

# Stage 2 Road Safety Audit Response Report

## Oxford Traffic Filters Project (Traffic Filter Installations Only)

Oxfordshire County Council

January 2024

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### Document history

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Revision	Purpose description	Originated	Reviewed	Authorised	Date
D01	First Issue	EA	NB	EA	11/01/2024
D02	Further DO comments added to provide information on updates made to detailed design GA layouts following RSA2	EA	NB	EA	04/03/2024
D03	OO comments and instructions added to the response report	EA	NB	EA	14/06/2024

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## 1. Project Details

<b>Report title:</b>	Oxford Traffic Filters Project – Stage 2 RSA Response Report
<b>Date:</b>	11 January 2024
<b>Document reference and revision:</b>	202050-MIL-HGN-OXF-RSA-CH-0002-D01
<b>Prepared by:</b>	Milestone Infrastructure Limited
<b>On behalf of:</b>	Oxfordshire County Council

## 2. Authorisation Sheet

<b>Report title:</b>	Stage 2 Road Safety Audit Response Report
<b>Prepared by (Design Organisation):</b>	
Name:	Elio Astone, BA (Hons), MIGHT, MIHE
Position:	Technical Design Lead - Schemes
Signed:	<i>Elio Astone</i> (electronic signature)
Organisation:	Milestone Infrastructure Ltd (Oxford)
Date:	11 January 2024
<b>Approved by (Overseeing Organisation):</b>	
Name:	Anthony Kirkwood
Position:	Vision Zero team leader
Signed:	<i>A. Kirkwood</i>
Organisation:	Oxfordshire County Council
Date:	24 June 2024

### 3. Introduction

Milestone Infrastructure Ltd (MIL) has been commissioned by Oxfordshire County Council (OCC) to carry out a Road Safety Audit Stage 2 on the detailed design of the Oxford Traffic Filters (traffic filter locations only) Project. Following the completion of the review, MIL has produced final comments which were made available to the Overseeing Organisation (OCC) and Design Organisation (MIL, Oxford) via email on 19 December 2023.

This document provides responses to the final comments in accordance with the requirements of DMRB GG 119 Road Safety Audit (Revision 2). The Design Organisation's (DO) responses have been prepared by Elio Astone of MIL, Oxford.

It should be noted that MIL has been appointed to the role of 'designer' and 'design organisation (DO)' at the detailed design and implementation stage of the project and has not been party to the feasibility design stage development of the overall traffic filter strategy, including the location and timings of the proposed restrictions at the traffic filters. Therefore, the DO responses provided in Section 5 of this response report that have been provided by MIL reflect the independent professional opinion of MIL on the feasibility/preliminary design subject to the RSA1 process.

### 4. Key Personnel

<b>Overseeing Organisation:</b>	Yasir Arafat Oxfordshire County Council
<b>RSA Team:</b>	Chris Whinney, BSc (Hons.), MCIHT, MSoRSA Ryan Brinkley, BSc (Hons.), MICE, EngTech Abhinav Nimbagal BTech (Civil Eng.) , MTech (Highway Eng.) MCIHT, MSoRSA Milestone Infrastructure Ltd; Engineering Solutions (ESol)
<b>Design Organisation:</b>	Milestone Infrastructure Ltd (Oxford) Elio Astone, BA (Hons), MICT, MIHE

## 5. Items Raised at Previous Road Safety Audits

A Stage 1 Road Safety Audit was previously carried out during August 2022. Both the audit report (WSP document reference:70092500\_MF\_RSA1\_001) and subsequent Response Report (WSP document reference 70092500-RSA1DR) have been reviewed by the RSA2 audit team. The comments below are the findings of the Stage 2 Road Safety Audit review and correspond to the 13 problems identified at the Stage 1 Road Safety Audit.

RSA Problem	Further recommendation(s) by Stage 2 audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 3.1 (Stage 1 Problem 1)</b>  <b>Location:</b> General to all filter locations.  <b>Summary:</b> Large quantity of information for drivers to interpret while driving resulting in sudden braking and shunts.	<p>This problem is considered partly resolved, noting that the proposed signing at the Traffic Filters has been granted DfT authorisation. However, whilst the use of red coloured surfacing is noted, on its own it does not convey any specific message to road users.</p> <p>It is recommended that, similar to the 'Congestion charge' in London, a specific road marking (e.g. 'TF' logo) is provided on the red coloured surfacing to compliment the proposed signing and make the traffic filter points more conspicuous.</p>	<p>DO accepts the RSA problem raised, but suggest an alternative solution:</p> <p>DO notes the road markings to Regs. Diags.1068 and 1069 relate only to congestion charging schemes and offer no variant option to change the marked text; DfT authorisation would be required to use alternative text for the traffic filter scheme. As no guarantee of approval for the non-prescribed sign can be made and given the short implementation time provided by the OO, this solution is rejected by the DO.</p> <p>Mitigation measures to be included at all proposed traffic filters:</p> <ul style="list-style-type: none"> <li>• Advance driver information / warning signs where no other known network signage changes proposed,</li> <li>• Network wide signage changes will also be implemented by the OO,</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul>	<p>OCC is not implementing a specific road marking (e.g., TF logo), and thus, DfT authorisation will not be required at this stage.</p> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation, and evaluation activities will be undertaken throughout the lifespan of the ETRO. Any necessary changes will be implemented as part of the trial's review process.</p>	No action required.
<b>Problem 3.2 (Stage 1 Problem 2)</b>  <b>Location:</b> Throughout the scheme  <b>Summary:</b> Proximity to existing direction, restriction and information signs resulting in a large quantity of information for drivers to see and interpret while driving resulting in sudden braking and shunts.	<p>The Audit Team acknowledge the Response Report comments. However, it is considered that the problem is only partly resolved.</p> <p>The wider signing strategy currently being undertaken is not with the scope of this audit, which only reviews the proposed signing at the filter points and on the immediate approaches to them. Key to reducing the risk of harsh braking and collisions involving u-turning vehicles will be the implementation of the wider signing changes, including both revising existing signs and providing new signs to ensure road users are fully aware of the restrictions and routes they are required to take to reach their intended destination.</p> <p>It is recommended that all associated new and revised traffic signs delivered as</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team; DO notes the OO has taken on design responsibility for the network wide signage changes and will therefore be responsible for the associated RSA. DO recommends this response report is provided as background information for the network wide signage changes RSA.</p>	<p>Accepted the recommendation of the RSA. The wider network signage strategy and sign designs have been developed in-house by OCC and are currently in procurement to secure a contractor and Principal Designer. Once completed, OCC will commission a combined Stage 1 and Stage 2 RSA for the wider network signage.</p>	OCC to conduct a combined stage 1 and 2 RSA for the wider network

