

A10 Stoke Newington Gyratory Gyratory Removal

Stage 1 Road Safety Audit

Ref: 3201/004/A10/TLRN/2018

Prepared for:

TfL Project and Programme Sponsorship

By:

Road Safety Audit, TfL Engineering

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Version	Status	Date
A	Audit report issued to Client	16/08/2018

1.0 INTRODUCTION

1.1 Commission

- 1.1.1 This report results from a Stage 1 Road Safety Audit carried out on the A10 Stoke Newington Gyratory, Gyratory Removal proposals.
- 1.1.2 The Audit was undertaken by TfL Road Safety Audit in accordance with the Audit Brief issued by the Client Organisation on 14th June 2018. It took place at the Palestra offices of TfL on 8th August 2018 and comprised an examination of the documents provided as listed in Appendix A, plus a visit to the site of the proposed scheme.
- 1.1.3 The visit to the site of the proposed scheme was made on 8th August 2018. During the site visit the weather was sunny and the existing road surface was dry.

1.2 Terms of Reference

- 1.2.1 The Terms of Reference of this Audit are as described in TfL Procedure SQA-0170 dated May 2014. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and how it impacts on all road users and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit. An absence of comment relating to specific road users / modes in Section 3 of this report does not imply that they have not been considered; instead the Audit Team feels they are not adversely affected by the proposed changes.
- 1.2.2 This Safety Audit is not intended to identify pre-existing hazards which remain unchanged due to the proposals; hence they will not be raised in Section 3 of this report as they fall outside the remit of Road Safety Audit in general as specified in the procedure SQA-0170 dated May 2014. Safety issues identified during the Audit and site visit that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in Section 4 of this report.
- 1.2.3 Nothing in this Audit should be regarded as a direct instruction to include or remove a measure from within the scheme. Responsibility for designing the scheme lies with the Designer and as such the Audit Team accepts no design responsibility for any changes made to the scheme as a result of this Audit.
- 1.2.4 In accordance with TfL Procedure SQA-0170 dated May 2014, this Audit has a maximum shelf life of 2 years. If the scheme does not progress to the next stage in its development within this period, then the scheme should be re-audited.
- 1.2.5 Unless general to the scheme, all comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan located in Appendix B.
- 1.2.6 It is the responsibility of the Design Organisation to complete the Designer's response section of this Audit report. Where applicable and necessary it is the responsibility of the Client Organisation to complete the Client comment section of this Audit report. Signatures from both the Design Organisation and Client Organisation must be added within Section 5 of this Audit report. A copy of which must be returned to the Audit Team.

1.3 Main Parties to the Audit

1.3.1 Client Organisation

Client contact details: Tracey Smith – TfL Sponsorship

1.3.2 Design Organisation

Design contact details: Samuel Barnes – TfL TDE

1.3.3 Audit Team

Audit Team Leader: Chris Gooch – TfL Road Safety Audit

Audit Team Member: Shane Martin – TfL Road Safety Audit

Audit Team Observer: None present

1.3.4 Other Specialist Advisors

Specialist Advisor Details: None present

1.4 Purpose of the Scheme

1.4.1 The purpose of the scheme is:

- Removal of the one way gyratory to allow two-way traffic to operate along the A10 Stoke Newington High Street and Rectory Road.
- Junction amendments (including traffic signal layouts, geometry and method of control) to facilitate two-way traffic operation.
- Rationalisation of bus services and diversion of routes to ease bus-on-bus congestion. Southbound bus services can now directly access the High Street.
- Introduction of a 20mph speed limit.
- Closure of side road accesses at Tysen Road, Hollar Road & Batley Road to accommodate pocket parks / parklets (yet to be designed).
- Continuous footways proposed at Victoria Road, Victoria Grove and Dyenvors Road to provide pedestrians and cyclists priority over traffic.
- New northbound stepped cycle track on High Street.
- Loading within the aforementioned cycle track will likely be timed, with loading only permitted between the hours of 8pm and 6am. The cycle track should be free from obstructions outside these hours.
- New southbound bus lane on High Street.
- New continuous footways at Victorian Road and Victorian Grove
- Closure of the Evering Road junction with Manse Road to discourage rat running.
- Provision of new two-way advisory cycle lanes along Brooke Road.
- Raised junctions and areas of carriageway to encourage a slower traffic environment.
- Stoke Newington High Street to be raised between Stoke Newington Church Street and Brooke Road. Carriageway to be coloured to provide a gateway effect along a section which is constrained width.
- Controlled pedestrian crossings to be provided with a coloured walking carpet.

- Chamfered kerbs for on / off footway loading for the raised section of carriageway between Stoke Newington Church Street and Brooke Road. Dropped kerbs are to be provided at loading bays extents to facilitate loading.
- Ramps to raised areas to be 1.5m long to accommodate 1:20 gradient.
- Relocation and rationalisation of parking and loading.
- Provision of a central refuge (<6mm upstand) along Rectory Road. This can be overrun by traffic, but is to provide a visual narrowing of the carriageway.
- Provision of new controlled crossing facilities at a number of junctions, and standalone crossing along the links.
- Revised / renewed Side Road Entry Treatments at a number of side roads*.

*Taken directly from the Audit Brief.

1.5 Special Considerations

- 1.5.1 The Audit Team has been informed that loading will be permitted within the stepped track between Brooke Road and Stoke Newington Church Street between the hours of 6am to 10am rather than between 8pm and 6am as stated in the Road Safety Audit brief.

2.0 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

The Audit Team is not aware of any other Audits having been carried out on the proposals.

3.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

This section should be read in conjunction with Paragraphs 1.2.1, 1.2.2 and 1.2.3 of this report.

3.1 JUNCTIONS

3.1.1 PROBLEM

Location: A – Victorian Grove and Victorian Road junction with Stoke Newington High Street, continuous footways.

