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1.0 INTRODUCTION

1.1 Background

This guidance document updates and replaces the previous ‘Guidance for Submission of Area Based Schemes’ (2008) and is aimed primarily at borough officers responsible for the appraisal, submission, development and delivery of Major Schemes within their borough. A summary of the key changes is set out at section 1.3. Throughout this guidance, the role of boroughs has been referred to, but in most cases the role applies equally to sub-regional partnerships. The guidance provided for boroughs is not intended to be prescriptive and in many instances, informed judgments will be required by borough officers to develop sensible, pragmatic solutions to identified problems. Where further guidance is required, the Borough Projects and Programmes (BPP) Team can be contacted (see Appendix C of this document for contact details).

Woolwich Town Centre- Plumstead Road (After Implementation) 2009
1.2 Aims and Objectives

The Mayor's Transport Strategy (MTS) and the London Plan set out proposals to transform the attractiveness of London’s streets, specifically, The Mayor has set out his ambition to revitalise London’s public space in his manifesto ‘London’s Great Outdoors’. Public spaces are part of what helps to define the quality of a city and hence well designed public spaces have many benefits.

“The Mayor, through TfL and working with London Boroughs and other Stakeholders, will use the principle of ‘better streets’ to seek to improve town centres, in particular: removing clutter and improving the layout and design of streets; enhancing and protecting the built and historic environment; increasing the permeability of streets; and creating clear and easily understandable routes and spaces to make it easier for cyclists, pedestrians and disabled people to get about” - MTS Proposal 83.

“A strategic approach is needed to ensure consistency and high quality in the design and management of public spaces and also to help make sure they are seen both as individual and linked entities to form a coherent public realm. The highest quality of design in London’s public spaces is needed to achieve a city that is more attractive, safer and easier to get around. - London Plan 4B4 4.49

Boroughs’ Local Implementation Plans (LIP) is the principal means through which these aims will be delivered, in particular through the Major Schemes programme. The Major Schemes concept is to examine all the main transport and wider related challenges within an area and develop a comprehensive, transformational but cost-effective treatment, rather than dealing with individual issues through small-scale, more limited interventions. Major Schemes can perform a key role in transforming neglected or underachieving places in London into popular spaces that live up to their desired functions.

In this way, a Major Scheme is expected to:

- improve the social, environmental and economic fabric of an area;
- improve peoples’ movement within and beyond their local area;
- understand and address the areas of concern in a locality;
- address transport difficulties in the area and promote the use of walking, cycling and public transport;
- improve peoples’ quality of life including their non-transport use of public spaces; and
- act as catalyst for positive change.
1.3 Changes to the Guidance

This guidance should now be used as the basis for preparing LIP Major Bids submissions. Much will still be familiar to users of the previous guidance. One of the aims of the update has been to keep the guidance and the process as similar as possible to that previously issued.

The main changes to the guidance can be summarised as follows:

- The Town Centre, Streets for People and Station access programmes have been replaced with the Major Schemes programme;
- Updated references to reflect new Mayoral policies and TfL ways of working;
- The Step 1 submission proforma and supporting document requirements have been updated and simplified where possible;
- Updated Step 2 process, including introduction of a Design Review Panel;
- Advice on liaison with TfL Traffic Signals (Traffic Directorate);
- More information on TfL Forward Planning responsibilities;
- Advice on bus service changes;
- Advice on Legible London (the new pedestrian and visitor wayfinding system for London);
- Advice on electric vehicle charging points;
- More details on streetscape and design principles;
- Updated sources of information and key contacts; and
- More worked examples of business cases.

The basis of the guidance remains the same, in that:

- It still follows a three-step approach;
- The submission forms remain very similar;
- Submissions need only be made once, and can be made at any time;
- Funding approvals and allocations for new schemes accepted into the Major Schemes programme take place on an annual cycle; and
- It enables TfL to allocate sufficient development funds for projects to be completed and for funding to be programmed as required by the boroughs.
The holistic nature of Major Schemes means that scheme promoters are required to engage with a wide range of key stakeholders. Yet it is clear that the process will have to adapt to further internal or external changes and the guidance will continue to be reviewed in the future. The continued partnership working between the boroughs and TfL is essential to enable the Major Schemes programme to evolve to meet changing requirements and to improve delivery. Appendix A lists the original members of the working group whose input to the guidance is greatly appreciated.

**Q: Where do I start if I am new to Major Schemes?**

**A:** Chapter 2 gives an introduction to the Step Approach and the typical scope of Major Scheme bids. Chapter 3 and the associated appendices provide guidance on scheme selection and justification.

Once funding has been allocated, it is recommended that these sections are read in detail in order to ensure the Step 2 work programme and budget contain adequate time and resources to deliver a complex scheme.

**Q: Can partnerships make submissions?**

**A:** Partnerships (which can include Business Improvement Districts and any grouping which incorporates a London Local Authority) can submit Major Scheme submissions through the lead authority. In doing so, prioritisation within a partnership area should take place prior to Step 1 submissions being submitted.

Boroughs in partnership areas can submit schemes either as a borough or as a partnership as appropriate, but not simultaneously. Where boroughs experience resource constraints on schemes, they are encouraged to work with neighbouring boroughs and partnerships to find innovative ways of unlocking resources elsewhere.
1.4 What is a Major Scheme?

The Major Schemes programme replaces the specific Area Based Schemes programmes for Town Centre, Station Access and Streets for People schemes. Major Schemes funding is intended to focus delivery on fewer, higher value schemes that make transformational improvements and contribute to delivering the Mayor’s Better Streets agenda.

Major Schemes offer the opportunity to approach problems in a holistic manner through taking account of:

- Tackling transport problems from a multi-modal perspective;
- Improving access to local services, encouraging shorter trips and sustainable modes;
- Producing a true step-change in public realm quality and local area character;
- Designing-out crime;
- Contributing to economic objectives by improving conditions for local retailers and other businesses;
- Designing safer street layouts;
- Creating vibrant, inclusive and adaptable public spaces; and
- Improving public transport accessibility.

Projects can be within town centres, around stations or other public transport interchange hubs, or in areas of high visitor numbers. Boroughs can apply for a proportion of the required funding from the Major Schemes programme for schemes costing more than £1m. For projects with a total cost above £2m where Major Schemes support is sought, a business case must be submitted and approved during the scheme development phase.

The following gives an indication of the types of area and the expected scope of Major Schemes. These are not strict guidelines but are described to give boroughs a sense of scale for the types of project.

1.4.1 Interchanges and Stations

Interchanges and stations should be those identified in TfL’s Interchange Plan and/or in the borough’s LIP. In order to ensure co-ordination, relevant stakeholders (e.g. Train Operating Companies or Network Rail) should be consulted prior to any submission. For example, a project around a station could include the construction of a new public piazza, accessibility improvements along the key routes to the station, measures to improve personal security and better interchange between public transport modes and
improved cycle parking. Bids can include working with a neighbouring authority.

### 1.4.2 Town Centres

Town centres selected should be as identified in the London Plan and the borough’s LIP. Town centre schemes generally include the main streets and side streets within a centre that encompasses the major retail, commercial and civic functions. Where necessary the works should extend to key pedestrian and cycle access routes. Access to stations or interchanges should be included where they are an integral part of, or in close proximity to, major town centres.

### 1.4.3 Areas of High Footfall and Deprivation

There are a number of areas of high footfall, including visitor attractions or areas of deprivation that do not fit within the remit of either town centre or interchanges and station schemes. Schemes in these areas can be developed where there is a need to rebalance the street design to reflect how people move. Measures to design-out crime improve the quality of the public realm and improve conditions for cyclists could all form a part of these projects.

These schemes can include residential areas and access to local facilities for residents, particularly where the area suffers significant levels of deprivation. This type of scheme can be developed where the nature of local built environment restricts residents’ ability to use their streets. The ability to use local streets reflects being able to use them at all times, encouraging people to make local trips and to use sustainable modes, being able to use public space as a place for residents to interact, generating local pride, discouraging crime and being inclusive to all.

Such schemes should encompass the local services used by residents of the core area. These can include, for example, local shopping parades, health or community facilities, parks and other leisure facilities, along with public transport. Scheme coverage should include the local access routes and the social spaces associated with these facilities.

As a transport organisation, part of TfL’s role is to provide funding for transport projects. However, promoters of Major Schemes should consider the design of spaces in a holistic manner and will be expected to use the range of design tools/advice available to ensure the design of the public realm is of high quality and the objectives of the project are achieved. All Major Schemes designs must have regard to the design principles and practical steps set out in the
Mayor’s Better Streets document published in 2009. Appendix F provides an indication of the scope of measures that ought to be considered.

The remainder of this document is structured to give detailed guidance to Boroughs on each Step, as follows:

| Step 1 – Scheme Selection and Justification; |
| Step 2 – Scheme Development, Consultation and Detailed Proposal; and |
| Step 3 - Implementation |
2.0 THE STEP APPROACH

2.1 Overview of the Process

Before preparing a Step 1 Major Schemes application, promoters should discuss their proposals with TfL’s Borough Projects and Programmes Londonwide team. This is to ensure that the proposed scheme is relevant and appropriate for submission as a Major Scheme. TfL officers can also deal with queries on the submission process.

Major Scheme assessment is a needs-based assessment and involves a three-stage process known as the Step Approach:

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Strongest schemes take priority in receiving funding for scheme development

<table>
<thead>
<tr>
<th>STEP 2:</th>
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<tbody>
<tr>
<td>• Scheme Development</td>
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<td>• Consultation</td>
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<td>• Design Review Detailed Design</td>
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Successful schemes receive funding to progress to implementation

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<th>STEP 3:</th>
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<tr>
<td>• Preparation of tender documents and drawings</td>
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<td>• Implementation</td>
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2.2 STEP 1

Step 1 submissions justify the need for the scheme and indicate, among other information, an outline cost to TfL. Step 1 schemes may be submitted to TfL at any time, although funding announcements will be made annually alongside other LIP programmes. However a deadline will be given for submissions to meet a specific assessment round in time for a Mayoral announcement (usually December). If approved, scheme development funds, typically in the region of 5-10% of total scheme costs, will be awarded to the borough so that the scheme may be worked up in detail. The amount will be set following detailed discussions with the borough concerned.
The Step 1 submission should explain why funds ought to be allocated to the scheme concerned. It should provide a clear link between the issues identified, the measures proposed and the benefits expected. A holistic approach to scheme design is required, since it is unlikely that consideration of a few individual elements will bring about the step-change needed to transform an area. To be most successful, each scheme will need to look at all the transport and public space problems in an area, including those that may not traditionally be associated with transport. People use public highways and spaces for many activities other than transport, such as waiting, meeting, talking or window shopping.

As part of this revision of the Major Schemes Guidance the Step 1 application form has been refreshed. This update includes feedback from a workshop held with boroughs officers on 21 March 2011. The revised version of the application form, together with a new ready reckoner table for the justification of expenditure and instructions on completing the application form, can be found in Chapter 3.

The information provided by the promoter in the Step 1 form should provide sufficient detail so as to give a complete overview of the project. It should explain the reasons for the project; identify the objectives, its key components, estimated costs and delivery programme. The written information must be supported with photographic and/or drawn information such as layout plans, images and visualisations that best give an “at a glance” description of the proposals. It should contain sufficient qualitative and quantitative information to justify the need for investment, inform objective decisions and help boroughs and TfL prioritise potential schemes.

Major schemes funding will be aligned with the MTS priorities. To ensure that TfL can adequately assess schemes against MTS deliverables, Major Schemes should be included in the borough’s approved Local Implementation Plan (LIP) and recorded and prioritised on the borough’s Annual Spending Submission (Proforma A).

In past years, TfL accepted submission of applications either in electronic or hardcopy format. However, given the wide acceptance of electronic methods of information management, all new Step 1 submissions will only be accepted electronically. To avoid difficulties with large file sizes, the applications should be uploaded onto the LIP Funding Document Management system, which is available via the Borough Portal.
A list of existing Step 1 submissions will be made available on TfL’s Borough Extranet.

### 2.3 STEP 2

A fully developed Step 2 submission will include:
- collection of baseline information;
- input from the Design Review panel;
- in some cases traffic modeling;
- a detailed cost estimate;
- consultation summary
- risk assessment;
- an outline programme of works;
- performance indicators;
- detailed design;
- business case (for schemes >£2m); and
- all relevant TfL and third party approvals.

Furthermore, the scheme must be supported by a number of TfL stakeholders (refer to section 4.13 to 4.17). Once complete, a full Step 2 submission will be submitted for approval and, if successful, the scheme will then be programmed for implementation (Step 3). At all stages, scheme promoters should continue to ensure that the Major Scheme represents value for money, continues to address its key objectives, and that project costs are kept under control.
2.4 STEP 3

Once a scheme has moved to Step 3, TfL will make financial allocations in accordance with a programme agreed with the borough and within the available annual Major Schemes budget. Allocations will cover the cost of preparing tender documents, land acquisition and any other necessary processes to enable works to start. Should the final cost deviate from the Step 2 estimate the borough will be required to fund some, or all of the increase. The amount will depend on the size of increase, TfL’s assessment of factors outside the control of the borough, and if the risk assessment properly recognised the potential increases.

Herne Hill (after implementation) 2010
Q. What happens if my Step 1 submission is not successful? Do I need to re-submit?

A. It is advisable to speak to TfL’s Borough Projects and Programmes London-wide team to ascertain whether a scheme should be re-submitted:

- If the submission meets the technical requirements but other schemes are of greater priority, it will remain in a ‘waiting list’ and may be funded in future years. Therefore no re-submission is required. However, places change over time and if the objectives and issues in one place evolve considerably, then a revised submission should be made.

- If the submission does not meet the technical requirements (e.g. further information is required to support one element of the step 1 submission), a revised version can be submitted.

- If the proposed scheme is considered outside the remit of the Major Scheme programme, the scheme should not be re-submitted.

2.5 Funding

The funds put aside by TfL for detailed scheme development are part of the overall Major Scheme allocation. Essentially, the programme funds will be ‘top-sliced’ to create a small funding stream to assist boroughs develop schemes in full. TfL will make projections on expected scheme completions and time the release of funds for new schemes to be developed (Step 2) and implemented (Step 3), so that a continuous rolling programme is achieved. It is, therefore, of prime importance that costs remain stable through scheme development and implementation, and that works are carried out to programme. This should assist boroughs in identifying their priorities at an early stage and make more efficient use of their resources.

Currently there is £28m for 2011/12. Submissions for Major Schemes made by boroughs have exceeded available funds by a significant margin in the past and therefore it is important that TfL can sensibly prioritise scheme proposals based on high quality scheme submissions.
2.6 Unsuccessful Submissions

Step 1 submissions fall into two categories, those that are acceptable and will be reviewed regularly for Step 2 funding, and those that do not meet the requirements of TfL and a decision is made not to offer funding. The latter happens where the need for the scheme is not clearly set out, it does not represent value for money, it does not accord with the boroughs priority for Major Schemes or there is insufficient resource in the Major Scheme budget.

For all submissions that are unsuccessful, TfL will provide feedback on the reasons for refusal. This will enable boroughs to review their submission and make whatever changes are necessary for it to be accepted. For Step 1 submissions, this may mean providing additional information on outline costs or justifying the need for investment. For many Step 1 submissions, the document is likely to be the first time TfL receive information about the proposed scheme. It should be noted that submissions not prioritised in a borough’s LIP are unlikely to be supported.

TfL will have greater involvement in the development of Step 2 proposals. The risk of a scheme failing to receive funding for implementation is therefore reduced, but it is essential that the proposal shows value for money, and this can be demonstrated through the business case.

2.7 Exceptions to the Step Approach

In exceptional circumstances, there may be potential schemes that fall outside the traditional step approach. These could be for example:

- Complementary schemes – a small number of measures introduced to be complementary to a Major Scheme introduced by another authority, e.g. measures to complement a major scheme on the TLRN; or
- Pilot schemes – innovative measures that may not constitute a holistic approach, but support maybe forthcoming under the Better Streets objective of exploring new ideas.

In these cases, boroughs should contact the Borough Projects and Programmes Londonwide team as early as possible to discuss these possibilities.
2.8 Objectives

A set of key objectives for the programme and its individual elements has been developed and is shown in Table 2.1 below. Major Scheme submissions should demonstrate how they will meet the key objectives.

**Table 2.1 Key Objectives**

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<td>Improve the physical and living environment</td>
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<td>Reduce vehicle dominance and create attractive outdoor living spaces</td>
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<tr>
<td>Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness</td>
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<tr>
<td>Increase the opportunities for local people to use streets as social spaces</td>
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<tr>
<td>Reduce social exclusion</td>
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<tr>
<td>Facilitate regeneration and increase transport opportunities for local communities, whilst encouraging shorter journeys to be made</td>
</tr>
<tr>
<td>Reduce the adverse effects of traffic</td>
</tr>
<tr>
<td>Improve conditions for cyclists, pedestrians and bus users to encourage more journeys by these modes</td>
</tr>
<tr>
<td>Improve accessibility of the public transport network for everyone</td>
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2.9 Spatial Scope

Major Schemes should primarily be on the public highway for which the borough is responsible. In some circumstances, TfL will agree to works being carried out in other adjacent areas, e.g. private forecourts, within stations, or on social housing estates. In such cases, TfL should be consulted in advance of a Step 1 submission.

Where a scheme involves or affects the TLRN, the appropriate TfL Roads team must be consulted and the results of the consultation included in the Step 1 submission.

![Image of Coulsdon High Street - Before](image-url)

2.10 Complementary Funding

The Major Scheme programme is one of several funding streams that improve the quality of life and aid regeneration. In general there is a presumption that Major Scheme applications should include contributions from other sources - with the availability of third party support forming part of the assessment process. Where a Major Scheme has been identified in a location that is receiving funding from other sources, this should be highlighted in the submission, the duration of funding and works should be described sufficiently so that it can be clearly seen how the Major Scheme financial assistance would complement the other funding. This will help the decision making
process through the early identification of potential funding or delivery partners. Possible complementary funding streams include:

- Developer contributions;
- Business Improvement Districts (BIDS) in town centres;
- Central government funding sources;
- DfT "Plugged in Places" funding for Electric Vehicle Charging Points;
- Network Rail/TOCs;
- Other LIP funding programmes;
- Other TfL funding e.g. London Underground, Cross Rail;
- Borough’s own resources, potentially including parking account funds; and EU programmes.

_Coulsdon High Street - After_

Boroughs considering initiating submissions where substantial funds are coming from other sources, particularly BIDs, are encouraged to discuss the scheme with TfL.

Schemes may also receive ‘contributions in kind’, where an organisation is unable to provide financial input, but is willing to contribute officer time or specific expertise that will add value to the scheme. Contributions from the police, in terms of officer time and resources, are a specific example where contributions in kind might be received, but there are a number of other organisations that this may also apply to. Boroughs should make clear the extent of any contributions in kind in their submissions. Boroughs should also identify funds they would make available and where they have altered...
priorities in other funding programmes, such as footway maintenance, to complement a Major Scheme.

2.11 Design Review

The Mayor's Better Streets manifesto sets out a requirement for all TfL and LIP funded borough schemes over £2m in value to be subject to an informal design review to ensure that they meet the Mayor's aspirations for the quality of public realm.

This review process for LIP and TLRN schemes is led by the Borough Projects and Programmes team in Surface Transport, through a design review panel set up for the purpose. This panel comprises a small permanent group from within the TfL and GLA organisations, supported by other officers invited on an ad hoc basis. The Panel provides design advice on the schemes presented to it, including views on whether the proposed design approach of each scheme is credible, appropriate and ambitious enough.

The Panel meets monthly and normally one scheme is considered in detail at each meeting. Feedback on the design is given by the Panel at the end of the session and confirmed subsequently in writing.

Further information on design review can be found in Appendix E.

2.12 Branding Requirements

TfL Branding
Although there is no longer a specific requirement for joint TfL branding of Major Schemes on borough roads, local authorities are asked to acknowledge both TfL and the Mayor of London on hoardings, posters and other publications associated with the scheme. This should be discussed with the Borough Projects and Programmes team.

GLA Branding
The GLA have developed separate branding guidelines for London's Great Outdoors projects. These are based on a suite of brands that have been developed for a number of environmental programmes: Re:Fit (Carbon efficiency for buildings), Re:Use (Recycling), Re:Leaf (trees). The London Great Outdoors programme has been given the tag line of Re:Vive. This brand should be used on hoardings, posters and other publications associated with any Great Outdoors scheme.
3.0 Preparing a Step 1 – Scheme Justification

3.1 Overview of the Process

The Step 1 submission is primarily aimed at justifying the need for a Major Scheme to TfL. The building blocks for a Step 1 submission are:

- Scheme selection and identification;
- Demonstrating need through site audit and data collation;
- Outline scheme design and costing;
- Images and Visualisations of the scheme; and
- Completion of pro-forma application.

Scheme selection

There are a large number of areas across London that could qualify for Major Scheme funding simply based on the need to meet the objectives set out in Chapter 2. However, limited funding availability will restrict the number of schemes that can be progressed at any one time. All potential schemes should be identified in the borough’s LIP and the Annual Spending Submission. Funding cannot be allocated to schemes that are not prioritised within the LIP. Scheme boundaries should be identified at an early stage, to avoid ‘scope creep’ and to enable information requirements to be defined.

Demonstrating need and scheme prioritisation

The need for investment in a particular area must be clearly demonstrated and key pieces of information are required. These are shown in Appendix D. For Step 1 submissions, all ‘Essential Information’ should be submitted alongside the submission. Appendix D also gives suggestions on how the required information should be collected and presented. The information matrices are designed to provide a consistent baseline where boroughs can compare potential schemes and prioritise those with greatest need.

Problem identification and site audit

Borough officers should have a good grasp of the needs, problems and issues in the area and of the potential solutions. The problems can be identified in a number of different ways. As part of the step 1 submission, an experienced officer should complete an outline site audit to identify problems and potential solutions by walking through, around and along the main approach routes to an area. The site audit is intended to be sufficient for a reasonable first idea of
likely works and to enable a realistic first scheme cost estimate. A scheme boundary should be plotted on a ‘Scheme Sketch’, at typically a 1:1250 scale, including key walking and cycling links to the surrounding area.

The aim of the audit is to gain a thorough understanding of site problems and potential solutions. Appendix F includes a list of prompts that may prove helpful, although officers carrying out the audit should use their discretion to identify the relevant issues in each case. Most issues can be marked and annotated on the Scheme Sketch, although brief accompanying text may be submitted describing area-wide issues.

Major Schemes present an opportunity to step back and review the overall function and performance of the street environment from a wider perspective. By taking a wider view of the roles of a street or space, a more coherent design vision can be developed. This should seek to address specific scheme objectives and may therefore include elements that differ from standard practices. Boroughs may find it useful to attempt to seek agreement on a Design Statement at an early stage to ensure that there is an agreed reference later in the design process.

The list of design considerations in Appendix F is not exhaustive and there may be other relevant issues not listed that should be noted, such as particular servicing arrangements. Furthermore, key civic, leisure, cultural or commercial activities should be noted, such as places of worship, public leisure centres, etc.

In addition to noting existing site conditions, the site audit should also indicate the potential improvements under consideration; for example, lengths of footway requiring replacement, or junctions needing treatment. These can be marked on the Scheme Sketch or illustrated on a separate map if preferred. The sketch can be a readable hand-drawn or CAD plan and should be submitted with the Step 1 submission. Most planned works and ideas only need to be shown diagrammatically, such as a line showing the location of a new puffin crossing/ side entry treatment, or where a kerb line is moved to widen a footway.