RSA Problem	Further recommendation(s) by Stage 2 audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
	part of the wider signing strategy are subject to the road safety audit process, in conjunction with the proposed signing at/immediately in advance of the filter points that are subject to this RSA.			
<b>Problem 3.3 (Stage 1 Problem 3)</b>  <b>Location:</b> Throughout the scheme  <b>Summary:</b> Vehicles using less suitable alternative routes, turning in junctions or braking suddenly resulting in sideswipe collisions, collisions with parked vehicles or shunts.	<p>This problem remains outstanding, and the Stage 1 recommendation remains valid. The audit team notes that:</p> <ul style="list-style-type: none"> <li>The location of the modal filters has not changed since the Stage 1 RSA.</li> <li>The advanced blue backed information signing, where proposed, are not located where road users can take an alternative route, rather locations where they can utilise side road junctions to undertake U-turn manoeuvres, usually only a short distance in advance of the filter location.</li> <li>Existing signing near to the traffic filter locations has not been shown in relation to the proposed traffic filter signing. The proposed traffic filter signs could conflict with existing signs.</li> <li>The audit team are not aware of a review of road markings and cycling provision being undertaken on routes where drivers may abruptly make left turns to avoid the traffic filters to mitigate the effects on cycle safety mentioned in the OO Response.</li> </ul> <p>It is recommended that existing signing in the proximity of the proposed signs are plotted on the design drawings to identify conflicts and signs relocated as required.</p> <p>The audit team are aware of a wider signage strategy being undertaken to provide advanced signage at appropriate locations across the network as mentioned in the DO Response.</p> <p>However, this is outside the scope of this RSA. When the design for the signing strategy is complete it is recommended that this element of the Traffic Filters Scheme should also be subject to the RSA process and reviewed in conjunction with the proposed signing at/immediately in advance of the filter points that are subject to this RSA.</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team, DO notes the OO has taken on design responsibility for the network wide signage changes and will therefore be responsible for associated RSA. DO recommends this response report is provided as background information for the network wide signage changes RSA.</p> <p>Mitigation measures to be included at all proposed traffic filters:</p> <ul style="list-style-type: none"> <li>Network wide signage changes will also be implemented by the OO,</li> <li>An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul> <p>Where relevant, details of the existing traffic sign infrastructure have been included on the GA drawings forming part of the works information and locations of proposed traffic filter signage has been revised and/or changes have been proposed to the existing signage (for example, at the Oxford Road (north &amp; south) junctions with Marston Ferry Road.</p> <p>OO has implemented a programme of improvements to existing cycle infrastructure throughout Oxford city centre as part of the Active Travel Tranches 1 and 2 and intends to make further improvements under tranche 3. Other location-specific cycling improvements are also planned or have been delivered as part of the OO's Vision Zero Strategy.</p>	<p>Accepts recommendation by the Designer.</p> <p>Accepted the recommendation of the RSA. The wider network signage strategy and sign designs have been developed in-house by OCC and are currently in procurement to secure a contractor and Principal Designer. Once completed, OCC will commission a combined Stage 1 and Stage 2 RSA for the wider network signage.</p>	<p>OCC to conduct a combined stage 1 and 2 RSA for the wider network proposed signage.</p>



RSA Problem	Further recommendation(s) by Stage 2 audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 3.4</b> <b>(Stage 1 Problem 4)</b>  <b>Location:</b> A420 Thames Street modal filter - Option 1B & Option 2  <b>Summary:</b> Restricted visibility of the pedestrian crossing traffic signals resulting in sudden braking and shunts or collisions between vehicles and pedestrians	<p>This problem remains outstanding. The modal filter remains proposed at the same location.</p> <p>The drawing (Drawing No: 70092500, Rev B) doesn't depict the visibility splay/forward visibility achieved, nor show the lamp column being relocated or tree being removed. It remains unclear if appropriate visibility has been achieved at this location.</p> <p>It is recommended that existing potential obstructions are plotted on the drawing to demonstrate that forward visibility to the nearside primary signal head at the Puffin crossing and to the proposed traffic filter restriction sign at this location is achievable.</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team.</p> <p>DO has obtained topo data and used this as the base information for the general arrangement of the Thames Street traffic filter. Adjustments have been made to the position of the new traffic signs to address potential visibility issues with the existing traffic signals (refer to updated GA drawing 202050-MIL-HGN-TS-DR-CH-0001 rev D03).</p>	<p>Accepts recommendation made by the RSA team.</p>	<p>Update the drawing to show the visibility splays according to the RSA's recommendations and include the available topographical survey to capture all existing features. This will allow a comprehensive assessment and facilitate the repositioning of proposed traffic filter signage where necessary.</p>
<b>Problem 3.5</b> <b>(Stage 1 Problem 5)</b>  <b>Location:</b> A420 Thames Street modal filter – Option 2  <b>Summary:</b> Restricted visibility of the proposed Zero Emission Zone sign resulting in sudden braking or vehicles turning in the road leading to shunts.	<p>This problem is considered resolved. ZEZ signing is no longer proposed at this location as part of the traffic filter project.</p>	<p>No comment</p>	<p>No comment</p>	<p>No action required.</p>
<b>Problem 3.6</b> <b>(Stage 1 Problem 6)</b>  <b>Location:</b> Manor Road, close to Manor Road / St Cross Road modal filter  <b>Summary:</b> Drivers joining St Cross Road not anticipating humps resulting in loss of control collisions or sudden braking and shunts.	<p>The hump warning sign is no longer shown as being removed on the drawing provided (Drawing No. 202050-MIL-HGN-SCR-DR-CH-0001-S2-D01). This problem is therefore considered resolved.</p>	<p>No comment</p>	<p>No comment</p>	<p>No action required.</p>
<b>Problem 3.7</b> <b>(Stage 1 Problem 7)</b>  <b>Location:</b> Manor Road, close to Manor Road / St Cross Road modal filter  <b>Summary:</b> High flows of buses heading south on St Cross Road resulting in sideswipe collisions or	<p>This issue remains outstanding and the original [RSA1] recommendation valid:</p> <p><i>"It is recommended that the prohibition is reviewed and amended to state Local Buses if required."</i></p> <p>It is unclear if the review of the city-wide coach restrictions has been completed and what the conclusion was.</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team.</p> <p>OO to advise what consultation has taken place with bus operators and include within the OO's response to the RSA2 audit.</p>	<p>No concerns have been raised by bus operators. OCC is now implementing a coach management strategy as part of the Central Oxfordshire Movement and Place Framework, although it hasn't started yet.</p>	<p>OO to liaise with the OCC communication team to establish a strategy for engaging bus operator before the construction start date.</p>