Summary: The two-way operation of the minor arm may reduce the likelihood of drivers giving way to pedestrians / cyclists at the junction. This could result in an increased risk of collisions between pedestrians / cyclists and vehicles turning left from Stoke Newington High Street.

It is proposed to provide a continuous footway side road treatment at the Victorian Grove and Victorian Road junctions. The traffic count surveys show that between 11 and 29 vehicles will turn left from Stoke Newington High Street into these two side roads. Whilst the number of vehicle movements is relatively low, the continuous footway at these locations may pose the following issues:

- The left-in from Stoke Newington High Street could result in an increased risk of collisions between pedestrians / cyclists on the footway and vehicles turning into Victorian Grove / Road, both of who may assume they have right of way. A recent study has found that drivers are most likely to give way to pedestrians when they are turning out of a side road, rather than turning in.
- Cyclists on the cycle track are likely to approach the crossing at a faster speed than pedestrians, and will also approach from behind the driver. Drivers may therefore fail to appreciate the presence of a cyclist approaching the crossing and turn across their path. This may result in left hook type collisions. The recent study also showed that drivers are more likely to give way to users who are on or very near the continuous footway than those approaching it.
- Stoke Newington High Street was observed to be relatively busy. Drivers following vehicles turning into Victorian Grove / Road may not expect them to stop to give way to pedestrians / cyclists. This may result in an increased potential for shunt type collisions.

RECOMMENDATION

It is recommended that the junctions are made left out only.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>The design team has previously investigated restricting turning manoeuvres at both junctions, however it is not practical to make all roads joining onto the high street exit only. There is a Police Station located along Victoria Road which requires quick vehicular access to and from Stoke Newington High Street during emergency calls, making the conversion of Victoria Road one-way out impractical. Furthermore, the borough do not support new one-way streets, meaning that the existing two-way operation has been retained for Victoria Grove.</p> <p>The Highway Code is clear in that pedestrians and cyclists should have priority over traffic at side roads. High streets should be road environments where pedestrians and cyclists have priority over all other traffic, which in the case of side roads, is already supported by Rules 170, 183 & 206 of the Highway Code. Continuous</p>	

footways support these rules effectively as the design emphasises cycling and walking along the main street as having priority. This in turn is supported by the traffic flows, where the average ratio of pedestrians to vehicles is 5.4:1 and 9:1 for Victoria Road during weekday and weekend hours respectively, as well as ratios of 8.4:1 and 9.2:1 for Victoria Grove (for the same hours).

The study the Audit Team refers to is fundamentally flawed in that no comparison or control data has been included. Whilst it is acknowledged that the give way behaviours of drivers turning into and out of the side roads differ depending on the manoeuvre type and flows, no comparison has been made to similar observations at normal side roads or at side roads with standard side road entry treatments. Continuous footways are commonplace on the continent where they are often seen as best practice, whilst there are also a number of continuous footways already installed by local boroughs and on the TLRN without any known collision issues.

The issue of cyclists undertaking slower moving traffic with the potential for left hook manoeuvres at side roads applies to stepped tracks as well as nearside cycle lanes. The stepped cycle track should highlight the presence of cyclists, and as explained above, pedestrians and cyclists have legal priority whilst crossing side roads, therefore placing the responsibility for the driver to look for and acknowledge any pedestrians and cyclists crossing the side road(s). It is also not practical for cyclists to give way to turning traffic at side roads, as behaviourally cyclists like to keep momentum.

The continuous footway designs will be presented at Public Consultation, with strong support from the borough and the Walking and Cycling Commissioner for London. Approvals are still outstanding from the Equality Impact Assessment process and the Streetscape Design Review Group. If these approvals are not forthcoming, the design will be amended to incorporate enhanced side road entry treatments which include tactile paving.

Client Organisation Comments	
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Part Accepted	Agree with Designer
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3.1.2 PROBLEM

Location: B – Stoke Newington High Street northbound, junction with Stoke Newington Church Street.

Summary: Drivers turning left into Stoke Newington Church Street may not appreciate that cyclists have re-joined the carriageway from the stepped track. This may result in left hook type collisions.

The stepped cycle track on Stoke Newton High Street terminates within the advanced cycle stop line (ASL) area at the junction with Stoke Newington Church Street. Up until this point, cyclists will have been segregated from general traffic and could be travelling at speed adjacent to queuing traffic. Drivers turning left into Stoke Newington Church Street (approximately 40% of all movements at present) may not appreciate that a cyclist has re-joined the carriageway and may be continuing ahead beside them. Drivers may therefore turn left across the cyclist's path. This may result in a left hook type collision. This is of particular concern with drivers of heavy goods vehicles where nearside visibility may be restricted.

RECOMMENDATION

It is recommended that an early cycle release signal is specified to reduce the risk of left hook type collisions at this location. Measures to better highlight the presence of cyclists on the nearside of drivers on the approach to the junction should also be provided. This could include shortening the stepped track and providing an on-carriageway feeder lane into the ASL.

Design Organisation Response	Accepted / Part Accepted / Rejected
Width constraints have forced the early termination of the stepped track, prohibiting the track to be continued further north of Stoke Newington Church Street.	
An early cycle release was investigated and modelled for the northbound junction approach, though the traffic modelling showed that the impacts on congestion and bus journey time delays along the high street were unlikely to be acceptable to get scheme approval.	
The design will be altered to include the slight shortening of the stepped track and providing an on-carriageway feeder lane into the ASL. The proposed ASL will enable cyclists to position themselves ahead of waiting traffic when held on red.	
The design team will also investigate whether an advisory cycle lane could be provided on the northbound junction exit, therefore protecting cyclists until a safer merger point further north.	
Client Organisation Comments	
Part Accepted	
The stepped track leads into the asl giving drivers turning left visibility of cyclists in the asl. Early starts are not mandatory for asl's and while providing an early start would have been a benefit to cyclist, it can not be accommodated in this scheme due to impacts on bus journey times.	
Reducing the stepped track and providing an on carriageway lead in lane, give cyclists less protection and drivers a less visible infrastructure to be aware off.	
Client agrees with advisory cycle lane could be provided on the northbound junction exit, therefore protecting cyclists until a safer merger point further north.	