The relevant borough officer developing the scheme should speak to stakeholders that have local knowledge of the problems/issues concerning the area. For example, the police and the borough’s crime and disorder reduction team, accessibility officers, planners and highways maintenance officers. There may be cases where additional data is thought useful in order to highlight case-specific issues. In such cases, boroughs should contact the BPP Londonwide Team with any queries.
3.2 Identification of costs

Within the Step 1 submission, boroughs will provide an estimate of scheme costs. Whilst this is only an initial estimate, it will need to give a considered indication of the financial scope of the project, to aid evaluation and programme planning by TfL. For example, if a Step 1 estimated cost is stated as £1.2m, but full submission costs at the end of Step 2 are significantly higher at £2.4m, it is unlikely that the scheme will be prioritised to proceed to implementation.

One of the main uses of the site audit and scheme sketch is to assess outline scheme costs. An assessment can be made of, for example, the amount of footway or number of lighting columns requiring replacement and cost estimates given based on known unit costs from previous schemes, term contract rates where these are available or data sources such as SPON’s Civil Engineering and Highway Works Price Book. From this initial estimate, a recommended contingency factor of up to 40% should be added to allow for unforeseen costs or utility works. Preparation of a bill of quantities is not necessary at this stage – the aim is to provide a reasonably robust cost estimate having regard to the likely works required.

The pro-forma requests a cost breakdown between the core scheme costs (materials, etc.) and other costs (such as utility diversions where these are known).

Although costs will vary considerably from scheme to scheme, it is expected that TfL contributions for most schemes will fall within the region of £1.5m - £4m. These ranges are not intended to act as limits; however, boroughs should be mindful of the need to show value for money and the limited resources available for funding Major Schemes across London. Complementary funding sources, as described in section 2.10 should, where practical be used to supplement funds from the Major Schemes programme. Schemes significantly exceeding these ranges may find it more difficult to demonstrate value for money and those falling below, are less likely to be able to show that they are sufficiently comprehensive and are able to achieve a holistic and transformational improvement.
3.3 Design Vision and Better Streets Interventions

As part of the Step 1, officers should clearly summarise the design vision for the scheme. This should include a description of the existing function and character of the area and how the design will deliver the Mayor's Better Streets agenda and make a transformational improvement to the area. Officers should also confirm which of the following five stages of intervention identified in the Mayor's Better Street document the scheme will achieve:

1. Tidy Up;
2. De-clutter;
3. Relocate/ Merge Functions;
4. Re-think Traffic Management Options – especially for bus services; or
5. Recreate the Street.

3.4 Scale of Impact

As a part of the revision to the bidding guidance, TfL has developed an easy to use ready reckoner tool (table 3.1) for borough officers to check on the likely viability of the scale of investment in the scheme. It allows officers to quickly identify how much expenditure is justified on a 'typical' Major Scheme for a given number of visitors. A typical scheme would be expected to, at the very least, address the seven categories listed in the example calculation which follows.

The look up table below provides a ‘first iteration’ analysis to see if a scheme is worthy of further investigation, and / or if further work is required in assessing benefits to see if the scheme is viable. It does not replace the full business case which remains a condition of TfL funding if the scheme costs are £2m or more.

Major scheme applications to TfL are usually for a minimum scheme cost of £1m.

This ready reckoner is based solely on the seven attributes listed in the example calculation given in Appendix D of this document. Borough officers should review the full description of the public realm attributes in Tables E4.10 and E4.11 of TfL's Business Case Development Manual (BCDM) when developing the full business case, which will be required as a condition of TfL funding.
There are also likely to be other benefits arising from the proposal, such as reduced journey times for pedestrians. This would also come out in the full business case assessment, as would all other relevant impacts. Boroughs should seek advice from TfL where there are likely to be significant effects on, for example buses, to ensure the ‘ready reckoner’ is still applicable.

Table 3.1- “Investment Ready Reckoner”

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<tr>
<th>Visitors per annum (millions)</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
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Notes

The investment figures in the table are based on 2011 prices for a scheme life of 15 years, with all costs and benefits discounted to 2011 using a discount rate of 3.5%.

The investment figures achieve a scheme BCR of 2:1.

Table 3.1 compares visitor numbers and the extent of scheme improvements. So, based on the example, for a scheme which improves an environment over a 250m length, approximately 1.5m trips are required per annum for every £1m of investment to achieve a benefit to cost ratio (BCR) of 2:1. This equates to 1000 trips per peak period (typically 07:00-10:00) in a neutral month. Hence, in using the look-up table:

- Determine the scope of the proposal and equate this to a linear length.
- Calculate the number of visitors per annum based on available survey data.

So, if the scope of the scheme is 250m and the number of visitors per annum is 1.5m, read along the top row of the table until you come to 250, and then read down along this column until you come to the cell which is in the row which shows 1.5m visitors per annum on the left hand side of the table. The level of investment which is justified will be in this cell – in this case £1m. Further background and an example calculation are given in Appendix G.

3.5 Photos, Visualisations and Images

Major Scheme submissions must be supported with photographic and/or drawn information such as layout plans, images and visualisations. These should be at a scale and scope to clearly describe the key aspects of the proposals or the general design themes proposed from a quick glance at the images. Images should be in PDF or JPEG formats annotated and capable of being printed to A3 size without loss of definition or information. They should be stand alone documents separate to any design reports or other documents being submitted.

3.6 Submission Requirements

To assist boroughs in preparing initial submissions, the standard pro-forma should be used for all schemes, downloadable from the Borough Extranet - https://extranet.tfl.gov.uk/boroughs/glp/bsps/supporting-info.aspx. A separate pro-forma should be used for each Step 1 scheme. By completing this form, boroughs will have addressed all the relevant Step1 matters set out in this guidance. A worked example proforma is attached in Appendix O.
All information required for the Step 1 submissions should be included or attached to the pro-forma. Completion of the pro-forma will enable TfL to assess all submissions on a consistent basis. Boroughs can submit Step 1 submissions using the pro-forma at any time to TfL.

### 3.7 Public Transport Accessibility

The Major Schemes investment, coupled with improving the urban realm, provides a unique opportunity to improve public transport accessibility. This can potentially be both in terms of bus interchange facilities and routing of services.

The provision of high quality balanced streets can help to regenerate town centres through improving access to sustainable modes of transport including for cyclists, pedestrians and bus services.

*MTS - Policy 13* states “The Mayor through TfL and working with the DfT, Network Rail, Train Operating Companies, London Boroughs and other Stakeholders will expand the capacity and quality of public transport services, improve passenger comfort and customer satisfaction reducing crowding and improve road user satisfaction” and Policy 21 states “The Mayor through TfL and working with the DfT, Network Rail, Train Operators Companies, London Boroughs and other Stakeholders will seek to increase accessibility for all Londoners by promoting measures to improve:

a) The physical accessibility of the transport system, including streets, bus stops, stations and vehicles.

b) Information provision, staff service and the travelling environment.

In developing a Major Scheme considerations must therefore include the routing of bus services and how bus passengers access the town centre. Across London, wherever possible the philosophy of a simple bus network is being promoted and designed. Good examples introduced in the last two years include Harrow and Woolwich Town Centres. TfL very much welcomes and will actively support traffic management proposals that will improve bus service routings and thus enhance accessibility. If such changes to bus services are proposed, London Buses Network Development must be involved at an early stage. They will provide assistance in terms of passenger loadings, objectives and whether the routing (s) would be practical.
3.8 Launch Events

TfL positively supports official launches, press releases and other forms of publicity and obviously TfL must be acknowledged.

3.9 Public Art

A number of major schemes have incorporated public art as part of the proposals. Whilst public art can be considered as part of Major Schemes there is a need to ensure it is appropriate and suitable for the scheme and the context. Further information on details of the artwork requirements and key contacts can be found in Appendix N.

3.10 Tree Planting

Street trees are an important visual and environmental asset providing visual interest, shade, shelter, a place for wildlife and a contrast to the built environment. They not only help to define or reinforce the character of a locality, making attractive places for people to live and work, but they also help to modify the local climate by providing shade and trapping pollutants in the form of small particles. Designers should seek to protect and maintain existing tree resources at the very minimum and should look to include additional tree planting as an integral part of Major Schemes.

3.11 Electric Vehicle Charging Points

Electric vehicles can be charged on-street or off-street using different types of charging points. On-street charging points are floor (footway) mounted and off-street charging points in external car parks (usually surface level) can be floor mounted or wall mounted. For more information on the infrastructure please refer to the EVCP Guidance which can be found on the Boroughs Extranet http://boroughs.tfl.gov.uk/1054.aspx

The Department for Transport (DfT) Office for Low Emission Vehicles launched a programme to increase the amount of infrastructure on-street and off-street, called Plugged in Places. This funding provides match funding towards the implementation of charging infrastructure.

In May 2011 the Mayor, launched the Source London charge point network. Source London is a TfL operated scheme that intends to bring together existing and new Electric Vehicle charge points into a single network across London. It will enable electric vehicle owners to charge their vehicles in any participating London borough, which is currently not possible. The creation of
a network of charging points is crucial to providing assurance that there will be sufficient locations for current and future owners of electric vehicles to charge their vehicles. Any vehicle that is licensed with the DVLA as a pure electric or a plug-in hybrid electric vehicle can join the scheme. Information on Source London can be found at - www.sourcelondon.net.

3.12 Legible London

Legible London is a pedestrian wayfinding system developed by TfL to assist pedestrians by providing location and direction information in a consistent format and across a range of sources including maps and signs. It is also integrated with other transport modes so, for example, when people are leaving the Underground, they can readily identify the route to their destination and walk there quickly and easily. TfL is working with boroughs, Business Improvement Districts (BIDs) and other organisations to extend the system across London.

TfL’s Major Schemes programme supports the introduction of Legible London and where pedestrian signing and wayfinding is identified as part of a Major Scheme it is expected that the designs will incorporate Legible London as standard. Exceptions to the use of Legible London wayfinding should be agreed with TfL.

Further information on Legible London can be obtained from the Borough Projects and Programmes team.
4.0 Step 2 – Scheme Development

4.1 Introduction

Scheme development funding will be made available for the successful Step 1 submissions. It is primarily aimed at assisting boroughs in compiling a fully costed and high quality scheme submission that meets its initial objectives and that, if accepted, can be taken forward to implementation. This chapter outlines the key processes and engagement points, along with information relating to processes for dealing with other TfL stakeholders. The development of Step 2 submissions is structured through a series of Gateways. The process is relatively fluid and allows for different working practices between boroughs. However, a degree of structure is required to:

- Ensure all issues are properly dealt with to facilitate a rapid scheme approval by TfL;
- Ensure the financial planning of the Major Schemes programme allows for boroughs’ actual development cost, development timescale and funding for construction;
- Provide boroughs with the highest level of confidence that schemes will progress to Step 3;
- Provide confidence to key stakeholders that progress is being made towards developing a scheme that meets the objectives outlined and that will be implemented within the planned timescale; and
- Enable TfL to assist boroughs when they encounter problems.

It is therefore extremely important that boroughs update TfL about progress. A simple e-mail will suffice for much of the correspondence, although officers may also wish to meet during the scheme development process. The Gateway process described below aims to maintain regular and open communication between the boroughs and TfL’s Borough Projects and Programmes team.

Following the announcement of a scheme moving to Step 2, TfL will arrange an inception meeting with borough officers to clarify the process. This will highlight the key engagement points between boroughs and TfL.

The Step 2 process identifies seven Gateways, but as part of the revisions to guidance, the process has been streamlined by making three of gateways outcome focused with measured, standard outputs and formal documentation to be provided. These gateways are:
Gateway 1 – Project Initiation

Gateway 5 - Design Quality and Business Case

Gateway 7 – Presentation of Final Design to TfL

Gateways 2, 3, 4 and 6 continue to be part of the Step 2 process, however the level of information to be provided will be agreed between TfL’s Borough Projects and Programmes team and the borough, to maximise flexibility. This permits different data requirements, models of governance and project management to be of schemes to be progressed, depending on the size and complexity of the scheme whilst remaining within the overall Major Schemes framework. Table 4.1 summarises the standard outputs required for the core Gateways.

The process anticipates that the borough’s design team and BPP team will work in partnership to prepare the Gateway outputs. For example, TfL officers can provide advice on programme requirements for Traffic Signals, or the Design Review Panel, which the borough officers can then incorporate in the baseline programme.

**Note:** The Major Schemes Step 2 process does not replace any other requirements in respect of other TfL processes for scheme design and approval e.g. Traffic Directorate (signals) or TMAN requirements, rather it acts as the framework to ensure that all the necessary sub-processes are captured at the appropriate stages of the design and development phase

Table 4.1 summarises these core Gateways
### Table 4.1 – Core Gateways in the design development (Step 2) process

<table>
<thead>
<tr>
<th>Gateway</th>
<th>Outcome</th>
<th>Minimum Outputs required for Major Schemes Gateways</th>
</tr>
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</table>
| 1       | Agreed programme, project plan and confirmation of required design funding | • Scope & Objectives  
• Agreed governance structure  
• Risk Register  
• Confirmation of project team  
• Agreed project programme  
• Funding profile and budgets for the design phase  
• Borough resources and roles and responsibilities  
• Details of any DTO slot requirements |
| 5       | Economic justification and design quality audit | • Approved business case  
• TfL Design Review approval  
• Details of scheme monitoring |
| 7       | BPP approval to release of implementation funding | Meeting with TfL to present finally approved design. The information required will be  
• Detailed designs  
• Outline implementation programme  
• Confirmation of how scheme objectives have been addressed  
• Confirmed approvals (TfL and 3rd party)  
• Robust costings and funding profile by year  
• Confirmation of available 3rd party funding |
4.2 Gateway 1: Project Initiation

Work Programme and Development Costs

At the outset of Step 2, boroughs would only have been allocated an indicative sum for scheme development. Gateway 1 is to ensure this can be amended to be in line with borough’s actual needs and is released over the time period required. A work programme should be produced in the form of a Gantt chart, showing all the key activities, durations, and linkages for Step 2. This will also highlight the gateways where TfL approval needs to be obtained as well as where committee/cabinet approval is required. Should the programme subsequently change thereafter, an updated Gantt chart should be sent to the programme manager immediately.

At this stage, boroughs should identify the staff resources available for delivery of Step 2. Where work is to be undertaken by external consultants, adequate time for tendering processes should be included. Major Schemes require a lengthy development process, and it is vital that work programmes are realistic and robust, with adequate contingency for delays. Ultimately, the borough should plan the scheme development so that it is confident that it can be delivered. The programme manager will then tailor the release of funding to match the borough’s requirements.

Generally a two year development programme is often more suitable for complex schemes involving signals and traffic modelling exercises comprising more than a single junction. Gateway 1 provides an opportunity to revise the work programme and development budget if necessary. Otherwise delays at a later stage will generate problems for the financial planning of the Major Scheme programme and could result in it not being possible to release funds for construction at the optimum time.

A number of matters should be considered right at the beginning of the design process to ensure that the original objectives and design visions are carried through to implementation:

- What skills are required to deliver the Major Scheme?
- How does the project ensure that objectives are coordinated and contribute to the initial vision?
- How can the overall design concept be translated to individual members of the design team?
- Who carries responsibility for continuity and overview in the design process?
• If all, or elements, of the design process are to be commissioned externally, how can the points above be achieved? Does the tender evaluation process require applicants to demonstrate both specific design skills as well as the ability to work constructively in a multi-disciplinary environment?

Boroughs are reminded that BPP is responsible for allocating the Traffic Directorate Signals slots for all Major Schemes and will endeavour to match the slot allocation to the Major Scheme work programmes. However, it will not always be possible to allocate all the necessary slots in a particular year. A nominal slot allocation can also be given to boroughs in the early stages of a submission to enable them to discuss proposals with the Traffic Directorate if they are unsure of the number of slots required.

It is recommended that boroughs identify the need for Traffic Directorate involvement in any traffic operation requirements at an early stage. These requirements could range from traffic signals to camera or CCTV requirements. Once this has been established, early preliminary discussions with Traffic Directorate would be advisable. It is also strongly recommended that those readers unfamiliar with Traffic Directorate Signals processes familiarise themselves with the processes outlined in Appendix H prior to drawing up a Step 2 work programme.

Funding for Step 2 is limited to scheme development costs only. It is not expected that any physical works will take place (except those associated with site investigation). Other scheme development could include consultant costs for design work, qualitative or quantitative surveys, trial pits to locate statutory undertakers’ plant, consultation or other tasks that would help to formulate a full submission. This should not include the preparation of tender documents as this fall within Step 3. As indicated previously, scheme development costs are likely to amount to between 5% and 10% of total scheme costs. However, the level of work required to fully develop a Major Scheme can vary considerably below or above this threshold depending on the complexity of the design process. It is essential that boroughs produce a robust scheme development budget in Gateway 1. There is little opportunity to accommodate requests for additional scheme development funds at a later stage.

At an initial meeting with TfL, the scope and project plan for Step 2 should be discussed with the aim of assessing that adequate funds are in place for the scheme to be properly developed. In particular, traffic modelling requirements may require discussion as complex models can be expensive and it is recommended that the Traffic Directorate modelling guidelines are consulted prior to this meeting. At this stage, any other funding contributions can also be set out.
Outline risk assessment

At this stage, boroughs are asked to produce an outline risk assessment of the proposed scheme. This is to identify the major threats to the scheme and should cover financial, programming and achievability matters and can be an outline based on the format for the later detailed risk analysis. It will almost always be the case that certain elements of a scheme cannot be fully quantified and remain unknown. Utilities are a typical risk with potentially high unforeseen costs even if a utilities survey can be carried out. Issues such as this should be included in the outline risk assessment.

At this early stage in the process it can be extremely useful to facilitate a ‘round-table’ meeting with representatives from key stakeholders, e.g. London Buses, Forward Planning, Network Rail and the Public Carriage Office. This ensures that other organisations are aware of the potential changes in the area and that potential risks are identified early on.

Gateway 1

The following project initiation documentation should be submitted electronically to the relevant BPP officer:

- Agreed governance structure
- Risk Register
- Confirmation of project team
- Agreed project programme for scheme development
- Funding profile and budgets for the design phase
- Borough resources and roles and responsibilities
- Details of any DTO slot requirements

4.3 Gateway 2: Scheme Definition

Final Step 2 submissions are assessed against the initial objectives laid out in the Step 1 submission. Therefore, where necessary, boroughs should re-visit and revise the initial objectives laid out in Step 1 before continuing with scheme development. This may appear onerous, yet in some cases considerable time will have passed since the Step 1 submission and areas may have changed as a result of, for example, new developments, socio-economic patterns or streetscape interventions. Where the Step 1 is very recent, the task of re-visited the scheme objectives will be relatively straight-forward.
Objectives

The main objectives of each scheme should be set down at the start of the development process. This will help to maintain a focus on the key issues and prevent ‘scope creep’ and will also enable the proposed works to be checked to see how well they contribute to achieving the objectives and if they give value for money.

Outline scheme

An outline scheme sketch identifying likely works matched against objectives should be produced. As in Step 1, this can simply be hand drawn onto a 1:1,250 scale plan.

Revised cost estimate

Based on the outline sketch (or the scheme options), a schedule of works is to be calculated, including volumes, unit costs and total costs. This must not deviate significantly from the Step 1 submission. At this stage boroughs will have more time to produce an estimate and therefore it should be more robust, and there should be greater confidence in its accuracy. In Step 2 the 40% contingency should be maintained unless the outline risk assessment justifies an alternative contingency. This figure provides the basis for the financial planning of the Major Scheme programme as a whole.

Gateway 2.

The following should be confirmed at Gateway 2:

- Updated scheme cost estimate;
- Updated scheme objectives and scheme sketch (if amended since step 1).

4.4 Gateway 3: Data Requirements and Performance Indicators

The development of a Major Scheme requires a substantial amount of data for the design, for robust outcome monitoring, and, where applicable, for traffic modelling processes and for a business case. Data collection will require time and money and resources should be scheduled carefully. Thought should be given at the outset towards what is actually needed and how this will inform design decisions.

As well as quantitative data, a schedule for community involvement should be planned from the outset. The concerns of key stakeholders can be gathered through stakeholder consultation. There may also be a case for assessing the priorities of the public through forms of market research.
Data collection for scheme development and monitoring is discussed below. If carefully planned, data collection can be conducted in such a manner as to satisfy multiple needs thereby alleviating repetition and reducing costs.

A database of traffic surveys undertaken across London is held by the Performance and Research Team within TfL. This team can also give advice on the most appropriate form of surveys to be undertaken. Contact details can be found in Appendix B. The following paragraphs give a comprehensive list of potential data sources; however boroughs should determine appropriate levels of data collection based on the needs of the project and discussions with TfL.

**Data collection**

**Traffic Directorate modelling data requirements**

Section 3 of the Traffic Directorate Modelling Guidelines (https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx) sets out the detailed requirements for modelling. These are summarised in Appendix H, but it is recommended that boroughs read this document before drawing up a programme for data collection. Furthermore, where work is outsourced to external parties, it should be specified that data collection must comply with these guidelines. Where data is to be collected on site, the TfL London Traffic Control Centre (LTCC) can provide information stating whether normal traffic control conditions are possible during the survey period (LTCCInfoDesk@streetmanagement.org.uk).

**Public transport**

Data on public transport loadings and journey times will often be available and should be sought where necessary in discussion with the relevant sections of TfL (see Appendix C for contact details). If additional data collection is required, this should be undertaken in close partnership with TfL and other parties. During the scheme development stage station access usage plots of the local area will be provided by TfL.

**Cycling**

Collecting reliable estimates of cycle flows is extremely difficult due to the variability on a daily and seasonal basis. Therefore, wherever possible existing data should be sought. TfL have a number of fixed counters monitoring daily cycle flows in London (for contact details see Appendix C). This data provides a good insight into seasonal variation in a given area. Cycle flows can also be obtained from the DfT’s Annual Average Daily Flows (AADFs, available from www.dft-matrix.net). However, the cycle estimates in
this data are relatively unreliable and therefore it only provides a very rough indication of overall usage.

Where further data collection is necessary, the following should be considered. In order to assess capacity issues, it may be worth collecting flow data on a peak day within school term time in early summer. Conversely, in order to estimate an average daily flow over the year, counts must be planned with sensitivity to weather conditions. Boroughs are advised to contact TfL (see Appendix C) for further advice on cycle count methodologies.

Access to an area by cycling can also be measured by monitoring parked cycles (attached both to cycle racks or other street furniture). It is relatively easy to measure length of stay by marking cycle tyres with chalk or attaching a post-in questionnaire to parked cycles.

**Pedestrians**

It is recognised that the minimum requirements of the Traffic Directorate may not necessarily include optimal assessment of pedestrian activity. Therefore it is strongly recommended that where measures to improve the environment for pedestrians are being developed, additional data is collected to understand movement patterns, desire lines, patterns of stationary activity and crowding.

TfL have introduced a number of Automatic Pedestrian Counters (APC) monitoring daily pedestrian flows on the TLRN (for contact details see Appendix C). This data can provide a good insight overall footfall in certain areas and into seasonal variation in a given area or street type.