RSA Problem	Further recommendation(s) by Stage 2 audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
pedestrian/vehicle collisions.				
<b>Problem 3.8 (Stage 1 Problem 8)</b>  <b>Location:</b> South Parks Road, close to the junction with Mansfield Road  <b>Summary:</b> Visibility of proposed modal filter advanced signage obscured by a large tree resulting in sudden braking and shunts.	<p>This issue remains outstanding, and the Stage 1 problem/recommendation remains valid:</p> <p><i>"It is recommended that the proposed information sign is relocated away from the trees."</i></p> <p>It is proposed to locate sign SCR6 to the rear of the footway/cycleway. There is a 2m wide verge separating the carriageway and footway/cycleway, with the proposed sign estimated to be located approximately 5m from the carriageway edge. A mature tree and other signs/street furniture are likely to block road users view of the sign.</p> <p>It is recommended that the sign is relocated so that it is visible to approaching road users.</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team.</p> <p>DO has re-positioned proposed traffic sign SCR6 into the gravel verge area adjacent the carriageway and in front of the adjacent large mature tree, thereby improving the conspicuity of the sign.</p>	Accepts RSA's recommendation.	Revise the drawings to reflect the suggested relocation of the SCR6 sign.
<b>Problem 3.9 (Stage 1 Problem 9)</b>  <b>Location:</b> Marston Ferry Road modal filter  <b>Summary:</b> Vehicles stopping to unload at the side of the road resulting in sudden braking and shunts, pedestrian trips and falls or pedestrian/vehicle collisions.	<p>This problem remains outstanding and Stage 1 recommendation remains valid:</p> <p><i>"It is recommended that access to the school from the north is maintained, or an alternative drop-off facility provided."</i></p> <p>The audit team reaffirms the concern raised at Stage 1.</p> <p>The responses and associated action are unclear.</p> <p>It is recommended that turning counts for those entering/exiting the school access, as well as traffic surveys to identify if non-permit holders currently drop-off/pick up from the highway. Actual numbers should be obtained so that the risk can be quantified, and appropriate provision made.</p>	<p>DO accepts the RSA problem raised, but suggest an alternative solution:</p> <p>DO recommends OO uses its traffic modelling data to identify predicted trips made using private cars to and from The Swan School and St Nicholas Primary School and works with both schools to encourage use of the active travel network in the area.</p> <p>OO has confirmed both schools have a travel plans in place encouraging other forms of accessing the schools other than using private vehicles.</p> <p>An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</p>	<p>The Oxfordshire Strategic Model can be used to estimate the impact of the filters. However, it lacks the required detail to examine individual schools. This is because education is not classified as a separate trip purpose, so school drop-off trips cannot be identified separately. Additionally, model zones are considerably larger than individual schools, making it challenging to pinpoint specific destinations within a zone.</p> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation, and evaluation activities will be undertaken throughout the lifespan of the ETRO. Any necessary changes will be implemented as part of the trial's review process.</p>	OO will coordinate with the school travel plan officer and the OCC communication team throughout the ETRO's duration to identify any necessary mitigation measures to enhance safety.

