



**A400 Camden High Street junction with Parkway
'Britannia Junction'
Safer Junctions programme**

Brief

August 2018

A400 Camden High Street junction with Parkway 'Britannia Junction'

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 Camden High Street with Parkway (Britannia junction) within the London Borough of Camden is situated along the A400 corridor. The A400 is a strategic arterial corridor that runs from the A40 at Tottenham Court Road in central London north towards the A1 at Archway. Within LB Camden, the A400 is generally a single carriageway with stretches of bus lane and cycle lane.

The junction is mainly comprised of a mixture of local businesses, and some residences. At the junction, there are examples where the local infrastructure acts as a physical and / or psychological barrier to the movement of people. The junction is confusing, with restricted carriageway and footway space. Cycle facilities are lacking, and pedestrians cross away from the designated crossing points. Green infrastructure is also notable by its absence.

Consideration should be given to simplifying the junction for all road users, realigning crossings, providing and upgrading pedestrian and cycle facilities. Please also note there are a number of studies already underway in the vicinity, which should be coordinated, as highlighted on page 12.

Collision Issues

30 personal injury collisions occurred in the 36 month period ending 31st October 2016, of which two resulted in serious injuries (6.7%). This is below the comparative rate of 12.6% for ATS junctions on the TLRN in Inner London Boroughs.

Key collision issues at the junction of A400 Camden High Street junction with Parkway include:

- 17 collisions (56.7%) involved a pedestrian
- 16 collisions (53.3%) occurred in dark conditions
- 10 collisions (33.3%) involved a pedal cycle
- 7 collisions (23.3%) occurred in non-dry conditions
- 4 collisions (13.3%) involved a bus or coach

Table 3 - Comparative Collision Rates

Factor	Collisions		Expected Rate (%) ²
	Number	% ¹	
Total	30	100.0%	-
Total per year	10.0	-	-
Total per km year	-	-	xx.xx / xx.xx
Priority Score	0	-	-
Injury			
Fatal and Serious	2	6.7%	12.6%
Slight	28	93.3%	87.4%
Modal			
Pedestrian	17	56.7%	21.6%
Pedal Cycle	10	33.3%	25.3%
Powered Two Wheeler	6	20.0%	25.4%
Bus or Coach	4	13.3%	11.2%
Goods Vehicle	2	6.7%	14.5%
Manoeuvre			
Overtaking	2	6.7%	9.4%
Right turning	2	6.7%	21.0%
Left turning	1	3.3%	10.1%
U-turning	0	0.0%	2.1%
Cond.			
Non-dry	7	23.3%	17.1%
Dark	16	53.3%	34.8%

¹ Shading indicates where a collision rate is higher than the comparative average

² Comparative rate is derived from Collision Levels in Greater London Issue 14: 2011 to 2013, comparison table: A1s (Inner Borough)

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 A400 Camden High Street junction with Parkway 'Britannia Junction' 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

