



**'Tooting Bec' A24 Upper Tooting Road junction  
with Tooting Bec Road  
Safer Junctions programme**

**Brief**

**June 2018**

# **A24 Upper Tooting Road junction with Tooting Bec Road**

## **Brief**

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## 1. Background

### Strategic context

Transport for London, as the highway authority, has responsibility for maintaining, operating and improving the Transport for London Road Network in London. This network comprises around five per cent of all roads in London, but carries over one third of all traffic.

The transport network plays a vital role in supporting economic growth, by linking people to jobs, delivering products to markets and supporting domestic and international trade. Transport also promotes social cohesion, by providing access to key services, such as health and education services, shops and leisure facilities.

The Mayor's Transport Strategy sets out a clear commitment to the Vision Zero approach to eliminating road deaths and serious injuries on London's roads. Vision Zero includes a number of programmes designed to tackle road danger reduction, including Safer Junctions.

Safety improvements at specific junctions will be critical to achieving the Mayor's Vision Zero ambition in reducing road danger and following the analysis of the road casualty data, the Safer Junctions list was published in April 2017 and identified 73 junctions on the TLRN with the highest Vulnerable Road User (VRU) collision rate. The list includes:

- 21 junctions which have been upgraded in the last three years,
- 33 at which TfL were already investigating improvements, and
- 19 where investigations would begin.

Over the period 2013 – 2015, 1819 KSIs (all modes) were recorded at all junctions in London. This data was used to identify the sites to be prioritised for study. 46 KSIs were recorded at the 19 new locations which are being investigated as part of the Safer Junctions programme.

It should be noted that the junctions in the Safer Junction programme are also major locations of social interaction and in many cases perform an important 'place' function. Hence design proposals should seek to make these locations more appealing to pedestrians and cyclists, with the aim of reducing road danger throughout the Safer Junction scheme area. This holistic approach will not only drive down collisions, but improve the urban realm, encourage modal shift to walking and cycling, and contribute to wider regeneration objectives.

Examples of interventions that should be considered for all Safer Junctions include:

- New and/or improved pedestrian crossings
- Innovative facilities to separate cyclists from traffic in time and space, and improve existing cycle facilities where they exist
- Wider pedestrian footways, and decluttering of existing footways
- 'Floating' bus stops
- Opportunities to introduce Sustainable Urban Drainage

- Opportunities to introduce pocket parks, improved hard and soft landscaping, and new cycle parking
- A review of street lighting throughout the scheme area, to identify any sub-standard locations
- Measures to reduce traffic speeds (including consideration of 20mph), and ensure those speed reductions are self-enforcing (e.g. through raised pedestrian crossings)
- Measures to bring about traffic reduction through the junction (e.g. traffic lane removal, where practicable and without significant adverse impacts on buses; making roads accessible to pedestrians, cyclists and buses only)
- Opportunities for increased bus priority

In June 2018, the TfL Healthy Streets Portfolio Board approved the Safer Junctions programme budget of £0.5m in 2018/19 to continue work on the 19 junctions where collision investigations began in 2017/18.

### Local context

The junction of Upper Tooting Road and Tooting Bec Road within the London Borough of Wandsworth is situated along the A24 corridor. The A24 is a strategic arterial corridor that runs in a south-westerly direction between the GLA boundary and Clapham Common. Within LB Wandsworth, the A24 is generally a bi-directional traffic, two lane road (with stretches of bus lanes in some sections), Cycle Superhighway 7 (CS7) also runs along the full length of the A24 in LB Wandsworth, providing cyclists with an unsegregated route.

Tooting Bec underground station is situated at the junction of Upper Tooting Road and Tooting Bec Road, with station entrances on both the northern and southern corners of the junction. There is a public house on the western corner of the junction. On the A24 to the north-east and south-west of the junction, there is a mixture of local businesses with residential flats above. There are local residences on Tooting Bec Road and Trinity Road.

The existing pedestrian crossing facilities are good, with controlled crossings on all arms of the junction and a diagonal crossing across the centre of the junction to serve the underground station entrances. However, the footways are relatively narrow and there are steep gradients to the dropped kerbs. Consequently the local infrastructure can act as a physical and / or psychological barrier to the movement of people. Coupled with high levels of pedestrian flows outside the underground station, this can create an environment that is unpleasant and potentially unsafe.

The alignment of the arms of the junction is poor and this can impede inter-visibility of turning vehicles. On the north-eastern arm, the alignment creates a problem for south-westbound cyclists who are more vulnerable to left-hook movements.

Generally, traffic levels at the junction are relatively high, particularly in the peak AM and PM periods. There is a part-time right-turn prohibition at the traffic signals from Tooting Bec Road to Balham High Street operational between 7am and 7pm, Monday to Friday.

In the existing road layout, the character of the junction may offer limited opportunities for wide-scale place making features, but decluttering and urban realm improvements may be feasible to improve the junction's Healthy Streets rating.

### Collision Issues

30 personal injury collisions occurred in the 36 month period ending 31<sup>st</sup> October 2016, of which three resulted in serious injuries (9.1%). This is above the comparative rate of 12.6% for ATS junctions on the TLRN in Inner London Boroughs.

Key collision issues at the junction of A24 Upper Tooting Road junction with Tooting Bec Road include:

- 11 collisions (36.7%) involved a pedal cyclist

Table 3 - Comparative Collision Rates

Factor	Collisions		Expected Rate (%) <sup>2</sup>
	Number	% <sup>1</sup>	
Total	30	100.0%	-
Total per year	10.0	-	-
Total per km year	-	-	100.00 / 100.00
Priority Score	0	-	-
Injury			
Fatal and Serious	3	10.0%	12.6%
Slight	27	90.0%	87.4%
Modal			
Pedestrian	8	26.7%	21.6%
Pedal Cycle	11	36.7%	25.3%
Powered Two Wheeler	10	33.3%	25.4%
Bus or Coach	2	6.7%	11.2%
Goods Vehicle	4	13.3%	14.5%
Manoeuvre			
Overtaking	4	13.3%	9.4%
Right turning	12	40.0%	21.0%
Left turning	3	10.0%	10.1%
U-turning	0	0.0%	2.1%
Cond			
Non-dry	5	16.7%	17.1%
Dark	10	33.3%	34.8%

<sup>1</sup> Shading indicates where a collision rate is higher than the comparative average

<sup>2</sup> Comparative rate is derived from Collision Levels in Greater London Issue 14: 2011 to 2013, comparison table: ATS (Inner Borough)

- 10 collisions (33.3%) involved a motorcyclist (P2W)
- 8 collisions (26.7%) involved a pedestrian
- 12 collisions (40.0%) involved a vehicle turning right
- 4 collisions (13.3%) involved an overtaking manoeuvre

## 2. Commission

To appoint Traffic Design Engineering (TDE) to carry out feasibility and concept design. TDE will act as the Principal Designer and carry out all the duties under the CDM Regulations 2015.