<p><b>Problem 3.10 (Stage 1 Problem 10)</b></p> <p><b>Location:</b> Marston Ferry Road modal filter</p> <p><b>Summary:</b> Vehicles U-turning via gaps in the central median in advance of the modal filter resulting in T-bone collisions or shunts.</p>	<p>This problem remains outstanding and the original recommendation valid:</p> <p><i>"It is recommended that the modal filter is relocated, or formal turning facilities are provided suitable for all vehicles."</i></p> <p>The modal filter location remains unchanged. No formal turning facilities have been provided.</p> <p>In order to avoid driving through the modal filter it is understood that road users originating from the west are to U-turn at the gap in the proposed central island that permits access to the field entrance to the west of the Swan School access. Road users approaching from the east are to turn within the access to Swan School.</p>	<p>DO accepts the RSA problem raised, but suggest an alternative solution:</p> <p>Alternative locations for the traffic filter on Marston Ferry Road were previously investigated and assessed by the OO; it concluded the proposed location is the only viable proposal (please refer to the WSP option report)</p> <p>Other mitigation measures to be included at this proposed traffic filter:</p> <ul style="list-style-type: none"> <li>• Advance driver information / warning signs on all approaches to the proposed traffic filter,</li> <li>• Network wide signage changes will also be implemented by the OO.</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any required changes to the location and layout of the traffic filters will be identified during this period.</p> <p>DO notes the position of the proposed traffic filters have been chosen by the OO to facilitate drivers to turn around in order to avoid passing through the filter.</p> <p>DO confirms swept path analysis has been carried out using a long estate car as the design vehicle; this reflects the anticipated type of vehicle which may make this turn (exemptions to the ETRO for the traffic filter have been included for all vehicles except private cars). The results of the swept path analysis have been used to determine the extents of the proposed 'over run area' to the western side of the existing field access to be used to accommodate U-turning vehicles. Details of the swept path analysis have been included in the background information supporting the RSA2 Audit Brief.</p> <p>DO also recommends OO uses its traffic modelling data to identify predicted trips made using private cars to and from The Swan School and St Nicholas Primary School and works with both schools to encourage use of the active travel network in the area. OO has confirmed</p>	<p>The Oxfordshire Strategic Model can be used to estimate the impact of the filters. However, it lacks the required detail to examine individual schools. This is because education is not classified as a separate trip purpose, so school drop-off trips cannot be identified separately. Additionally, model zones are considerably larger than individual schools, making it challenging to pinpoint specific destinations within a zone.</p> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation, and evaluation activities will be undertaken throughout the lifespan of the ETRO. Any necessary changes to the location of the filter and signage changes will be implemented as part of the trial's review process.</p>	<p>OO will coordinate with the school travel plan officer and the OCC communication team throughout the ETRO's duration to identify any necessary mitigation measures to enhance safety.</p>
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		both schools have a travel plans in place encouraging other forms of accessing the schools other than using private vehicles.		
<b>Problem 3.11 (Stage 1 Problem 11)</b>  <b>Location:</b> Marston Ferry Road modal filter  <b>Summary:</b> Vehicles turning in the school access road in advance of the modal filter resulting in T-bone collisions, shunts, collisions between vehicles and cyclists or cycle loss of control collisions.	<p>This problem remains outstanding and original audit problem remain / recommendation remains valid:</p> <p><i>"It is recommended that formal turning facilities are provided away from the school access road junction OR it is recommended that the modal filter is relocated."</i></p> <p>The modal filter location remains unchanged. No formal turning facilities have been provided.</p> <p>High numbers of cyclists were observed during the site visit between 15:00-16:00hrs riding east and west bound on Marston Ferry Road at the entrance to Swan School as well as cyclists exiting Swan School. Any U-turn movements at this location may increase the risk of collisions involving cyclists since there is a high possibility of westbound vehicles using the junction area at the entrance of Swan School for U-turn/turning movements to avoid passing through the proposed traffic filter.</p>	<p>DO accepts the RSA problem raised, but suggest an alternative solution:</p> <p>Alternative locations for the traffic filter on Marston Ferry Road were previously investigated and assessed by the OO; it concluded the proposed location is the only viable proposal (please refer to the WSP option report)</p> <p>Other mitigation measures that have been included at this proposed traffic filter:</p> <ul style="list-style-type: none"> <li>• Advance driver information / warning signs on all approaches to the proposed traffic filter,</li> <li>• Network wide signage changes will also be implemented by the OO.</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any required changes to the location and layout of the traffic filters will be identified during this period.</p> <p>DO confirms swept path analysis has been carried out using a long estate car as the design vehicle; this reflects the anticipated type of vehicle which may make this turn (exemptions to the ETRO for the traffic filter have been included for all vehicles except private cars). The results of the swept path analysis have been used to determine the extents of the proposed 'over run area' to the western side of the existing field access to be used to accommodate U-turning vehicles. Details of the swept path analysis have been included in the background information supporting the RSA2 Audit Brief.</p> <p>DO also recommends OO uses its traffic modelling data to identify predicted trips made using private cars to and from The Swan School and St Nicholas Primary School and works with both schools to encourage use of the active travel</p>	<p>The Oxfordshire Strategic Model can be used to estimate the impact of the filters. However, it lacks the required detail to examine individual schools. This is because education is not classified as a separate trip purpose, so school drop-off trips cannot be identified separately. Additionally, model zones are considerably larger than individual schools, making it challenging to pinpoint specific destinations within a zone.</p> <p>The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation, and evaluation activities will be undertaken throughout the lifespan of the ETRO. Any necessary changes to the location of the filter and signage changes will be implemented as part of the trial's review process.</p>	<p>OO will coordinate with the school travel plan officer and the OCC communication team throughout the ETRO's duration to identify any necessary mitigation measures to enhance safety.</p>



		network in the area. OO has confirmed both schools have a travel plans in place encouraging other forms of accessing the schools other than using private vehicles.		
<b>Problem 3.12 (Stage 1 Problem 12)</b>  <b>Location:</b> St Clements modal filter  <b>Summary:</b> Restricted visibility of the modal filter sign resulting in sudden braking and shunts.	<p>This problem remains outstanding and original recommendation valid:</p> <p><i>“It is recommended that the adequate visibility is provided to the modal filter signs.”</i></p> <p>The position of the traffic filter signing remains unchanged.</p> <p>The audit team also notes the location of the existing ‘no-entry/right turn prohibition’ signs to the eastern side of Jeune Street have not been plotted in relation to the proposed traffic filter signs (Sign Ref: SC3 &amp; SC5).</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team.</p> <p>DO has reviewed the position and arrangements for the existing traffic sign infrastructure at the Jeune Street junction and has included works to rationalise and simplify the arrangement. Positions of other proposed traffic signs associated with the St Clements traffic filter have also been reviewed and positions amended where required and achievable. However, the DO notes the location of the filter has been previously identified by the OO and consulted on before the current DO was appointed. The site is already extremely congested in terms of usage and function; bus stops, side road junctions, mixture of commercial retail and residential frontages directly onto St Clements – there is very little scope for making any significant changes to the locations of the proposed signage infrastructure.</p>	Accepts RSA’s concern and recommendation.	Revise the drawing and update the signs in accordance with the recommendations from the RSA team.
<b>Problem 3.13 (Stage 1 Problem 13)</b>  <b>Location:</b> St Clements modal filter  <b>Summary:</b> Proposed sign located in line with the tactile paving resulting in pedestrian trips and falls.	<p>This problem remains outstanding and original problem/recommendation valid:</p> <p><i>“It is recommended that proposed modal filter sign is located at the back of the footway and mounted on an offset bracket if required.”</i></p> <p>The Audit Team acknowledge that the sign assembly is to be cantilevered.</p> <p>However, the drawing provided (Drawing No:202050-MIL-HGN-SC-DR-CH-0001) only shows the location of the signs (ref: SC2 &amp; SC4) indicatively and the extent of the tactile paving is not shown.</p> <p>It appears that the sign may also obstruct the doorway to no. 58a, which again could pose a particular hazard to wheelchair users and those with pushchairs.</p> <p>It is recommended the location of this sign is reviewed to ensure it does not obstruct the crossing and/or access to private properties.</p>	<p>DO accepts the RSA problem and recommendation made by the RSA team.</p> <p>DO has reviewed the locations of all proposed traffic signs and has relocated positions where appropriate to avoid clashes with doorways or other existing features.</p> <p>Proposed traffic sign assembly SC2 / SC4 is to be installed as a cantilevered assembly so no part is closer than 450 mm from the adjacent road channel.</p> <p>However, the DO notes for this assembly and all other proposed traffic signs, the final positions can only be confirmed once the installation process begins on site and the extent of existing underground utilities is fully exposed. Foundations for new traffic signposts are intended to be ground retention socket (NAL or similar approved). Given the size of the signs and associated posts, the resulting foundations are larger than a traditional planted foundation.</p> <p>Each initial excavation activity for traffic signpost foundations shall be treated as a trial pit exercise to verify the position of the foundations and shall have one of the following outcomes:</p>	Accepts RSA’s concern and recommendation.	Revise the drawings to depict the precise sign location, the extent of tactile paving, and ensure that the sign does not obstruct any doorways. Ensure the signpost maintains the required offset from the edge of the carriageway.