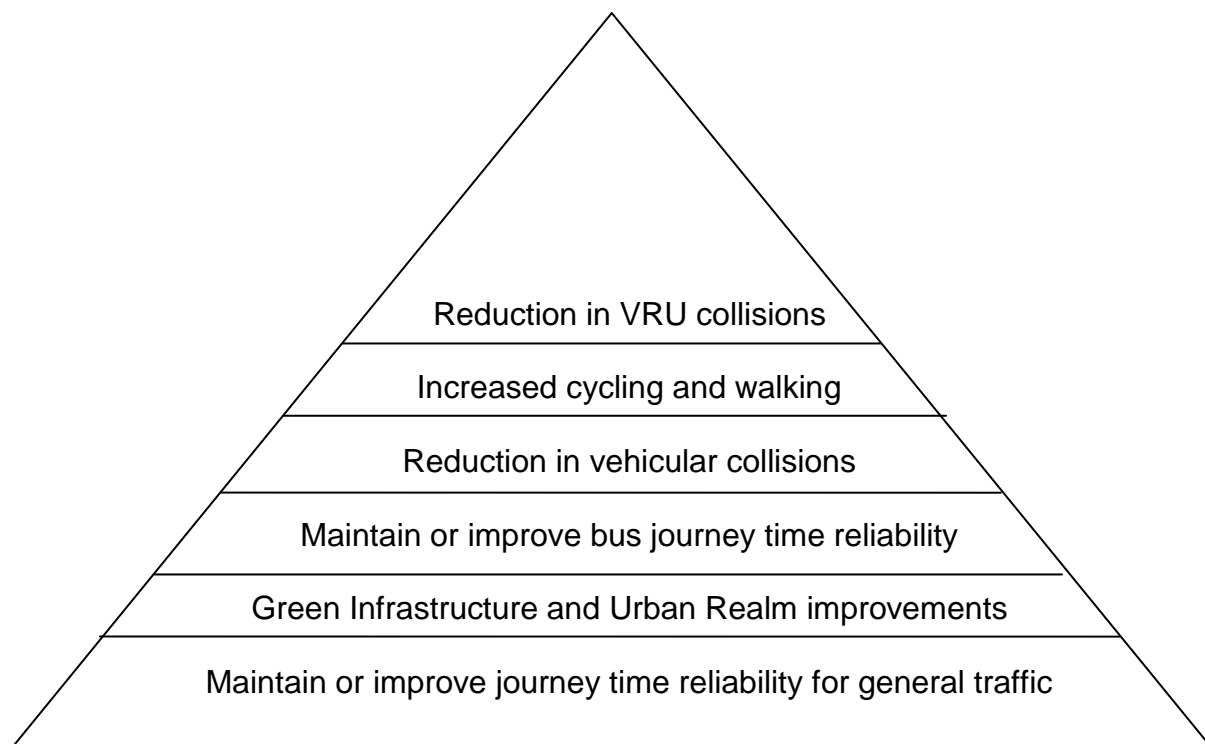
Considerations – Safer Junctions Programme Wide

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
- 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 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).

Safer Junctions Template

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

Traffic reduction measures:

- Removal of through traffic from selected streets, such as residential zones

Highways infrastructure:

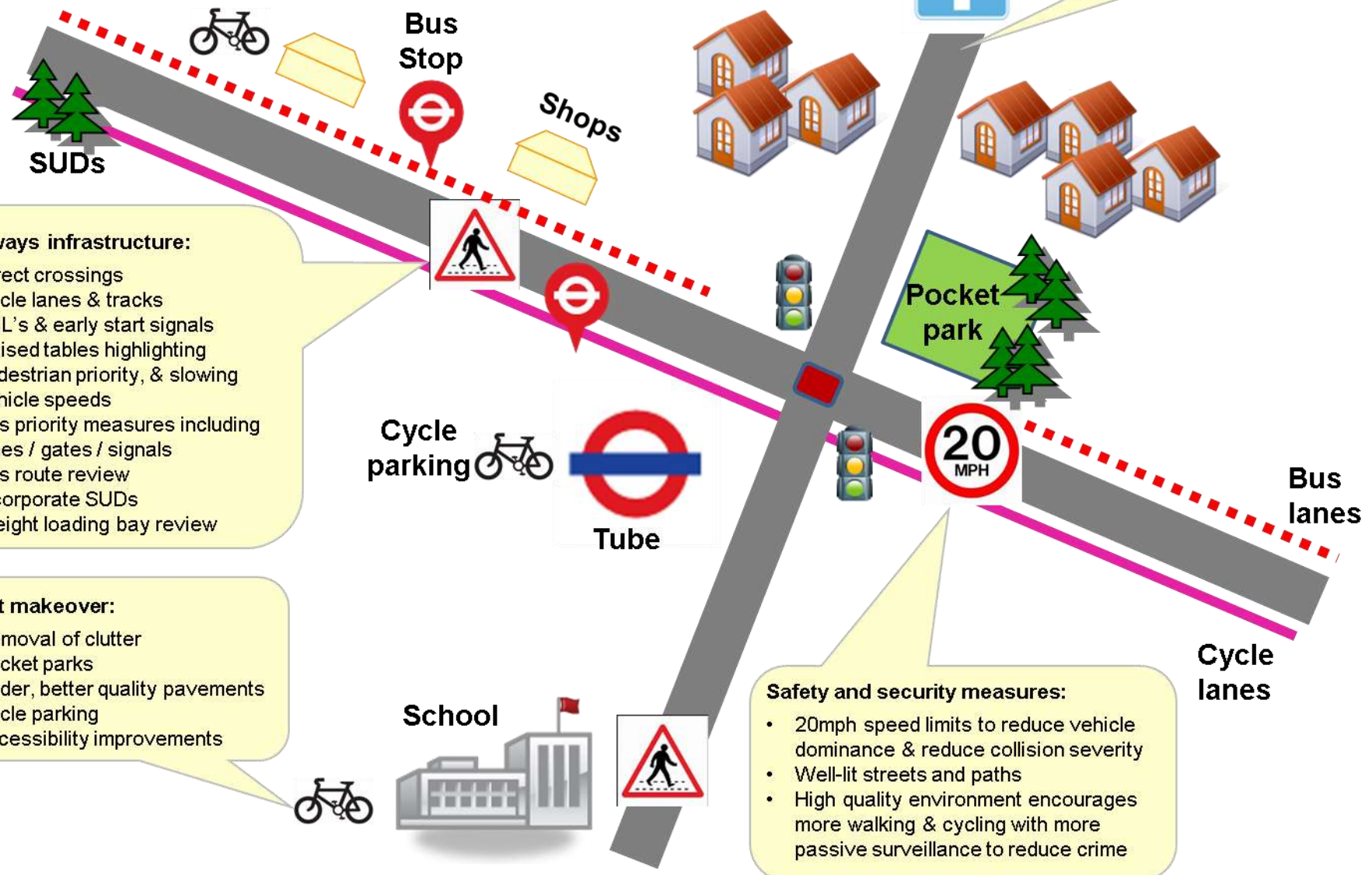
- Direct crossings
- Cycle lanes & tracks
- ASL's & early start signals
- Raised tables highlighting pedestrian priority, & slowing vehicle speeds
- Bus priority measures including lanes / gates / signals
- Bus route review
- Incorporate SUDs
- Freight loading bay review