Furthermore, TfL has recently published brief technical guidance entitled Measuring Pedestrian Activity. This contains recommendations with regards to methodology and sampling issues.

**Collisions and casualties**

Collision and casualty data for London is collated centrally by the Delivery Planning team in TfL Surface Planning. Statistical reports and research findings can be found on the extranet - [https://extranet.tfl.gov.uk/boroughs/glp/road-safety/reports.aspx](https://extranet.tfl.gov.uk/boroughs/glp/road-safety/reports.aspx) or on the TfL web site at [http://www.tfl.gov.uk/corporate/2840.aspx](http://www.tfl.gov.uk/corporate/2840.aspx). If significant time has lapsed since the 3-year collision plot produced for the initial Step 1 submission, an updated collision plot should be produced.
Crime and fear of crime

Boroughs are required under the Crime and Disorder Act 1998 to exercise their functions with due regard to their likely consequences and to do all that is reasonable to prevent crime and disorder. Consequently all Major Schemes should look to minimise crime and produce a safe secure environment where people do not feel under threat. In practice, it is important that boroughs involve the Metropolitan Police through the local Crime & Disorder Reduction Partnership (CDRP) structures.

The Metropolitan Police can provide data on crimes in an area. As outlined in Appendix D, boroughs should contact their local Borough Intelligence Unit (BIU) for crime data. Where possible, this data should already be considered as part of CDRP discussions at Step 1. By contacting the appropriate Transport Community Safety Manager (see Appendix C) boroughs can also obtain crime and disorder plots for the area and advice on Community Safety concepts and design issues, and a crime and disorder audit. Alternatively TfL’s Crime and Disorder Partnership Unit (CDPU) contains qualified Crime Prevention Design Advisers (also known as Architectural Liaison Officers).

Major Schemes aim to strengthen the place functions of streets in order to create a more vibrant, people-friendly public realm. The Measuring Pedestrian Activity guidance, as referred to above, includes a section on measuring the use of space.

Monitoring and Performance Indicators

Borough-level performance indicators are monitored as part of the LIP process. For schemes of the magnitude of typical Major Schemes, additional outcome monitoring should be conducted in order to:

- Assess whether scheme objectives have been met;
- Identify any aspects of the scheme that have not achieved their objectives and suggest mitigation measures; and
- Influence the design of future Major Schemes.

Once the decision to proceed to Step 2 has been made, TfL and the borough will need to agree on the information requirements for establishing baseline and outcome monitoring. This will focus on the Key Performance Indicators highlighted for the type of scheme being proposed and its objectives.

Monitoring should not be onerous. In most cases, TfL will generally fund baseline monitoring through the Step 2 scheme development funds. Post implementation outcome monitoring should be included as an integral element of the Step 3 budget.
Appendix L provides details of recommended methods of monitoring scheme impacts. A set of core attitudinal questions are presented that aim to capture the attitudes of street users in relation to the key objectives of Major Schemes. If these questions are incorporated into borough questionnaires, the main results can be aggregated by TfL at a London-wide level to assess the impact of the Major Schemes funding stream as a whole.

There may be instances where in agreement with TfL more in-depth data collection and monitoring may be required for a scheme. This would be to gain a better understanding of how certain specific elements of a scheme deliver overall programme objectives, information that can inform the design of future schemes. In these cases, TfL will contact boroughs and agree the necessary resources to undertake the work.

**Gateway 3**

The following should be emailed to BPP:

- The before survey data collected in the attitude survey as set out in Appendix L;
- Survey data as identified above and agreed with the TfL BPP sub-regional team.

**4.5 Gateway 4: Scheme Development Design Considerations**

Emerging evidence shows that not only do better balanced streets make for more humane interaction in our cities, but they can also support a revitalisation of trade and contribute to a reduction in accidents. It is possible to redress the balance in our public spaces by simple measure that encourage responsibility and respect between road users. The design ethos that should be applied in developing a Major Scheme is as follows:

1. Understand Function
2. Imagine a blank canvas
3. Decide the degree of separation
4. Reflect character
5. Go for quality
6. Avoid over-elaboration

The holistic nature of a Major Scheme offers the chance to bring about a genuine step-change in street design quality. Basic design principles lie at the heart of achieving the objectives set out in section 2.3. Appendix F includes a
series of principles taken from the guidance document ‘By Design’ published by the DETR and CABE, which are widely recognised as a successful basis for creating better spaces. The recently published Manual for Streets also provides detailed design guidance for numerous contexts and frequent reference is made to this document.

Achieving high quality design is not only about the principles applied to the initial design, but how to ensure quality throughout the design process. The following points should be considered during the design process:

- Consider the contractual arrangements governing design and implementation to determine how quality is to be evaluated and enforced;
- If the design concept includes ‘non-standard’ elements that do not form part of the day-to-day design palette of an organisation, this should be clearly expressed to all parties from the outset to ensure that resources are focused on the scheme-specific design objectives;
- Regular design review meetings should be considered as a means to ensure that individual elements of the streetscape design fit into the overall design without omissions, overlap or clutter;
- Consider the design life of changes to the streetscape and examine the life cost of the project when assessing value for money. Similarly consider how flexibility can be built into the design to accommodate changes in land use or travel behaviour;
- A maintenance strategy should be considered for the replacement of street elements, particularly where non-standard elements are employed;
- How the design concept is effectively carried through into the construction phase and how the builders are made aware of the concept; and
- The interface of the study area with the surrounding area should be considered and, if necessary, appropriate streetscape interventions identified as part of the scheme.

Urban Design London (UDL) has a number of roles in promoting good urban design, including its involvement with the Mayor’s Great Outdoors Programme. UDL offer advice on design issues relating to Major Schemes, infrastructure or development projects and also provide free training courses for those boroughs which pay a yearly subscription. Furthermore, a number of training opportunities are available for transport professionals. Boroughs can contact
the BPP team for further advice on training opportunities and assistance from UDL.

**Scheme Costs**

Full proposals are expected to include a detailed breakdown of scheme costs based on robust estimates of measured material costs, utility works, traffic management costs, contingency and inflation. There will be little scope to increase funding allocations to individual schemes after the Step 2 submission has been agreed with TfL. Boroughs should, therefore, be mindful that they will carry the risk of cost increases above those agreed with TfL. An independent estimate might, therefore, be carried out to ensure the costs are robust.

A 'ready reckoner' budget estimate for traffic signals schemes is available on the boroughs extranet ([https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx](https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx)) to provide an order of costs for signal design, equipment and installation. Detailed costs cannot be provided by the Traffic Directorate prior to the completed design.

Boroughs need to satisfy themselves that their Step 2 proposal includes all foreseeable costs associated with the project. Although it is recognised that this is not always easy given the nature of Major Schemes, scheme costs should be roughly broken down into areas such as cycling and maintenance. This will enable coordination with other programmes, effectively expanding the spending power of the Major Scheme programme.

It is expected that an appropriate risk allowance is included to allow for unforeseen circumstances. At this stage of scheme development, boroughs should be able to estimate the required contingency based on their detailed risk analysis.

### 4.6 Equality Impact Assessment (EQIA)

An EQIA should be included in the Step 2 submission. The purpose of an EQIA is to improve the benefits of Major Schemes to local communities by making sure there are no discriminatory outcomes and that, where possible, Major Schemes promote equality and build upon the duties bestowed upon local authorities under individual pieces of legislation, such as the Race Relations (Amendment) Act 2000, and the Disability Discrimination Acts 1995 and 2005. The Commission for Equality and Human Rights (CEHR), created under the Equality Act 2006, is an independent body promoting good practice and awareness.

TfL produced guidance on the production of EQIAs in 2004 (see Appendix B). The EQIA should assess and record the likely impact of a Major Scheme.
There should be a focus on assessing the impact on equality target groups. It involves anticipating the consequences of Major Schemes on these groups and making sure that, as far as possible, any negative consequences are eliminated or minimised and opportunities for promoting equality are maximised. The creation of an inclusive environment is one of the key design considerations of Major Schemes (see Appendix F) and it is expected that the overall effect on equality target groups will be positive.

The following equality target groups should be covered in the EQIA:

- women;
- disabled people;
- people from black and ethnic minority groups;
- lesbians, gay men, bisexual and transgendered people;
- older people, children and young people; and
- people of faith and belief.

Major Schemes should also look at the needs of other groups that may find themselves excluded, namely:

- job seekers;
- lone parents;
- people on low incomes;
- people with caring responsibilities; and
- refugees and asylum seekers.

The Disability Discrimination Act 2005 requires local authorities to involve people from minority groups in their decision-making. An accessibility audit tool is included in Appendix G, providing indications of the types of barriers and recommended standards for different groups. It is not intended that this be used as a simple tick list of standards. Instead the broad range of potential measures in Major Schemes allows scheme designers to seek creative solutions, working with local mobility groups to promote access for all whilst maintaining local character and distinctiveness.

For further queries, please contact the TfL Equality and Inclusion Unit (see Appendix C for contact details).

4.7 Detailed Risk Analysis
One of the underlying principles behind the Step Approach is to reduce risk, particularly financial, both for boroughs and TfL. Unforeseen costs, partly due to poor financial planning, have contributed significantly in the past to an increase in future year commitments, which have reduced the number of new projects that can be implemented.

Building on the outline risk assessment produced at Gateway 2, all Step 2 full submissions will be expected to include a detailed risk analysis of the project. This should be carried out under the following headings and describe the actions that have taken place to assess and reduce potential risks. A risk analysis pro-forma is included in Appendix K.

Risks associated with the project should be identified as high, medium or low. For medium and high risk elements, boroughs should consider its potential impact and mitigation measures to reduce the impact. For an activity with medium or high financial risk (due to, for example, uncertain utility impacts), this may mean increasing the budget contingency within the Step 2 submission. Alternatively, where risks are low, it may be possible to reduce the contingency.

Where risks associated with a project are very high, or would have severe consequences, TfL may request further work be undertaken to assess them in more detail, with a view to gaining a full understanding, prior to agreeing to proceed to Step 3.

### 4.8 Consultation

Consultation is a crucial element of the scheme development. This guidance does not prescribe how consultation should be carried out as borough practices vary substantially across London and the varied nature of Major Schemes calls for case-specific judgment on the consultation strategy to be adopted. In general, the following principles should be adopted:

- Throughout the consultation process, it is important to manage the expectations of consultees. An outline scheme design and budget has already been established through Step 1, so the consultation should aim to keep expectations within this financial limit;
- If the implementation process is likely to be protracted, say over three or more years, it may be appropriate to engage with key stakeholders at an early stage to agree an outline scheme, before carrying out more detailed consultation with a wider group closer to a potential implementation stage; and
• It is not expected that statutory consultation (associated with traffic orders or traffic calming) would be undertaken at this stage.

Boroughs should be aware of TfL’s branding requirements prior to producing consultation materials.

Consultation can be divided into 1) stakeholder and 2) public. Stakeholder consultation is likely to take place early on in the process and public consultation later in the process when the details of the scheme are more clearly known.

**a) Stakeholder consultation**

Consultation with key stakeholders can take place at any point during the scheme development process and boroughs may wish to maintain close links to key partners such as local traders throughout. It is important that the expectations of key stakeholders are managed carefully. It is therefore recommended that boroughs provide all stakeholders with a realistic timeframe for implementation prior to consultation. Similarly, it should be made clear that the Major Scheme involves the balancing of multiple interests.

The summary outcomes from the consultation should be included.

**b) Public consultation**

Consultation with the public should be carried out whilst there is still an opportunity for the outcome to be influenced. Conversely, there is the need to manage the expectations of consultees. Individual boroughs may have various strategies to deal with these issues.

As a general rule, before presenting a proposed scheme to the public, boroughs should ensure BPP are fully aware of the proposals

This relates to indicative worked-up schemes only, and boroughs may wish to involve smaller groups of the public at an early stage of the design process. Some boroughs have considered it helpful to organise workshops or walkabouts including members of the public as part of the design process. In this way local people can participate in a design exercise where their desires and needs can be identified and different options tested.

Where borough officers consider there is scope for scheme costs to alter significantly, directly as a result of consultation, it is recommended that prior to consultation, an indicative scheme design and cost is discussed and agreed with TfL. The design will be more detailed than the Step 1 submission and should highlight the areas that might change as a result of consultation. Post-consultation design and costs should be discussed with TfL prior to a full proposal being submitted.
Discussing and agreeing an indicative scheme prior to consultation gives the borough and TfL the opportunity to discuss key elements of the scheme at an early stage and re-confirm the scope of the project. It will not always be possible to highlight areas where the public will seek changes to scheme proposals, but baseline surveys, in particular qualitative surveys, should give a reasonable picture of local sensitivities. Boroughs should bear in mind that significant changes to a scheme and its cost could result in TfL withdrawing support for the scheme if the funds required would seriously affect delivery of other borough schemes, or it no longer demonstrated value for money compared with other Step 1 schemes that have not yet been funded to Step 2.

4.9 Gateway 4: Stakeholder Input

Whilst schemes are being developed, boroughs do not need to submit documents such as the detailed risk analysis or EQIA. However, it is recommended BPP is informed of the views and concerns of key stakeholders following the initial stakeholder consultation. These can simply be summarised in an email or recorded in a summary document (e.g. a copy of a report to Cabinet members).

4.10 Gateway 5: Business Case & Design Review

a) Business Case

A business case is required for all schemes with a total scheme cost greater than £2m. This is a general rule applicable to all schemes funded by TfL, both borough and its own schemes. All business cases submitted to TfL must comply with the Business Case Development Manual (BCDM). The requirements of this methodology have been incorporated into a standard spreadsheet known as the Business Case Assistant (BCA), available on the extranet - https://extranet.tfl.gov.uk/boroughs/glp/lips/annual-progress-reporting.aspx. An accompanying spreadsheet, the Journey Time Calculator, has been developed to assist the setting out and calculation of multi-modal journey time impacts. It is also strongly recommended that a Business Case Narrative (BCN) is submitted, to complement the ‘tabular’ format of the BCA by setting out the background and main emphases of the project’s objectives, scope, merits, and risks / caveats, as well as providing essential explanations behind key figures in the BCA (such as the basis and derivation of costs and benefits).

One BCA and BCN is to be prepared for each project (or for each option where multiple options are under consideration). Each appraisal is assumed to be set against a base option, which is normally the minimum course that it would be reasonable to take. Since the base option is not shown separately, it
follows that any costs avoided or benefits foregone by not doing the base option must be specified in the summary of the preferred option.

It is the business case convention that the capital cost is incurred in year 0. However, some Major Schemes may be implemented over more than one year, and year 0 would represent the start date of the works.

The completed Business Case Assistant, and Narrative, should be emailed to the BPP team. It is not necessary to supply any further accompanying report, although boroughs should maintain a record of working figures not shown in case of further queries.

b) Design Review

All TfL and LIP funded borough schemes over £2m in total cost will be subjected to an informal design review within TfL to ensure that they meet the Mayor's aspirations. This is not intended to be an additional bureaucratic process, merely advice on how to ensure the principles set out in Better Streets can be applied to the Major Schemes implemented across the Capital.

The review process is led by the Surface Planning, Directorate through a panel set up for the purpose. The panel, chaired by the Director comprises a small permanent group from within TfL supported by external advisors or other TfL interests (e.g. Buses) invited as appropriate. The Panel provides design advice on the schemes presented to it, including views on whether the proposed design approach of each scheme is credible, appropriate and ambitious enough. Generally the panel meets monthly, however given the lead in time and the demand for review slots, boroughs should look to schedule their project for design review at least three months in advance. Contact the relevant BPP area team for further information.

Further information on the principles of design review is given in Appendix E.

UDL Design Surgeries

Scheme promoters can, in addition, utilise UDL’s design surgeries to provide further advice on design detail during the development of the scheme. The surgeries are informal and do not have written or public observations. They are an opportunity to get design advice, ideas and observations from experienced professionals.

The UDL surgeries are also ideal forums for getting feedback on smaller, lower profile schemes that are in the early stages of development or other streetscape projects which would not go to more formal design processes such as TfL’s Design Review. Boroughs are recommended also to
take LIP funded streetscape schemes that are less than £2m in total cost to these surgeries.

**Gateway 5**

The following information must be provided to TfL:

- Completed Business Case in accordance with TfL’s BCDM requirements;
- Details of scheme monitoring defined in Gateway 3

and the following milestone must be successfully completed:

- TfL Design Review

### 4.11 Gateway 6: Pre-consultation Presentation

As mentioned in section 4.7, boroughs are expected to present their proposal to the BPP team prior to the main public consultation stage. This is required as the BPP team:

- need to know which scheme details are published in the public arena;
- needs to be confident the proposals will be supported by stakeholders within TfL;
- may be required to answer questions about the scheme within TfL;
- needs to confirm the scheme addresses the objectives the borough set out in Gateway 2; and
- needs to confirm that the proposals are supported by key stakeholders.

It is recognised that this may not represent the final scheme design as it may still be subject to amendments resulting from public consultation and the approvals process.

### 4.12 Gateway 7: Step 2 Submission

After public consultation, the final Step 2 proposals should be presented to TfL. A small series of core information documents should be prepared for this meeting. As laid out in Appendix M, there is also a series of further requirements that boroughs would reasonably expect to have completed and that the BPP team may ask to see after the meeting if they feel this is necessary. Following TfL’s assessment of the scheme, boroughs will be informed if the scheme is accepted for future funding.
The Step 2 submission should contain sufficient information to enable TfL to understand how the scheme’s objectives have been addressed, the scope and extent of the work, the total cost and funding arrangements, and a works programme. The objectives will be as set out in Gateway 2. Plans should be made available with sufficient detail to enable borough officers to fully explain the scheme. The total scheme cost will need to be explained and the status of any other non-Major Scheme funding. Section 106 and other contributions will need to be confirmed.

Announcements regarding funding allocations will be made in December each year, alongside other LIP allocation announcements. Successful schemes will be placed into the Major Scheme programme for implementation. As stressed in section 2.1, there is no guarantee that Step 2 submissions will automatically proceed to Step 3. However, if the Step 2 submission meets its original objectives and if its cost is similar to the initial estimate, it can generally be assumed that it will proceed to Step 3 and receive full funding if sufficient resources are available.

### Gateway 7

A formal report is not required for this meeting. The following core documents should be available for discussion:

- Confirmation of main objectives from Gateway 2;
- Scheme detailed design drawings, including changes resulting from public consultation;
- Robust scheme costs;
- Confirmation of available 3rd party funding
- Provisional implementation programme, including a spend profile; and
- Detailed risk analysis.

Large Major Schemes are complex and, in exceptional circumstances, there may be a possibility of arranging a staged introduction of measures. This can be beneficial where one element of a scheme is delayed but the scheme promoter wishes to start implementation so as to capitalise upon the momentum developed during the final stages of consultation. This is only possible where it is clear that a decision on the delayed scheme element will materialise and its final design will contribute to overall scheme objectives. It
is recommended that boroughs contact the BPP team if they believe that they could pursue such an arrangement.

4.13 TfL Approvals

In order for a Step 2 submission to progress to implementation, approvals from a number of sections within TfL are generally required. The BPP contact must be informed of these approvals (in most cases a brief email is sufficient). However, if there are issues that prove difficult to resolve with one or more sections of TfL, the BPP contact should be informed and will provide assistance in seeking a solution.

Although it is not a formal Major Scheme requirement, in many cases a round table meeting with representatives of the relevant sections of TfL can be useful at the outset of the project. Future negotiation will be easier if all parties are aware of and are sympathetic towards the wider objectives of the scheme. Furthermore parties may be able to indicate misgivings about the scheme and suggest mitigating or compensatory measures.

4.14 Traffic Signals

The Traffic Directorate is the service provider responsible for all of London’s traffic signals. A process has been developed for the implementation of borough traffic signals schemes. This is known as the 6-step process (not to be confused with the Major Scheme step approach). A guide to the process is included in Appendix H along with a process map (these are also available on the extranet – https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx). Signals schemes should be designed in accordance with Design Standards for Signals Schemes in London (formerly TTS6) that can be downloaded from the extranet (https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx). If new signals are being considered, this document includes advice on justification for traffic signals.

The Mayor wishes to see a reduction in the number of traffic signals and wherever practical alternative methods should be considered. Accordingly the introduction of traffic signals should be considered as a last resort and removal/replacement of existing traffic signals identified where practical. Good examples of this are Oxford Street East where a traffic signal junction has been removed and Woolwich Town Centre where a zebra crossing replaced a pelican crossing.
4.15 Traffic Management Act Notification (TMAN) approval

The notification process seeks to ensure that promoters fully understand the impact of their proposals and adequately mitigate any adverse impacts before they are implemented. The aim is to ensure that schemes and works are designed and constructed with the minimum adverse effect on the road network and that there is an appropriate balance between impacts on the different users.

TMAN approval is required for schemes that might result in a significant and adverse impact to the TLRN or Strategic Road Network (SRN). As such, all major schemes will require a formal TMAN. Up-to-date guidance on the notification process can be found on www.londonworks.gov.uk

All Major Schemes will require two notifications; one to consider the permanent or long term effects of the scheme, and one to consider shorter term affects of works associated with implementing a scheme.

The information in Appendix I aims to guide Borough’s through the TMAN process explaining how it relates to the TfL Major Scheme Process. There are also details of types of data / information required during the assessment process. Appendix I also sets out the impact assessment framework that Forward Planning work with along with an example of measures that can be taken forward within your project and some ‘top tips’ to assist with delivery of your scheme.

It is advised that, where required, the Forward Planning Team is contacted at the outset of the project and should be engaged at any round table discussions.

4.16 TfL London Buses

Changes that affect bus operations can involve negotiating with multiple parties. Therefore, it is recommended that Major Schemes are discussed at an early stage during liaison meetings. As an overview, the following parties may be involved in assessing the impact of a Major Scheme on bus operations (see contact details in Appendix C). Changes to the actual structure and routing of bus services are assessed by Network Development. Changes and improvements to the bus stops and waiting areas may fall within the remit of Bus Infrastructure. BPP will provide guidance on the provision of bus accessibility and bus priority measures. Arrangements for diversions etc. during the implementation phase are dealt with by Network Operations.
4.17 Public Carriage Office

The approval of the Public Carriage Office (PCO) is required for all schemes that impact upon taxis, for example stopping restrictions and taxi ranks. It is recommended that the PCO be contacted on all Major Schemes as in some cases there may be latent demand or background issues that may not be apparent at the current time.

As a guide, the following types of Major Schemes are likely to be of interest to the PCO:

- Where existing ranks are in place or are planned;
- Taxi ranks are generally viable at stations with substantial throughput or where there is interchange between more than two vehicular modes (e.g. LU / national rail / bus);
- Some large town centres can sustain a rank, especially in proximity to major interchanges; and
- Town centres with a very significant night-time economy can sustain a marshalled taxi rank.

When designing for taxi ranks, mobility issues are of great significance due to the introduction of fully accessible vehicles and also the potential for passengers with large amounts of luggage. Ramps are situated on the nearside of the vehicle and ranks should be designed accordingly with consideration to the kerbside space required. Island layouts are often very constrained and should be avoided. The PCO is happy to give further advice on design matters.