		<ul style="list-style-type: none"><li>a) New foundations can be installed as ground retention sockets in the position shown on the relevant general arrangement drawing,</li><li>b) New foundations can be installed as ground retention sockets but in a different location to that shown on the relevant general arrangement drawing,</li><li>c) New foundations cannot be installed as ground retention sockets and will be installed as standard planted foundation detail either in the position shown on the relevant general arrangement drawing or an alternative location.</li></ul>		
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## 6. Items Raised At This Stage 2 Road Safety Audit

Following an examination of the audit brief, design drawings and a site inspection on Wednesday 14th November 2023, 24 problems considered to be detrimental to road safety were identified. The problems and recommended course of action are described below.

RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.1</b> <b>Location:</b> General to all filter locations. <b>Summary:</b> Increased risk of harsh braking leading to nose to tail collisions and U-turn/side impact collisions due to insufficient advanced warning of the traffic filter locations.	It is recommended that the design for the wider Signing Strategy should be subject to the RSA process once complete, with clear and consistent signing being provided across the city to ensure road users select the correct route for their intended destination, thereby reducing the number of U-turns/turning at junctions at/near the proposed filter locations. This should be reviewed in conjunction with the proposed signing at/immediately in advance of the filter points that are subject to this RSA.	DO accepts the RSA problem and recommendation made by the RSA team; DO notes the OO has taken on design responsibility for the network wide signage changes and will therefore be responsible for associated RSA. DO recommends this response report is provided as background information for the network wide signage changes RSA	Accepts recommendation made by the RSA. The wider network signage strategy and sign designs have been developed in-house by OCC and are currently in procurement to secure a contractor and Principal Designer. Once completed, OCC will commission a combined Stage 1 and Stage 2 RSA for the wider network signage.	RSA Stage 1 & 2 to be carried out on OO design for Wider network proposed signage.
<b>Problem 4.2</b> <b>Location:</b> General to all filter locations. <b>Summary:</b> Increased risk of harsh braking leading to nose to tail collisions and U-turn collisions due to misunderstanding of the traffic restrictions ahead.	It is recommended that a comprehensive driver education/publicity strategy is delivered pre-implementation to ensure as far as possible road users are aware of the location and operation of the proposed traffic filters.	DO accepts the RSA problem and recommendation made by the RSA team.	Accepts RSA's recommendation. OO comms team will campaign for the signage awareness before the TF filters go live.	The education/publicity strategy will be developed and implemented by OO's communications team.
<b>Problem 4.3</b> <b>Location:</b> General to all filter locations. <b>Summary:</b> Increased risk of collisions involving vulnerable road users, such as pedestrians, cyclists and motorcyclists, due to road users undertaking U-turns/turning/reversing movements to avoid the restrictions.	It is recommended that measures to improve the safety of vulnerable road users at 'last resort' locations to reduce the risk of collisions.	DO accepts the RSA problem raised, but suggest an alternative solution:  DO notes the traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any additional engineering measures that may be required will be identified during this period.  Mitigation measures to be included at all proposed traffic filters: <ul style="list-style-type: none"> <li>• Advance driver information / warning signs on the approaches to traffic filters where no network wide signage changes are known of.</li> <li>• Network wide signage changes will also be implemented by the OO,</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul>	Accepts the RSA's concerns and the designer recommendations.	OO will implement the wider network signage, and its communications team will develop and execute the education/publicity strategy.

RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.4</b>  <b>Location:</b> General to all filter locations.  <b>Summary:</b> Increased risk of harsh braking leading to nose to tail collisions and U-turn collisions at the traffic filter points due to road users following SatNavs.	It is recommended that SatNav companies are consulted to identify if it is possible to update software to warn road users of the restrictions and that additional signage is provided to warn road users not to follow their SatNav.	DO accepts the RSA problem and recommendation made by the RSA team;	Accepts the RSA's concerns and recommendations.  OO is currently liaising with Google. However, this may be challenging given the temporary nature of the scheme at this time.	OO is liaising with SatNav providers.
<b>Problem 4.5</b>  <b>Location:</b> General to all filter locations.  <b>Summary:</b> Increased risk of collisions due to congestion elsewhere on the network due to redistribution of traffic.	It is recommended that traffic modelling is undertaken to identify if any mitigation measures are required at those locations/junctions where increased traffic flows could detrimentally affect road safety.	DO accepts the RSA problem and recommendation made by the RSA team.  DO notes traffic modelling has been undertaken by the OO and has identified where traffic on the network has increased due to displacement, but it has its limitations on the local routes. Full effect of the traffic filters on the displacement of traffic will not be understood until implementation, therefore DO recommends monitoring is coordinated and a review strategy is put in place by the OO.	Accepts the RSA's concerns and recommendations.	OO will implement ongoing monitoring and review of the strategy.
<b>Problem 4.6</b>  <b>Location:</b> General to all filter locations.  <b>Summary:</b> Increased risk of failure to give way collisions due to the proposed signed obstructing junction visibility splays.	It is recommended that all traffic signs are located outside the extent of junction/access visibility splays.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has included a requirement for all traffic signs to have a mounting height of minimum 2.10 m (or 2.40 m if located adjacent cycle routes) which will place the underside of the proposed traffic signs above the line of sight for drivers at junctions.	Accepts the RSA's concerns and the designer recommendations.  When signs don't conflict with visibility splays, footways, or cycleways, they should be installed more directly in the line of sight, rather than at 2.1-2.4 meters.	DO to revise the drawing and update the signs in accordance with the recommendations from the RSA team.
<b>Problem 4.7</b>  <b>Location:</b> A420 Thames Street filter (western end) - (Puffin Crossing to the east of Blackfriars Road)  <b>Summary:</b> Proximity of traffic filter sign to the nearside primary signal head could increase the risk of on-crossing and/or nose to tail collisions.	It is recommended that the distance between the Puffin Crossing and the traffic filter location is increased to allow adequate perception time for all road users.	DO accepts the RSA problem and recommendation made by the RSA team.  DO notes the position of the proposed traffic filters have been chosen by the OO to facilitate drivers to turn around in order to avoid passing through the filter.  Mitigation measures to be included at this proposed traffic filter: <ul style="list-style-type: none"> <li>• Network wide signage changes will also be implemented by the OO that is understood to cover the Botley Road / Frideswide Square / Oxpens Road approaches; OO to confirm scope of changes to LADS within its response to the RSA2 audit.</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul>	The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation, and evaluation activities will be undertaken throughout the lifespan of the ETRO. Any required changes to the location of the filter and signage changes will be implemented as part of the trial's review process.	OO will implement ongoing monitoring and review of the strategy. During the ETRO, monitoring will include observing driver behaviour and tracking injury accidents.



RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.8</b>  <b>Location:</b> A420 Thames Street filter (eastern end)  <b>Summary:</b> Insufficient setback of the proposed traffic filter sign TS5 could lead to collisions involving vehicles striking the sign assembly.	It is recommended that the proposed TS5 sign location is reviewed and relocated appropriately to ensure sufficient clearance is provided.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has re-positioned proposed traffic sign TS5 to a location that provides appropriate lateral clearance from the edge of the sign face to the adjacent road channel (450 mm minimum).	Accepts the RSA's concerns and the designer recommendations.	Reviewed the proposed sign location and update the drawings as necessary as recommended by RSA team.
<b>Problem 4.9</b>  <b>Location:</b> A420 Thames Street filter  <b>Summary:</b> Increased risk of nose to tail collisions and/or collisions involving U-turn manoeuvres due to the absence of advanced signage indicating the location of the traffic filter point ahead.	It is recommended that advanced signage is provided at an appropriate location for road users on the A420 to decide either to pass through the traffic filter or take an alternative route well in advance of the prohibition.	DO accepts the RSA problem and recommendation made by the RSA team.  DO notes the traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any additional signing measures that may be required will be identified during this period.  Network wide signage changes will also be implemented by the OO; this will assist with providing sufficient advance information for drivers to make an informed choice ahead of the proposed traffic filter point; OO to confirm the scope of these changes.  An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.	Accepts the RSA's concerns and the designer recommendations.  The wider network signage strategy and sign designs have been developed in-house by OCC and are currently in procurement to secure a contractor and Principal Designer.  The wider network signage strategy includes changes to signage in advance of the filter location to driver the opportunity of choosing an alternative.	No action required.
<b>Problem 4.10</b>  <b>Location:</b> A420 Thames Street filter (eastbound approach)  <b>Summary:</b> Increased risk of on-crossing collisions due to omission of road marking details associated with the existing Puffin Crossing.	It is recommended that all existing road markings associated with the Puffin Crossing are reinstated following the installation of the coloured surfacing.	DO accepts the RSA problem and recommendation made by the RSA team.  DO confirms a requirement to re-mark all existing road markings covered by the new coloured surface treatment has been included in the works information for all the proposed traffic filters.	Accepts the RSA's concerns and the designer recommendations.	Update the design drawings to include the recommendation regarding reinstate the existing road markings. Include all lining proposals on all drawings
<b>Problem 4.11</b>  <b>Location:</b> Hythe Bridge Street filter - Rewley Road junction.  <b>Summary:</b> Increased risk of collisions between turning vehicles and pedestrians due to absence of advanced signage indicating the location of the traffic filter point.	It is recommended that an advanced information sign is provided so that road users can decide either to pass through the traffic filter or take an alternative route well in advance of the Rewley Road location.	DO accepts the RSA problem and recommendation made by the RSA team.  DO notes the network-wide signage change details are currently being developed by the OO and that this work may well include changes to the existing signage on the approaches to the Hythe Bridge Street traffic filter. Should no changes to the existing signage be proposed, DO recommends that as a minimum, additional advance driver information signs are installed, and updates are made to the LADS provision on all approaches to Frideswides Square which currently direct traffic through the proposed filter location; OO to confirm scope of network wide signage changes.	The wider network signage strategy and sign designs have been developed in-house by OCC and are currently in procurement to secure a contractor and Principal Designer.	The advance warning signs for the filter will be installed in St Giles, Beaumont Street, Park End Street, Hollybush Row, and Botley Road. The current direction signs will remain unchanged since they are still relevant outside of the filter's operational hours. 'No through road' signs will be put up in Worcester Street, and Tier 1 signs on the approaches to Oxford will inform drivers about the filters and their introduction date.

RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.12</b>  <b>Location:</b> Hollow Way traffic filter  <b>Summary:</b> Increased risk of harsh braking leading to nose to tail collisions and U-turn collisions due to road users being unaware of the proposed traffic filter provision on Hollow Way.	It is recommended that additional advanced signage is provided to assist road users in finding suitable alternative routes.	DO accepts the RSA problem raised, but suggest an alternative solution:  DO notes the traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any additional signing measures that may be required will be identified during this period.  Network wide signage changes will also be implemented by the OO; this will assist with providing sufficient advance information for drivers to make an informed choice ahead of the proposed traffic filter point.  An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required signage changes will be implemented as part of the trial's review process.	Advance signs warning of the filter and indicating alternative routes will be installed on The Slade, Horspath Driftway, Oxford Road in Cowley, and Garsington Road. The current directional signs will remain unchanged as they are still relevant outside the filter's operational hours. 'No through road' signs will be placed on Hollow Way, and Tier 1 signs on the approaches to Oxford will alert drivers about the filters and their introduction date.
<b>Problem 4.13</b>  <b>Location:</b> Marston Ferry Road – Field access to the north of the Swan School access  <b>Summary:</b> Increased risk of nose to tail and side/swipe collisions due to road user undertaking U-turn manoeuvres.	It is recommended that the filter point is relocated to a more suitable position where U-turn manoeuvres are not required for road users avoiding the proposed prohibition.	DO accepts the RSA problem raised, but suggest an alternative solution:  The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any required changes to the location and layout of the traffic filters will be identified during this period.  Alternative locations for the traffic filter on Marston Ferry Road were previously investigated and assessed by the OO; it concluded the proposed location is the only viable proposal (please refer to the WSP option report)  Other mitigation measures to be included at this proposed traffic filter: <ul style="list-style-type: none"> <li>• Advance driver information / warning signs on all approaches to the proposed traffic filter,</li> <li>• Network wide signage changes will also be implemented by the OO.</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul>	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required changes to the location of the filter and signage changes will be implemented as part of the trial's review process.	Advance signs warning of the filter and indicating alternative routes will be installed on Banbury Road, Marston Ferry Road, Cherwell Drive, Marsh Lane, and Marston Road. The existing directional signs will remain as they are still relevant outside of the filter's operational hours. 'No through road' signs will be placed on Marston Ferry Road, and Tier 1 signs on the approaches to Oxford will inform drivers about the filters and their introduction date.

RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.14</b>  <b>Location:</b> Marston Ferry Road – Vehicular entrance to Swan School and the field access to the northwest.  <b>Summary:</b> Increased risk of nose to tail collisions due to reduction in the length of the existing ghost right turn lane.	It is recommended that an alternative location for the filter point is found such that the existing ghost right turn layout can be retained.	DO accepts the RSA problem raised, but suggest an alternative solution:  The traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any required changes to the location and layout of the traffic filters will be identified during this period.  Alternative locations for the traffic filter on Marston Ferry Road were previously investigated and assessed by the OO; it concluded the proposed location is the only viable proposal (please refer to the WSP option report)  Other mitigation measures to be included at this proposed traffic filter: <ul style="list-style-type: none"> <li>• Advance driver information / warning signs on all approaches to the proposed traffic filter,</li> <li>• Network wide signage changes will also be implemented by the OO.</li> <li>• An extensive media / communication campaign will be rolled out by the OO in the build up to the expected 'go live' date.</li> </ul>	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required changes to the location of the filter and signage changes will be implemented as part of the trial's review process.	Advance signs warning of the filter and indicating alternative routes will be installed on Banbury Road, Marston Ferry Road, Cherwell Drive, Marsh Lane, and Marston Road. The existing directional signage will remain unchanged as it remains relevant outside the filter's operational hours. 'No through road' signs will be placed on Marston Ferry Road, and Tier 1 signs on the approaches to Oxford will warn drivers about the filters and their introduction date.
<b>Problem 4.15</b>  <b>Location:</b> Marston Ferry Road – Vehicular entrance to Swan School and the field access to the northwest.  <b>Summary:</b> Increased risk of loss of control collisions due to turning vehicles overrunning the proposed central traffic islands.	It is recommended that swept path analysis is undertaken to ensure all anticipated design vehicles can turn into/out of the accesses with overrunning kerbs/islands.	DO accepts the RSA problem and recommendation made by the RSA team.  DO confirms swept path analysis has been carried out using a long estate car as the design vehicle; this reflects the anticipated type of vehicle which may make this turn (exemptions to the ETRO for the traffic filter have been included for all vehicles except private cars). The results of the swept path analysis have been used to determine the extents of the proposed 'over run area' to the western side of the existing field access to be used to accommodate U-turning vehicles. Details of the swept path analysis have been included in the background information supporting the RSA2 Audit Brief.	Accepts the RSA's concerns and the designer recommendations.	Please carry out a swept path analysis and update the drawing pack to include the results of the analysis.
<b>Problem 4.16</b>  <b>Location:</b> Marston Ferry Road – Proposed bolt-down traffic islands.  <b>Summary:</b> Increased risk of loss of control collisions due to road users striking the traffic islands.	It is recommended that the position of the 'keep left' bollards (to TSRGD Diagram No. 610) are shown on the drawings to ensure correct placement on site.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has prepared a location specific construction drawing which includes details of the proposed keep left bollards at each end of the proposed traffic islands at this filter.	Accepts the RSA's concerns and the designer recommendations.	Update the drawing in accordance with the recommendations from the RSA team.

RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.17</b>  <b>Location:</b> Marston Ferry Road – Proposed advanced information signs at its staggered junction with Oxford Road  <b>Summary:</b> Increased risk of failure to give way collisions due to the existing give way signs being masked by the proposed advanced information signs (MFR9 and MFR10).	It is recommended that the location of the proposed signing is reviewed in relation to the existing signing and sign locations amended to ensure all signs are visible.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has re-positioned proposed traffic sign MFR9 further eastwards into Oxford Road (north) away from existing signage.  DO has re-positioned proposed traffic sign MFR10 out of the line of sight of the existing give way sign at the junction of Oxford Road (south) and Marston Ferry Road / Cherwell Drive.	Accepts the RSA's concerns and the designer recommendations.	Revise the drawing and update the signs in accordance with the recommendations from the RSA team.
<b>Problem 4.18</b>  <b>Location:</b> Banbury Road – Proposed advanced information sign outside property no. 170.  <b>Summary:</b> Increased risk of collisions involving pedestrians stepping into the path of vehicles due to the footway being obstructed.	It is recommended that sign MFR2 is relocated to ensure the footway is not obstructed.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has re-positioned proposed traffic sign MFR2 to the back of footway, sign to be cantilevered. OO to confirm if network-wide signage changes include the LADS at this location as this may remove the requirement for proposed traffic sign MFR2.	Accepts the RSA's concerns and the designer recommendations.	Revise the drawing and update the signs in accordance with the recommendations from the RSA team and confirm the question about LADS
<b>Problem 4.19</b>  <b>Location:</b> Banbury Road – Proposed advanced information sign outside St. Clares School.  <b>Summary:</b> Increased risk of collisions involving U-turns/turns in junctions on Marston Ferry Road due to road users failing to see the advanced information signs.	It is recommended that MFR1 is relocated to ensure road users visibility to the sign is not obstructed, whilst taking care not to block the pedestrian entrance to the school	DO accepts the RSA problem and recommendation made by the RSA team.  DO has re-positioned proposed traffic sign MFR1 to the back of footway, sign to be cantilevered. OO to confirm if network-wide signage changes include the LADS at this location as this may remove the requirement for proposed traffic sign MFR1.	Accepts the RSA's concerns and the designer recommendations. This sign can be positioned to ensure adequate advance visibility.	Revise the drawing and update the signs in accordance with the recommendations from the RSA team and confirm the question about LADS.
<b>Problem 4.20</b>  <b>Location:</b> Marston Ferry Road – General to traffic islands.  <b>Summary:</b> Increased risk of loss of control collisions during wet conditions due to highway drainage paths being adversely affect by proposed traffic islands.	It is recommended that highway drainage is reviewed, and improvements made if deemed necessary.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has carried out flow path analysis and identified the western traffic island requires to be split into two sections to accommodate a route for surface water; GA drawing updated to reflect this.	Accepts the RSA's concerns and the designer recommendations.	Revise the drawing and include drainage improvements if required.
<b>Problem 4.21</b>  <b>Location:</b> St Clements Street traffic filter – The Plain Roundabout exit onto St Clements Street  <b>Summary:</b> Increased risk of collisions between vehicles and cyclists due to harsh braking and/or sudden lane changes.	It is recommended that advanced traffic filter signs are provided on the Magdalen Bridge, Cowley Road and Iffley approaches to the roundabout (see Image 10). This will enable drivers to take an informed decision on whether or not to pass through the traffic filter, reducing the risk of harsh braking and/or sudden lane changes that could increase the risk collisions with cyclists on the roundabout circulatory.	DO accepts the RSA problem and recommendation made by the RSA team.  DO has included an additional advance driver information / warning sign placed on Magdalen Bridge approach to The Plain Roundabout.  DO recommends the OO's network-wide signage changes strategy to make amendments to existing LADS on Cowley Road & Iffley Road.	Accepts the RSA's concerns and the designer recommendations.  The wider network signage strategy is currently developed in-house by OCC and the recommended advanced signs will be introduced.  No sign has been included on the Magdalen Bridge approach because most traffic coming from that direction will have already passed through a prior filter. Additionally, there will be prominent signs at the exit from The Plain.	Advance signs warning of the filter and indicating alternative routes will be installed on Iffley Road, Cowley Road, Headington Hill, London Place, and Morrell Avenue. The existing directional signage will remain as it is still relevant outside the filter's operational hours. 'No through road' signs will be placed on St Clements Street, and Tier 1 signs on the approaches to Oxford will inform drivers about the filters and their introduction date.