Street makeover:

- Removal of clutter
- Pocket parks
- Wider, better quality pavements
- Cycle parking
- Accessibility improvements

Safety and security measures:

- 20mph speed limits to reduce vehicle dominance & reduce collision severity
- Well-lit streets and paths
- High quality environment encourages more walking & cycling with more passive surveillance to reduce crime



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 A400 Camden High Street junction with Parkway 'Britannia Junction' which TDE should also be aware of. However, other investigations in the wider local area being undertaken which are of relevance to this study, will need to tie in to this work, and are currently with Engineering are: -

- Mornington Crescent to Britannia junction
- Camden High Street
- Camden Road, from the station to the junction with Royal College Street, and which has direct interaction with Cycle Future Route 2

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 4th June 2018 and at the post-site meeting involving key internal stakeholders held at the TfL offices at Palestra on 18th July 2018.

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

1. Narrow lane widths make it difficult for cyclists to advance to the Advanced Stop Line (ASL) on Parkway (south-west arm)

Summary: Parkway (south-west arm) is a two lane one-way road approaching the junction in a north-easterly direction. It is two lanes wide, but there are no on-carriageway cycle lanes. Given the relatively high traffic volumes at this location, cyclists experience difficulties in bypassing queuing traffic and advancing to the ASL where they can proceed ahead of traffic when they are given a green traffic signal. Consequently, there is an increased risk of side-swipe type collisions for cyclists. Failure to make use of the existing ASL also increases the potential for cyclists to be struck by turning vehicles which can pull away from the traffic signals quicker than cyclists.

Proposals: Investigate options to provide an on-carriageway cycle facility.

1. Reduce the number of general traffic lanes from two to one and provide an on-carriageway cycle lane to enable cyclists to enter the ASL. This may also provide an opportunity to increase the footway widths at this location.
2. Provide one general traffic lane and a nearside bus lane continuing to the stop line.

Potential impacts: Likely to impact on junction capacity and journey times, including buses and cyclists. Potential impact to traffic will be determined by traffic modelling, which will be carried out by Network Performance (NP).

Due to the existing public toilets accessed from the northern side of Parkway, there is no scope to retain the existing number of traffic lanes by cutting back the footway.