4.18 Walking and Cycling

Where schemes impact upon key cycle routes, such as the Cycle Super Highways and where there is potential to incorporate Cycle Hire in Central and Inner London, boroughs are encouraged to liaise with TfL representatives accordingly (see Appendix C). The Mayor has a target to introduce 66,000 new cycle parking spaces in his first term and therefore schemes which incorporate new cycle facilities are particularly welcome. Similarly, the Strategic Walk Network (SWN) forms a series of strategic flagship walking routes around Greater London (promoted under the Walk London brand). Where schemes impact upon this network, boroughs are encouraged to liaise with Walk London (see Appendix C). The guide ‘Best Practice for Local Walking Schemes’ contains useful information on design issues and it is recommended that this is read in conjunction with this guidance.
4.19 Legible London Wayfinding

Legible London is TfL’s standard for all pedestrian signing and wayfinding in London.

Legible London (LL) is a pedestrian wayfinding system that’s helping people find their way around the Capital. It provides a clear and consistent approach that serves to enhance users’ ‘mental maps’ of London and encourage a modal shift towards walking. Following extensive research and development, LL has successfully delivered: a prototype; three pilot schemes; and additional projects across the capital. In addition, all of London will be mapped into a LL base map by December 2011.

The onus is on boroughs to work closely in partnership with TfL to continue to deliver LL. TfL is integrating LL into its entire infrastructure to enable seamless modal integration, for example, on: tube and bus stops; cycle hire; cycle super highways and on to on-street signs. TfL is also continuing to work with external organisations such as Network Rail, as well as businesses and other private sector partners to roll out LL throughout London.

Delivering a LL scheme to your area

TfL is keen to work with everyone to deliver LL across the capital. Introducing LL in your area can encourage walking, reduce street clutter and improve links to businesses and local attractions – making where you live, play and work a better place.

A delivery model is in place to assist boroughs in delivering schemes on the ground with ease, with scope to tailor to local borough objectives and budgets. Funding for schemes can come from LIPs (Block Grants), LIPs Major Schemes, Outer London Grants, Council’s own resources, Section 106 agreements, European funding and funding and/or match funding from businesses and other organisations.
There are four key stages to deliver a LL scheme. These are:

| 1. Initiating & Scoping | This covers expressing an interest in implementing LL in your area, the development of cost estimates for potential schemes, and the preparation of a delivery agreement to specify roles and responsibilities and the timeline for a typical Legible London scheme. |
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5.0 STEP 3 - IMPLEMENTATION

5.1 Introduction

Funding for scheme implementation will be released once a Step 2 submission has been approved by TfL. It is worth noting at the outset that control of costs and other risks lies with the borough, as there is very limited scope for funding increases from TfL once the scheme is approved. Indicative allocations for scheme implementation will be made alongside other LIP allocations in December each year. These will be amended once a works programme has been agreed with TfL. Funding for individual schemes will have been committed for the duration of its implementation. There will, therefore, be no need to submit further submissions to TfL for the years after implementation has started.

Detailed design work and the preparation of contract documents can start immediately once a scheme has been approved by TfL and the Design Review Panel. The release of funding for preliminary and main works will be as set out in the works programme. The indicative allocation arrangements will enable works to start at the most appropriate time thereby avoiding many of the problems associated with annualised funding. This will reduce the back loading of Major Schemes projects towards the end of the financial year which benefits both boroughs and TfL.

Work programme and bi-monthly reports

Boroughs will have submitted an indicative work programme with their Step 2 submission. This can be finalised at the inception of Step 3. This should take into account the following factors:

- The construction year – in order to minimise disruption, it is good practice to schedule the most disruptive works from May-October in order use the longest daylight hours and the summer holidays most intensively;
- The effect on frontages (e.g. retailers during the Christmas shopping period);
- External stakeholders (particularly Traffic Directorate) – a schedule for signals works procured by Traffic Directorate must be agreed; and
- Financial profile.

Borough officers are required to stay in regular contact with TfL, through updating the Borough portal at least monthly. TfL will be happy to work with and support local authorities - a programme of liaison meetings should be
agreed as required to ensure that construction progress, likely implementation dates and potential difficulties are communicated.

5.2 Notification of Works

Large schemes will generally require separate notifications for the actual scheme and for the works impact. Therefore, once an implementation programme has been drawn up, Forward Planning approval will be required. Appendix I details the requirements.

In order to assist boroughs in deciding whether notification is required, table A3 in Appendix I categorises types of works. Appendix I also provides details of how the Forward Planning Team assesses notifications and the types of data required.

If the scheme is located on the SRN or will impact this network, it is positively encouraged to coordinate your works with those of other agencies. One way of enabling this is to share the proposed works timetable with others at an early stage. Boroughs are encouraged to use the advanced planning tool at www.lwadvance.net in order to increase the visibility of their programme across the street and road works community and aid coordination.

Woolwich Town Centre Before (Plumstead Road 2005)
Woolwich Town Centre After (Plumstead Road 2009)

5.3 Buses and Taxis

Temporary arrangements for buses during the works phase must be arranged with TfL Network Operations. This may include issues such as diversions, temporary stopping arrangements, signage to stops and temporary bus stands if necessary.

For temporary arrangements for taxis during scheme implementation, the PCO should be consulted. As taxi ranks work largely on the basis of sightlines, early planning is required to seek a solution ensuring adequate space and signage to ensure minimum disruption to the taxi trade.

5.4 Risk

In allocating funds for a scheme, TfL will treat this amount as a fixed contribution. The risks for cost increases, or other delivery issues arising from other matters, lie fully with the scheme promoter. It is, therefore, very important that cost estimates are robust and the risk assessment is adequate.

Although there will be very limited scope for further funding allocations to be made once the Step 2 proposal has been agreed, problems that arise through implementation, which are likely to cause significant financial difficulty, should
be raised with TfL at the earliest opportunity. In certain exceptional cases, TfL may consider additional assistance, if:

- the fault clearly lies outside of the control of the scheme promoter;
- the risk was identified in the Step 2 detailed risk analysis (or the risk could
- not reasonably have been foreseen at the time of developing the
detailed risk analysis);
- the mitigation measures identified in the Step 2 detailed risk analysis
have been applied; and
- there are sufficient resources available within the Major Schemes
budget.

5.5 Publicity

Where a borough is planning or has been asked to provide press articles and
information relating to a Major Scheme, TfL’s role and input should be
included. The relevant TfL sub-regional team should be contacted in all cases
so that the borough’s and TfL’s press officers can coordinate their activities.

5.6 Outcome Monitoring and Performance Indicators

As indicated in section 4, the costs of outcome monitoring should be included
in the Step 3 budget. It is the responsibility of the borough to set out a
timetable for monitoring after scheme implementation.

The timetable for post implementation monitoring should take into account the
need for ‘bedding in time’. On the one hand, people may react relatively
quickly to small changes in factors such as local area accessibility. On the
other hand, people’s behaviour may take longer to adapt to more significant
changes to the overall environmental quality of an area. Similarly, after a
period of disruption during construction, it may take time for use of an area to
even return its initial level. It is advisable that most monitoring be carried out at
the same time of the year as baseline monitoring.

Photos should be taken before, after and during works to generate a record of
the changes both physical and how people use the area. These records will be
required to support any promotion of the scheme either in the local press or
national technical publications.

Outputs from completed Major Schemes should be included in the boroughs
Annual report on interventions and outputs submitted to TfL for LIP funded
individual schemes or packages delivered during the course of the financial year.
These reports are submitted each July using Profoma C as set out within the Second LIPs Guidance.

Details of the deadline and process for submission can be found in the LIP ANNUAL SPENDING SUBMISSION GUIDANCE for the relevant year.

Once a Major Scheme is completed TfL will be happy to support the borough in entering various competitions, such as the London Transport Awards.
Appendix A

Major Schemes Working Group

This guidance has been developed by the Major Schemes (previously Area Based Schemes) working group, consisting of representatives of TfL, a number of London Boroughs,

The original members of the Major Schemes working group were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah Walton</td>
<td>Cross River Partnership</td>
</tr>
<tr>
<td>Trish Ferreira</td>
<td>City of London</td>
</tr>
<tr>
<td>Scott Lester</td>
<td>Borough Projects and Programmes</td>
</tr>
<tr>
<td>Sharfqat Khattak</td>
<td>LB Bexley</td>
</tr>
<tr>
<td>Salesh Kapur</td>
<td>LB Brent</td>
</tr>
<tr>
<td>Andy Blake</td>
<td>LB Bromley</td>
</tr>
<tr>
<td>Hannah Brown</td>
<td>LB Camden</td>
</tr>
<tr>
<td>Adrian McWinnie</td>
<td>LB Enfield</td>
</tr>
<tr>
<td>Mark Kelder</td>
<td>LB Hackney</td>
</tr>
<tr>
<td>Ann Fine</td>
<td>LB Harrow</td>
</tr>
<tr>
<td>George Wright</td>
<td>LB Lambeth</td>
</tr>
<tr>
<td>Ashley Heller</td>
<td>LB Merton</td>
</tr>
<tr>
<td>Robert Dray</td>
<td>LB Richmond upon Thames</td>
</tr>
<tr>
<td>Simon Phillips</td>
<td>LB Southwark</td>
</tr>
<tr>
<td>Faran Forghani</td>
<td>LB Sutton</td>
</tr>
<tr>
<td>Sarah Finn</td>
<td>LB Tower Hamlets</td>
</tr>
<tr>
<td>Helen Griffin</td>
<td>LB Wandsworth</td>
</tr>
<tr>
<td>Ian Price</td>
<td>RB Kingston upon Thames</td>
</tr>
<tr>
<td>Anthony O’Keeffe</td>
<td>Transport for London</td>
</tr>
</tbody>
</table>
Appendix B

Sources of Data / Guidance

Better Streets
Better Streets Practical Steps. The Mayor’s manifesto for Public Space (2008)
http://www.london.gov.uk/greatoutdoors/betterstreets/

Design Considerations
TfL (2009) Streetscape guidance

http://www.dft.gov.uk/pgr/sustainable/manforstreets/

News and case studies can be found on www.rudi.net (Resource for Urban Design Information), a not-for-profit membership resource.

Traffic Directorate
Traffic Directorate Modelling Guidelines, Traffic Directorate signal scheme brief form and Design Standards for Signals Schemes in London (TTS6) all available from Boroughs extranet:

London Works
London Works on-line notification application and registration. This website also provides useful information on how and when to notify TfL.
www.londonworks.gov.uk

TfL Directorate of Road Network Performance (2005) Notification of Schemes and Works affecting the Strategic Road Network and Greater London Authority roads

TfL Directorate of Road Network Performance (2005) TMA Notifications assessment additional information for scheme/works promoters

Further information is available from: http://www.londonstreetworks.net/

Equality Impact Assessments

Walking

TfL Walking Good Practice Version 3 - June 2010
Measuring Pedestrian Activity Version 1.0 May 2007
Improving walkability; Good practice guidance on improving pedestrian conditions as part of development opportunities - September 2005


Business Cases
TfL Business Case Assistant (and its User Guide)
TfL Business Case Narrative Template
Journey Time Calculator
TfL Business Case Development Manual
All these documents can be accessed from:

TfL Road Safety Reports
Published Surface Planning reports, including TfL Road Safety Audit Procedure:
http://londonroadsafety.tfl.gov.uk/

Responsible Procurement
GLA Responsible Procurement Policy (GLA) http://www.london.gov.uk/rp/policy/

Mayor’s Green Procurement Code (GLA) http://www.greenprocurementcode.co.uk/

Legible London
http://www.tfl.gov.uk/microsites/legible-london/default.aspx

Public Art
http://artintheopen.org.uk
## Important Contacts

### Borough Projects and Programmes: Londonwide

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Lester</td>
<td>T: 020 3054 0802</td>
<td><a href="mailto:scott.lester@tfl.gov.uk">scott.lester@tfl.gov.uk</a></td>
</tr>
<tr>
<td>Anthony O’Keeffe</td>
<td>T: 020 3054 4989</td>
<td><a href="mailto:Anthonyokeeffe@tfl.gov.uk">Anthonyokeeffe@tfl.gov.uk</a></td>
</tr>
</tbody>
</table>

### Borough Projects and Programmes: Area Teams

<table>
<thead>
<tr>
<th>Team</th>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>North and West Team</td>
<td>Lennox Davidson</td>
<td>T: 020 3054 0770</td>
<td><a href="mailto:lennox.davidson@tfl.gov.uk">lennox.davidson@tfl.gov.uk</a></td>
</tr>
<tr>
<td>East Team</td>
<td>Julie Dye</td>
<td>T: 020 3054 0850</td>
<td><a href="mailto:Julie.Dye@tfl.gov.uk">Julie.Dye@tfl.gov.uk</a></td>
</tr>
<tr>
<td>Central Team</td>
<td>Daniel Johnson</td>
<td>T: 020 3054 4710</td>
<td><a href="mailto:danieljohnson@tfl.gov.uk">danieljohnson@tfl.gov.uk</a></td>
</tr>
<tr>
<td>South Team</td>
<td>Peter McBride</td>
<td>T: 020 3054 0862</td>
<td><a href="mailto:PeterMCBride@tfl.gov.uk">PeterMCBride@tfl.gov.uk</a></td>
</tr>
</tbody>
</table>

### Design for London

The team at Design for London can be contacted at: info@designforlondon.gov.uk

### Crime and Disorder Partnership Unit

(TfL Community Safety, Enforcement and Policing)

John Strutton, Crime & Disorder Partnership Manager, can be contacted with general queries relating to CDRP:

T: (020) 3054 2912 E: John.Strutton@tube.tfl.gov.uk
Transport Community Safety Managers for each London borough can be contacted for advice and assistance when preparing Step 1 submissions and when developing schemes under Step 2. Contacts for each borough can be found on the Borough Extranet https://extranet.tfl.gov.uk/boroughs/library/documents/guidance-legislation-policies/bbps/areabased-schemes/TfL-Contacts-Crime-Disorder.pdf

TfL Equality and Inclusion Unit
T: 020 7126 4020

Traffic Directorate Contacts
The latest team leader contacts for each borough can be found on the Borough extranet: https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/traffic-infrastructure/default.aspx

Traffic Directorate - Network Performance Contacts
The latest team leader contacts for each borough can be found on the Borough extranet: https://extranet.tfl.gov.uk/boroughs/boroughs-tfl/Urban-Traffic-Control/default.aspx

London Traffic Control Centre Information Desk
T: 020 7941 2582 E: LTCCInfoDesk@streetmanagement.org.uk

Signal Data Requests Office
T: 020 7126 2370 F: 020 7126 2303 E: DTODataLegalRequests@tfl.gov.uk

Cycling
Further information on TfL cycle count data can be obtained through the Borough Extranet: http://boroughs.tfl.gov.uk/1331.aspx

London Buses
T: 020 3 054 0547

Legible London
legiblelondon@tfl.gov.uk

Public Carriage Office
Integration & Interchange Manager at the PCO, should be contacted for all queries in relation to area based schemes

Forward Planning Team
General enquiries: 020 7027 3831 or TMANotifications@streetmanagement.org.uk
The latest borough contacts can be found on http://www.londonstreetworks.net

**Business Case Development**
General business case enquiries:
Arnold Cohen - 020 7941 4135
(or either of the two contacts below)

Business Case Assistant enquiries:
Adrian Brown - 020 7941 4049

Journey Time Calculator enquiries:
Ryan Taylor - 020 7941 4615

**Surface Planning – Delivery Planning**
For collision or casualty data requests, please contact:
Sandra Cowland (Principal Research & Data Analysis Officer)
T: 020 3054 1048 E: Sandra.cowland@tfl.gov.uk

For further information regarding R & D and studies, please contact:
Chris D’Souza (Principal Research, Data and Analysis Officer)
T: 020 3054 0774 E: chris.dsouza@tfl.gov.uk

**Signage and logos**
Logos and the New Johnston font can be requested online from the extranet https://extranet.tfl.gov.uk/boroughs/glp/bsp4/signage-logos.aspx

For queries on the Strategic Walk Network (Walk London), please contact:
Jim Walker E: Jim.Walker@theaccesscompany.com

For queries about Automatic Pedestrian Counters, please contact:
Brett Little E: Brett.Little@tfl.gov.uk

**Electric Vehicle Charging Points**
Guidance is available on the Boroughs Extranet http://boroughs.tfl.gov.uk/1054.aspx

For queries on the Electric Vehicle Charging Point Programme, please contact:
Omoniyi Giwa, Senior Borough Programme Officer (Borough Projects and Programmes)
E: oniyi@tfl.gov.uk

For information about Source London
www.sourcelondon.net
Appendix D

Step 1 Information Requirements

This note provides guidance and details of the content and methodology to gather supporting information to support Step 1 submissions. This guidance is not intended to be prescriptive, but suggests practical methodologies and data sources to provide the essential information requirements.

Table A1: Step 1 submission – Information requirement

<table>
<thead>
<tr>
<th>Information Requirement</th>
<th>Suggested Methodology for Step 1</th>
<th>Essential</th>
<th>Desirable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other funds likely to be available (including other works the council will carry out within its own programmes)</td>
<td>Identify the proportion of scheme funding Likely to come from additional sources on the pro-forma.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Site audit and relevant information</td>
<td>An experienced borough officer should undertake a street audit of the proposed scheme area and its major access routes to identify problems, potential solutions and collect sample data. This can be submitted alongside the scheme sketch. A list of audit considerations is provided in Appendix F</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>A brief overarching statement setting out the need for the scheme</td>
<td>A brief statement (no more than one side of A4) is required to place the proposed scheme in borough strategic context and highlight its' links to other borough and wider initiatives.</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan showing location and boundaries of scheme</td>
<td>Drawn on a plan at a suitable scale.</td>
</tr>
</tbody>
</table>

| Scheme sketch at 1:1250 scale highlighting problems, issues and potential solutions | This can simply be hand drawn onto the map with annotations of the problems identified on the site audit. 1:1,000 or 1:1,500 scales can also be accepted. | ✓ |

<table>
<thead>
<tr>
<th>Pedestrian Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample footfall survey(s) in tourist/high density pedestrian areas at primary locations</td>
<td>It is suggested that a 20 minute sample count be undertaken on a pedestrian route within the scheme area to give an idea of overall activity. It should be from a busy period of the day. Pedestrians can be counted manually or with help of a ‘clicker’ on one side of the street, in both directions.</td>
</tr>
<tr>
<td>The data should be recorded with the exact location and time of the count on the pro-forma and the location marked on the scheme sketch.</td>
<td></td>
</tr>
</tbody>
</table>

| Accessibility statement (continued) |

This should be a short statement (no more than one side A4) describing: (1) how local disabled people have and will be involved in the design process, e.g. via a Mobility Forum, contact with a local group of disabled people (2) the problems currently faced by mobility impaired people and other groups, such as the visually impaired, and how the scheme will assist them. The guidance on Local Accessibility Schemes can be used for reference. Extranet – https://extranet.tfl.gov.uk/boroughs/glp/bsps/supporting-info.aspx. (3) the extent of severance caused by excessive traffic, busy junctions or other transport infrastructure (grade separated junctions, rail lines, etc) that will have an impact on the accessibility of everyone to the area in question. |
<table>
<thead>
<tr>
<th><strong>Full pedestrian count(s)</strong></th>
<th>Technical guidance is contained within TfL’s ‘Measuring Pedestrian Activity’ document.</th>
<th>✓</th>
</tr>
</thead>
</table>

**Traffic Data**

<table>
<thead>
<tr>
<th><strong>Congestion statement</strong></th>
<th>This should be a short statement (no more than one side A4) explaining how the scheme contributes to the objectives set out in Section 16(1) of the Traffic Management Act 2004. Where a scheme affects the SRN, the statement should focus on the second objective (facilitating movement on another authority’s roads). The statement should include how buses may be affected.</th>
<th>✓</th>
</tr>
</thead>
</table>

<p>| <strong>Sample traffic survey(s)</strong> | A similar methodology to the footfall surveys is suggested, i.e. a 20 minute survey counting all vehicles in both directions on a representative length of road within a scheme area. It is suggested that surveys take place during weekday shopping hours. And if applicable on a main route in the scheme area, in the morning or evening peak. The data should be recorded with the exact | ✓ |</p>
<table>
<thead>
<tr>
<th><strong>Traffic Collision Data</strong></th>
<th>location and time of the count on the pro-forma and the location marked on the scheme sketch.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed traffic survey(s) if available (could include turning counts or speed surveys)</td>
<td>Where recent traffic count data is available, a summary of the main figures can be appended to the submission.</td>
</tr>
<tr>
<td>Three year plot</td>
<td>A plot showing all personal injury collisions within the latest three years for the study area should be attached to the submission.</td>
</tr>
<tr>
<td>Identification of concentrations, particularly those involving vulnerable users</td>
<td>From the plot, it should be possible to determine collision concentrations or patterns. A short summary (no more than one side A4) noting these and commenting on how the scheme will resolve collision issues should be included.</td>
</tr>
<tr>
<td>Crime</td>
<td>This should be drawn up with the help of CDRP representatives</td>
</tr>
</tbody>
</table>
| Crime statement (CDRP) (continued) | (structures within local authorities vary but most have a CDRP coordinating role who can advise on how to proceed). The statement can take the form of a statement or a summary of a meeting between key CDRP stakeholders. The step 1 statement should focus on demonstrating need, and should therefore address the following issues:

1. What is the police’s overall view of crime in the study area? What types of crime occur and is there potential for ‘designing out crime’?

2. Are there particular areas or issues that require attention (wherever possible based on the identification of hotspots using GIS data as detailed below?)

3. How does the Major Scheme fit into the borough’s Crime & Disorder Reduction Plan? |

<p>| Images and Plans | Visualisation and plan which would provide an overview and key aspects of the scheme. Focus should be made on how the quality of the urban realm will be delivered. JPEG/PDF should be ✓ |</p>
<table>
<thead>
<tr>
<th>Scale of Impact</th>
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</thead>
<tbody>
<tr>
<td><strong>Ready Reckoner</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

separate to the submission document.
Appendix E

Objectives of the Design Review

All TfL and LIP funded borough schemes will be subjected to an informal design review within TfL to ensure that they meet the Mayor’s aspirations. This is not intended to be an additional bureaucratic process, merely advice on how to ensure the principles set out in Better Streets can be applied to the Major Schemes implemented across the Capital.

The Design Review Panel will wish to undertake a review prior to commencing detailed design, but post consultation. The exact timing of the design review will need to be agreed between the borough and BPP.

Principles of Design Review (from CABE’s Design Review Principles and Practice)

<table>
<thead>
<tr>
<th>No.</th>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Independent</td>
<td>It is conducted by people who are separate from the scheme promoter and decision maker and it protects against conflicts of interest.</td>
</tr>
<tr>
<td>2.</td>
<td>Accountable</td>
<td>It records and explains its advice and is transparent about potential conflicts of interest.</td>
</tr>
<tr>
<td>3.</td>
<td>Expert</td>
<td>It is conducted by suitably trained people who are experienced in design and know how to criticise constructively. Review is usually most respected where it is carried out by professional peers of the project designers, as their standing and expertise will be acknowledged.</td>
</tr>
<tr>
<td>4.</td>
<td>Advisory</td>
<td>It does not make decisions but acts as a source of impartial advice for decision makers.</td>
</tr>
<tr>
<td>5.</td>
<td>Accessible</td>
<td>Its findings are clearly expressed in terms that decision makers can understand and use.</td>
</tr>
<tr>
<td>6.</td>
<td>Proportionate</td>
<td>It is used on projects whose significance warrants public investment in providing design review at national, regional and local level, as appropriate. Other methods of appraising design quality should be used for less significant projects.</td>
</tr>
<tr>
<td>7.</td>
<td>Timely</td>
<td>It takes place as early as possible in the life of a design because this saves the most time and it costs less to make changes. If a planning application has already been made, review happens within the timeframe for considering it. It is repeated when a further opinion is required.</td>
</tr>
<tr>
<td>8.</td>
<td>Objective</td>
<td>It appraises schemes in the round according to reasoned, objective criteria rather than the stylistic tastes of individual panel members.</td>
</tr>
<tr>
<td>9.</td>
<td>Focused on outcomes for people</td>
<td>It asks how this building or place can better meet the needs of the people using it and of everyone who is affected by it.</td>
</tr>
<tr>
<td>10.</td>
<td>Focused on improving quality</td>
<td>It constructively seeks to improve the quality of architecture, urban design, landscape, highway design and town planning.</td>
</tr>
</tbody>
</table>
Appendix F

Design Considerations

This appendix includes a series of design principles taken or adapted from the ‘By Design’ guidance published by the DETR and CABE. Reference is also made to *Manual for Streets*, which, although aimed primarily at residential streets, provides a good illustration of a number of street design principles and methods that can be applied.