RSA2 Problem	Recommendation(s) by audit team	Design Organisation (DO) Response	Overseeing Organisation (OO) Response	Overseeing Organisation (OO) Instruction
<b>Problem 4.22</b>  <b>Location:</b> St Clements Street traffic filter – westbound approach.  <b>Summary:</b> Insufficient warning of traffic filter ahead could increase the risk of harsh braking and nose to tail collisions.	It is recommended to that additional advance traffic filter signs are provided in advance of the Marston Road and Morrell Avenue junctions to assist route users earlier in diverting onto a suitable alternative route.	DO accepts the RSA problem and recommendation made by the RSA team.  DO notes the network-wide signage change details are currently being developed by the OO and that this work may well include changes to the existing signage on the approaches to the St Clements traffic filter; OO to confirm network-wide signage changes for Marston Road & Morrell Avenue includes amendments to LADS, otherwise additional advance driver information / warning signs to be placed on these routes.	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required signage changes will be implemented as part of the trial's review process.	Advance signs warning of the filter and indicating alternative routes will be installed on Headington Road, London Place, and Morrell Avenue. The existing directional signage will remain unchanged as it is still relevant outside of the filter's operational hours. 'No through road' signs will be placed on St Clements Street, and Tier 1 signs on the approaches to Oxford will inform drivers about the filters and their introduction date.
<b>Problem 4.23</b>  <b>Location:</b> St Cross Road traffic filter – advanced signage on northbound approach (sign ref SCR1) at the Jowett Walk junction.  <b>Summary:</b> Insufficient warning of traffic filter ahead could increase the risk of harsh braking leading to nose to tail collisions and/or U-turn/side impact collisions involving turning vehicles.	It is recommended to that additional advance filter signs are provided to assist route users in diverting onto a suitable alternative route before reaching the filter point.	DO accepts the RSA problem raised, but suggest an alternative solution:  DO notes the traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any additional signing measures that may be required will be identified during this period.  DO notes the network-wide signage change details are currently being developed by the OO and that this work may well include changes to the existing signage on the approaches to the St Cross traffic filter; OO to confirm network-wide signage changes for St Cross Road includes amendments to LADS, otherwise additional advance driver information / warning signs to be placed on this route.	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required signage changes will be implemented as part of the trial's review process.	Advance signs warning of the St Cross Road filter will be installed on Iffley Road, Cowley Road, High Street, and Parks Road. The existing directional signage will remain in place, as it remains relevant outside the filter's operational hours. 'No through road' signs will be installed on Long Wall Street and South Parks Road, and Tier 1 signs on the approaches to Oxford will alert drivers about the filters and their introduction date.
<b>Problem 4.24</b>  <b>Location:</b> St Cross Road traffic filter – advanced signage on southbound approach (sign ref SCR6) at the Mansfield Park junction.  <b>Summary:</b> Insufficient warning of traffic filter ahead could increase the risk of harsh braking leading to nose to tail collisions and/or U-turn/side impact collisions involving turning vehicles.	It is recommended to that additional advanced signing is provided to assist route users in diverting onto a suitable alternative route before reaching the filter point.	DO accepts the RSA problem raised, but suggest an alternative solution:  DO notes the traffic filters project is being introduced using an experimental traffic regulation order (ETRO); therefore, review, adaptation and evaluation activities will be undertaken throughout the life span of the ETRO, and any additional signing measures that may be required will be identified during this period.  DO notes the network-wide signage change details are currently being developed by the OO and that this work may well include changes to the existing signage on the approaches to the St Cross traffic filter; OO to confirm network-wide signage changes for St Cross Road includes amendments to LADS, otherwise additional advance driver information / warning signs to be placed on this route.	Accept the concerns raised by RSA and the recommendations made by the designer. These will be carefully considered and integrated into the broader network's strategic signage plan. Additionally, any required changes to the location of the filter and signage changes will be implemented as part of the trial's review process.  'No through road' signage will be placed in Long Wall Street and South Parks Road.	Ongoing review on trial periods on proposed wider network signages.

## 7. Design Organisation Statement

<p><b>On behalf of the Design Organisation, I certify that:</b></p> <p><b>1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed with the Overseeing Organisation.</b></p>	
Name:	Elio Astone, BA (Hons), MIGHT, MIHE
Signed:	<i>Elio Astone</i> (electronic signature)
Position:	Technical Design Lead - Schemes
Organisation:	Milestone Infrastructure Ltd, Oxford
Date:	11 January 2024

## 8. Overseeing Organisation Statement

<p><b>On behalf of the Overseeing Organisation, I certify that:</b></p> <p><b>1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed with the design organisation; and</b>  <b><del>2) the Overseeing Organisation Instruction will be progressed.</del></b></p>	
Name:	Anthony Kirkwood
Signed:	<i>A. Kirkwood</i>
Position:	Vision Zero team leader
Organisation:	Oxfordshire County Council
Date:	24 June 2024