3.1.3 PROBLEM

Location: C – Stoke Newington High Street northbound, junction with Northwold Road.

Summary: Stationary traffic may obstruct visibility to the nearside primary traffic signal. Drivers may fail to see the traffic signals. This may result in red light violations or nose to tail type collisions.

Stoke Newington High Street flares to two lanes on the approach to the junction, with the nearside lane for ahead traffic and the offside lane for right turning traffic only. The two lanes have their own phase within the method of control, with the right turn held whilst the ahead lane is given a green signal in stage 1. Visibility to the offside primary signal may be obstructed by stationary southbound buses in the adjacent stop. Similarly, high sided stationary vehicles in the nearside lane may restrict visibility to the nearside primary traffic signal for drivers wishing to turn right. Inadequate visibility may result in red light violations (with potential for collisions with opposing traffic) or nose to tail type collisions as drivers fail to appreciate the traffic signal in time and brake late.

RECOMMENDATION

It is recommended that appropriate visibility is provided to the traffic signals from all lanes. This could be achieved by relocating / shortening the bus stop.

Design Organisation Response	Accepted / Part Accepted / Rejected
Opportunities to relocate the bus stops are limited, as the length of the cages have been determined by the number of services accessing the stops as well as the required entry and exit tapers.	
The bus cage on the southbound junction exit has been relocated further south, which should minimise the risk of buses tailing back through the junction. In addition, a new traffic island has been proposed on the northbound approach which will allow the location of an offside primary traffic signal.	
A far sided secondary signal is proposed on the northbound approach, whilst closely associated secondary traffic signals will be proposed on the southbound junction approach.	
The changes outlined above should ensure the traffic signals are appropriately visible on the junction approaches.	
Client Organisation Comments	
Accepted	Client agrees with designer

3.1.4 PROBLEM

Location: D – Stoke Newington High Street northbound, junction with Stoke Newington Church Street.

Summary: Lane widths on the northbound exit of the junction could cause cyclists to be squeezed by passing vehicles. This may result in side swipe type collisions.

On the approach to the junction, the lane width is shown as 3.2m with a 2.1m stepped cycle track which terminates at the advanced cycle stop line. On the exit from the junction, the carriageway narrows to 3.2m where the western kerb has been built out. Northbound cyclists could be squeezed towards the kerb by passing vehicles as they exit the junction. This could result in side swipe type collisions.

RECOMMENDATION

It is recommended to make the entry and exit widths consistent to allow cyclists to exit the junction without being squeezed by passing traffic. The provision of an early cycle release signal may also reduce the risk of cyclists being squeezed on the exit from the junction.

Design Organisation Response	Accepted / Part Accepted / Rejected
An early cycle release was investigated and modelled for the northbound junction approach, though the traffic modelling showed that the impacts on congestion and bus journey time delays along the high street were unlikely to be acceptable to get scheme approval.	
The design will be altered to include shortening of the stepped track and providing an on-carriageway feeder lane into the ASL. The proposed ASL will enable cyclists to position themselves ahead of waiting traffic when held on red.	
The western kerbline will also be realigned to provide a 3.0m wide northbound traffic lane alongside a 1.5m advisory cycle lane up to the junction with Garnham Street.	
Client Organisation Comments	
Part accepted	
Early starts are not mandatory for asl's, The proposed ASL will enable cyclists to position themselves ahead of waiting traffic when held on red.	
Reducing the stepped track and providing an on carriageway lead in lane, give cyclists less protection and drivers a less visible infrastructure to be aware off.	
Client agrees that the western kerbline should be realigned to provide a 3.0m wide northbound traffic lane alongside a 1.5m advisory cycle lane up to the junction with Garnham Street.	

3.1.5 PROBLEM

Location: E – Stoke Newington High Street junction with Victorian Grove.

Summary: Vehicles in the loading bay may restrict intervisibility between drivers turning left into Victorian Grove and northbound cyclists. This may result in left hook type collisions.

It is proposed to provide a continuous footway side road treatment at the Victorian Grove junction incorporating the stepped cycle track. Loading bays are provided immediately to the south of the junction. Vehicles parked in the loading bays may restrict intervisibility between drivers turning left into Victorian Grove and northbound cyclists who have priority. Drivers may therefore fail to appreciate the presence of a cyclist approaching the junction and turn left across their path. This may result in left hook type collisions.

RECOMMENDATION

It is recommended that the loading bays are relocated to ensure suitable intervisibility can be provided between drivers turning left and northbound cyclists. Alternatively, ban the left turn into Victorian Grove (see 3.1.1)

Design Organisation Response	Accepted / Part Accepted / Rejected
The design will be amended to realign the cycle track along the offside (carriageway side) of the inset bay, therefore ensuring cyclists will not be obstructed by loading vehicles for traffic turning left into Victoria Grove.	
Client Organisation Comments	
Accepted	Agree with designer

3.1.6 PROBLEM

Location: F – Manse Road eastbound approach to the junction with Rectory Road.

Summary: The building line of Tate House may obstruct visibility to / for pedestrians and the traffic signals on the northern side of the crossing. This may result in late braking (shunt type collisions) and / or collisions between eastbound traffic and crossing pedestrians.