2. Existing ASL on Parkway (south-west arm) is occupied by other road users

Summary: Site observations showed that drivers of motor vehicles and motorcycles often waited at a red traffic signal within the ASL reservoir, preventing its use by more vulnerable cyclists. Failure to access the ASL could put cyclists at risk of being struck by passing vehicles when given a green traffic signal to proceed. The increased proximity of motorists in the ASL to the crossing point can also contribute to an intimidating environment for pedestrians.

Proposal: Provide measures to discourage or prevent encroachment of the ASL by motorists. 1. Increase the depth of the ASL. 2. Provide early-release from the traffic signals for cyclists with low-level cycle signals, enabling them to assert their position over this junction with multiple exit arms.

Potential impacts: Likely to impact on junction capacity and journey times, including buses and cyclists. Potential impact to traffic will be determined by traffic modelling, which will be carried out by Network Performance (NP).

3. Inset loading bay provision on Parkway can restrict effective footway width and is under-utilised

Summary: Along both footways of Parkway there are loading pads inset into the footway. At the time of the site visit, the loading bays did not appear to be utilised fully.

Proposal: Undertake a parking and loading survey to assess the levels of usage and to identify opportunities for the removal or relocation of loading bays to better utilise the available road space.

Potential impacts: Should loading bay provision be reduced, local businesses may object to having their deliveries further away from their premises.

4. Loading bay provide directly in front of bus stop X hinders bus passage northbound on Camden High Street (south arm)

Summary: Site observations showed that when the existing loading bay situated directly in front of bus stop X is occupied, buses are unable to leave the stop without changing lane to go around the stationary loading vehicle. General traffic in the adjacent lane is generally slow moving, hindering efficient bus passage towards the stop line.

Proposal: Investigate improvements to smooth bus passage through the junction. 1. Undertake a parking and loading survey to assess the levels of usage and to identify opportunities for the removal or relocation of loading bays to better utilise the available road space. 2. Look to extend the northbound bus lane from Greenland Street up to the stop line of the junction.

Potential impacts: Should the loading bay be removed or relocated, local businesses may object to having their deliveries further away from their premises. Proposal 2 may also impact junction capacity, including buses. Potential impact to traffic will be determined by traffic modelling, which will be carried out by NP.

5. **Poor and confusing signing on the Camden High Street northbound approach to the junction fails to assist road users in selecting the correct lane position on the approach the junction**

Summary: Camden High Street is one-way northbound and approaches the junction in three lanes including a nearside bus lane. Immediately before the junction, the lanes physically divide to two lanes towards Hampstead and Swiss Cottage to the west and Kentish Town to the east. However, the lane markings and associated direction signing fail to adequately assist road users in selecting the correct position in good time, resulting in late lane changes.

Proposal: Review the direction signing and markings on the northbound approach to the junction to clearly provide advance notification for road users of the lane allocation and junction layout.

6. **Narrow pedestrian crossing width over Greenland Road reduces pedestrian comfort levels**

Summary: The existing controlled pedestrian crossing point over Greenland Road is just 2.4m, which is narrow in comparison to more modern signal installations. The narrow crossing width can reduce comfort levels for crossing pedestrians and increase the perception of a traffic dominated environment. This may also encourage crossing away from the designated crossing points at an increased risk of pedestrians being struck.

Proposal: Increase the width of the crossing point to improve pedestrian comfort levels.

7. **Britannia Junction has a proliferation of street clutter which is visually intrusive and obstructs pedestrians in the area**

Summary: It was noted that there is an excessive amount of street clutter around the junction, including litter bins, traffic signal equipment and signposts. This can restrict pedestrian mobility around the junction and is visually intrusive, reducing the aesthetics of the junction. From an operational perspective, this can increase asset maintenance costs as well as future construction costs.

Proposal: Review the street furniture around the junction with a view to declutter and rationalise the signing around the junction.

Potential impacts: Rationalised signing proposals may increase the amount of signs placed on individual sign posts, leading to increased cognitive overload for road users and heavier duty, wider based posts.

8. Existing method of signal control results in long pedestrian wait times at crossing points

Summary: It was noted that although there is an existing all-red pedestrian stage for pedestrians, the existing method of signal control can result in long wait times for pedestrians, particularly on the Camden Road and Kentish Town Road northbound exits from the junction. This may encourage pedestrians to cross away from the junction in a less safe location.