The scope of this commission is for TDE to consider the content of the A3 Clapham Road / Union Road collision study report (as supplied Appendix A) together with the comments and recommendations provided by key internal stakeholders at the site meeting (as supplied in Appendix B) and further develop these to:

- Provide feasibility design options based on the potential interventions to reduce road danger, including exploring opportunities to improve cycle facilities, encourage pedestrian priority, reduce traffic dominance and vehicle speeds and where possible introduce urban realm improvements and / or green infrastructure (See also, 'Strategic Context');
- Provide concept design of the preferred option;
- Utilise the results from the base Healthy Streets surveys undertaken by TDE to inform the design;
- Assist the Sponsor to assess the impact of proposals using the TfL's City Planner strategic assessment framework tool;
- Provide designs to TfL Network Performance in order for them to undertake traffic modelling of recommended solutions for the design of all options and to assess local impacts. TfL Network Performance will be commissioned separately by the TfL Sponsor;
- Provide technical input to the Sponsor for the Business Case and other required paperwork in preparation for associated programme and portfolio boards;
- Calculate potential collision savings and other quantifiable benefits which may be derived, such as more walking and cycling; and,
- Provide a detailed Microsoft project programme and cost estimate for TDE tasks related to carrying out the feasibility and concept designs.

In order to adhere to the required timescale, it is recommended that certain surveys required by the LoHAC design team for detailed design may be required to be procured during the concept design stage. All additional surveys required to carry out the design, will require prior authorisation from the Sponsor. TDE to provide specification and quotations to the Sponsor so that separate survey commissions can be agreed.

The design has to be produced and comply with all the relevant design standards and TfL specific requirements.

Figure 1 overleaf shows the geographic scope of the study with the local context.