Key questions for the site audit are presented under each heading, along with recommendations for how these factors can be recorded on the Scheme Sketch.

Subsequently, toolkit ideas are listed. The holistic nature of Major Schemes means that a variety of approaches to understanding design issues can be employed, and the toolkit ideas include a series of prompts.

Street design guidance often focuses on new developments. When intervening in an existing street environment, planning professionals are obviously constrained in their ability to plan for movement and land use in a holistic manner. However, a series of potential measures are highlighted below suggesting how these principles can be applied within Major Schemes.

This toolkit is not meant to be exhaustive and there are numerous other relevant considerations. Likewise not every scheme is expected to feature all measures in the toolkit, only those that are relevant to the problems and issues identified.
## Ease of Movement – Access

### Principles
- Minimising walking distances between major land uses and public transport stops makes public transport easier to use and available to as many people as possible
- Public transport should be designed as an integral part of the street layout
- A junction can be designed as a point of entry. Such junctions can help identify and define the through routes

### Site Audit
- What are the key pedestrians and cycle routes to local attractors, such as hospitals, schools, parks, shops?
- Are there any locations with pedestrian congestion?
- Do public transport modes experience delays accessing the area?
- The Scheme Sketch should highlight locations with pedestrian congestion where footway widening is sought
- Locations where crossings are not on the principle desire lines should be highlighted
- Key cycle routes, cycle paths, parking facilities and other street furniture used for attaching cycles should be identified

### Toolkit Ideas
- Enhancements to improve the pedestrian environment will benefit users accessing an area by any mode and are therefore central to the success of Major Schemes. A number of tools exist to analyse pedestrian movement (e.g. space syntax techniques), but they should always seek to understand the diverse needs of different groups (e.g. interchange users, shoppers, people strolling or browsing, tourists and pleasure walkers)
- The provision of high quality cycle facilities enhances the appeal of this mode for accessing local centres and stations
- Selective and considered use of signing removal of street clutter and minimal use of advisory signing to enhance impact of essential signage

### Potential Measures
- Priority for public transport to reduce delays in accessing local centres
- Reduce or remove complicated bus journeys
- Improvements to public transport waiting facilities.
- Measures to maximise pedestrian space/priority where possible (shared surface, footway recognition and side entry treatments)
- Improvements to pedestrian access within an area and on the approaches to it
- Enhancement of cycle facilities within an area and on the approaches to it – this could include parking and route facilities
# A Balanced Approach

## Principles
- Streets should be designed as public spaces not just in response to engineering considerations.
- Boulevard-type street design provides a means of providing a high level of traffic capacity whilst encouraging continuous frontage development sheltered from the effects of traffic.
- The traditional form of high street, which allows for stopping, parking and slow traffic, provides an effective way of accommodating local shopping and economic activity.

## Site Audit
- Do public transport modes experience delays accessing or travelling through the area?
- Where are the key cycle routes to local attractors and through the area?
- The site audit should identify existing bus priority measures and also where delays occur.
- Similarly, key cycle routes through the area should be identified, as well as where cycles experience delay.

## Toolkit Ideas
- Road allocation decisions should be taken in line with the LIP and contribute to achieving its targets. Major Scheme design should be sensitive to the context of individual streets.
- Adequate social space should be provided at important locations such as outside stations and civic buildings, or at gateways to parks and recreational areas.
- Adequate space for loading areas is vital to the functioning of local centres.

## Potential Measures
- Re-allocation or re-arrangement of highway space to take into account user numbers and the need to accommodate non-transport ‘social’ activities, such as leisure/meeting areas.
- Bus priority measures within and on the main approaches to an area; and
- Enhancement of cycle facilities within an area and on the approaches to it - this could include parking and route facilities.
## Road Safety

<table>
<thead>
<tr>
<th>Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic speeds can be managed by the arrangement of buildings and spaces. Physical traffic calming measures should be secondary but considered as an integral part of the design.</td>
</tr>
<tr>
<td>Changes in materials or ‘gateways’ at the entrance to low speed areas can alert motorists to the need to reduce speed.</td>
</tr>
<tr>
<td>Smaller corner radii will encourage more careful vehicle movement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are traffic speeds through the area in keeping with the character and functions of the streets?</td>
</tr>
<tr>
<td>Sites where speeds regularly exceed a suitable level should be indicated on the Scheme Sketch. In the interest of understanding the causes, the carriageway width and sightlines at this site can also be recorded.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toolkit Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 7 of the Manual for Streets includes recommendations for using street design to control vehicle speeds.</td>
</tr>
<tr>
<td>Traffic calming can take a variety of forms including horizontal build out and changes in textures and colours to indicate changes in environmental character to drivers and to reduce sightlines to encourage lower speeds.</td>
</tr>
<tr>
<td>Where conflicts between pedestrians and vehicles is an issue, the provision of crossing facilities should be examined in terms of desire lines and cycle times.</td>
</tr>
<tr>
<td>Advance stop lines for cycles help to ensure that they are in the drivers’ sightline as traffic starts to move.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced speed zones, such as 20mph zones.</td>
</tr>
<tr>
<td>Changes to crossing facilities and user priorities.</td>
</tr>
</tbody>
</table>
## Connectivity

### Principles
- The grain of streets is usually finer around busy shopping streets
- Streets that connect to other streets encourage movement and activity and short linked-up streets can make places more accessible and encourage walking and cycling
- In designing for connected streets care should be taken to avoid undermining the ‘defensible space’ of particular neighbourhoods

### Site Audit
- Where are the main pedestrian desire lines?
- The main pedestrian crossing desire lines, the location of existing crossings and traffic signal location, and informal crossing provision such as refuges should be identified on the Scheme Sketch.

### Toolkit Ideas
- Options to improve pedestrian connectivity should be explored wherever possible, e.g. new links
- Pedestrian crossings should match desire lines. A higher frequency of informal and formal crossings is required where the grain of streets or adjacent activities is higher, such as around busy shopping streets
- Where a formal crossing is not justified, provision can be made for safer informal crossing using refuges, carriageway narrowing or changes of paving texture and colour to slow vehicles and signal to drivers that pedestrians may be crossing

### Potential Measures
- Installation or relocation of pedestrian crossings to coincide with desire lines; and
- New informal crossing facilities
## Interchange

<table>
<thead>
<tr>
<th>Principles</th>
<th>Stations and public transport waiting areas designed as an integral part of the public realm create safe and secure pedestrian environments at all times of the day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Audit</td>
<td>Are public transport waiting areas spacious, comfortable, safe and well-located? Are the walking routes between public transport stops and station on the main desire line, wide enough for flows, overlooked by adjacent land uses and well lit at night?</td>
</tr>
<tr>
<td>Toolkit Ideas</td>
<td>Any issues associated with the quality of public transport areas, or the walking routes between them, should be highlighted on the Scheme Sketch.</td>
</tr>
<tr>
<td>Toolkit Ideas</td>
<td>Safe, comfortable waiting areas for public transport should be provided with consideration to minimising interchange distances and positioning shelters etc out of but adjacent to high pedestrian flows. Public transport interchange areas should be surrounded by a mix of uses including active ground floor frontages so as to ensure activity at all times of the day.</td>
</tr>
<tr>
<td>Potential Measures</td>
<td>Improved layout of public transport stops to facilitate interchange and better integration between public transport modes. Consider new routings for bus services to reduce running times and improve accessibility. Measures to stimulate activity in proximity to public transport stops, e.g. provision for kiosks or outdoor seating; and Provision of new infrastructure around interchange areas, e.g. lighting or CCTV.</td>
</tr>
</tbody>
</table>
## Character

<table>
<thead>
<tr>
<th>Principles</th>
<th>Layout and local building forms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• The traditional layout of an area reflects its history, functions and connections with adjoining areas. These contribute to the interest and richness of an area, and to its potential to accommodate further change in the future</td>
</tr>
<tr>
<td></td>
<td>• Local building forms and details contribute to the distinctive qualities of a place</td>
</tr>
<tr>
<td>Materials</td>
<td>The scale, texture and colour of building materials reflects an area’s special function and character</td>
</tr>
<tr>
<td></td>
<td>• Every element of the street scene contributes to the identity of the place, including sculpture, lighting, railings, litter bins, paving, fountains and street furniture</td>
</tr>
<tr>
<td></td>
<td>• Areas can be enhanced by reflecting local art and craft traditions. These might relate to elements such as ironwork, stained glass, thatching, brickwork, masonry, walling and paving. They should not be add-ons or after-thoughts but part of the design from the start</td>
</tr>
<tr>
<td></td>
<td>• The Design Review Panel can assist/may make recommendations</td>
</tr>
</tbody>
</table>

| Site Audit | Is the street layout in harmony with the character, history, functions and connections of the surrounding area? |
|           | • Are the individual elements of street furniture and materials in keeping with the character of the area? |
|           | • The site audit should register general issues and problematic elements of the streetscape should be marked on the Scheme Sketch. |

| Toolkit Ideas | Considering the character of an area is an essential part of the design process. The character and functions of space can change over time. Both historical records and consultation responses from residents of different ages can be used to understand the sense attributed to spaces through time |
|              | • Functions, specific layouts or individual features that contribute to an area’s character should be maintained wherever possible |
|              | • Where the sense of a place has been damaged by inappropriate design measures, these should be reversed or mitigated as far as possible |
|              | • Chapter 5 of the Manual for Streets provides guidance on simple tools for assessing the character of places, including assessments of street dimensions and enclosure. |

| Potential Measures | Re-allocation and/or re-alignment of road space in line with the desired character and functions of an area; and |
|                   | Improved choice of materials to match the character and context of an area. |
## Quality of the Public Realm

### Principles
- The Design Review Panel will advise on public realm and may make recommendations or provide advice on design matters.
- Co-ordinating the design of streetscape avoids clutter and confusion. This includes all elements of the street scene including signage, lighting, railings, litter bins, paving, seating, bus shelters, bollards, kiosks, cycle racks as well as sculptures and fountains.
- Streetscape should take account of the need for maintenance, resistance to vandalism and access to underground services.
- The work of artists should be integrated into the design process at the earliest possible stage if it is to be used effectively.
- Street furniture such as benches and bus stops should be sited with the safety of users in mind.
- Making use of natural assets such as water, riversides, slopes, trees and other planting helps to create attractive spaces and encourages biodiversity.
- Street trees and street lighting can reinforce the character and relative importance of a route.

### Site Audit
- How is the condition of the footways?
- Is the street furniture consistent and of a high quality?
- Are there areas that are cluttered and/or confusing?
- Footway condition, types of material, location of vehicle crossovers, and the existence of cellars and/or private forecourts in retail centres can be indicated on the Scheme Sketch.
- Spaces should be marked on the Scheme Sketch where de-cluttering and the rationalisation of street furniture are required.

### Toolkit Ideas
- A number of tools exist for auditing the public realm. Any audit should concentrate not only on materials and street furniture on the public highway, but also its interaction with shop frontages, A-boards etc. Although some of the elements may be outside the remit of Major Schemes, a holistic approach should consider how changes link to the adjacent land uses.
- Major Schemes provides a major opportunity to reduce street clutter (see for example Traffic Measures in Historic Towns, published by English Heritage).
- Chapter 10 of the Manual for Streets sets out recommendations for design solutions where street furniture offers amenity whilst avoiding clutter.
- TfL has guidelines on the design and branding of shelters, information provision, and other street furniture. In order to reduce clutter, it is vital that consideration is given to these at an early stage. Otherwise, it is possible that additional elements of street furniture may be added after scheme completion.
- It is vital that maintenance is considered during the design phase. This can include assessing the current successes and failures of maintenance in an area, the street cleaning equipment to be used, stock replacement arrangements for stone and street furniture, and the responsibilities of external stakeholders such as utility companies.
## Potential Measures

- Enhancement of the public realm through, e.g. planting, sculpture or other ‘focal’ features, replacement and consolidation of street furniture
- Consideration of environmental improvements, including those to improve air quality, reduce emissions or increase biodiversity
- Installation of seating areas within and on the approaches to an area; and Carriageway resurfacing as part of more holistic improvements
Continuity, Enclosure and Personal Security

**Principles**

- Development that follows the boundary of the street block can help to create an unambiguous distinction between public and private spaces. Respecting the historic or traditional building line helps to integrate new development into the street scene, maintaining the continuous urban fabric and avoiding places of concealment.
- Continuous street frontages have a minimum of blank walls and gaps between buildings. Gaps between buildings reduce the degree to which the street is overlooked, as do blank walls (which also encourage graffiti).
- Clearly indicating the extent of private ownership of space round a building (by means such as walls, fences, railings, gates, arches, signage and paving) define the boundary between public and private space.
- Detailed design can make clear whether ambiguous spaces (such as forecourts, malls, arcades and covered streets) are public or private.

**Site Audit**

- Where are there active and inactive frontages?
- Are there sections of footway without natural surveillance?
- Is there an unambiguous distinction between public and private spaces?
- Are there blank walls, gaps, or concealed entrances that create security concerns?

**Toolkit Ideas**

- As a starting point for assessing the urban fabric, a number of elements can be mapped relatively easily: traditional building lines, active and inactive frontages, public/private and ambiguous spaces, nooks and crannies or concealed spaces.
- Spaces lacking natural surveillance may require special treatment in terms of improved pedestrian sightlines, lighting effects, CCTV etc. to enhance their profile.
- Conversely, options can be explored to “close off” other ambiguous spaces (such as access to loading areas behind buildings) either physically or psychologically. Where possible, pedestrian connectivity should not be compromised and solutions should be sought that encourage through movement on overlooked, lit paths whilst closing off ‘dead-end’ spaces.
- The rhythm of trees, lighting and materials can create continuity on links. Deliberate changes in continuity can be used to reinforce a functional change, e.g. at a gateway from ‘link’ to ‘place’.
- Chapters 4 and 5 of the Manual for Streets provide further guidance on a number of these principles.
- The Community Security Zone concept is an attempt to incorporate crime, disorder and terrorism reduction issues into the design of spaces, especially busy places.
<table>
<thead>
<tr>
<th>Potential Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Context-specific street design to define and accentuate links and places;</td>
</tr>
<tr>
<td>- Designing out ‘nooks and crannies’ or ‘dark spots’ to improve personal security;</td>
</tr>
<tr>
<td>- Designing out crime hotspots and addressing peoples’ fears;</td>
</tr>
<tr>
<td>- Incorporating Community Security Zone concepts; and</td>
</tr>
<tr>
<td>- Improvements to street lightning and CCTV to reduce the fear of crime.</td>
</tr>
</tbody>
</table>
## Inclusivity and Accessibility

### Principles
- Transport is one of the most powerful mechanisms for tackling social discrimination, imbalance and exclusion. Everyone who lives in, works in or visits London should have a fair and equal chance to access transport services and be able to equally use London’s streets without fear or barriers.
- Inclusive street design ensures ease of use, comprehension and understanding. Moving through the space should require minimal stress, physical strength and effort.
- The social model of disability proposes that barriers and prejudice and exclusion by society (purposely or inadvertently) are the ultimate factors defining who is disabled and who is not in a particular society. It recognises that while some people have physical, intellectual, or psychological differences from a statistical norm, which may sometimes be impairments, these do not have to lead to disability unless society fails to accommodate and include them in the way it would those who are ‘normal.’

### Site Audit
- Are the footways step-free and adequately wide?
- Is tactile information provision adequate and accurate?
- Is there an adequate tapping line for visually impaired people using a tapping stick?
- Is there colour contrast, for example on bollards, bins and cycle stands?
- Is there any parking provision for Blue Badge holders?
- The Scheme Sketch should record the locations steep gradients, steps, missing accessible crossings, missing tapping lines, missing tactile information and any other remaining barriers.

### Toolkit Ideas
- Local disabled people should be involved in the design process as early as possible.
- A number of auditing tools also exist for assessing barriers to access for target groups. Appendix G contains an auditing toolkit produced by TfL for accessibility schemes.
- Major Schemes offers the possibility to include these considerations from the beginning of the design process, allowing creative design solutions for area-specific issues. These design considerations must be kept in mind all the way through the design process so that they are not inadvertently squeezed out when late modifications and amendments are introduced.

### Potential Measures
- Area-wide improvements to accessibility to provide a legible, step-free, spacious environment.
- Information provision adapted to the needs of those with sensory impairments or learning difficulties, considering tactile, audio and other information channels; and
- Installation or relocation of accessible parking bays near key facilities.
## Legibility

<table>
<thead>
<tr>
<th>Principles</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The ability to see important routes and landmarks can be integral to finding one’s way around and in reinforcing the sense of place</td>
<td></td>
</tr>
<tr>
<td>- Where possible, views should focus on important routes, memorable buildings and landscape features</td>
<td></td>
</tr>
<tr>
<td>- A sense of place often depends on the design of the public realm and its contribution to an area’s character and identity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The choice of materials can add interest and aid legibility. The infinite variations in any natural material have their own intrinsic qualities and uniqueness</td>
</tr>
<tr>
<td>- The quality of signage, including that for shops and other commercial premises, is important and can enhance identity and legibility</td>
</tr>
<tr>
<td>- Works of art and lighting schemes can help to aid identity and legibility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Is it easy to understand the area and orientate oneself?</td>
</tr>
<tr>
<td>- Are street names and other directional signage provided?</td>
</tr>
<tr>
<td>- The Scheme Sketch should identify key local facilities serving as landmarks and conversely those spaces that have no reference points.</td>
</tr>
<tr>
<td>- Signage and other wayfinding aids should be recorded.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toolkit Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Understanding legibility is difficult but consultation and survey responses, as well as the observation of pedestrians can be used to assess the environment. Alternatively, the sightlines of individual landmarks can be mapped</td>
</tr>
<tr>
<td>- A greater amount of signage and other wayfinding aids are needed in spaces with poor natural legibility (for example one-way systems where vehicular movements often contradict pedestrian routes). These should be positioned to minimise clutter yet be visible from key pedestrian flows</td>
</tr>
<tr>
<td>- Chapter 9 of the Manual for Streets provides suggestions for optimising signage</td>
</tr>
<tr>
<td>- The <em>Legible London</em> project aims to address barriers to pedestrian legibility by seeking more joined-up wayfinding approaches, and boroughs are encouraged to link in to London-wide initiatives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Re-allocation and/or re-alignment of road space to provide a more legible road layout;</td>
</tr>
<tr>
<td>- Removal or relocation of signs, guard railing or other street furniture clutter; and</td>
</tr>
<tr>
<td>- Improved signage and information provision.</td>
</tr>
</tbody>
</table>
### Adaptability

<table>
<thead>
<tr>
<th>Principles</th>
<th>Site Audit</th>
<th>Toolkit Ideas</th>
</tr>
</thead>
</table>
|  - Well-designed public spaces allow for different uses, such as events, festivals and markets. |  - Are the streets and public spaces designed in a manner that allows for future flexibility of uses?  
  - Is there potential to host events, festivals and markets? |  - Specific issues with existing spaces and spaces with potential for wider uses can be recorded in the site audit. |

<table>
<thead>
<tr>
<th>Potential Measures</th>
</tr>
</thead>
</table>
|  - Creation of flexible and adaptable spaces that can be used for a variety of events (e.g. markets or fairs), considering issues such as access, power supplies and maintenance; and  
  - Good provision of bins, easy access for cleaning equipment and provision for replacement of street furniture and materials to create a durable and easy-to-maintain environment. |
Diversity of Activity

| Principles | • A successful mix of uses results where the uses are compatible one with another and interact with each positively |
| Site Audit | • Does the area support a diverse range of activities?  
• Do different sectors of the local community use the street/public space?  
• What is the provision for loading and servicing at different time of the day?  
• Issues can be recorded in the site audit. |
| Toolkit Ideas | • The Major Schemes design should be mindful of the adjacent land uses and their frontages. Transport professionals should work closely with planners to seek a joined-up approach to planning surrounding land uses and on-street uses.  
• Some land uses have significant demand for loading and servicing that can conflict with other street functions. Major Schemes offers a possibility to consider loading and access arrangements for adjacent businesses over a wider area.  
• Certain land uses also produce significant amounts of waste. Chapter 6 of the Manual for Streets provides some guidance on provisions for waste storage and collections.  
• Streets and the social space they provide should aim to cater for all groups of society. In order to improve community cohesion, diverse and non-segregated provision of spaces used by all groups including the elderly, young people and children is essential. |
| Potential Measures | • Improved loading and servicing arrangements;  
• Creative solutions for the storage and collection of waste;  
• Parking management and control, review of CPZs in conjunction with other works; and  
• Creation of a diverse range of ‘social spaces’ within an area. |
**Sustainability**

**Principles**
- Major Schemes can make a significant contribution to sustainability objectives. Improved access to local centres and stations by walking, cycling and public transport encourages shorter trips by sustainable modes. Furthermore, improving the attractiveness of local centres encourages people to use local facilities and make shorter trips, whilst contributing to a sustainable future for local businesses.
- Local air quality can be improved through trees and planting in the public realm, and wider footways to increase the distance between pedestrians and motor vehicles.
- The choice of materials should also aim to promote sustainability through the use of sustainable and regionally sourced products.

**Site Audit**
- How long have the existing materials lasted?
- Where are the materials used sourced from?
- How good is the local air quality?
- Potential locations for footway widening and planting can be drawn of the Scheme Sketch.

**Toolkit Ideas**
- Where Major Schemes improve pedestrian and cycling access to local facilities and services, localised marketing of this fact should be considered to encourage local people to use these facilities.
- Although boroughs may have standard suppliers of materials, schemes of the size of Major Schemes provide an opportunity to consider alternative materials. Longevity and regional sourcing are key aspects of sustainable purchasing. There may also be options to use recycled materials.
- Where trees and planting are considered, the choice should reflect local biodiversity needs as well as simply aesthetics.

**Potential Measures**
- Planting of trees and other plants;
- Choice of regionally-sourced materials;
- Use of products from certified sustainable sources;
- Use of recycled and recyclable materials;
- Use of materials with a long life;
- Minimising energy use (e.g. more energy efficient lighting).

**Value**

Major Schemes should aim to achieve value for money. When planning major interventions in the public realm, a long term view is recommended, considering the whole life cost of a scheme. The use of more costly and durable materials is better value in the long term if maintenance costs are reduced.
Appendix G

Local Area Accessibility Toolkit

Introduction

1) Obtain a detailed map of your area/route so you can record the location of any accessibility issues identified.