It is proposed to signalise the junction of Manse Road and Rectory Road and provide signal controlled pedestrian crossing facilities. Whilst the 20mph speed limit is noted, the building line of Tate House on the north-western corner of the junction may restrict visibility for eastbound drivers to traffic signals and the northern side of the pedestrian crossing facility. This may result in the following issues:

- a) Eastbound drivers on Manse Road may fail to see the traffic signal in time. This could result in late braking (with the potential for associated shunt type collisions), or increase the likelihood of red light violations (potential for collisions with pedestrians using the crossing facility).
- b) Visibility to / for pedestrians waiting on the northern side of crossing may also be restricted. Eastbound drivers may fail to see pedestrians on the nearside of the crossing (and vice versa). This may result in potential collisions with users of the crossing, particularly if users are crossing out of phase.

RECOMMENDATION

It is recommended that appropriate visibility is provided to the traffic signals and the pedestrian crossing facility. This could be achieved by building out the kerb line (subject to appropriate swept path analysis).

Design Organisation Response	Accepted / Part Accepted / Rejected
The design team will investigate whether the northern footway can be built out to better position the traffic signal and crossing point further south beyond the building line. The extent of the buildout will be limited due to vehicle swept paths. Furthermore, a far sided secondary traffic signal will be proposed at a more central location opposite the eastbound approach to ensure road users have better visibility of the traffic signals.	
Client Organisation Comments	
Accepted	Agree with designer

3.1.7 PROBLEM

Location: G – Rectory Road northbound approach to the junction with Manse Road

Summary: Restricted junction intervisibility may result in collisions between traffic turning left into Manse Road and pedestrians using the crossing facility.

Junction intervisibility between Manse Road and Rectory Road northbound is restricted by the wall on the south-western corner of the junction. Where the junction intervisibility zone is limited, drivers may enter into the controlled area unaware that vehicles or pedestrians from a previous stage may not have completed their manoeuvre. This is of particular concern for drivers turning left into Manse Road as they may be unable to see the southern side of the pedestrian crossing facility. This may result in vehicle to pedestrian collisions.

RECOMMENDATION

It is recommended that appropriate intervisibility is provided between all users of the junction. This could be achieved by relocating the crossing facility and / or stop lines.

Design Organisation Response	Accepted / Part Accepted / Rejected
The design team will investigate whether the southern footway on Manse Road could be built out, though the extents of the buildout is likely to be limited due to the need to accommodate vehicle swept paths. Other changes to be investigated include whether the Manse Road crossing could be re-angled to move the crossing point slightly further east (subject to keeping the intergreens the same), whilst the stop line on the northbound approach could be relocated further north.	
Client Organisation Comments	
Accepted	Agree with designer

3.1.8 PROBLEM

Location: H – Northwold Road junction with Alkham Road.

Summary: The vertical alignment of the carriageway may restrict forward visibility to the give way line. This could result in late braking (with the potential for shunt type collisions) or drivers failing to give way to opposing traffic (side impact type collisions).

It is proposed to change the priorities at the junction so that drivers on Northwold Road give way to traffic turning to / from Alkham Road. The give way line is located on the eastern side of the humped bridge across the railway line. Forward visibility to the give way is restricted by the vertical alignment at this location. Drivers may fail to appreciate the junction layout and the need to give way. This could result in late braking (with the potential for shunt type collisions) or drivers failing to give way to opposing traffic (side impact type collisions).

RECOMMENDATION

It is recommended that the priorities are reversed so that traffic turning right from Northwold Road into Alkham Road gives way to eastbound traffic on Northwold Road.

Design Organisation Response	Accepted / Part Accepted / Rejected
The give way road markings will be supplemented by vertical signing which should be clearly visible to approaching eastbound traffic. Furthermore, the 20mph speed limit in conjunction with the raised Zebra crossing on the eastbound approach should ensure approaching traffic speeds are low.	
Client Organisation Comments	
Rejected	Agree with designer

3.1.9 PROBLEM

Location: General to scheme, multiple locations.

Summary: Provision of signal controlled junctions that include opposed right turn movements may result in failure to give way type collisions.

The removal of the gyratory and the provision of two-way movement results in opposed right turns at a number of the junctions. The provision of opposed right turns at the junctions may be inherently less safe than the existing gyratory layout where movements are unopposed. This could result in an increase in the number of collisions at these locations (failure to give way for drivers turning right).

RECOMMENDATION

It is recommended that the signal phasing is adjusted so that the right turns at the junctions run unopposed.

Design Organisation Response	Accepted / Part Accepted / Rejected
Whilst the design team fully acknowledge the issue raised, it is not possible to amend all junction signal phasing so that the right turns remain unopposed. The scheme has been subject to traffic signal modelling, with close scrutiny given to protecting bus journey times. An extra stage would be required within the method of control for the majority of junctions to accommodate for the unopposed right turns.	

This would further delay traffic (including buses) and lead to increased congestion.

The design team have separately staged the right turn for some of the most heavily trafficked junctions with the study area, including the northbound right turn at the Stoke Newington High Street junction with Northwold Road, as well as providing a southbound right turn overlap at the Stoke Newington High Street junction with Stoke Newington Church Street. Right turn manoeuvres are unopposed at the Stoke Newington High Street junction with Brooke Road, as well as the Manse Road junction with Rectory Road.

It should be noted that running the right turn movements opposed is not uncommon within London, and is often the case where traffic flows are sufficiently high that running an additional stage within the Method of control is not feasible due to the impacts on capacity and journey time delays.

Client Organisation Comments	
Rejected	Agree with designer

3.2 NON MOTORISED USER PROVISION

3.2.1 PROBLEM

Location: I – Stoke Newington High Street, stepped track between Brooke Road and Stoke Newington Church Street.

Summary: Loading vehicles obstructing the cycle track could result in cyclists being unseated, collisions with pedestrians, or side swipe type collisions with northbound traffic.