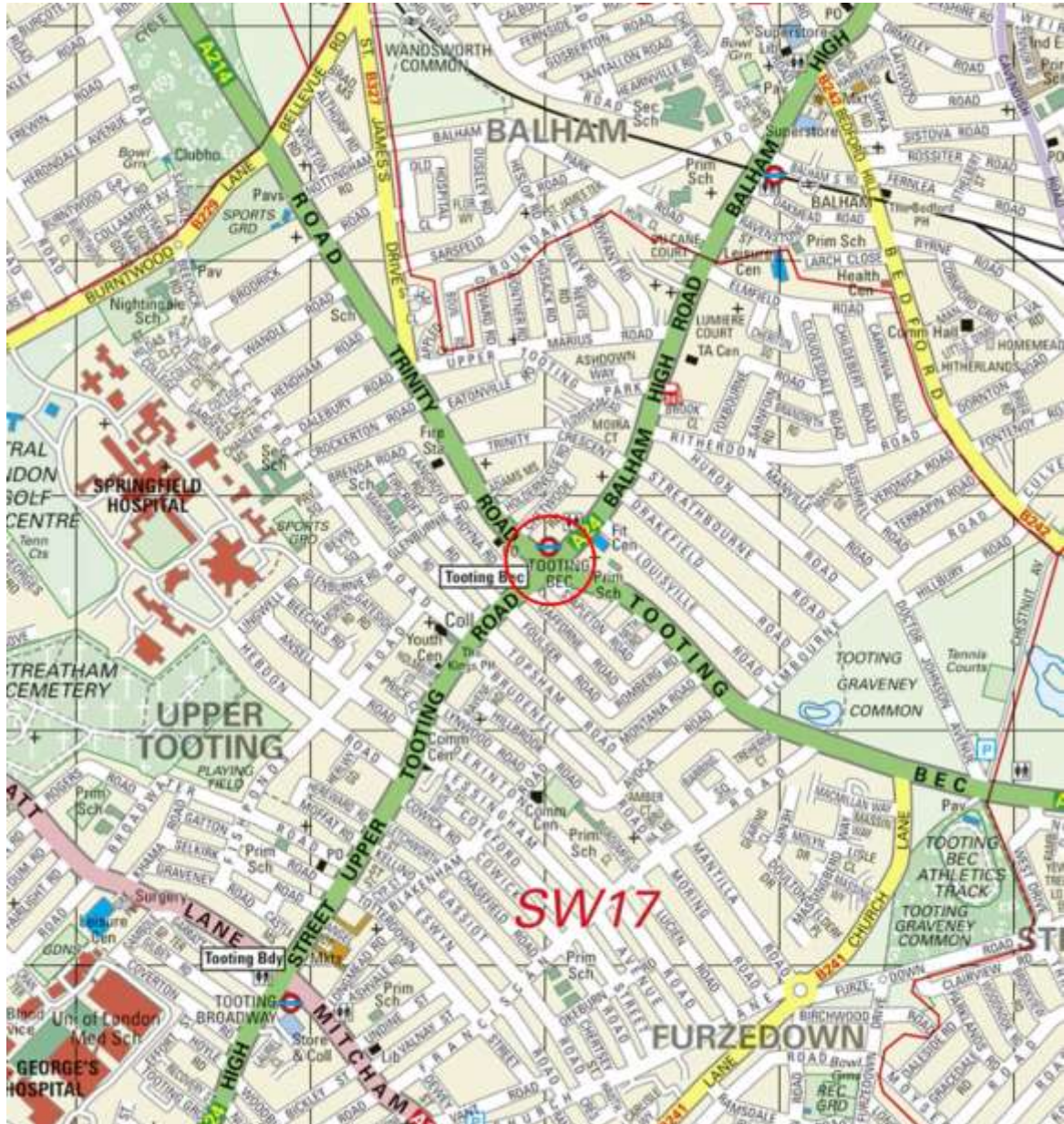


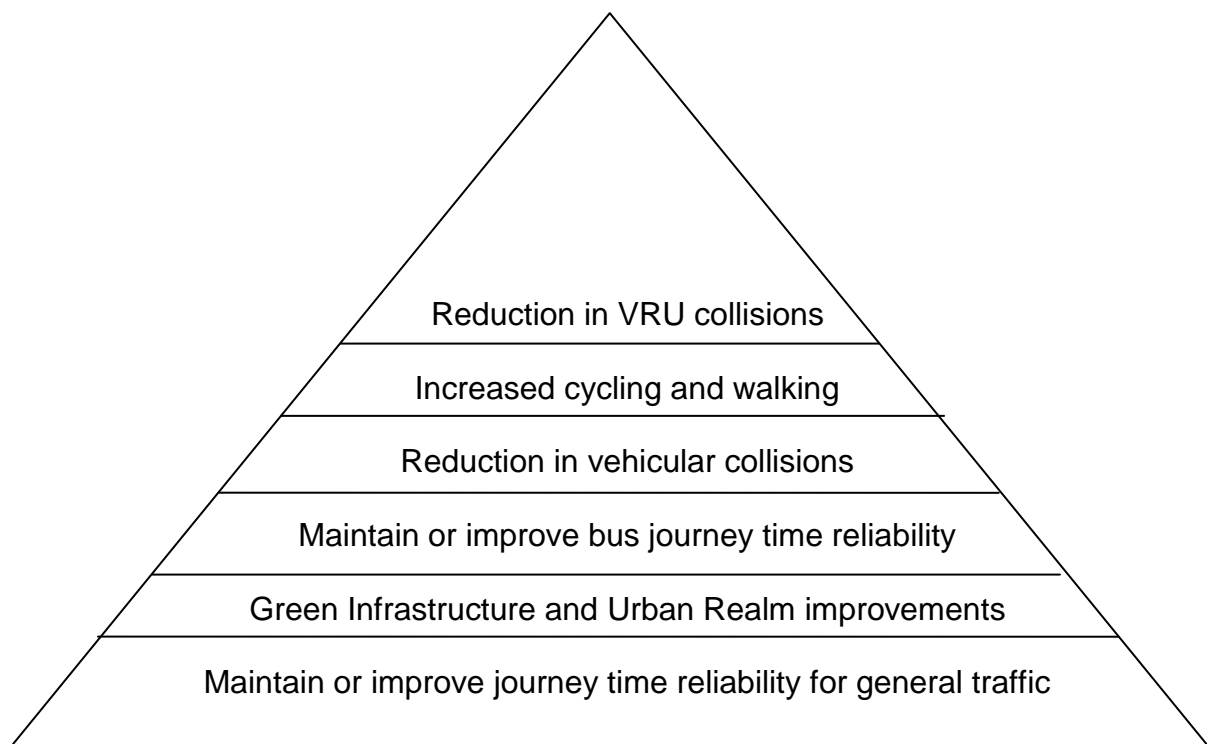
Figure 1 - Network in scope for intervention

## Considerations – Safer Junctions Programme Wide

Initial findings from the first collision studies into new locations indicate that the challenges highlighted at some Safer Junction locations may include the need to make trade offs. For example:

- Traffic re-timings of signals and the large impact of changes to traffic across several lanes, but this could impact negatively on the bus network
- Pedestrian behaviour (with no historical record of personal injury collisions) of crossing injudiciously or informally across junctions could be resolved by an all-round pedestrian signal stage
- Side road closures resulting in more stakeholder agreement being needed
- The delay of improvements to a location because of other planned changes or factors

It is accepted that in order to provide a holistic approach to reducing road danger, some design considerations may be in direct contradiction with each other. To assist in the prioritisation of proposed measures, this hierarchy of needs is to be followed:





There are several elements to the Design Strategy for the Safer Junctions programme which should be considered.

### **Design Strategy - Overarching Principles**

- **Highways Infrastructure** – To see significant improvements in addressing collision patterns and reducing road danger for vulnerable road users, meaningful changes and improvements are needed to the highways infrastructure. The provision of direct crossings and raised tables can highlight pedestrian priority and reduce the dominance of vehicular traffic.

For cyclists, direct cycle lanes, tracks, two-stage right turns, left-turn on footway, and early release traffic signals should be investigated, especially where there is future cycle demand. ASLs and advisory cycle lanes are not considered sufficiently transformational for Safer Junctions.

The use of public transport for longer trips should be encouraged by bus priority measures including bus lane extensions and bus gates should also be considered. Wherever possible, impacts to the bus network should be mitigated.

- **Street Makeover** - By encouraging more pedestrians to spend time in the area through enhancing the place function of the site, vehicle dominance in the area will be reduced.

Streetscape and urban realm improvements can design out conflict points while enabling pedestrians to safely follow desire lines. This can include, but is not limited to removal of clutter, introducing pocket parks and green infrastructure (eg. sustainable urban drainage), wider, better quality pavements and cycle parking. This also helps support a number of Healthy Streets indicators including shade and shelter, places to stop, people feel relaxed and clean air, which would not routinely be addressed through traditional highway infrastructure improvements.

Removal of through traffic from selected residential streets can remove key dangerous manoeuvres and provide opportunities for streetscape improvements.

An Urban Designer has been appointed to the Safer Junctions programme to provide technical input and strategic guidance to facilitate the incorporation of Streetscape and urban realm improvements into the designs for this Safer Junction.

- **Safety and Security** – Reduced speed limits, especially 20mph, are known to reduce the severity of collisions and encourage more active forms of transport. A high quality urban environment will in turn result in more passive surveillance to reduce crime and encourage more active forms of transport.
- **Future Proofed** – The pressures on the street are ever-changing and so the design needs to be adaptable to change: flexible on a daily basis and resilient over the long-term. The Safer Junctions programme will need to

respond to any known intensifying role as a focal point for pedestrian, cyclist or motorcyclist activity.

- Innovative – The deliverables need not rely solely on tried and tested measures. Where appropriate, efforts should be made to trial innovative and creative solutions in order to reduce road danger.
- Safer Streets for All – A dimension of the design strategy is to increase motorist awareness of all vulnerable road users. The design should support the provision of alternative modes such as walking and cycling, in particular focussed on shorter trips to local main attractors where there is most scope for increased use, such as nearby town centres and public transport interchanges.