Proposal: Simplify the method of signal control. This may include removing the existing pedestrian streams to provide operational efficiencies and reduce pedestrian wait times.

Potential impacts: There may be limited scope for improvements at this junction. Improvements in pedestrian wait times may be offset by increased traffic queues, leading to a perception of a traffic dominated area.

9. Pedestrian Countdown at Traffic Signals (PCaTS)

Summary: Site observations showed that there are no PCaTS features at the junction. This technology replaces the blackout period between the green and red man, reducing ambiguity for pedestrians as to if there is sufficient time to cross the carriageway by showing how many seconds remain before the red man aspect appears and the invitation to cross is lost. Despite a programme to upgrade older site installations, this junction does not include PCaTS.

Proposal: Provide PCaTS around the junction.

Potential impacts: More confident pedestrians may under-estimate the time needed to cross and still enter the carriageway after the green man invitation to has been lost at a risk of being struck by approaching vehicles.

10. Lack of pedestrian crossing facility over Camden High Street (north-west arm exit) outside the underground station

Summary: In the existing road layout, there is no pedestrian crossing facility directly outside Camden Town underground station over Camden High Street (north-west arm exit). There is a strong desire line for pedestrians exiting the station to cross towards large retail establishments and local attractions, such as Camden Lock and the Jazz Café.

Proposal: Investigate the introduction of a new crossing facility for pedestrians, either controlled or through the provision of dropped kerbs and tactile paving to create an uncontrolled crossing.

Potential impacts: Provision of a controlled crossing facility would impact on the capacity and performance of the junction. Potential impact to buses, cyclists and general traffic will be determined by traffic modelling, which will be carried out by NP.

The provision of an uncontrolled crossing facility may not be suitable for visually impaired pedestrians who may find it difficult to establish a safe time to cross within a complex traffic signal staging arrangement.

11. Alignment of pedestrian crossing point outside the Kentish Town Road entrance to the underground station

Summary: The crossing that is currently provided on Kentish Town Road outside of the underground station is not directly on the desire line for pedestrians. Consequently, pedestrians were observed crossing behind the stop line, where they may be at risk of being struck by slow-moving, filtering or accelerating vehicles.

Proposal: Review the current pedestrian location and look to realign and declutter the existing area so that a crossing facility can be provided on the desire line of pedestrians. There may also be scope to reduce the crossing distance for pedestrians by narrowing the carriageway width at this location as the lane widths are relatively wide.

As part of the Camden Town underground station development proposals, there may be alterations to the entrance and exit arrangements at this location. The Networks Sponsor is to confirm future station access and egress arrangements to assist with this proposal.

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.

12. Existing drainage gullies can pose a hazard to cyclists

Summary: It was noted that drainage gullies around the junction are of an older installation style which can increase the potential for the narrow wheels of cycles to become lodged within the gulley grate arrangement. This poses a hazard to cyclists who may become destabilised, resulting in injury.

Proposal: Replace the older style gully grates with a 'cycle friendly' version.

13. Poor maintenance of utility service covers and gullies

Summary: Site observations showed that there are a number of utility service covers around the junction which have sunk or where the surrounding road surface has degraded and potholes are now forming. This can result in vulnerable cyclists and motorcyclists veering around the features to avoid becoming destabilised, at an increased risk of being struck by nearby vehicles.

Proposal: Review the condition of the utility service covers and surrounding footway around the junction and repair or reinstate accordingly.

14. Direction sign on Parkway (south-west arm approach) is obscured

Summary: A large direction sign on Parkway (outside No.23) is partially obscured by stickers.

Proposal: Clean or replace the road sign to ensure that the information contained is clearly visible to approaching road users.

15. Poor condition of existing road surface

Summary: At multiple locations around the junction, the existing buff coloured surface dressing has cracked and lifted off. This may present a hazard to vulnerable road users, especially cyclists and motorcyclists who may be destabilised and fall from their vehicles or be required to veer around the damage at a risk of being struck by nearby vehicles.

Proposal: Review the condition of the carriageway and reinstate as required.