2) Visit the area and record on the audit sheet (Sheet B) any specific accessibility issues. Pay particular attention to the needs of those in the target groups identified in Table 1.2. Note any useful measurements i.e. footway width.

Table 1.1 provides a useful checklist of issues you may want to consider when completing your audit sheet. Where numbers are indicated in the table, look for the corresponding number in Table 1.3 which will provide you with information on appropriate design standards included in the DfT’s Inclusive Mobility document. You can use these standards to help to determine what improvements need to be made to your area/route.

Table 1.1: Checklist

<table>
<thead>
<tr>
<th>Pedestrian Routes</th>
<th>Street Furniture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footway widths 1</td>
<td>Seating and waiting areas 1, 13</td>
</tr>
<tr>
<td>Gradients 2</td>
<td></td>
</tr>
<tr>
<td>Crossfall 2</td>
<td></td>
</tr>
<tr>
<td>Ramps and steps 3</td>
<td></td>
</tr>
<tr>
<td>Condition of the footway 5</td>
<td></td>
</tr>
<tr>
<td>Surfaces – texture/colour 12</td>
<td></td>
</tr>
<tr>
<td>Surface quality 5</td>
<td></td>
</tr>
<tr>
<td>Pedestrian headroom 17</td>
<td></td>
</tr>
<tr>
<td>Pedestrian volumes 1</td>
<td></td>
</tr>
<tr>
<td>Suitable resting places 13</td>
<td></td>
</tr>
<tr>
<td>Parked vehicles 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crossing Facilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of crossing 6, 7</td>
<td></td>
</tr>
<tr>
<td>Dropped kerbs 11</td>
<td></td>
</tr>
<tr>
<td>Frequency of crossings opportunities 6</td>
<td></td>
</tr>
<tr>
<td>Tactile paving 11, 12</td>
<td></td>
</tr>
<tr>
<td>Refuge islands 8</td>
<td></td>
</tr>
<tr>
<td>Form of control at crossing 9, 10</td>
<td></td>
</tr>
<tr>
<td>Signage 14, 15, 16, 17, 18</td>
<td></td>
</tr>
<tr>
<td>Crossing time 10</td>
<td></td>
</tr>
</tbody>
</table>
Target Groups

It is vital to consider each of the target groups whilst auditing the pedestrian environment, these groups are shown in the table below:

Table 1.2: Target Groups

<table>
<thead>
<tr>
<th></th>
<th>L</th>
<th>P</th>
<th>S</th>
<th>H</th>
<th>R</th>
<th>LD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L</strong></td>
<td><strong>Locomotion:</strong> this includes people in wheelchairs and people with walking difficulties, some of whom may use a walking aid such as a walking stick or walking frame.</td>
<td><strong>Physical:</strong> Measures to improve access for this group will generally also benefit other groups such as people with prams/pushchairs or those with luggage.</td>
<td><strong>Seeing:</strong> this includes blind people and partially sighted people. The needs of these two groups can differ substantially.</td>
<td><strong>Hearing:</strong> this includes profoundly deaf people and those with hearing impairments.</td>
<td><strong>Reaching, stretching and dexterity:</strong> this includes a number of conditions (most frequently arthritis) that can make specific movements very painful, can represent a loss in muscular strength, and can cause complaints to the nervous system.</td>
<td><strong>Learning disability:</strong> this can affect individuals’ ability to understand complex information, e.g. when accessing public transport or navigating in an illegible public realm.</td>
</tr>
</tbody>
</table>
## Standards

The standards outlined below will help you make an assessment of the accessibility needs within your chosen area.

### Table 1.3: Standards

<table>
<thead>
<tr>
<th>Group</th>
<th>Standards/Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Widths</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>L,P,S</td>
</tr>
<tr>
<td>2000mm effective width allows two wheelchair users to pass one another and is regarded as the minimum under normal circumstances. Otherwise, 1500mm allows a wheelchair user and one ambulant person to pass. 1200mm is the absolute minimum, as this at least ensures a double buggy can use the footway</td>
<td></td>
</tr>
</tbody>
</table>

Effective width describes the width of the paved surface available to pedestrians excluding space taken by guard railings and other street furniture.

| **Gradients/crossfall** | |
| 2. | 5% (1 in 20) is considered as the maximum gradient for any footways. Indeed, over longer distances 2.5% (1 in 40) is considered a better maximum standard. Over very short distances (under 1000mm), 8% (1 in 12) can be used as an absolute maximum.

Gradient standards apply to all footways and dropped kerbs to crossings. Some crossfall on footways may be necessary for drainage but should never exceed 2.5% (1 in 20). Variable crossfall often occurs in streets with vehicle-crossovers. These can provide as much of a barrier to mobility as road crossings and should be investigated carefully.
<table>
<thead>
<tr>
<th>Group</th>
<th>Standards/Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steps/ramps</strong></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The following standards are recommended for all steps</td>
</tr>
<tr>
<td></td>
<td>- Height of riser between 130-150mm</td>
</tr>
<tr>
<td></td>
<td>- Preferred depth of tread 300mm</td>
</tr>
<tr>
<td></td>
<td>Gradient standards also apply to ramps, i.e. 2.5% - 8% depending on the length</td>
</tr>
<tr>
<td></td>
<td>Both steps and ramps require handrails at a height of 900-1100mm.</td>
</tr>
<tr>
<td>4.</td>
<td>Hazard warning tactile surface should be provided at the top and bottom of stairs starting 400mm from the first step with a depth of 800mm. Colour contrast is recommended on steps.</td>
</tr>
<tr>
<td><strong>Surface quality</strong></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>L,P,S Uneven footway surfaces and excessive gaps between pavings present a significant barrier to mobility. Where possible gulley covers and gratings should be located away from main pedestrian paths.</td>
</tr>
<tr>
<td><strong>Frequency of crossing opportunities</strong></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>L,P,S,LD Step-free crossings (both formal and informal) should be provided at regular intervals. Dropped kerbs should be provided at least every 100m at the absolute maximum. Lack of crossings, those located off main desire lines, and very staggered crossings can all contribute to excessive detours for mobility impaired people and an illegible environment for people with sensory and learning difficulties.</td>
</tr>
<tr>
<td>7.</td>
<td>H At certain crossing points both hearing and visual senses may be employed to ascertain when it is safe to cross (i.e. where sightlines may be restricted). These may prove particularly dangerous for people with hearing impairments, and additional traffic calming measures may be necessary.</td>
</tr>
<tr>
<td><strong>Refuge islands</strong></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>L,P,R Centre refuge islands should have an absolute minimum width of 1200mm. However, to cater for wheelchair users they should be at least 1500mm. Staggered crossings require a minimum effective width (i.e. excluding guard rail) of 2000mm to allow</td>
</tr>
</tbody>
</table>
two wheelchairs to pass, and 1500m to allow ambulant persons to pass a wheelchair user.

<table>
<thead>
<tr>
<th>Group</th>
<th>Standards/Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Controlled crossings – bus stops</strong></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>R,S,H</td>
</tr>
<tr>
<td>10.</td>
<td>L,R</td>
</tr>
<tr>
<td><strong>Tactile information and gradients</strong></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>L,P,R</td>
</tr>
<tr>
<td>12.</td>
<td>S</td>
</tr>
<tr>
<td><strong>Resting places</strong></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>L,R</td>
</tr>
<tr>
<td>Group</td>
<td>Standards/Guidance</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------</td>
</tr>
<tr>
<td><strong>Signage</strong></td>
<td></td>
</tr>
<tr>
<td>14. L,P,S,D</td>
<td>Signs should be written in a clear typeface. Arial and Helvetica are often recommended. A strong colour contrast (preferably dark on light) is recommended yellow for partially sighted people. The size of letters depends on the reading distance, whereby a ration of 3.75% (1 to 27) is recommended. This corresponds to 15-25mm for close up reading, 60-80mm for directional signs viewed from several metres away, and 120-160mm from 15-25m. Information can also be provided using other measures, e.g. tactile signage, tactile maps or information boards incorporating tactile and/or audio information.</td>
</tr>
<tr>
<td><strong>Positioning</strong></td>
<td></td>
</tr>
<tr>
<td>15. S,R</td>
<td>The positioning of signs and information panels can vary depending on, for example, crowding levels that may obscure signs. Therefore directional signs should often be mounted at no less than 2000mm above the ground. Generally wall-mounted information should be centred at 1400mm above the ground.</td>
</tr>
<tr>
<td><strong>Heights</strong></td>
<td></td>
</tr>
<tr>
<td>16. S,R</td>
<td>The opening on bins should be at the height of approximately 1000m above ground level. Free standing objects such as bollards should generally be at least 1000mm in height. Chains or rope linking bollards is not recommended.</td>
</tr>
<tr>
<td><strong>Pedestrian headroom</strong></td>
<td></td>
</tr>
<tr>
<td>17. S</td>
<td>Signs and other objects should be mounted at a minimum of 2100-2300mm above the ground if located above a pedestrian footway. Where signs are mounted on two posts or with a significant overhang at head height, a skirting at a height of 300mm is required as a tapping aid.</td>
</tr>
<tr>
<td><strong>Colour contrast</strong></td>
<td></td>
</tr>
<tr>
<td>18. S</td>
<td>Some form of colour contrast is recommended for most types of street furniture, although this may be difficult in heritage areas. This can be achieved with colour-contrasted bands on street furniture. However, in most cases it may be more proficient to seek to minimise unnecessary street furniture and ensure that all necessary furniture is in a colour that contrasts adequately with its surroundings.</td>
</tr>
<tr>
<td>Other issues</td>
<td>Standards/Guidance</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>19. L,S,R</td>
<td>Detailed attention should be paid to access routes to and from blue badge parking facilities. Guidance path surfacing can be used on wider pedestrian spaces or concourses to facilitate movement where tapping may be difficult. Where cycle paths run adequate to the footway, a clear tactile delineation is required.</td>
</tr>
</tbody>
</table>
Audit sheet
Location:
Name of Auditor:
Brief description of route/area:
Main land uses in and around the area:

| ID | Description of issue | Group | Relevant Measurements | Priority level (1-5,)
|----|-----------------------|-------|-----------------------|------------------------
|    |                       |       |                       | 1 no action required, 5 immediate action required |
Appendix H

Traffic Directorate processes, and data/modelling guidance

Traffic Directorate Process

The six different steps in the Traffic Directorate process can be summarised as follows:

**Step 1: Fund**

As Major Schemes are LIP-funded, all proposals are submitted to the BPP team. The Traffic Directorate are not involved at this stage. BPP acts as the coordinator and provides a ‘watching brief’ for the progress of the signals work. They are also responsible for assigning schemes to the available ‘slots’ in the TfL Signals programme and matching the priorities in conjunction with Mayor’s Transport Strategy.

Proposal 30 of the Mayor’s Transport Strategy makes it incumbent on local authorities to upgrade, rationalise or remove unnecessary traffic management equipment wherever appropriate and to optimise timings at signal controlled junctions to keep traffic moving. TfL has therefore written to all London boroughs with details of the results of the review of traffic signals in their area, and asked them to consider whether, with the benefit of their local community and stakeholder knowledge, they would also consider the sites identified as viable candidates for removal.

Through the development of new LIPs, London boroughs will need to demonstrate their commitment to this Mayoral objective by putting forward appropriate proposals as part of the development of their LIP funded programmes.

Major Schemes provide a good opportunity to comprehensively assess the local road network, especially in terms of public transport, walking and cycling. Accordingly the opportunity should be taken to examine whether traffic signals could be replaced by alternatives such as priority junctions. The Traffic Directorate will be very happy to work with boroughs to assess such possibilities.
Step 2: Develop Design

At the preliminary design stage, the scope is developed by the boroughs. During this stage, the Traffic Directorate provides support and advice only, on modelling techniques, scheme evaluation and deliverables. Crucially, the Traffic Directorate also provides estimates for signals design and installation to assist with scheme cost estimates.

Especially for complex Major Schemes, it is advisable to discuss the modelling requirements up front to decide on the amount of modelling work required and generate a realistic cost estimate for this work.

Step 3: Detailed Design

The borough initiates the detailed design for the scheme. The results of the preliminary design will determine whether traffic signals changes are required, if so a Scheme Brief Form (SBF) must be submitted to the BPP (see below for details of the technical documents that are required by the Traffic Directorate). BPP submits the SBF along with a borough’s Works order so that Traffic Directorate can start work. The timescale for submission of the SBF is crucial to the management of the overall Major Schemes programme and delays at this stage will affect the progress of your or other Major Schemes.

Traffic Directorate will then agree the timing of procurement and installation with the borough. If Forward Planning approval is required, the detailed design report is also incorporated into the submission that must gain approval from the Forward Planning Team. Following completion of the detailed design, the Traffic Directorate submits a quotation letter to the borough and BPP for approval, prior to initiating the next phase.

Step 4: Procure and Install

Following approval of the detailed design and funding for implementation, the scheme enters the procurement and installation phase. Once a Major Schemes Step 2 submission has been approved by the BPP, and all other necessary approvals have been obtained, this stage can commence. Any additional funding required, as indicated by Traffic Directorate quotation letter, must be submitted to Traffic Directorate prior to entering any procurement or
installation contracts with third parties. The implementation dates are agreed with the borough and equipment procurement and installation commences.

On completion of the signals work, Traffic Directorate finalises the as-built layout drawing; a Stage 3 checklist for site completion and safety; and, the ‘Take-over Certificate’ and notifies the borough.

**Step 5: Commission and Close**

The borough is responsible for updating the document from the previous phase. This should include any maintenance schedules required to be handed over to the Traffic Directorate.

The borough is also responsible for ensuring the issue of the Completion Certificate for any civils work. Traffic Directorate retains copies of the as-built drawings in archive and will submit a final account of the costs for the signals work to the borough and the BPP.

**Step 6: Operate and Maintain**

The Traffic Directorate are responsible for maintenance of the traffic signals, from commissioning.

**Scheme Brief Form (SBF) Requirements**

The Scheme Brief Form (SBF), submitted by the borough to the BPP to be forwarded to Traffic Directorate, comprises:

- Scheme details (titles; location; funding sources; etc)
- Scheme objective
- Scope and deliverables
- Justifications and benefits
- CDM contact details
- And appended scheme technical data (drawing; technical data and flows; etc)
- £2,000 P.O for each set signals (this figure is currently under review)
The technical data that are required are tabulated below:

Note that although pedestrian data is not required by Traffic Directorate, boroughs are strongly advised to consider pedestrian desire lines when preparing changes to crossings.

<table>
<thead>
<tr>
<th>Scheme Data requirements</th>
<th>1:200 Drawing</th>
<th>Traffic Data</th>
<th>Collision Statistics</th>
<th>85% Speeds</th>
<th>Speed Limits</th>
<th>Bus Flows</th>
<th>Cycle Flows</th>
<th>Queue Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>New signals installation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Major modification to existing junction</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Minor modification to existing junction</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Pelican/toucan crossing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Puffin crossing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Timing change (new EPROM) (excludes UTC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Completed Scheme Brief Form</td>
</tr>
</tbody>
</table>

**Traffic Directorate Modelling Guidance**

Please note that this appendix summarises some of the key sections of the Traffic Directorate Modelling Guidance (as contained in version 2.0 published July 2006). The latest version of the full document can be found on the TfL boroughs extranet – [https://extranet.infrastructure/default.aspx](https://extranet.infrastructure/default.aspx).
Traffic Directorate Data Requirements

It is generally recommended that data for the following time periods is collected:

- Am peak
- Mid day peak
- Pm peak
- Saturday mid day peak
- Sunday pm peak

This list is not exhaustive. Additional periods may be required depending on site specific circumstances (e.g. late evenings in the West End). Survey periods should cover at least a two-hour period to ensure the peak-hour can be captured. The peak hour should be determined separately for each junction. The Traffic Directorate will require a series of geometric layout drawings and traffic diagrams. These will generally include an existing TfL signal layout drawing, staging and inter-stage diagrams, a Signal Design Summary Sheet, a network diagram and separate existing and proposed layout drawings showing road markings and parking.

In all cases traffic flows should be collected. For simple isolated junctions, the following data represents the minimum requirement:

- Peak hour classified turning movements (with appropriate PCU weightings applied) at each approach for each modelled period, including where appropriate:
  - Buses, articulated buses, HGVs, LGVs, trams, taxis, motorcycles, pedal cycles and cars
- Junction bound automatic traffic counts upstream of maximum queues (at any time during the study period)
- Number of vehicles using short lanes per cycle and the average cycle length and green time for each modelled period
- Number of opposed right turn vehicles clearing in inter-greens per cycle
- Number of ahead vehicles per cycle sharing an offside lane with right turning vehicles per cycle
- Number of pedestrians crossing each junction approach, where appropriate

For more complex networks of junctions, more comprehensive surveys should be obtained to generate an origin/destination matrix through the modelled network.

Traffic signal control information can be obtained by contacting the Signal Data Requests Office (see Appendix C). Essential information includes the current method of control (including banned movements), phase inter-green
table, phase delays, phase minima, phase maximum in case of VA operation, CLF plans (only if non-UTC sites), any other special conditioning.

A series of calibration data is required, including pedestrian and bicycle flows, crossing times, bus flows and dwell times, free running travel times, minimum acceptable give way gaps, and saturation flows.

Data required to validate models includes stop line traffic flows, degree of saturation, queue lengths and average journey times.

Q. **What are UTC and SCOOT?**

A. The Traffic Directorate Network Performance team controls 2,900 of London’s 6,000 sets of traffic signals centrally. Through an optimisation programme, the Network Performance team aims to balance the needs of all road users, including pedestrians, but passengers and cyclists. Signals in London are controlled in one of three ways:

1. **Urban traffic control**
2. UTC fixed time control – operating to pre-calculated timings that vary according to the time of day and week.
3. UTC Split Cycle Offset Optimisation Technique (SCOOT) – controlled by a dynamic, real-time, demand responsive computer controlled system.

In the case of planned events, scheduled works and unplanned incidents, UTC signals can be manipulated from the LTCC and its library of scenarios.

When existing junctions are controller UTC, further UTC plan data is also required:

- Current signal timings (for fixed time controlled junctions) from the UTC system library
- SCOOT average cycle and stage lengths (from the SCOOT data Astrid database backfiles – NOT from SCOOT signals plans)
- Average SCOOT offsets (from SCOOT “M16 message” – NOT from SCOOT signal plans)
- Appearance frequency of demand dependent stages (using the UTC system ACHK command)
- Stage length allocation to other stages when demand dependent stages are not called (according to existing plans)
Details of any SCOOT parameters or constraints that may affect the timings (e.g. weightings of splits or offsets)
Details of any SVD bus priority measured in operation

The above data can be obtained from Traffic Directorate via the Signal Data Requests Office.

Modelling Recommendations
This section attempts to provide a series of general recommendations for modelling area based schemes. Detailed guidelines are to be found within the Traffic Directorate Modelling Guidance.

Model Identification
Schemes impacting on a single junction should be modelled with LINSIG or, if the junction is part of an UTC Group or Region and requires a change to the cycle time, TRANSYT should be used to model the entire Group or Region.

Major schemes will generally have a network wide impact. The technique used is dependent on the level of saturation of the network:

- Under saturated networks – if no links with significant oversaturation or exit blocking are predicted, then the TRANSYT tool is recommended.
- Oversaturated networks – micro-simulation models should accompany the TRANSYT models for congested conditions with significant oversaturation or exit blocking. The UTC section in the Traffic Directorate has the capability to assess micro-simulation models using both VISSIM and PARAMICS, although it is strongly recommended that VISSIM is used in order that models can be adequately audited.
- Major development schemes – for schemes over £2m in cost or those with considerable network impacts a traffic assignment model, such as SATURN, should be used and iterations with TRANSYT and VISSIM undertaken.

Model Boundaries
In general the model boundary should encompass the area within which link flows or journey times or delays will be significantly affected by the implementation of the scheme.

Initially it should include:

- Any junctions where traffic flows are changing significantly as a result of the proposal;
Any junctions that include changes to the geometric layout (regardless of changes to flow); and
Any junctions that include changes to the signal control (regardless of changes to flow).

Furthermore, the boundary should go beyond:

- The effects on platooning vehicles from upstream junctions and arriving at downstream junctions;
- The maximum observed queue length formed at junction approaches, including any junctions where blocking back occurs; and
- Any upstream junctions where modelling indicates there may be interference between the external links and these junctions.

Note that if the study area is part of a CLF or UTC Group or Region and changes to cycle times are proposed, then the whole Group/Region will have to be included in the model. Finally, consideration must be given to the following issues:

The routes currently being used (or likely to be used in the future) by traffic affected by the scheme;
The areas where significant relief would be provided by the scheme;
The areas susceptible to significant disbenefits produced by extra traffic induced by the scheme;
The impact of changes in traffic levels on both existing new/improved roads in the area affected; and
The area over which economic benefits are assessed.

**Traffic Modelling Deliverables**

An assessment of the scheme is written up within the Scheme Brief Form. The full impact of the scheme compared to the existing base situation must be presented in a clear and concise manner.

The minimum recommended performance statistics are:

- Degree of saturation (per link);
- Maximum average queue length per lane/link;
- Ratio of maximum queue length (per link) to link length;
- Ratio of low to capacity (RFC) per arm;
- Average delay per vehicle per link;
- Average delay per bus per link;
- Maximum delay per pedestrian (per crossing point); and
• Predicted collision reductions.

The following validation parameters can also be used to assess the proposal:

• Generation of vehicles and flow profiles;
• Stop line throughput by vehicle type;
• Saturation flow lane;
• Capacity per junction area;
• Journey time for buses; and
• Journey time for general traffic.

Although not required by Traffic Directorate, where improvements for pedestrians form a major objective of proposed changes to junctions, pedestrian journey times for the major desire lines identified can be used as a performance parameter.
## Forward Planning Team Major Scheme Guidance

All major schemes on or impacting on the TLRN / SRN will require a Traffic Management Act Notification (TMAN) for both the scheme and the associated works. The information below aims to guide Borough’s through the TMAN process explaining how it relates to the TIL Major Scheme Process.