Loading will be permitted within the stepped track between Brooke Road and Stoke Newington Church Street between the hours of 6am to 10am. Whilst it is understood that northbound cycle numbers between these times are expected to be relatively low, loading within the cycle track may pose the following issues:

- a) A 65mm high chamfered kerb is proposed between the stepped track and the carriageway. Cyclists will be required to re-join the carriageway if their path is blocked by a loading vehicle. Leaving / joining the cycle track via the chamfered kerb could cause a cyclist to become unseated and fall from their bicycle, risking injury.
- b) It is proposed to provide a flush kerb between the cycle track / loading bays and the footway. Cyclists may move onto the footway to negotiate the loading vehicle. This may result in collisions with pedestrians on the footway.
- c) Cyclists will be required to re-join the carriageway if their path is blocked by loading vehicles. Northbound drivers may not anticipate a cyclist leaving the stepped track to re-join the carriageway. This could result in side swipe type collisions between cyclists and northbound traffic.

RECOMMENDATION

It is recommended that loading is only permitted outside of the AM, PM and inter-peaks to ensure that the cycle facilities are available during the busiest periods. Any facility provided should facilitate cyclists being able to enter / leave the cycle track should their path be blocked by a loading vehicle.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>There is a necessity to accommodate loading along the High Street in the section between Stoke Newington Church Street and Brooke Road. There are a number of Public Houses, financial services and local businesses located along this section which will require daily or weekly deliveries. Given the width constraints, it has not been possible to incorporate a stepped track separate from the loading provision, therefore the decision was made to limit loading along this section to certain hours of the morning (when northbound cycle flows are less) so that the cycle track remains unobstructed for the majority of the day and evening.</p> <p>Alternative timings for loading being permitted between the hours of 8pm to 6am were suggested by the design team, but these hours have been deemed inappropriate for local businesses by the Client Organisation representative as deliveries would only occur outside standard trading hours. The exact hours are still subject to Public Consultation.</p> <p>An alternative design is being investigated whereby the cycle track is flush with the carriageway, with an upstand instead provided between the cycle track and footway. This would address the issues raised in points a) and b), although cyclists would be provided with less physical protection as a result. Another possibility is to use angled kerbs to provide cyclists with an easily navigable transition between the footway and carriageway (solving point a), although the height of the kerb would likely mean that the cycle facility and footway are still flush (with Problem b being outstanding), albeit separated by a raised segregating strip. This is subject to further discussion and Public Consultation.</p> <p>Cyclists would be expected to see the occupation of the loading bays significantly in advance of reaching the stepped track, and would be expected to take appropriate action to rejoin the carriageway safely when an opportunity to take a central riding position is presented. Our current design would incorporate frequent dropped kerbs, providing cyclists with frequent opportunities to rejoin the carriageway or cycle facility after avoiding an obstruction.</p>	
Client Organisation Comments	
<p>Part accepted</p> <p>Loading bay times will be clearly visible to cyclists indicating cycling is not permitted at these times. The loading bays are also clearly visible so if they are in use and cyclist should not enter the shared space if the path is clearly blocked and should leave the cycle track and join the carriageway at the junction with Brooke Road.</p>	

3.2.2 PROBLEM

Location: J – Stoke Newington High Street northbound, on-carriageway loading / parking bays.

Summary: Loading activity within the cycle track may force cyclists into the carriageway. This may result in side swipe type collisions with northbound traffic.

The proposed stepped cycle track runs alongside a number of loading / parking bays located within the carriageway. Whilst it is appreciated that a 0.5m wide dooring buffer has been provided, the Audit Team are concerned that pedestrians, users unloading and disabled users entering / exiting these vehicles, may do so within the cycle track, obstructing cyclists. Cyclists may therefore enter the general traffic lane to avoid such activities, potentially into the path of vehicles, who may not expect such manoeuvres. This may result in side swipe type collisions.

RECOMMENDATION

It is recommended that sufficient space is provided to permit parking / loading activities whilst providing sufficient clearance to the cycle track.

Design Organisation Response	Accepted / Part Accepted / Rejected
The design complies with the London Cycling Design Standards whereby a 2m cycle track is provided alongside a loading bay with the marking of a 0.5m dooring zone.	
Client Organisation Comments	
Rejected	Agree with designer

3.2.3 PROBLEM

Location: K – Rectory Road, uncontrolled pedestrian crossing between Stoke Newington Common and Sanford Terr.

Summary: The width of the island may not be adequate to accommodate pedestrians. This may result in pedestrians being clipped by passing vehicles risking injury.

It is proposed to provide an uncontrolled crossing facility with a refuge island across Rectory Road. The width of the island is shown as 1.3m. The width of the island may not be adequate to accommodate pedestrians in wheelchairs or those with pushchairs / prams. These users may overhang into the carriageway where they may be at risk of being clipped by passing vehicles, risking injury.

RECOMMENDATION

It is recommended that the island is widened to accommodate all expected users. This may require local widening of the carriageway. Alternatively, provide a controlled crossing facility to allow the carriageway to be crossed in a single movement.

Design Organisation Response	Accepted / Part Accepted / Rejected
The crossing will be amended to a Zebra crossing to allow the carriageway to be crossed in a single movement. No tactile paving will be provided within the refuge, however the islands will be retained to act as a horizontal traffic calming feature.	
Client Organisation Comments	

Accepted	Agree with designer
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3.2.4 PROBLEM

Location: L – Northwold Road eastbound, to the east of the junction with Rectory Road.

Summary: Stationary buses may restrict intervisibility between drivers and pedestrians at the Zebra crossing. Drivers may fail to see and give way to pedestrians at the Zebra crossing. This may result in potential collisions with users of the crossing.

It is proposed to provide a Zebra crossing across Northwold Road between its junctions with Rectory Road and Alkham Road. A bus stop is proposed in advance of the crossing. Stationary buses in the stop may restrict intervisibility between eastbound drivers overtaking the bus and pedestrians on the northern side of the crossing. Drivers may not see the pedestrians and fail to stop and give way. This may result in potential collisions with users of the Zebra crossing.