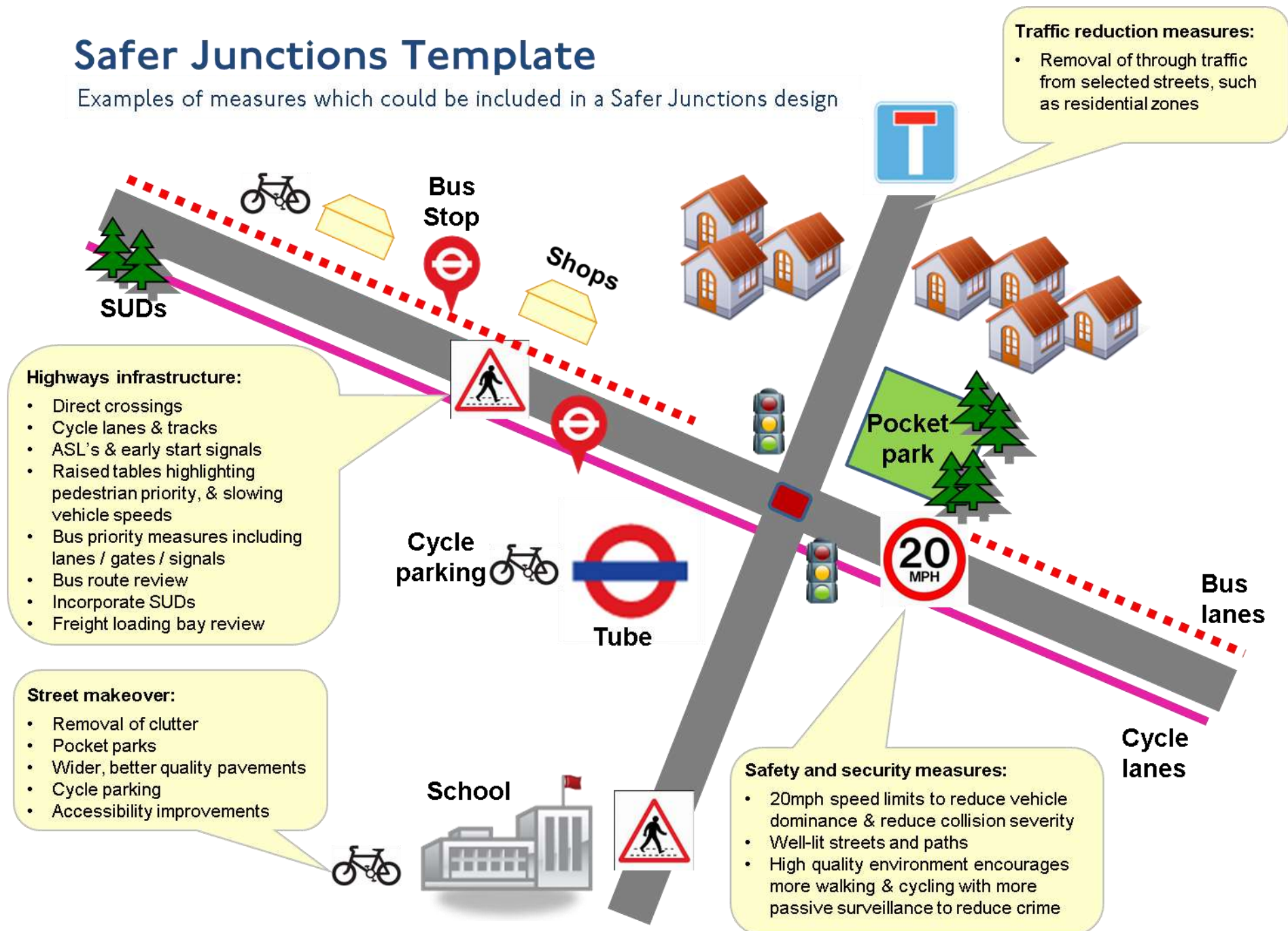
Where appropriate, having a distinct change in the character of the junction may be appropriate to encourage motorists to slow down, especially where cyclists travel and where pedestrians cross frequently.

Whilst additional motorised trips should not be encouraged within the Safer Junctions programme, the safety of motorcyclists should be protected through the design of the individual projects.

- Parking and Loading - Special consideration should also be given to loading and parking along the route and maintaining or improving servicing arrangements. Loading pads which allow for footways to open up during the busiest periods is one approach that could provide for different users at different times of the day.
- Behaviour Change Initiatives – Where possible, if a location is identified which may also benefit from softer road safety interventions, this should be highlighted to the Sponsor to bring to the attention of colleagues in Customer Communication and Technology (CCT).

### Examples of measures which could be included in a Safer Junctions design

### Examples of measures which could be included in a Safer Junctions design



## Other Relevant Investigations

Currently Strategy and Network Development (S&ND) is not aware of any other ongoing investigations or projects at the junction of the A24 Upper Tooting Road junction with Tooting Bec Road which TDE should also be aware of. A high level sketch of the junction has previously been designed to improve cycle facilities at the junction, but this is not currently being progressed.

Other investigations in the wider local area being undertaken which are of relevance to this study are:

- Tooting Pedestrian Town Centre pilot – Major project to deliver safety and pedestrian ambiance benefits. Aims of the project are to reduce pedestrian and cycle collisions using innovative and creative methods, increase the level of pedestrian activity in the town centre and improve the pedestrian environment. The scheme extends from south of Tooting Bec junction to Longley Road on the A24, and Mitcham Road between Tooting Broadway and Avarn Road. A proportion of the funding has been allocated to LB Wandsworth for Behaviour Change activities. Tooting Broadway junction also forms part of the Safer Junctions programme.

Measures include a 20mph speed limit throughout the scheme extents; widened raised crossing points relocated to where pedestrians want to cross; continuous footways to promote pedestrian priority across the side roads; removal of parking on the TLRN and a reduction in loading facilities; fully or partially inset loading pads to improve bus and cycle passage and improve visibility of cyclists at junctions. At Totterdown Street, the road will be restricted to access only and a new public area will be created with new green infrastructure and places for people to rest and spend time.

The project is due to go to public consultation in September 2018 and construction is expected in Summer 2019 for around 18 months. This coincides with the expected delivery date of the Tooting Bec Safer Junction project of May 2020.

- Tooting Bec Road junction with Elmbourne Road – London Borough of Wandsworth are proposing to ban the right turn into Elmbourne Road from Tooting Bec Road to alleviate issues of through traffic. As part of this project it is proposed to reinstate the prohibited right turn at the Tooting Bec junction on the TLRN. LB Wandsworth are aware of the Safer Junctions proposals at this location and would like to ensure that the following scenarios are also put forward:
  - Reinstating the right turn from Tooting Bec Road into Balham High Road.
  - Switching the banned right turn movement from Tooting Bec Road – Balham high Road to Trinity Road – Upper Tooting Road.
  - Maximising traffic efficiency at the junction by cutting back footways to maximise road space and removing the Red Route loading bay on Tooting Bec Road.
  - Split phase the traffic signals to permit both right turn movements from Tooting Bec Road and Trinity Road to be permitted.

