THE DESIGN CHECK PROCEDURE

Why Design Check?

TfL want to promote consistently high quality cycle facilities throughout the LCN+. Such facilities should comply with the London Cycling Design Standards and should become examples of 'Best Practice'.

The Design Check Procedure has been introduced to allow the LCN+ team to review scheme proposals with the aim of ensuring that appropriate options have been considered and the best solution determined.

The procedure does not diminish the Designers obligations in any way. The Designer remains responsible for the scheme design as the Borough is still the Highway Authority. The procedure is intended to assist Officers in improving the quality of schemes throughout London.

Designers should find the procedure beneficial during scheme design. In particular, it will help to promote awareness and application of the London Cycling Design Standards which will lead to better schemes of a consistent standard being implemented. Requests for CCE approval will also be more straightforward and scheme proposals will be better placed to stand up to scrutiny when presented to council committee meetings and during public consultation.

What is a Design Check?

A Design Check is a review of a scheme design focusing on adherence to design standards and quality issues such as material types and general aesthetics.

A Design Check is also used to ensure that the scheme designer has followed 'due process' from inception through to construction (e.g. undertaken traffic surveys and obtained accident data, prepared traffic regulation orders, undertaken road safety audits, and considered issues relating to the Disability Discrimination Act and Bus Service Operators).

A Design Check should not be confused with a Road Safety Audit which is a completely separate procedure. Boroughs should continue to have scheme proposals safety audited as part of the implementation process. It is recommended that a road safety audit be undertaken on completion of the Design Check Procedure as scheme proposals may have been amended at this stage to accommodate recommendations made. This must be undertaken by an experienced safety auditor, independent of the design team. LCN+ do not undertake Road Safety Audits on LCN+ schemes.

What Information Do Borough Officers Need to Provide?

The first step involves the Borough Officer completing a standard form known as 'The Designers Overview Pro-Forma'. This contains a series of standard questions many of which should be read as a prompt to take action either prior to or during the scheme design process. The officer will be able to answer some of the questions without difficulty and some may simply be answered as not applicable. However, it may be necessary to gather data beforehand if not already available. This would typically include analysis of existing accident data, traffic speed and volume surveys, cycle and pedestrian flow surveys. Such data is generally required during scheme design and is useful to the LCN+ team when considering wether the proposals are the most appropriate available. Officers should contact the relevant LCN+ Project Officer for assistance in answering any difficult questions.

Having completed the 'Pro-Forma' the officer then needs to show the following information on the scheme drawings (scale drawings preferred at 1:200 scale with a North arrow):

- Key dimensions: carriageway and motor traffic/cycle/bus lane widths
- Footway, cycle track and gap widths
- Frontage Activity

- Trees, sign posts, lighting columns and other relevant street furniture
- Drainage gullies
- Waiting and loading restrictions
- Street names
- One way streets (direction of vehicular flow)
- Significant gradients
- Signing details (diagrams and sizes). Can provide on separate schedule
- Signal phasing diagrams where relevant
- Cycle parking
- Possible opportunities for future highway widening

When is a Design Check Undertaken?

Designers should submit scheme proposals for design checking on completion of the outline design and consultation. LCN+ may not be able to undertake a full design check on insufficiently developed proposals but would be willing to make informal comments. Scheme proposals must be design checked prior to a works order being issued to a contractor.

How is a Design Check Undertaken?

The Design Check is typically undertaken by the relevant Sector Manager and Project Officer. This involves reviewing the scheme drawings and Designers Overview Pro-Forma and noting any comments. A site visit or discussions with the Officer may be necessary where the scheme proposals cannot readily be visualised from the drawings. The most significant element of the Design Check involves cross referencing between the proposals shown on the scheme drawings and the recommendations contained in the Draft London Cycling Design Standards.

The Project Officer will then complete a Design Issues Response Pro-Forma highlighting any issues raised during the design check before preparing a draft letter and making recommendations where necessary. Once approved by the Sector Manager, this letter is then sent to the borough officer for consideration.

What happens Next?