RECOMMENDATION

It is recommended that appropriate visibility is provided to / from the Zebra crossing. This could be achieved by relocating or shortening the bus stop.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>The presence of the Zebra crossing should be clearly visible to approaching traffic. The crossing is to be tabled in conjunction with introducing a 20mph speed limit to ensure speeds approaching the Zebra crossing are low. The deflection posed by the horizontal alignment also ensures traffic will be directed towards the nearside having overtaken the bus cage. Reducing the approach speeds should ensure approaching traffic will have sufficient time to brake safely in advance of a pedestrian stepping out onto the crossing from the nearside.</p> <p>In addition, the proposed zig-zag markings have been extended by two marks and the bus cage relocated west further west.</p>	
Client Organisation Comments	
Part accepted	Agree with designer

3.2.5 PROBLEM

Location: General to scheme – stepped cycle track on Stoke Newington High Street.

Summary: Cyclists may not appreciate the presence of the kerb between the stepped track and the carriageway. This may result in cyclists losing control and falling from their bicycle.

It is proposed to provide a stepped cycle track northbound along Stoke Newington High Street. The Audit Team are aware of a number of recent instances where cyclists may have lost control and fallen from their bicycle due to the layout of similar facilities. It is understood that cyclists may not have appreciated the presence of the kerb when joining / leaving the track. This issue may be exacerbated at this location as loading will be permitted within the track (between certain hours) which will force cyclists to leave / re-join the track.

RECOMMENDATION

It is understood that a study has been commenced by TfL to consider the layout of stepped tracks and how cyclists interact with this type of facility. It is recommended that the proposed layout is reviewed following any outcome of that study.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>A stepped cycle track provides physical protection for cyclists from conflict with general traffic due to the vertical kerb upstand along the edge of carriageway, which is why the stepped track is preferred over an advisory or mandatory cycle lane. Whilst the design team acknowledge that there have been reported instances of cyclists becoming destabilised due to the presence of the kerb upstand, these instances are statistically rare and do not detract from the overall safety benefits a stepped track provides over an advisory or mandatory cycle lane.</p> <p>The design team will await the results of TfL's study before finalising the design, but in the meantime the proposals for the stepped track will remain.</p> <p>It should be noted that there is insufficient width to provide a continuous fully segregated northbound cycle track which would otherwise be the preferred level of provision along Stoke Newington High Street.</p>	
Client Organisation Comments	
Part Accepted Agree with designer	

End of list of problems identified and recommendations offered in this Stage 1 Road Safety Audit

4.0 ISSUES IDENTIFIED DURING THE STAGE 1 ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

Safety issues identified during the audit and site inspection that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrants that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.

4.1 ISSUE

Location: 1 – Stamford Hill southbound, junction with Northwold Road.

Reason considered to be outside the Terms of Reference: Detailed design issue.

The far sided secondary signal for traffic turning left from Stamford Hill onto Northwold Road is positioned on the eastern side of the pedestrian crossing across Stoke Newington High Street. The signal will be visible to the drivers of buses and cyclists as they continue ahead onto Stoke Newington High Street. Drivers continuing ahead could think that the red signal applies to them and mistakenly stop in advance of the pedestrian crossing (it is appreciated that most traffic will be buses whose drivers will be familiar with the route). It is recommended that an alternative location for the signal is considered at detailed design.

Design Organisation Response	Accepted / Part Accepted / Rejected
The secondary traffic signal heads will be relocated on to closely associated poles.	
Client Organisation Comments	
Part Accepted Agree with designer	

4.2 ISSUE

Location: 2 – Stamford Hill junction with Northwold Road, bus lane.

Reason considered to be outside the Terms of Reference: Item for consideration rather than a defined road safety concern.

The pedestrian crossing phase across Northwold Road runs in the same stage as the ahead movement for southbound buses between Stamford Hill and Stoke Newington High Street. Cyclists are likely to attempt to turn left illegally from the bus lane rather than move to the offside lane to make the manoeuvre legally. Cyclists undertaking this manoeuvre would be in direct conflict with pedestrians using the crossing. It is recommended that a catch stop line is provided to safely permit the left turn for cyclists from the bus lane.

Design Organisation Response	Accepted / Part Accepted / Rejected
An internal stop line will be provided to ensure cyclists (or other traffic) do not turn onto the crossing whilst the pedestrian phase is active.	
Client Organisation Comments	
Accepted Agree with designer	

4.3 ISSUE

Location: 3 – Stoke Newington High Street, northbound stepped cycle track to the north of Kynaston Avenue.

Reason considered to be outside the Terms of Reference: Detailed design issue.

No vertical feature to highlight the start of the stepped track has been provided. Northbound vehicles may overrun the start of the track. It is recommended that an island (as provided elsewhere) or similar is provided to highlight the start of the stepped track to northbound drivers.

Design Organisation Response	Accepted / Part Accepted / Rejected
Agreed – an island will be provided which will incorporate a vertical wand or bollard.	
Client Organisation Comments	
Accepted Agree with designer	

4.4 ISSUE

Location: 4 – Stoke Newington High Street, northbound stepped track between Brooke Road and Stoke Newington Church Street.

Reason considered to be outside the Terms of Reference: Detailed design issue.

It is proposed to permit vehicles to load within the cycle track between Brooke Road and Stoke Newington Church Street. The markings denoting the loading bay will be provided along the kerb. Notwithstanding the Problem raised in 3.2.5, the markings may mask the presence of the kerb to cyclists. Cyclists who fail to appreciate the presence of the kerb may be destabilised as they attempt to join / leave the stepped track. This could result in the cyclist being dismounted, risking injury. It is recommended that the markings are offset from the kerb edged so that the kerb is more visible to cyclists.