- Balham High Road between Balham Station Road and Tooting Bec Road safety scheme: A draft collision study has been carried out along this section and recommendations include the provision of extended Keep Clear markings; alterations to the parking and loading provisions; street lighting survey and implementation of associated recommendations; alterations to the traffic signal method of control at the junction of Ritherdon Road; installation of cycle logos and decluttering.

### Proposed Measures for Feasibility and Concept Design under this Commission

These proposals are based on the recommendations made in the Collision Study prepared by TDE, comments made at the site meeting of 10<sup>th</sup> April 2018 and at the post-site meeting involving key internal stakeholders held at the TfL offices at Palestra on 17<sup>th</sup> April 2018.

TDE are instructed to investigate and provide feasibility and concept designs, which could include a combination of the following proposals:

#### **1. Lack of facilities for south-westbound cyclists to access the ASL**

**Summary:** Cyclists on the A24 south-westbound carriageway are unable to access the ASL when the approaches lanes are used by two adjacent vehicles, despite this being a cycle superhighway. This puts cyclists at a risk of left-hook type collisions and being squeezed by passing vehicles.

**Proposal:** 1. Investigate the potential to provide early-release for cyclists on the A24; 2. Cut back the north-eastern footway and reallocate the lane widths accordingly; or, 3. Extend the nearside south-westbound bus lane to the stop line at the Tooting Bec Road junction, forcing vehicles to turn left from the offside lane and giving cyclists greater lane width to assert their position through the junction.

**Potential impacts:** May impact junction capacity, including buses. Potential impact to traffic will be determined by traffic modelling, which will be carried out by NP.

#### **2. North-eastbound cyclists vulnerable to left-turning traffic**

**Summary:** In the existing road layout, the A24 north-eastbound approach lane is narrow and has a short and narrow feeder lane for cyclists to access the ASL. There are no dedicated facilities for cyclists to be protected from vehicles turning left into Trinity Road when continuing north-east over the junction. This puts them at an increased risk of left-hook type collisions.

**Proposal:** Investigate the potential to provide early-release for cyclists on the A24 and lengthen and widen the cycle feeder lane to the ASL.

**Potential impacts:** May impact junction capacity, including buses. Potential impact to traffic will be determined by traffic modelling, which will be carried out by NP. This proposal will have to be developed in conjunction with the proposals immediately to the south for Tooting Town Centre.

### 3. Tight junction alignment

**Summary:** The junction does not form a standard cross-road alignment. The A24 south-westbound deviates sharply to the right through the junction and the side roads of Trinity Road – Tooting Bec Road north-eastbound deviates sharply to the left. This can make turning movements at the junction difficult to undertake, especially for buses which turn right (north-west to north-east). Consequently there is a part-time right turn ban from Tooting Bec Road to Balham High Road at peak times. This alignment also presents a risk to motorcyclists and cyclists who may position themselves away from where they may be expected by adjacent vehicles to progress through the junction.

Traffic often queues through the junction due to exit blocking, merging lanes of traffic or right turning vehicles blocking those wishing to continue ahead. This means that pedestrians may choose to cross between stationary or slow-moving traffic on a red-man signal and with poor visibility around the junction. This is of particular concern as traffic can appear from multiple directions at this junction under the existing method of signal control. Site observations showed that although there is a formal north-south diagonal crossing point over the centre of the junction, because this runs during an all-red stage, pedestrians undertake the longer east-west movement diagonally as well.

**Proposals:** Redesign the junction to promote a more symmetrical layout. Investigate changes to the method of signal control, possibly running each arm separately.

Investigate extending the right turn prohibition from Tooting Bec Road into Balham High Road to a full time feature.

Provide right turn markings in the centre of the junction to indicate to drivers wishing to turn right into Tooting Bec Road where to position themselves.

Investigate the provision of a double mini roundabout

**Potential impacts:** May impact junction capacity, including buses. Potential impact to traffic will be determined by traffic modelling, which will be carried out by NP. Traffic may reassign to alternative local roads.

The provision of a double mini roundabout may not operate adequately given the traffic volumes at this junction. Furthermore, this would remove the formal diagonal crossing at this junction and position crossing pedestrians further from the junction away from key desire lines outside the station. This could also be more hazardous for visually and mobility impaired pedestrians.

#### 4. Short inter-green periods

**Summary:** It was noted that the inter-green periods around the junction are relatively short. This can lead to conflicts occurring in the centre of the junction within the traffic signal cycle. Site observations showed that right turning vehicles generally have to wait in the middle of the junction for a gap in the opposing traffic flow and turn within these inter-green periods. They often do not clear the junction in good time, running the red light at the end of their vehicle stage. Whilst the junction is reasonably large, it becomes cramped due to vehicles trying to perform ahead and right-turn movements in multiple directions simultaneously.

**Proposals:** Review the traffic signal timings for the junction and explore any suitable improvements.

**Potential impacts:** May impact junction capacity, including buses. Potential impact to traffic will be determined by traffic modelling, which will be carried out by NP.

#### 5. Provide a double mini roundabout

**Summary:** Vehicles turning left from Upper Tooting Road into Trinity Road often encroach into the south-eastbound ASL which puts cyclists at risk of being struck.

**Proposal:** Undertake swept path analysis for the largest vehicles expected to use the junction and make alterations to the ASL accordingly so that large vehicles can turn left without encroaching the ASL.

**Potential impacts:** Reduction in the size of the ASL may be proposed as a result of the swept path analysis.

#### 6. Tooting Bec Road cycle improvements

**Summary:** The existing Advanced Stop Line (ASL) at this location is relatively shallow and access to the ASL is restricted since the feeder lane is narrow and short.

**Proposals:** Increase the depth of the ASL and investigate widening and increasing the length of the feeder lane / cycle lane on the approach to the junction.

**Potential impacts:** Tracking requirements for large vehicle turning at the junction will need to be considered.



## 7. **Narrow pedestrian crossing point – Tooting Bec Road**

**Summary:** The existing pedestrian crossing point over Tooting Bec Road is relatively narrow given its proximity to Tooting Bec Underground Station. This can reduce pedestrian comfort levels and also reduce driver awareness of pedestrians at this junction.