### Major Scheme Step

<table>
<thead>
<tr>
<th>Major Scheme Step</th>
<th>Forward Planning Team Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (12 months)</td>
<td><strong>Early Engagement</strong></td>
</tr>
<tr>
<td></td>
<td>• Stakeholder Engagement</td>
</tr>
<tr>
<td></td>
<td>• Identification of key road network opportunities and challenges within context of Mayor’s Transport Strategy and London Plan.</td>
</tr>
<tr>
<td></td>
<td>• Traffic Directorate agree traffic model extents &amp; data collection methodology</td>
</tr>
<tr>
<td></td>
<td>• Establish Governance Structure</td>
</tr>
<tr>
<td></td>
<td>• Identify requirement for referral to Network Management Group (NMG)</td>
</tr>
<tr>
<td></td>
<td>• Identification of works network operating conditions</td>
</tr>
<tr>
<td></td>
<td><strong>Provisional Scheme TMAN</strong></td>
</tr>
<tr>
<td></td>
<td>• Pre-lim design</td>
</tr>
<tr>
<td></td>
<td>• Agree stakeholder engagement plan</td>
</tr>
<tr>
<td>2 (12-18 months)</td>
<td><strong>Provisional Works TMAN</strong></td>
</tr>
<tr>
<td></td>
<td>• Detailed design</td>
</tr>
<tr>
<td></td>
<td>• Traffic Signals Supplementary Report</td>
</tr>
<tr>
<td></td>
<td>• Stakeholder engagement</td>
</tr>
<tr>
<td></td>
<td>• Agree works network operating conditions</td>
</tr>
<tr>
<td></td>
<td>• Identification of works collaboration opportunities</td>
</tr>
<tr>
<td></td>
<td><strong>Formal Scheme TMAN</strong></td>
</tr>
<tr>
<td></td>
<td>• Final agreed proposed layout</td>
</tr>
<tr>
<td></td>
<td><strong>Formal Works TMAN</strong></td>
</tr>
<tr>
<td></td>
<td>• Stakeholder engagement on works methodology</td>
</tr>
<tr>
<td></td>
<td>• Network coordination</td>
</tr>
<tr>
<td></td>
<td>• Final agreed works methodology and programme</td>
</tr>
<tr>
<td>3 (9-12 months)</td>
<td><strong>Project Build</strong></td>
</tr>
<tr>
<td></td>
<td>• Design changes in light of on-street network operating conditions</td>
</tr>
<tr>
<td></td>
<td>• Changes to traffic management methodology resulting from on-street conditions / events / design changes</td>
</tr>
</tbody>
</table>
**TMAN submission**

For Major Projects Boroughs should submit the following information to the Forward Planning Team:

- Stakeholder and public engagement plan
- TD agreement to traffic model extents and data collection methodology
- Identification of key road network opportunities and challenges within context of Mayor’s Transport Strategy
- Existing layout drawings
- Pre-lim design drawings
- Traffic Signals Supplementary Report
- Final proposed layout changes
- Stage 2 safety audit and engineers response
- Consultation summary (to include any issue resolution)
- Assessment of network impact of proposals on all road users
- Traffic Management methodology, programme and works plans
- Awareness of major land use changes that will influence demand levels

All schemes will be measured against the base road layout / performance and it is important to demonstrate understanding of this.

**Forward Planning Impact Assessment Framework**

The notification process seeks to ensure that promoters fully understand the impact of their proposals and adequately mitigate any adverse impacts before they are implemented. The aim is to ensure that schemes and works are designed and constructed with the minimum adverse effect on the road network and that there is an appropriate balance between impacts on the different users.

The table below provides Borough’s with an indication of the framework used by Forward Planning in the assessment of TMAN.
<table>
<thead>
<tr>
<th>Future proofing</th>
<th>Network Resilience</th>
<th>Network Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Walking</strong></td>
<td>Consideration of demand changes for all road users taken into account and performance of network assessed as appropriate</td>
<td>Consideration of performance of revised road layout during unplanned and planned interventions. This should include assessment of likelihood of interventions.</td>
</tr>
<tr>
<td><strong>Smoothing Traffic Flow</strong></td>
<td>Consideration of utility equipment and future access requirements</td>
<td>Consideration of wider network impact on all road users of banned turns, road closures, increases in traffic signal cycle time</td>
</tr>
<tr>
<td><strong>Buses</strong></td>
<td>Consideration of improvements to existing road restrictions including weight, width and height restrictions</td>
<td></td>
</tr>
<tr>
<td><strong>Urban Realm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cycling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Safety of users</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All stakeholders, including neighbouring highway authorities are engaged so that any issues are addressed or resolved
Using the assessment framework above and taking the example of Buses, the following measures may be taken forward within your project to demonstrate the impact of your proposal on Buses.

**Example assessment – Buses**

<table>
<thead>
<tr>
<th>Buses</th>
<th>Measure</th>
<th>Data sources</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Capacity</strong></td>
<td>Predicted delay / improvement to bus journey times by passenger numbers:</td>
<td>• Modelling output</td>
<td>✅ same or better than existing level of service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I-Bus data</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bus timetables / maps</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TSSR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• BoDS data</td>
<td></td>
</tr>
<tr>
<td><strong>Network Resilience</strong></td>
<td>Reliability along the bus corridor</td>
<td></td>
<td>🟠 reduced level of service but with mitigation no impact on scheduling or additional bus requirements</td>
</tr>
<tr>
<td><strong>Future proofing</strong></td>
<td>Additional bus service requirements</td>
<td></td>
<td>🟥 Significant reduction in level of service that with mitigation still results in scheduling changes or additional bus requirements</td>
</tr>
<tr>
<td></td>
<td>Known future service amendments</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key stakeholder</strong></td>
<td>London Buses Network Development Team</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Forward Planning Team can provide advice on appropriate ‘network impact’ measures for your project that will assist with submission of your TMAN.

**Forward Planning Team Top 5 Tips to help with delivery of your scheme**

1. Ensure you are registered to use London Works on-line notification application. This website also provides useful information on how and when to notify TfL. [www.londonworks.gov.uk](http://www.londonworks.gov.uk)
1. Contact Forward Planning Team at the earliest opportunity to discuss your proposal. Submit a provisional notification when you have the basic details to hand and build on this as the project progresses.

2. Allow time between receiving your Traffic Signals Supplementary Report and submission of your Formal TMAN. This will enable you to address any issues that may be identified in the TSSR and if necessary carry out additional consultation with some key stakeholders.

3. Take care to understand whether any major land use changes and or network changes are planned in the vicinity of your proposal. This may impact on your proposal and delivery timescales.

4. Ensure that your traffic management proposals seek to minimise, programme length and disruption to all road users and sufficient provision has been made in your cost estimations for off-peak working, double shifting use of new technologies and / or quick curing materials.
Appendix J

Business Case

Introduction
A business case is required for any scheme costing more than £2m over the whole life of the project.

The Business Case Assistant (BCA) requires a number of specific inputs for each project assessed.

Quantified and monetised inputs:
- Costs
- Monetised benefits

- Non-monetised inputs:
  - An outline of overall objectives
  - Non-monetised scheme impacts (although not monetised, wherever possible quantitative data should be used)

The monetised elements generate the benefit cost ratio (BCR), which forms one side of the appraisal. However, the strength of the case made by the non-monetised elements may also make a significant impact in the overall appraisal.

The key worksheets of the BCA template will be presented in turn. More detailed guidance is available from the BCA guidance and TfL’s Business Case Development Manual (BCDM).

(https://extranet.tfl.gov.uk/boroughs/glp/lips/annual-progress-reporting.aspx)

A brief report can be submitted alongside the BCA outlining the methodologies used and justifying the assumptions that have been made, though these are best presented within the Business Case Narrative framework.

Objectives

Main item of scope should be a concise list of up to about 6 items. For example; the list may include:
**Scope:**
Highway modifications including relocation of utilities signal modifications, relocated crossings (including de-cluttering), improvements to the public and new lighting.

Objectives, expressed in terms of outcomes, should briefly cover the reason the project arises and explain how the intended outcomes relate to TfL’s strategic priorities.

**Costs**

Business cases are calculated over a defined lifespan. Values in future years are ‘discounted’, i.e. they are worth less in future years than in the present. The BCA does these calculations automatically using a number of key inputs.

The implementation year (referred to as ‘year 0’) should be entered. The majority of capital costs will generally be spent in this year. Benefits and operating costs are assumed to commence in year 1.

The number of years over which the project is assessed will be 30, or less if the life of the main assets is expected to be shorter.

**Capital Costs**

Up to four separate capital costs elements can be identified. These should be entered in £000s, with a minus sign, under the year(s) in which the cost will be incurred.

Users can enter details of costs avoided and the relevant year(s), i.e. capital/maintenance costs that would be incurred should the project not go ahead.

Residual value refers to the estimated financial value of an asset at the end of the project life.

**Operating costs**

Operating cost changes might potentially be incurred as the result of a Major Schemes. Examples might be:

- Savings in maintenance costs; or
- An increase or reduction in bus service operating costs.
Operating costs and savings should be entered in £000s with the first year they are incurred, together with the appropriate number of years and, if applicable, a growth rate.

Similar fields are also available for secondary income and revenue loss avoided.

**Third party contributions**

Up to three separate third party contributions can be added in £000s along with the year in which they are anticipated.

**Optimism bias**

‘Optimism bias’ (OB) is the term used in cost benefit appraisal to deal with the systematic tendency for projects to underestimate outturn cost. This applies over and above risk and contingency. With regard to contingency, a figure of 40% is added to the total scheme cost for the Major Schemes Step 1 submission, but at the time of submitting a Major Schemes business case at the end of Step 2, capital cost estimates are expected to be more robust, and measures to identify and mitigate risks should have been taken in the detailed risk analysis. Moreover, experiential evidence of costings from similar projects should have been used to justify reducing OB. Therefore, if an optimism bias has already been included when drawing up the capital cost estimate, this should be entered in the space provided. Otherwise, an OB figure should be added (users can refer to the BCA guidance or the DfT Web Tag unit 3.9.4 for further guidance).

**Benefits**

The three tables at the top of the worksheet are protected and refer to:

- Project time span – taken from ‘costs’
- Build-up of revenue reference table – suggests appropriate revenue profiles
- Elasticity reference table – standard elasticity as contained in the BCDM

At the bottom of the worksheet, there is a textbox where additional details relating to revenue streams can be added.

Journey time improvements (see also journey time calculator below)

Major Schemes can affect journey times of users of different modes, and these should be displayed separately where possible. Increases in journey
time can be input as negative values. Journey time improvements can include walking time, in-vehicle time or waiting time. Improved public transport reliability can be translated into a waiting time improvement.

Benefits should be entered in £000s and where possible a description of the calculation should be added, e.g. “2 min journey time reduction for 2,000 tube-bus interchange passengers per week”. The start year will conventionally be year 1 and the number of years will generally equal the project life.

An additional % increase per annum can be added to reflect a special growth factor, i.e. over and above underlying real growth in value of time, if appropriate.

The appropriate relationship between passenger benefits and revenue generation for the particular mode should be entered here, normally chosen from the table of values at the top right of the page.

A revenue build-up code should be entered from the revenue build-up patterns at the top of the sheet, i.e. A for London Underground or suburban rail, B for London Buses and C for non-revenue modes such car, walking and cycling).

**Ambience improvements**

Major Schemes are unlikely to generate ambience improvements on Underground and bus services, except where significant improvements to public transport waiting areas are made (see Appendix E4 of the BCDM for monetised values).

Public realm improvements can be included as pedestrian ambience benefits in the BCA. Research on monetised values has been completed and the values are used by TfL.

**Safety improvements**

Benefits resulting from a reduction in collisions should be calculated by an experienced engineer. These should be entered in £000s in a similar manner to the journey time improvements above. In the absence of other information, the usual elasticity is applied to account for the effect on patronage of serious collisions, though this only applies to the changes in collision levels to passengers on the respective mode of public transport (e.g. for motorists/pedestrians the social benefit would be credited to the project but elasticity would be zero, because no effect would accrue to public transport revenues).
Wider benefits

Wider social or external benefits should also be quantified if the effects are significant. In particular:

- If the change in continuous background noise is likely to be greater than 1 dBA Leq (this equates to an increase/decrease in free flowing road traffic volume of +25% - 20%), the noise impact should be calculated with the help of Web Tag Unit 3.3.2 (available at http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.2.htm)
- If the Major Schemes is expected to significantly alter private and/or public transport traffic volumes, or create modal shift, the impact on greenhouse gas emissions should be calculated with the help of WebTag Unit 3.3.5 (available at http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.5.htm)
- If the Major Scheme is expected to generate a significant increase in the number of persons converting to journeys of over 15 minutes by walking or cycling, physical fitness impacts can be calculated with the help of WebTag Unit 3.3.12 available at http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.12.htm

Sensitivity

Deriving cost and benefits predictions for a Major Scheme is a complex task, and the validity of the BCR will depend upon the accuracy of these predictions. Sensitivity testing is used to assess the sensitivity of a project BCR to changes in individual elements of the cost and benefit streams.

Having completed a detailed risk analysis, users should be in a position to estimate those elements for which uncertainty is greatest. For example, if there is still uncertainty over the final cost estimate because of utilities problems, an increase in costs can be tested. Or if there is uncertainty over the traffic growth rates underpinning the modelling, the modelled journey time savings can be tested.

The worksheet has space for three sensitivity tests to be recorded. A description of the parameter changed can be entered into the text box. Tests can be calculated automatically by the BCA using the sensitivity parameters below. In this case ‘A’ should be entered in the User/auto column above.
Users can also run other tests manually and input these above with a ‘U’ in the user/auto column.

**Impacts**

Non-monetised impacts of the Major Scheme on four key strategic areas can be added here. The three areas covered here are:

- Mayor’s Transport Strategy
- Key NATA objectives
- Improved financial efficiency

In general, users should always try to assess (1) how many people are affected and how often, and (2) the impact or range of impacts on an individual.

**Example**

“Through the provision of a higher quality pedestrian and cycling environment, it is likely the scheme will have a beneficial impact on physical fitness”.

Can also be expressed as:

“Walking and cycling account for around 1,200 (46%) trips at the adjacent Y secondary school. Through provision of higher quality and safer pedestrian and cycling facilities, it is likely that more trips will be made by these modes. Increased walking and cycling are vital elements of a preventive strategy to increase physical activity, reduce obesity, coronary and lung diseases”.

The BCA guidance provides a series of links to sources of guidance relating to individual impacts.

**Assumptions, Risks and other Options Considered**

Where non-standard parameters have been used in the BCA, these should be mentioned here.

Other assumptions can include for example the timing of related projects, or the partial rather than total delivery of some benefits. A detailed risk analysis should have been completed for the Major Scheme. Major risks and mitigation measures (and costs) can be highlighted here.

To strengthen confidence in the validity of the preferred option, other options considered should be mentioned here along with reasons for rejecting these.
Overall Assessment

This should summarise the result of the cost-benefit analysis, indicating the sensitivity of the result to any identified risks or assumptions, and in particular explain the weight which should be ascribed to the BCR (benefit to cost ratio), relative to factors not captured within the BCR calculation, in conveying the overall case for the scheme. Where there is scope for reducing the scale of the project or deferring part of the implementation, details can be given in the relevant box along with details of the impacts.

Measures of Success

Measures of success should be particular to each project. They should enable the success of the project to be measured, irrespective of other, perhaps complementary, projects being delivered in the same area. Key performance indicators agreed with the BPP that could serve as measures on passengers and/or other people affected should always be sought. A key feature of ‘Measures of success’ is that they should be relatively easy and inexpensive to provide, because the project sponsor has carefully thought through the method and timing of data collection, both before and after project implementation.

Checklist

The checklist worksheet provides an “at glance” check on missing or erroneous data.

Journey Time Calculator

The journey time calculator is a spreadsheet containing standardised values of time and annualisation factors. It produces a summary output that can simply be copied and pasted into the journey time improvements section of the BCA spreadsheet. It is set up in a similar fashion to the BCA spreadsheet.

Reference Modes

Journey time effects are calculated for a series of modes and for pedestrian journeys accessing these modes. In the first ‘Home’ worksheet, the so-called reference mode must be selected to avoid double-counting. Reference modes are generally public transport modes with a greater permanence of infrastructure, such as LUL or national rail. For example, if LUL is included as the reference mode, interchange trips between a bus stop and the LUL station are included under the bus users but not as trips accessing the LUL station so as to avoid double-counting.
Modal Worksheets

There is a separate worksheet for each mode, each with four sections:
- Changed distance/time for mode users arriving;
- Changed distance/time for mode users walking to destination;
- Changed distance/time for users passing; and
- Summary table

These are illustrated using an example of cycle stands in the BCA guidance.

Worked Business Cases

Worked examples of business cases are located on the [http://boroughs.tfl.gov.uk/local_implementation_plans.aspx](http://boroughs.tfl.gov.uk/local_implementation_plans.aspx).
Appendix K

Risk Analysis

The process of developing a detailed risk analysis is an incremental process. At Step 1 an initial assessment of risk should be made similar to the template below. As the scheme progresses and the exact nature of potential risks to delivery become clear, a more detailed risk analysis can be developed.

A final copy of the detailed risk analysis should be ready at the time of the Design Review Panel, towards the completion of Step 2, although where there are potentially high risks, these should naturally be discussed with the Major Scheme programme manage. Detailed analysis should be undertaken prior to the business case so that the optimism bias can be justified on the basis of scheme-specific risks that have been outlined in the risk analysis.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Assessment</th>
<th>Potential Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>H M L</td>
<td></td>
</tr>
<tr>
<td>Statutory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Party</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public/Political</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix L

Outcome Monitoring

The outcome monitoring indicators for each Major Schemes should be agreed with BPP at Gateway 3. Boroughs may wish to use a variety of methods including:

(1) User attitudinal data from questionnaires;
(2) Pedestrian counts; or
(3) Behavioural observation.

Alternatively, there may be specific indicators linked to objectives at individual sites. For methodological recommendations on (2) and (3), please refer to Measuring Pedestrian Activity (see section 4.4.14).

Major Schemes are about people. Therefore the outcome monitoring framework should always include attitudes expressed by street users. This appendix contains a series of recommended core attitudinal questions relating to the key objectives of Major Schemes which should be incorporated into borough monitoring questionnaires. All Major Schemes are different and it is not the intention of TfL to dictate the nature of outcome monitoring to boroughs. Therefore the core attitudinal questions should serve as a base around which additional scheme-specific questions can be built.

Results from the core attitudinal questions should be sent to the BPP team upon completion of the surveys so that results from around London can be aggregated. Therefore, even with relatively modest sample sizes for each individual scheme an extremely powerful sample should be attainable at a London-wide level.

A series of recommendations for managing questionnaire surveys is presented overleaf. The rest of this appendix contains two types of information for designing questionnaires:

- Core attitudinal questions
- It is recommended that boroughs incorporate these attitudinal questions into baseline and outcome questionnaire surveys.
- Recommended definitions – These definitions and category lists are designed to be compatible with other surveys conducted around London. When designing questionnaires, boroughs may wish to employ similar definitions so as to ensure that results can be validated and comparisons drawn.
## Questionnaire Management Tips

| When? | Baseline surveys – prior to start of implementation  
Outcome surveys – at least six months after scheme completion in the same month of the year as the baseline surveys, conducted on the same day of the week, at the same time and (if possible) with similar weather conditions. Therefore the both surveys should include an area to record the date, time and weather conditions of when surveys were undertaken. |
|-------|--------------------------------------------------------------------------------------------------|
| Who and where? | A random sample of persons interviewed at a busy spot in the town centre. Separate samples of businesses or residents may be applicable.  
This can vary for residential and high footfall areas. In residential neighbourhoods, a random sample of residents is recommended.  
Around local services or in high footfall areas a random sample of persons interviewed at a busy spot in the area (e.g. near local shops) should catch non-resident street users. |
| Sample: This can depend on the nature of the scheme and the questionnaire but the following examples serve as a guide | E.g. 250 town centre users, 100 residents and 100 businesses  
E.g. 150 residents and 150 local centre users  
Or  
250 high footfall area users |
| Survey periods: User profile can vary at different times of the day and week but the following time periods should avoid neglecting | E.g. Weekdays:  
07:00 – 10:00  
10:00 – 16:00  
16:00 – 19:00  
19:00 – 22:00  
Saturday:  
10:00 – 16:00  
E.g. Weekdays:  
07:00 – 10:00  
10:00 – 16:00  
16:00 – 19:00  
19:00 – 22:00  
Saturday:  
10:00 – 16:00  
If residents are to be interviewed |
specific user groups. Note that on-street evening surveying should be avoided where there are security concerns.

at home, please bear in mind that evenings should be included to avoid survey bias.

**Core Attitudinal Questions**
The core attitudinal statements relating to the main Major Schemes objectives are shown in tabular format. A copy of the questions in MS Word format can also be downloaded from the extranet at [https://extranet.tfl.gov.uk/boroughs/glps/bsps/supporting-info.aspx](https://extranet.tfl.gov.uk/boroughs/glps/bsps/supporting-info.aspx).

<table>
<thead>
<tr>
<th>Major Schemes Objective</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve the physical and living environment</td>
<td>The streets in this town centre are attractive</td>
</tr>
<tr>
<td>Reduce vehicle dominance and create attractive outdoor living spaces</td>
<td>I enjoy spending time in this area</td>
</tr>
<tr>
<td>Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness</td>
<td>I feel safe in this town centre during the day \ I feel safe in this town centre after dark</td>
</tr>
<tr>
<td>Increase the opportunities for local people to use streets as social spaces</td>
<td>This town centre is a good social meeting place.\ This is a friendly town centre and I feel at home here</td>
</tr>
<tr>
<td>Reduce social exclusion</td>
<td>This area is a good social meeting place \ I can easily get around this town centre</td>
</tr>
<tr>
<td>Facilitate regeneration and increase transport opportunities for local communities, whilst encouraging shorter journeys to be made</td>
<td>I like to use the shops, restaurants, pubs and services in this town centre \ I like to use the shops, restaurants, pubs and services in this area</td>
</tr>
<tr>
<td><strong>Reduce the adverse effects to traffic</strong></td>
<td><strong>I find it easy to get to public transport in this area</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>The traffic in this area makes it difficult for other street users to move around</td>
</tr>
<tr>
<td></td>
<td>The traffic in this area has a negative effect upon people living or working here</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Major Schemes Objective</strong></th>
<th><strong>Town Centre</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve conditions for cyclists, pedestrians and bus users to encourage more journeys by these mode</td>
<td>I can get to this town centre on foot/by bicycle</td>
</tr>
<tr>
<td></td>
<td>It is easy to get to this town centre without a car</td>
</tr>
<tr>
<td></td>
<td>The streets in this area are good for pedestrians</td>
</tr>
<tr>
<td>Improve accessibility of the public transport network for everyone</td>
<td>In this area I find it easy to use public transport to get to the town centre</td>
</tr>
<tr>
<td></td>
<td>I find the bus stop/tram stop arrangements in the town centre good</td>
</tr>
<tr>
<td></td>
<td>I find the waiting facilities at the bus stops/tram stop good</td>
</tr>
<tr>
<td>Other</td>
<td>The taxi facilities in this town centre are good</td>
</tr>
<tr>
<td>After survey questions</td>
<td>This town centre has significantly improved</td>
</tr>
<tr>
<td></td>
<td>It was worthwhile carrying out these improvements</td>
</tr>
<tr>
<td></td>
<td>I am more likely to use this town centre</td>
</tr>
</tbody>
</table>

**Recommended definitions**

**Journey purpose:**

What is the main reason for your journey today?

<table>
<thead>
<tr>
<th><strong>Commuting to work</strong></th>
<th><strong>Business in course of work</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping</td>
<td>Personal Business (doctor, bank, etc.)</td>
</tr>
<tr>
<td>Education</td>
<td>Leisure, social, entertainment</td>
</tr>
<tr>
<td>Just out for a walk</td>
<td>Escorting others</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>
Mode of transport:
For example: How did you arrive at this station today?

<table>
<thead>
<tr>
<th>Walked</th>
<th>Cycled</th>
<th>Bus/Tram</th>
<th>Underground/DLR</th>
<th>National Rail</th>
<th>Car/Van</th>
<th>Motorcycle/Moped</th>
<th>Taxi/Minicab</th>
<th>Other (specify)</th>
</tr>
</thead>
</table>

Demographics:
Which of the following age bands do you fall into?

<table>
<thead>
<tr>
<th>16-24yrs</th>
<th>25-34yrs</th>
<th>35-44yrs</th>
<th>45-54yrs</th>
<th>55-64yrs</th>
<th>65yrs and over</th>
</tr>
</thead>
</table>

Gender

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

What is your employment status?