Design Organisation Response	Accepted / Part Accepted / Rejected
Agreed - see also response to Problems 3.2.1 & 3.2.5.	
Client Organisation Comments	
Part Accepted – loading bays will be clearly marked and will be in a different material to carriageway materials. Cyclists will also have the same amount of visibility as pedestrians that the kerb is a different colour than the carriageway and note the step change.	

4.5 ISSUE

Location: 5 – Stoke Newington High Street, northbound stepped track between Brooke Road and Stoke Newington Church Street.

Reason considered to be outside the Terms of Reference: Item for consideration rather than a defined road safety concern.

It is proposed to permit vehicles to load within the cycle track between Brooke Road and Stoke Newington Church Street. The stepped track will be flush with the footway at this location. The majority of the loading bays are relatively narrow (2.1m) and will be raised above the carriageway by 65mm. Drivers may be shy of the kerb edge and instead overhang into the footway, narrowing the available width. It is recommended that the loading bays are widened to deter vehicles from overhanging the footway.

Design Organisation Response	Accepted / Part Accepted / Rejected
Part accepted - See response to Problems 3.2.1 & 3.2.5. Proposals to drop the cycle track so that it is flush with the carriageway would resolve this issue, although at the expense of lessening protection for cyclists. Widening the bays is unlikely to be practical due to the narrow footway widths along this section in conjunction with the adjacent lanes being only 3.2m wide.	
Client Organisation Comments	
Part Accepted – loading bays will be clearly marked so no encroaching on footway is necessary. Loading bay is also 2.1m wide and the meets the requirements of being outside the minimum width of 1.8m	

4.6 ISSUE

Location: 6 – Stoke Newington High Street outside No. 68 (White Hart Public House).

Reason considered to be outside the Terms of Reference: Item for consideration rather than a defined road safety concern.

There appears to be an area designated for off carriageway parking / loading immediately outside the White Hart public house. This has not been accommodated within the proposed scheme. If access is still required, it is recommended that the design is adjusted as necessary to accommodate this existing feature.

Design Organisation Response	Accepted / Part Accepted / Rejected
A loading bay is proposed directly outside of the pub along the western frontage of Stoke Newington High Street, south of Tyssen Road. In reference to the existing vehicle crossover, this is a historic feature which is no longer required as vehicle access to the rear of the Pub is no longer possible.	
Client Organisation Comments	
Rejected Agree with Designer	

4.7 ISSUE

Location: General to scheme – Raised tables at the signalised junctions.

Reason considered to be outside the Terms of Reference: Detailed design issue.

It is proposed to provide raised tables at the signal controlled junctions throughout the scheme. At many locations, the edge of the associated pedestrian crossing facilities is immediately adjacent to the ramp for the raised table. Pedestrians passing close to the edge of the ramp could trip and fall due to the change of level. It is recommended that a shoulder is provided between the ramp and the edge of the crossing studs.

Design Organisation Response	Accepted / Part Accepted / Rejected
Pedestrians would be expected to cross within the confines of the crossing, whilst those crossing outside of the crossing extents should not be at risk of falling due to the 1:20 ramp gradients which are shallower than the maximum 1:12 gradient for a dropped kerb crossing.	
Client Organisation Comments	
Rejected	agree with designer

4.8 ISSUE

Location: General to scheme – footways.

Reason considered to be outside the Terms of Reference: Detailed design issue.

It is proposed to narrow the existing footway at a number of locations to accommodate partially inset loading bays / bus stops and the stepped cycle track. There are a number of items of street furniture and shops with on-footway displays, which combined with the proposed footway narrowing, could result in an unacceptably narrow footway width. It is recommended that an adequate footway width can be maintained.

Design Organisation Response	Accepted / Part Accepted / Rejected
A review of the existing street furniture has not been undertaken at this stage. An objective of the scheme will be to ensure the streetscape is free from unnecessary clutter, with a view to maximising the clear available footway widths. Further details will be provided at detail design.	
Client Organisation Comments	
Accepted	

TfL will approach LB Hackney regarding street trading and licencing.

5.0 SIGNATURES AND SIGN-OFF

5.1 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and documents listed in Appendix A. to this Safety Audit report. The Road Safety Audit has been carried out in accordance with TfL Procedure SQA-0170 dated May 2014, with the sole purpose of identifying any feature that could be removed or modified in order to improve the safety of the measures. The problems identified have been noted in this report together with associated suggestions for safety improvements that we recommend should be studied for implementation.

No one on the Audit Team has been involved with the design of the measures.

AUDIT TEAM LEADER:

Name: Chris Gooch
BSc. (Hons), CMILT, MCIHT, MSoRSA

Signed:



Date: 16/08/2018

Organisation: Transport for London, Road Safety Audit
Engineering Services, Highways Engineering Team

Address: 3rd Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ

Contact:



AUDIT TEAM MEMBER:

Name: Shane Martin MCIHT, MSoRSA

Signed:



Date: 16/08/2018

Organisation: Transport for London, Road Safety Audit
Engineering Services

Address: 3rd Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ

Contact:



5.2 DESIGN TEAM STATEMENT

In accordance with SQA-0170 dated May 2014, I certify that I have reviewed the items raised in this Stage 1 Safety Audit report. I have given due consideration to each issue raised and have stated my proposed course of action for each in this report. I seek the Client Organisation's endorsement of my proposals.

Name: Samuel Barnes

Position: Senior Engineering Leader

Organisation: TfL Engineering

Signed: S Barnes

Dated: 24/08/2018

5.3 CLIENT ORGANISATION STATEMENT

I accept these proposals by the Design Organisation.