**Proposal:** Widen the pedestrian crossing point on Tooting Bec Road.

**Potential impacts:** Coupled with the proposals to increase the depth of the ASL on Tooting Bec Road, this may push drivers further back from the junction and interrupt the junction inter-visibility zone.

## 8. **Risk of cyclists being struck in the ASL by left turning vehicles**

**Summary:** Vehicles turning left from Upper Tooting Road into Trinity Road often encroach into the south-eastbound ASL which puts cyclists at risk of being struck.

**Proposal:** Undertake swept path analysis for the largest vehicles expected to use the junction and make alterations to the ASL accordingly so that large vehicles can turn left without encroaching the ASL.

**Potential impacts:** Reduction in the size of the ASL may be proposed as a result of the swept path analysis.

## 9. **Narrow footway on the eastern corner of the junction**

**Summary:** The footway outside The Wheatsheaf public house is narrow and could result in pedestrians over-spilling into the carriageway.

**Proposal:** Investigate widening the footway at this location.

**Potential impacts:** There may be limited potential to widen the footway at this location without adversely affecting the carriageway widths for cyclists, turning buses and general traffic.

## PPD Elements to deliver in advance of the TDE design

Certain issues have been observed on site and can be delivered in advance of TDE designing the project. These are to be passed to TfL Projects and Programme Directorate (PPD) to rectify.

### 10. **Steep dropped kerbs**

**Summary:** There are steep footway gradients towards the dropped kerbs at the crossing points around the junction. This could hinder pedestrians with pushchairs or mobility impairments and reduces the level of pedestrian comfort.

**Proposal:** Re-profile the footways.

**Potential impacts:** Re-profiling may not be feasible due to the London Underground station building and assets underneath the junction as well as cellars underneath belonging to the public house on the western corner of the junction.

### 11. **Pedestrian guardrail restricts effective footway width and is used for cycle parking**

**Summary:** Several panels of pedestrian guardrail are situated on the southern side of Tooting Bec Road, restricting the effective footway width. This is exacerbated by the pedestrian guardrail being used to facilitate cycle parking. This also potentially causes a risk to cyclists being squeezed on the nearside by large vehicles turning left.

**Proposal:** Removal the guardrail on Tooting Bec Road. Locations for alternative cycle parking should also be investigated.

### 12. **Lack of cycle logo in ASL**

**Summary:** The cycle logo is missing from the ASL on the Balham High Road (north-east arm) approach. The lack of a cycle logo in the ASL may reduce the effectiveness of a dedicated area for this vulnerable road user group.

**Proposal:** Install a cycle logo within the ASL.

### 3. Methodology

#### Identifying potential interventions

TDE is required to produce feasibility designs for each site identified as a Safer Junction site. These may vary in cost for delivery; PPD Commercial should lead on all cost estimating for emerging designs, in collaboration with the Designer. The final interventions are expected to remain within an overall budget of circa £5m (including all design development, project management, sponsorship, communications, and miscellaneous delivery costs).

Early Contractor Involvement will be considered by PPD, in order to inform the cost estimates, and help the designer address risks at any early stage (e.g. in relation to statutory undertakers and procuring necessary surveys).

S&ND will make available any relevant completed studies, which describe issues and suggest solutions. TDE should not rely on collating existing ideas, and will be expected to develop design recommendations independently.

Innovative and creative solutions may be proposed, but non-standard or unapproved techniques will need to be agreed by the Sponsor before significant work is undertaken in developing these options.

The design should address the following issues:

- Improve road safety, focussing on, but not limited to vulnerable road user collisions;
- Facilitating public realm improvements to encourage more people to spend time in the area and maximise the junction's potential against TfL's Healthy Streets indicators;
- Improving local ambience through increasing TfL's green estate. This will also mitigate the exposure of pedestrians (especially children), cyclists and motorcyclists to fumes from stationary traffic and maximising opportunities for carbon capture and sequestration, addressing environmental impacts;
- Improving accessibility and severance issues for pedestrians and cyclists, including cycle parking provisions;
- Journey time reliability should be maintained or improved for buses where feasible;
- In acceptance of the role of Principal Designer, all CDM Regulation 2015 requirements will apply including managing, co-ordinating and programming the feasibility and concept design to include all aspects for delivering the design (i.e. Engineering and Technical Services, Traffic Infrastructure, Network Impact Management, WCAP, Highways Technical Approval Authority, external including contractors for surveys and London Borough of Lambeth etc.). The S&ND Principal Sponsor will send a letter formally appointing TDE as Principal Designer and provide the initial PCI separately.

### Feasibility designs

TDE is expected to undertake 2D geometric designs of intervention measures for identified locations. CAD based designs should include/ identify:

- General highway layout (existing and proposed), showing the highway boundary;
- Geometric alterations to the highway;
- Land take requirements, if required;
- Lane definition; and,
- Statutory plant, and furniture affected by the proposals and the implications for the design.

Where unavailable, topographical surveys may be required for the purpose of providing suitable feasibility designs however this should be agreed with the Sponsor prior to commissioning.

Where required, TDE to assist the Sponsor in presentation of the proposals to the Streetscape Design Review Group (SDRG).

TDE, in conjunction with the Sponsor, is to provide PPD with the draft feasibility designs to facilitate construction cost estimates for the project.

Concept design of the preferred option is then to be progressed.

### Concept design

The final concept design package is to include:

- General Arrangement drawings showing proposed dimensions;
- Site Clearance drawings;
- Signs and Road Marking drawings; and,
- (where appropriate) Outline Urban Realm improvement designs (in conjunction with the nominated Urban Designer).

A Risk workshop with stakeholders will be arranged by PPD during the concept design stage, and output to be included within ARM. TDE will be required to provide their technical input. The output of this meeting will be a detailed Risk Register and Issues Register to be maintained by PPD using ARM.

TDE, in conjunction with the Sponsor, is to provide PPD with the draft concept design to facilitate construction cost estimates for the project.