16. Poor condition of existing paving slabs

Summary: At multiple locations around the junction, many existing paving slabs have become loose and unstable. This presents a trip hazard to pedestrians and an obstruction to mobility impaired pedestrians. On the Camden High Street (south arm) approach to the junction, there is also a drainage gulley grate which could present a trip hazard to pedestrians.

Proposal: Review the condition of the footway and reinstate as required. Suitable means of removing or replacing the drainage gulley on the footway with one suitable for pedestrians should also be investigated.

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 Camden 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 detailed design and Gate 4 approval 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:

By end August 2019	Feasibility, concept design and public consultation complete (12 months)
<i>Mid August 2018</i>	<i>TDE to respond with understanding of brief, output delivery programme and fee estimate (one week)</i> <i>S&ND to confirm commission (one week)</i>
<i>End December 2019</i>	<i>Feasibility design to be completed with amendments incorporated including Highways TAA submission</i>
<i>End January 2019</i>	<i>Gate 2 sign-off by S&ND</i>
<i>Spring 2019</i>	<i>Public consultation to run concurrently to the concept design with one month to collate consultation report.</i>
<i>End July 2018</i>	<i>Concept design to be completed with amendments incorporated including Stage 1 Road Safety Audit and Highways TAA submission</i>
<i>End August 2019</i>	<i>Gate 3 sign off by RSM-S</i>
By end of April 2020	Detailed design complete (5 months)
By end of February 2021	Construction complete (10 months)

6. Appendices

Appendix A – A400 Camden High Street junction with Parkway ‘Britannia Junction’ 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 – A400 Camden High Street junction with Parkway ‘Britannia Junction’ Safer Junctions collision study



Camden High Road,
Parkway - Collision Re

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



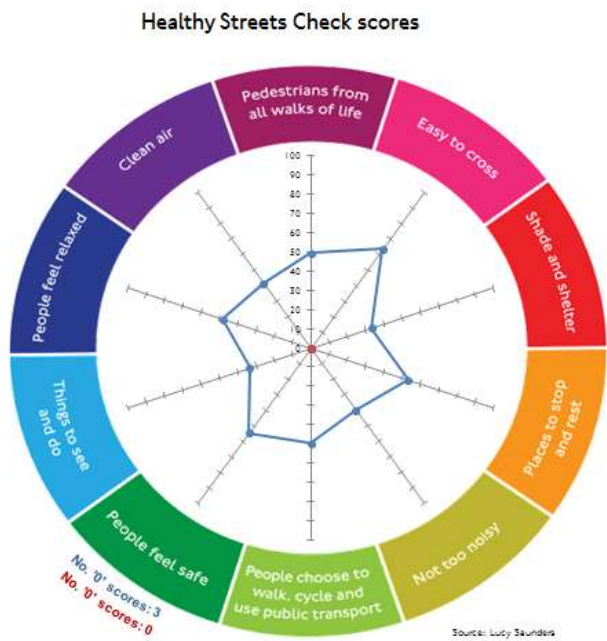
Camden High St
Safer junctions.xlsx

Appendix C – Strategic Assessment Framework 'Fingerprint'

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

Table 5 f: 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	CR and crime levels	+ High	High 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 issues					
		Reliable Service	Current & forecast bus demand & bus performance	+ High	High patronage & poor bus performance					
		Quality Service	Current & forecast bus demand & bus performance	+V High	Highest crowding & lowest comfort					
		Inclusive PT	Accessibility levels	+V High	Poor accessibility					
		Growth	Existing & forecast pop. and employment levels	+ Medium	Average population & employment density					

Appendix D – Base Healthy Streets Check



Healthy Streets Indicators' scores (%)
(Results will only display once all metrics have been scored)

	Existing layout	Proposed layout
Pedestrians from all walks of life	49	#####
Easy to cross	63	#####
Shade and shelter	33	#####
Places to stop and rest	53	#####
Not too noisy	40	#####
People choose to walk, cycle and use public	49	#####
People feel safe	55	#####
Things to see and do	33	#####
People feel relaxed	48	#####
Clean Air	42	#####
Overall Healthy Streets Check score	50	0
Number of '0' scores	3	0

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