Name: Tracey Smith

Position: Principal Sponsor

Organisation: TfL Sponsorship

Signed: 

Dated: 11/10/2018

5.4 SECONDARY CLIENT ORGANISATION STATEMENT (where appropriate)

I accept these proposals by the Design Organisation.

Name: David McKenna

Position: Lead Sponsor

Organisation: TfL Network Sponsorship

Signed: 

Dated: 09/06/2020

APPENDIX A

Documents Forming the Audit Brief

DRAWING NUMBER

ST-PJ472C-RSM-FEA-04-DR-TE-01-0000 to 0020 Rev. P00.1
ST-PJ472C-RSM-FEA-04-DR-TE-02-0001 & 2.

DRAWING TITLE

A10 Stoke Newington Gyratory Feasibility Design TfL – Option 1
A10 Stoke Newington Gyratory Feasibility Design TfL
Stoke Newington Gyratory Preliminary Design for Discussion North and South Sections

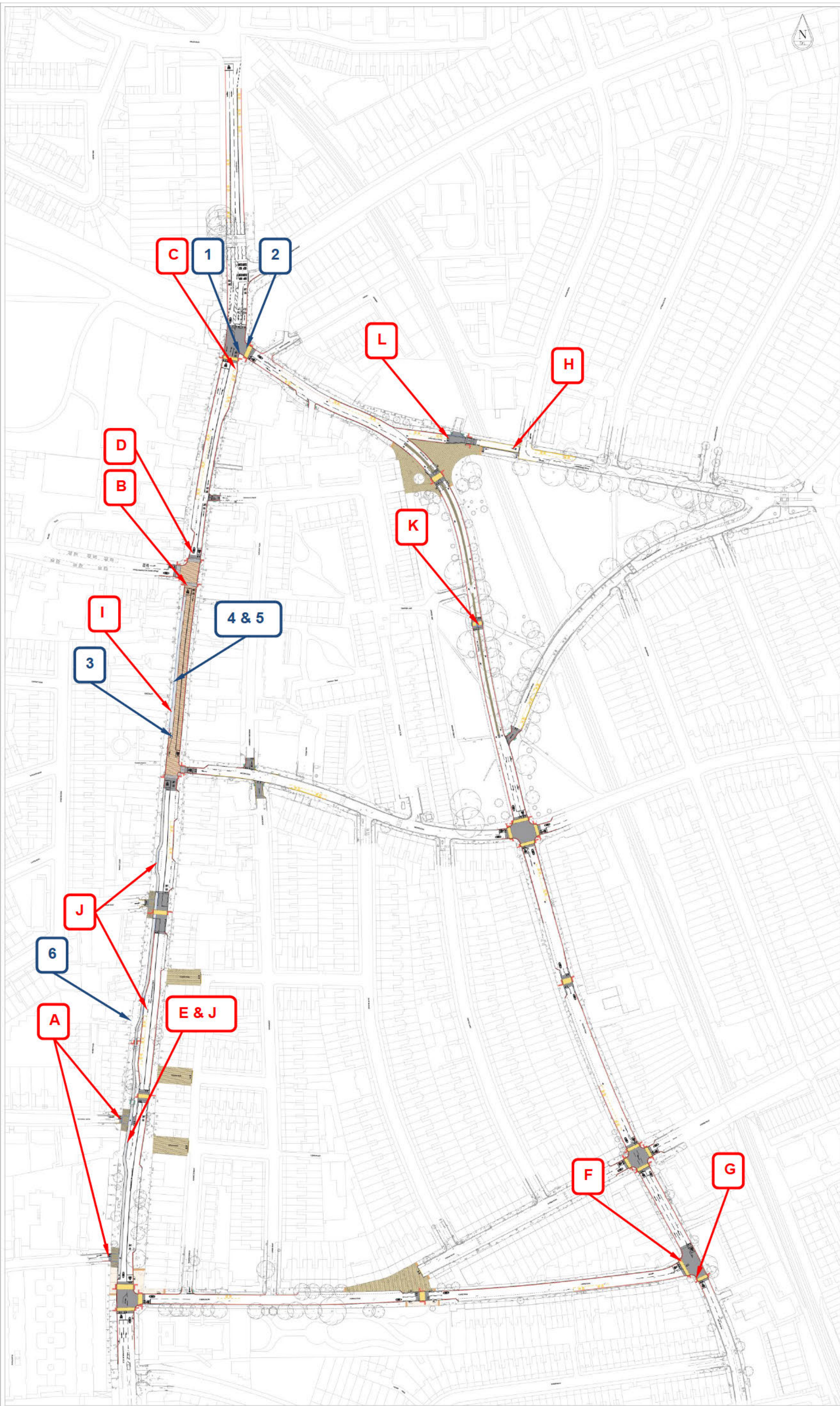
DOCUMENTS

- ☒ Safety Audit Brief
- ☐ Site Location Plan
- ☒ Traffic signal details
- ☐ TfL signal safety checklist
- ☐ Departures from standard
- ☐ Previous Road Safety Audits
- ☐ Previous Designer Responses
- ☒ Collision data
- ☒ Collision plot
- ☒ Traffic flow / modelling data
- ☒ Pedestrian flow / modelling data
- ☐ Speed survey data
- ☐ Other documents

DETAILS (where appropriate)

APPENDIX B

Problem Locations



rev	date	details	dm	chk	app


rev	date	details	dm	chk	app

LB HACKNEY

scheme
A10 STOKE NEWINGTON GYRATORY
FEASIBILITY DESIGN
TFL - OPTION 1
OVERVIEW

Transport for London
Surface Transport

Road Space Management
Outcomes Design Engineering



Valencia
171, Southwark Road
London
SE1 1NU

date	scale	drawn	checked	app	sheet no
JUNE 2017	1:1250 @ A1	SS	GT	SRB	0001 OF 6026
SS					

drawing No
ST-PJ472C-RSM-FEA-04-DR-TE-01-0001

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