### Assess impact of proposals using strategic assessment framework

TDE will be provided with a Fingerprint output from TfL's City Planner strategic assessment framework tool for each junction. The attributes of the framework include the following Transport Outcomes:

- Safety – Road casualties and crime levels
- Active – Active travel, current and potential cycling and walking levels
- Green – Air quality
- Space efficient – Freight flow levels and car dependency
- Connected public transport – Improved connectivity
- Accessible public transport – Access inequality
- Quality public transport – Bus performance, demand and provision
- Sustainable, active travel developments – Car dependency and poor connectivity
- Unlocking development – Forecast population and employment growth

Once feasibility designs are defined, TDE should assist the Sponsor in completion of a high-level evaluation of all options based on this assessment framework.

### Local Modelling of options

Local modelling will be required in order to undertake the assessment of network performance/engineering feasibility. Separate briefs to Network Performance and Traffic Infrastructure will be issued by the Sponsor.

### Public Consultation

As a result of the limited timeframe for delivery, public consultation will only take place where there is a statutory requirement. Where no formal public engagement is required, extensive pre-engagement via TfL CCT will take place throughout the design period to maximise the potential for local stakeholder buy-in.

Where formal public consultation is to take place, TDE is to assist with the preparation of material for the consultation.

### Key Study Stages and Deliverables

#### Stage 1

- Project initiation meeting

- Brief note outlining TDE's understanding of study objectives and strategic and local objectives

## Stage 2

Following confirmation of the above with S&ND, the following is expected:

- Design of interventions to feasibility and concept level as specified
- Assess impact of each proposal on a local level for all road users utilising the assessment framework
- Periodic spend profile to end of concept design
- Detailed Microsoft Project plan to end of concept design
- Designer's Response to the Stage 1 Road Safety Audit and TfL Highways Approval Document (HAD) for the Technical Approval process
- Technical input to the TfL Engineering Scheme Impact Report (SIR)

## **Deliverables**

In addition to the common deliverables noted in the next section, the following items should also be provided:

### Option drawings

Any option drawings should be produced in line with recommendations made by key internal stakeholders in attendance at the Safer Junctions site meetings and / or wash up sessions.

The Sponsor will select the optimum design option which captures the design objectives within the scope of this commission, based on the hierarchy of needs established earlier in this Commissioning Brief.

### Utility Surveys

Utility surveys, e.g. C2's shall be undertaken and subsurface utilities are to be determined with the project area. This shall be undertaken during the course of this task order. During the feasibility and concept design stages, the LoHAC designer is to be available for early engagement activities in order to understand the rationale behind design decisions and to ensure that any surveys necessary to undertake the detailed design are procured in good time to meet the agreed timescales. TDE are to assist in the procurement and commissioning of these surveys.

### Road Safety Audit

On completion of the concept design, the Sponsor will arrange for a Stage 1 Safety Audit to be undertaken by TfL's in-house Road Safety Team. The Safety Audit reports shall be received by TDE who shall consider and provide a designer's response in respect of any remedial works or additional features considered necessary.

### Construction and Design Management

CDM Regulations 2015 should be considered as part of assessing viability of any design. The S&ND Principal Sponsor will send a formal letter of appointment to TDE and provide the Pre-Construction Information (PCI) documentation.



## DELIVERABLES

Common Deliverables	Required?
Project Plan that sets out time and cost details, including project milestones and deliverables.	<input checked="" type="checkbox"/>
Periodic reports to coincide with TfL 4-weekly accounting periods detailing time worked, money spent, and percentage complete.	<input checked="" type="checkbox"/>
Report on work undertaken and implementation recommendations (no report without a recommendation). The Report will include a single page Executive Summary as a forward outlining the Commission objectives and conclusions, and a single page Design Statement outlining the key design parameters and decisions.	<input checked="" type="checkbox"/>

The following will be included in the Report or produced as separate documents:

Common Deliverables	Required?
Appropriate plans (AutoCAD and PDF format)	<input checked="" type="checkbox"/>
Traffic counts – To be discussed and confirmed with Sponsor	<input checked="" type="checkbox"/>
Appropriate Traffic Models giving:	
Base	<input type="checkbox"/>
Options	<input type="checkbox"/>
Preferred option	<input type="checkbox"/>
Signed off TSSR	<input type="checkbox"/>
Topographical survey - To be discussed and confirmed with Sponsor	<input checked="" type="checkbox"/>
Stage 1 Road Safety Audit – To be completed by TfL's in-house Road Safety Audit team	<input checked="" type="checkbox"/>
Stage 1/2 Road Safety Audit combined	<input type="checkbox"/>
Road Safety Audit Designer's Response	<input checked="" type="checkbox"/>
Location of Statutory Undertakers plant and potential implications to design.	<input checked="" type="checkbox"/>
Streetscape Design Review Group (SDRG) approval, where required	<input checked="" type="checkbox"/>
Highways Technical Approval at the end of each stage	<input checked="" type="checkbox"/>
Network Performance (NP) approval	<input checked="" type="checkbox"/>
Consultation documentation (plan, text etc.)	<input checked="" type="checkbox"/>
Summary results of consultation exercise(s)	<input checked="" type="checkbox"/>
Cost estimate for construction	<input type="checkbox"/>
CDM documentation	<input checked="" type="checkbox"/>
Public consultation drawings (where required)	<input checked="" type="checkbox"/>
TMO drawings and schedules	<input checked="" type="checkbox"/>
Environmental Checklist	<input checked="" type="checkbox"/>
Healthy Streets Check (with Sponsor)	<input checked="" type="checkbox"/>
Guardrail Assessment	<input type="checkbox"/>
Design change log	<input checked="" type="checkbox"/>

#### **4. Governance**

The S&ND Portfolio Sponsor for Road Safety is accountable for the commissioning of this work and the requirements set out in this brief. A PPD Project Manager has been appointed for early involvement of this project, prior to handover at the detailed design stage. The PPD Project Manager is accountable or responsible for all Health and Safety and Project Management activities as set out in the Pathway RACI matrix.

The S&ND Principal Sponsor (based in the appropriate Network Sponsorship Area Team) will be responsible for stakeholder engagement, decision making, and project governance during design development. They will provide appropriate scrutiny and challenge to the Project Manager, who will oversee the design schedule and cost estimates.

TDE should provide a weekly progress report.

A project Progress Meeting will also take place on a monthly basis. TDE should be available for this and may be invited to attend for part of the meeting. There may be other meetings between the Sponsor and TDE however this will be confirmed / requested over the course of the commission period. Please find attached the governance structure in Appendix C.

## 5. Timescales

TfL has committed to Will Norman, the Walking and Cycling Commissioner for London, to complete all construction work and Gate 5 approval for site work at this location by April 2020.