<table>
<thead>
<tr>
<th>Working Fulltime (30hrs + a week)</th>
<th>Working part-time (less than 30hrs a week)</th>
<th>Student</th>
<th>Self Employed</th>
<th>Seeking Work</th>
<th>Retired</th>
<th>Looking after the home</th>
<th>Other (specify)</th>
</tr>
</thead>
</table>

Which of these ethnic groups do you consider yourself to belong to?

A: White

| British | Irish | Any Other White Background |

B: Mixed

| White and Black Caribbean | White and Black African | White and Asian | Any Other Mixed Background |

C: Asian and Asian British
Indian
Pakistani
Bangladeshi
Any Other Asian Background

D: Black and Black British
Caribbean
African
Any Other Black Background

E: Chinese or Other Ethnic Group
Chinese
Any Other Ethnic Group
(Refused)

Do you have any long term physical or mental impairment that limits your daily activities or the work you can do, including problems due to age?

<table>
<thead>
<tr>
<th>Mobility impairment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age related mobility difficulties</td>
<td></td>
</tr>
<tr>
<td>Visual impairment</td>
<td></td>
</tr>
<tr>
<td>Hearing impairment</td>
<td></td>
</tr>
<tr>
<td>Learning difficulty</td>
<td></td>
</tr>
<tr>
<td>Mental Health Condition</td>
<td></td>
</tr>
<tr>
<td>Serious Long Term Illness</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>
Appendix M

Step 2 Information Requirements

The full scheme development of a Major Scheme and Design Review Panel through Step 2 can be a complex process resulting in a large number of documents and information sources. It is not expected that boroughs prepare a large formal submission however; all documents relating to individual elements of the Step 2 process should be saved and referenced accordingly.

If at the Gateway 7 meeting the programme managers wish to see further documents relating to individual elements of the Step 2 process, these can subsequently be provided.

Table A4  Information Requirements for Gateway 7

<table>
<thead>
<tr>
<th>Core document</th>
<th>Other information to be available for later discussion if required</th>
<th>Suggested Methodology for Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design drawings</td>
<td></td>
<td>The final design drawings including amendments resulting from public consultation should be completed prior to the Design Review Panel. These need not be detailed construction drawings, but should be in a suitable scale where individual interventions can be identified.</td>
</tr>
<tr>
<td>Step 3 Implementation programme</td>
<td></td>
<td>A work programme, ideally in the form of a Gantt chart, should be prepared. It should identify key procurement milestones, construction start and duration, agreed Traffic Directorate Signals construction phases, any phasing or forced stoppages (e.g. Christmas) and expected completion. This should be accompanied by a speed profile.  The details of the CDM coordinator should also be supplied.</td>
</tr>
<tr>
<td>Core document</td>
<td>Other information to be available for later discussion if required</td>
<td>Suggested Methodology for Step 2</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Robust Cost Estimate</td>
<td></td>
<td>A detailed breakdown of scheme costs is required, based on measured materials, utility works, traffic management, outcome monitoring, contingency and inflation. Where relevant, the costs attributed to complementary funding, including other LIP funding streams should be shown. Boroughs should make their own contingency estimate based on the detailed risk analysis. A number of industry specific price indexes are available, including those produced by Building Cost Inflation (BCIS) – <a href="http://www.bcis.co.uk">www.bcis.co.uk</a>. Relevant inflation indexes should be included in the cost estimate, with the rate and source quoted.</td>
</tr>
<tr>
<td>Detailed risk analysis</td>
<td>The detailed risk analysis should be prepared using the template shown in Appendix K.</td>
<td></td>
</tr>
<tr>
<td>Safety Audit</td>
<td>A Stage 1 or 2 Safety Audit should be undertaken for the scheme.</td>
<td></td>
</tr>
<tr>
<td>Maintenance Statement</td>
<td>A statement of no more than a side of A4 indicating how the borough intends to keep the scheme in good order should be prepared and confirmed.</td>
<td></td>
</tr>
<tr>
<td>Design Statement</td>
<td>A short statement demonstrating how the scheme complies with design considerations highlighted in Appendix F. This can be in the form of an annotated map or a brief written statement.</td>
<td></td>
</tr>
<tr>
<td>Core document</td>
<td>Other information to be available for later discussion if required</td>
<td>Suggested Methodology for Step 2</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Accessibility Audit</td>
<td>A short statement outlining how the scheme addresses the accessibility issues identified in Step 1 must be prepared. This should indicate how target groups were involved in the design process and what steps were undertaken.</td>
<td></td>
</tr>
<tr>
<td>Equality Impact Assessment</td>
<td>An EQIA should be prepared as outlined in section 4.6.</td>
<td></td>
</tr>
<tr>
<td>Crime and disorder audit</td>
<td>The results of the crime and disorder audit can be summarised into a brief report.</td>
<td></td>
</tr>
</tbody>
</table>

**Pedestrian Information**

<table>
<thead>
<tr>
<th>Pedestrian Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Full pedestrian counts</td>
<td>The results of the pedestrian count should be available to be seen if necessary.</td>
</tr>
<tr>
<td>Accessibility Statement</td>
<td>It is recommended that the accessibility statement from the Step 1 submission is updated to highlight how the scheme addresses the issues originally identified.</td>
</tr>
</tbody>
</table>

**Traffic Data**

<table>
<thead>
<tr>
<th>Traffic Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion Statement</td>
<td>It is recommended that the congestion statement from the Step 1 submission should be updated to highlight how the scheme addresses the issues originally identified. Conversely, if modelling suggests that congestion is to increase as a result of the scheme, the statement can highlight this.</td>
</tr>
<tr>
<td>Traffic Survey Data and Traffic Directorate detailed design report</td>
<td>Where detailed traffic data has been collected this should be included. The detailed design report issued by Traffic Directorate Signals can be used as a base presenting the signals proposals if required.</td>
</tr>
</tbody>
</table>

**Collision Data**

<table>
<thead>
<tr>
<th>Collision Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collision reduction statement</td>
<td>A brief statement should outline the contribution of the scheme to collision reduction, referring to the State 1 or 2 Safety Audit where appropriate.</td>
</tr>
<tr>
<td>Core document</td>
<td>Other information to be available for later discussion if required</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------</td>
</tr>
<tr>
<td>Retail Information</td>
<td></td>
</tr>
<tr>
<td>Quality of Life</td>
<td>Resident/user consultation</td>
</tr>
<tr>
<td>Branding and launch event</td>
<td></td>
</tr>
</tbody>
</table>
Appendix N

Provision of Public Art as part of Major Schemes

Introduction

The use of public art may be considered in an area where a special and decorative design feature or landmark will help to define a particular place, or strongly enhance people’s daily experience. It is usually located in specific areas to create easily-identified visual recognition points for pedestrians and other street users and may either be a single object or an element repeated across a locale, or simply an enhancement to the ‘standard’.

If public art is being advocated or considered as part of a Major Scheme then the promoters must in the first instance discuss their ideas and aspirations with TfL’s BPP before commissioning any development work. This is to ensure that TfL can advise on the requirements for taking forward the development of art projects.

Where funding for public art is being sought from the TfL Major Schemes programme the detailed proposals will need to be presented as part of the Step 2 submission to TfL (see Appendix M for details of the Step 2 submission requirements.)

It should be noted that TfL would not fund public art projects that have not been subject to appropriate consultation and review, or where it is felt the proposals would not provide value for money.

1. Good practice

Public art should always be designed to complement its location. Design teams should ensure that public art meets streetscape criteria and seek approval from TfL before progressing projects as part of Major Schemes.

Design teams or promoters wishing to commission art must liaise with the following

- The Local Authority arts coordinator
- Art in the Open -
- Platform for Art - in the case of Art proposals on or around London Underground Stations.

Links to The Platform for Art and Art in the Open Websites can be found in Appendix B.
Maintenance and management of public art must be taken into account as part of the design process and details of the maintenance regime should form part of any request for funding.

It is strongly recommended that the local community are consulted as part of the development of any art proposals. In some cases, it may be appropriate to involve the local community in judging a design competition through the local authority’s public arts co-coordinator, but it is recognised that the final decisions on art provision are matters for the local authority.

In some cases planning consent may be required from the local planning authority and designers should discuss proposals with planning officers at an early stage to ensure any planning requirements can be met.
# Appendix O

## Example of Step 1

Notes for completing Step 1 form.
1. Please enter information only in the **red** bordered boxes as instructed in the side column.
2. The sections marked *'Required Input' must be completed.*
3. Completion of the sections not marked *'Required Input' is optional and is left to the judgment of the borough officer.*
4. Individual cells / rows can be increased in height but please do not otherwise alter the layout of this form
5. If the cells on the form are not large enough for the data required, please continue on a separate sheet.

### Step 1 Submission for Major Scheme

<table>
<thead>
<tr>
<th>Scheme Name <em>(Required Input)</em></th>
<th>Aldgate gyratory conversion major scheme</th>
<th>Provide an identifying title - This should be consistent with the title used in the LIP and Proforma A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borough <em>(Required Input)</em></td>
<td>City of London</td>
<td>Provide name of borough</td>
</tr>
<tr>
<td>Statutory Context <em>(Required Input)</em></td>
<td>In Local Implementation Plan?</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Other Document? (please specify)</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>London Plan: Aldgate is a 'Key of Area Opportunity'. LDF: Aldgate is Core Strategy 8 for the City, one of 5 key City places.</td>
<td></td>
</tr>
</tbody>
</table>

*This Major Scheme must also be recorded on Proforma A of the LIP Annual Spending submission.*

<table>
<thead>
<tr>
<th>Are other Step 1 proposal(s) being submitted alongside this one? <em>(Required Input)</em></th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes , indicate the priority of this scheme in comparison with the others being submitted. <em>(Required Input if 'Y' given to previous question)</em></td>
<td>1 of 4</td>
</tr>
</tbody>
</table>
### Problems, Opportunities & Issues *(Required Input)*

Problems: Area is traffic dominated by a 1960’s gyratory one way system linked with subways that are a perceived and real safety issue and a maintenance issue. Pedestrian links to interchange between public transport and other routes into the City is not intuitive or clear, owing in part to the four linked gyratories in the Area, especially for bus passengers. Stations in the immediate area include: Aldgate Station, Tower Gateway (DLR), Tower Hill, Fenchurch St Station, Aldgate East.

Opportunities: Momentum and appetite exists for significant change in the area. A Voluntary S106 payment has been made specifically to assist with the removal of the Aldgate gyratory and the creation of a public open space between Sir John Cass Primary School and St Botolph Church - which will provide safer routes to school from Aldgate Station, a space that can be utilised for events adjacent to a church/school, and proven improvement in air quality for the school.

Simplifying the traffic system is easier for all road users, especially cyclists and pedestrians. Surface level crossings on desire lines will replace inaccessible subways. The regeneration potential is large. The scheme is being looked at in context of the entire area. The current consultation and production of an illustrated strategy for the area increases the opportunity to attract further S106 funds. There are a number of development sites available, or coming on stream in the very near future in the vicinity of the Aldgate Gyratory. Opportunity exists with backing of business, land owners and developers interested in the area. They already meet regularly, and are currently considering forming an Initiative that will not only attract and support regeneration, but provide art and cultural events attracting visitors and making it a lively place to dwell for residents, workers and high numbers of university students in the area.

### Benefits expected from the scheme *(Required Input)*

- Reduction in traffic dominance
- Improved conditions for cyclists
- Improved pedestrian routes (on desire line, surface level crossings (removing subways), remove obstructions, create walking routes with open spaces to provide an improved pedestrian experience)
- Improvement in air quality for school children
- Safer routes; to school from LU station, between St Botolph church and the school for weekly visits
- Regeneration/improved economy - attracting further S106 contributions as developments come on stream
- Open space to dwell, play, lunch an events space(s)
- Bus priority included in function of streets
- Indirect LU and bus improvements by attracting development to the area with the vision

### Scheme objectives

- Strategy Document currently being undertaken
The City of London has identified the Aldgate Area for improvement as a Core Strategy Policy, one of five identified Key City Places, in the City of London’s Local Development Framework Core Strategy document.

Regeneration
Large open space that can meet the needs of residents, visitors, workers, worshippers, school, event space
Green up and incorporate urban orchard for community
Opportunity to attract S106 and benefit through attracting redevelopment
Improved pedestrian experience (space, way-finding, interchange (buses, cycle hire, LU and Trains), safety improved)

Meeting Key Objectives (Required Input)

<table>
<thead>
<tr>
<th>Included</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving the physical &amp; living environment</td>
<td>Y</td>
</tr>
<tr>
<td>Reduce vehicle dominance and create attractive outdoor living spaces</td>
<td>Y</td>
</tr>
<tr>
<td>Improve personal security, reduce the fear of crime, particularly for travel during the hours of darkness</td>
<td>Y</td>
</tr>
<tr>
<td>Increase the opportunities for local people to use streets as social spaces</td>
<td>Y</td>
</tr>
<tr>
<td>Reduce social exclusion</td>
<td>Y</td>
</tr>
<tr>
<td>Facilitate regeneration and increase transport opportunities for local communities, whilst encouraging shorter journeys to be made</td>
<td>Y</td>
</tr>
<tr>
<td>Reduce the adverse effects of travel</td>
<td>Y</td>
</tr>
<tr>
<td>Improve conditions of cyclists, pedestrian and bus users to encourage more journeys by these modes</td>
<td>Y</td>
</tr>
<tr>
<td>Improve accessibility of the public transport network for everyone</td>
<td>Y</td>
</tr>
</tbody>
</table>

The scheme’s alignment with the MTS Goals / Outcomes and its wider impacts should be recorded on the Annual Spending Submission Proforma A in accordance with the Annual Spending Submission Guidance.

Scheme Design Vision (Required Input)

Pedestrian improvements - generous paved areas, on desire line, surface level crossings
Benches, trees, green space, green walls, mature trees in redundant subway(s)
rethinking junctions and traffic management (removing gyratories and providing intuitive streets for all)
remove clutter. Better balanced streets, quality street environment
Significantly transform the Aldgate Area with large open spaces, extended footways, walking routes more intuitively designed for improved wayfinding, spaces that can and will be utilised by large community groups (worshippers, school children, families, residents, workers, events/markets, public art in spaces)
Improvements for cyclists
Improve safety (both real and perceived)
Attractive place for visitors
## Alignment with Better Streets Interventions
*(Stages 1 - 5 as set out in Better Streets - Practical Steps)*
*(Required Input)*

<table>
<thead>
<tr>
<th>Tidy Up</th>
<th>De-clutter</th>
<th>Relocate Merge / Functions</th>
<th>Re-think Traffic Management Options</th>
<th>Recreate the Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

### Scheme components *(Required Input)*

<table>
<thead>
<tr>
<th>CCTV</th>
<th>Removal of Traffic Signals</th>
<th>New Traffic Signals</th>
<th>Traffic Calming</th>
<th>Cleaner Streets*</th>
<th>Footway Paving*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bus Stop Re-location</th>
<th>Bus Route Changes</th>
<th>Accessible Bus Stops</th>
<th>Side Road Entry Treatments</th>
<th>Provision of Drop Kerbs*</th>
<th>Guardrail Removal &amp; Pavement De-cluttering*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Cycle Lanes</th>
<th>New Cycle Parking</th>
<th>New Street Furniture</th>
<th>Single Surface / Shared Surface</th>
<th>Carriageway Narrowing (generally across the scheme)</th>
<th>Improved Street Lighting*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tree Planting</th>
<th>20MPH Zone</th>
<th>Public Art</th>
<th>Electric Vehicle Charging points</th>
<th>Legible London signing</th>
<th>Footway Widening* (generally across the scheme)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Public Space</th>
<th>Carriageway Resurfacing</th>
<th>Road Closures or Stopping Up Orders</th>
<th>Inset Loading /Parking Bays</th>
<th>Car Club Bays</th>
<th>Footway Paving or Renewal*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taxi Rank Changes</th>
<th>Waiting &amp; Loading changes</th>
<th>Street Name plates*</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Components

Inclusion of SUDS - Sustainable Urban Drainage System is being considered. New public space is likely to include elements that are also suitable for play for the high number of children (Sir John Cass Primary School, Mansell St and Middlesex St residential estates) in the vicinity of the scheme. Removal of subways - will remove obstruction of subway entrances. Possible renewed uses for the subways are being considered, such as a future proofing pipe subway, storage for materials required by the City, and secure cycle parking provision. Possible inclusion of green walls, fruit trees/vines, bio-diverse gardens, herb/veg garden provision.

Scale of Impact  *(Required Input)*

| Footfall or Number of Visitors per annum | 4,442,096 | Length of core area being improved (in metres) | 600 | Amount of investment justified* (£m) | 6.820M |

*If the amount of investment that can be justified is less than the total scheme cost given below, please contact Anthony O’Keeffe for further advice before progressing with this submission.*

Total Estimated Scheme Cost *(Required Input)*

(a) **Design & Development Cost**

| Data Collection | £ |
| Feasibility and Initial design | £ |
| Detailed Design and Consultation | £ |

(a) **Total Design and Development Cost** £ 583,400

(b) **Build Cost** *(Required Input)*

<p>| Scheme Implementation | £ 4,255,194 |
| Other Implementation <em>(please identify)</em> | £ |
| Contingency <em>(please give % and £)</em> | % 40 £ 1,935,438 |</p>
<table>
<thead>
<tr>
<th>Fees</th>
<th>£</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Total Build Cost</td>
<td>£</td>
<td>6,190,632</td>
</tr>
<tr>
<td>Total Cost of Scheme = (a) + (b)</td>
<td>£</td>
<td>6,774,032</td>
</tr>
</tbody>
</table>

Amount being sought from Major schemes programme. *(Required Input)*

<table>
<thead>
<tr>
<th>Total Amount sought from TFL’s Major Scheme Programme</th>
<th>%</th>
<th>£</th>
<th>3,387,016</th>
</tr>
</thead>
</table>

Complementary Funding *(Required Input)*

<table>
<thead>
<tr>
<th>Source</th>
<th>Proportion %</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer Contributions (where known)</td>
<td>43</td>
<td>£2.02 million obligation deeds signed, £0.23 million received (Sept 2011)</td>
</tr>
<tr>
<td>Business Improvement Districts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network Rail/TOC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other LIP Funding (please specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borough Own Resources</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EU Funding (please specify programme)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (please specify) LBTH Match funding</td>
<td>6</td>
<td>No discussions have taken place</td>
</tr>
</tbody>
</table>

Landowners *(Required Input)*

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Proportion %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borough public highway</td>
<td>91%</td>
</tr>
<tr>
<td>TLRN</td>
<td>2%</td>
</tr>
<tr>
<td>Private Land</td>
<td>2%</td>
</tr>
<tr>
<td>Network Rail / TOC</td>
<td></td>
</tr>
<tr>
<td>(If Other Please Specify)</td>
<td>LBTH 5%</td>
</tr>
</tbody>
</table>

State the proportion of the scheme that is estimated to fall within the responsibility of the Borough, TLRN and any third parties. Use percentages of land or lengths of road, whichever is most appropriate.
<table>
<thead>
<tr>
<th>Task</th>
<th>Earliest Start (quarter/ year e.g. 2/06)</th>
<th>Estimated Duration (Months)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection</td>
<td>1/12</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Feasibility &amp; Initial Design (earliest design start)</td>
<td>1/12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Detailed Design &amp; Consultation</td>
<td>4/12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Contract Award &amp; Implementation</td>
<td>3/13</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

**Contributions in Kind**

S106

**Complementary TfL Initiatives**

Cycle Hire, Scoot, Countdown, possible bus and LU station redevelopment (dependant on developers)

**Local Spending Priorities**

Identify any funds likely to be made available for the proposal through the Borough altering its spending priorities, e.g. footway maintenance
## Supporting Information Checklist - *(Required Input)*

<table>
<thead>
<tr>
<th>Included</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Audit and accompanying information</td>
<td>Y</td>
</tr>
<tr>
<td>Location Plan</td>
<td>Y</td>
</tr>
<tr>
<td>Scheme Sketch (at 1:1250 scale)</td>
<td>Y</td>
</tr>
<tr>
<td>Scheme Visualisations, or Images either photographic or drawn information</td>
<td>N (Visualisations will be available in November 2011 and will be submitted in support of the scheme at that time.)</td>
</tr>
<tr>
<td>Visitors / Footfall - Survey data</td>
<td>Y</td>
</tr>
<tr>
<td>Identification of collision concentrations</td>
<td>Y</td>
</tr>
<tr>
<td>Three Year Accident Plot</td>
<td>Y</td>
</tr>
<tr>
<td>Accessibility Statement</td>
<td>Y</td>
</tr>
<tr>
<td>Traffic Counts at Key Locations</td>
<td>Y</td>
</tr>
<tr>
<td>CDRP Strategy Support Statement OR Crime Opportunity Profile Report</td>
<td>N</td>
</tr>
<tr>
<td>Cost summary showing the calculations for the build cost provided above</td>
<td>Y</td>
</tr>
</tbody>
</table>

### Other Information being presented in support of the application

Possible layout produced via a TfL Route 25 Bus alternative diversion study.
Air Quality Study Excerpt based on modelling and layout from TfL Bus study.

### Freedom of Information *(Required Input)*

All submissions are deemed to be public documents and therefore available through Freedom of Information Requests. Please advise if there are any exceptions to this requirement contained in this submission.

No Exceptions

### Contact Details *(Required Input)*

Provide details for a relevant point of contact to discuss this application.

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td></td>
</tr>
<tr>
<td>Tel No:</td>
<td></td>
</tr>
<tr>
<td>Email:</td>
<td>-</td>
</tr>
<tr>
<td>Date of this Submission</td>
<td>dd/mm/yyyy</td>
</tr>
</tbody>
</table>
Appendix P

Source London: Electric Vehicle Charging Point Images

Black Source London Charging Infrastructure

Green Source London Charging Infrastructure

Silver Source London Charging Infrastructure
**Scheme Development EVCP**

Boroughs should consider electric vehicle charging points as part of their major schemes application.

It is advised that the location should be assessed for feasibility at the time of the scheme scoping works.

Transport for London would assist with identification of location to ensure its suitability for the installation. Please refer to our Guidance for the implementation of electric vehicle charging infrastructure at Link to Borough extranet [http://boroughs.tfl.gov.uk/1054.aspx](http://boroughs.tfl.gov.uk/1054.aspx)

**This Procurement Framework**

TfL have developed a procurement framework, which allows signed partners to Source London call-off the framework for the Supply, Installation and Maintenance of Charge Point Infrastructure. The Framework Agreement provides a mechanism for Partners to call-off Charge Point Infrastructure from Charge Point Infrastructure providers that have been selected by TfL as being able to provide high quality Charge Point Infrastructure and a competitive price that are compatible with the Pan-London Scheme. Please contact TfL for more information and guidance

**Useful Links**

Guidance for the implementation of electric vehicle charging infrastructure-Borough extranet


Source London- [www.sourcelondon.net](http://www.sourcelondon.net)

**Contact Details**

For more information on Electric Vehicles please contact:

**Omoniyi Giwa**, Senior Borough Programme Officer (Borough Projects and Programmes)

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Appendix Q

Major schemes Business Cases – Worked examples.

Worked examples included narrative and BCDM output are provided separately on the Borough Extranet as a part of the supporting documents for this guidance.