In order to meet this deadline, TDE are requested to complete the feasibility and concept design with public consultation as outlined in this brief by 31 December 2018.

Indicative milestones for the final design are:

<b>By end Jan 2019</b>	<b>Feasibility, concept design and public consultation complete (8 months)</b>
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*Interim target dates: 10 weeks each for feasibility and concept design stages and four weeks for each Stage Gate sign off.*

<i>Early July 2018</i>	<i>TDE to respond with understanding of brief, output delivery programme and fee estimate (one week)</i>
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<i>Mid July 2018</i>	<i>S&amp;ND to confirm commission (one week)</i>
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<i>End September 2018</i>	<i>Feasibility design to be completed with amendments incorporated including Highways TAA submission</i>
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<i>October 2018</i>	<i>Gate 2 sign-off by S&amp;ND</i>
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<i>October – December 2018</i>	<i>Public consultation to run concurrently to the concept design including one month to collate consultation report.</i>
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<i>End December 2018</i>	<i>Concept design to be completed with amendments incorporated including Stage 1 Road Safety Audit and Highways TAA submission</i>
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<i>January 2019</i>	<i>Gate 3 sign off by RSM-S</i>
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<b>By end of June 2019</b>	<b>Detailed design complete (5 months)</b>
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<b>By end of April 2020</b>	<b>Construction complete (10 months)</b>
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## **6. Appendices**

**Appendix A – A24 Upper Tooting Road / Tooting Bec Road Safer Junctions collision study**

**Appendix B – Summary of site visit / meetings with key internal stakeholders**

**Appendix C – Strategic Assessment Framework ‘Fingerprint’**

**Appendix D – ‘Before’ Healthy Streets check**

**Appendix E - Safer Junctions Governance Structure**

## Appendix A – A24 Upper Tooting Road / Tooting Bec Road Safer Junctions collision study



Upper Tooting Rd  
Tooting Bec Rd - Vers

## Appendix B – Summary of site visit / meetings with key internal stakeholders



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## Appendix C – Strategic Assessment Framework 'Fingerprint'

**Table A:**  
Strategic  
Network  
Check

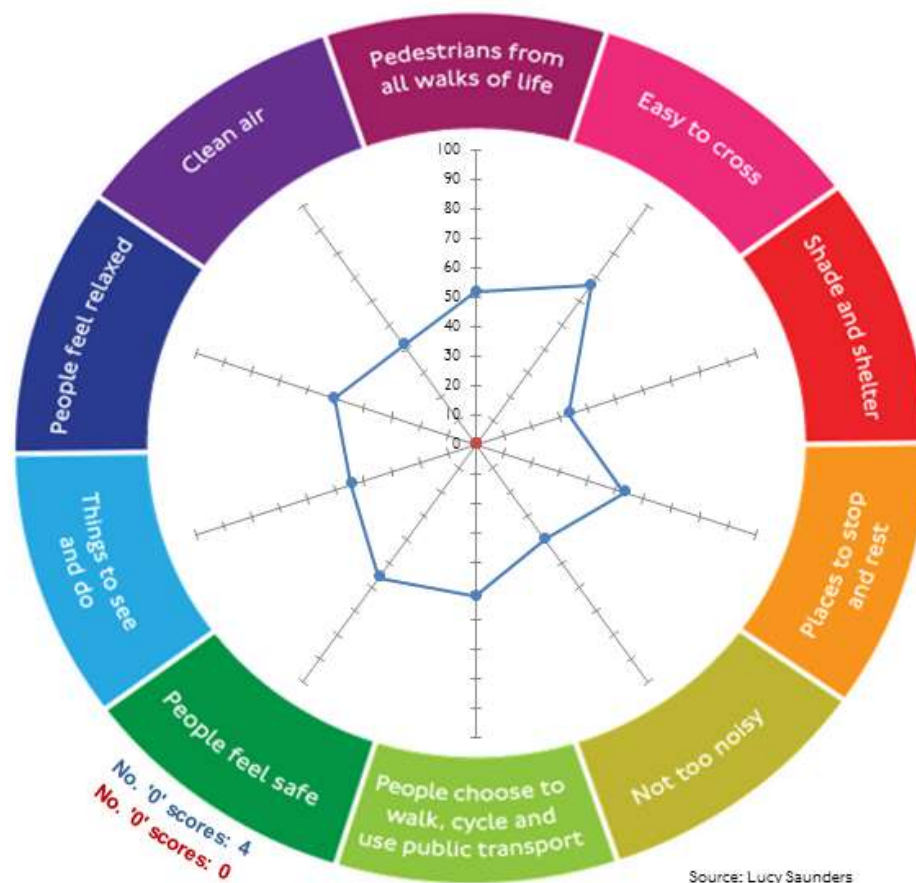
STRATEGIC CHECK	Existing/Committed Cycle Network	Yes	
	Strategic Cycle Analysis - Priority	Yes	
	Strategic Movement & Freight Network	Yes	
	Bus Network	Yes	
	Bus Priority Corridor	No	
	Low Emission Bus Corridor	No	
	High Patronage Bus Corridor	No	
	Existing Major PT Interchange	No	
	Growth & Opportunity Area	No	

**Table B1:**  
Outcome  
Scoring (short  
version)

AREA OUTCOME SCORING	Transport Outcomes		Score	Importance Description	V Low	Low	Medium	High	V High
	Active	Current & potential cycling & walking levels	+V High	Highest ped & cycling demand & potential					
	Safe	KSI and crime levels	+ Medium	Average accident and/or crime incidence					
	Green	Air quality issues	+V High	Lowest air quality					
	Space Efficient	Vehicle flow levels & car dependency	+ High	High vehicle flows and local car ownership					
	Connected PT	Existing PT connectivity	+V Low	Highest PT accessibility index					
	Reliable Service	Current & forecast bus demand & bus performance	+V High	Highest patronage & poorest bus performance					
	Quality Service	Current & forecast bus demand & bus performance	+ Low	Low crowding & high comfort					
	Inclusive PT	Accessibility level	+V High	Poor accessibility					
	Growth	Existing & forecast pop. and employment levels	+ High	High population & employment density					



## Appendix D – Base Healthy Streets Check



## **Appendix E - Safer Junctions Governance Structure**

\*Please note that members of the Design and Modelling team listed overleaf shown in italics are subject to Transformation and consequently the individuals involved may be subject to change.

## Safer Junctions Governance