The Officer should consider the issues highlighted and recommendations made by LCN+. Informal discussion between LCN+ and the Borough are recommended at this stage. This can be done by telephone, on site or during progress meetings.

The Officer then needs to respond to LCN+ in writing, confirming acceptance of each recommendation. Where recommendations are not accepted, the Officer is required to give valid reasons. It is acknowledged that acceptance of some recommendations will increase the scheme costs. In such instances, the Officer should estimate the cost increase for each agreed recommendation and then submit a variation to LCN+ requesting the provision of additional funds. Such variations will be processed by LCN+ and CCE in the usual manner.

Post Scheme Construction Site Visit

The LCN+ Project Officer may visit the site and make any relevant comments on the completed scheme. The Officer would be given the opportunity to take part and be involved in further informal discussions. Where necessary, further comments and recommendations for additional improvements will be made. This would be necessary where as-built facilities differ substantially from the scheme drawings without apparent reason.

Pro Forma Example

Please use this Pro Forma example to guide you

DESIGN CHECK PROCEDURE
Design Overview Pro-forma
Pro forma Example

Introduction

This design overview serves as a reference during the design stage of a cycle scheme to highlight key issues, encourage adherence to design guidance and help to provide consistency of outcome.

Design Overview Pro-Forma
This design overview pro-forma is completed by the designer to inform the scheme design. If a CRISP study has been completed for the Link, the Final CRISP Report should provide much of the information required to complete this pro-forma. This overview is to be submitted with the drawings at the Design Check stage. The designer should state any significant departures from the recommendations in the London Cycling Design Standards, which should be referred to throughout the design process.

Designer name:	Lewis C. D. Smith
Job title:	Cycling Programme Manager
Date design check completed:	June 2007

General Scheme Information				
1	Borough:	Livingston On Thames	Link number:	2010
2	Baseline programme reference:			
	BS/07/LCN/LIV.07			
3	Scheme name:			
	Pedal Road –Sinusoidal Humps & Point No Entry Except Cycles			
4	Road names:			
	Pedal Road between Velo Way and Bicycle Street			
5	Main scheme elements and LCN+ route length addressed:			
	Widen cycle gap access to point no entry, sinusoidal humps as part of 20mph area wide scheme. Total length 250metres			
6*	CRISP section/element (data sheet) reference where CRISP completed on Link:			
	CRISP Link 2010 Datasheet Section 2 A			
7.1*	Main objectives of the scheme:			
	Improve access for cycle users to and from cycle route. Improve safety and comfort of cyclists as part of wider 20mph scheme.			
7.2	Main existing and anticipated users of the scheme:			
	Local cycle users to and from shops and station			

DESIGN CHECK PROCEDURE
Design Overview Pro-forma
Pro forma Example

Flows and speeds (assume 24hr flow = 10 x am peak hour flow) include any applicable survey dates. Where surveys have not taken place, provide a High/Medium/Low estimate of traffic flows.*		
8.1*	Motor vehicle flows:	
	May 2007 = 5,030 vehicles on Pedal Road, 10,077 vehicles on Velo Way and traffic flows observed to be Low on Bicycle Street	
8.2*	HGV proportions:	
	10% HGV's on Velo Way; Pedal Rd & Bicycle St a low % HGV's	
8.3*	Known issues relating to motor traffic flows and HGVs	
	Velo Way: 2 Fatal, 1 Serious involving left turn HGV's last 3 years	
9*	Pedal cycle flows (existing and predicted) – where appropriate state on/off carriageway split:	
	Existing: 300 per day	Predicted: 900 per day
10.1*	Significant pedestrian flows along and crossing the cycle route:	
	Med to High pedestrian flows towards town centre and station	
10.2*	Known issues related to pedestrians:	
	N/A	
11.1*	Speed limit, relevant surveyed speed data:	
	Speed limit = 30mph	Surveyed speed data = 33mph
11.2*	Known speed related problems/issues:	
	Rat run along during morning peak period	

Safety and accidents	
12	Safety issues identified and addressed by the scheme (refer to statistics/reports where relevant, including accident data)
	No cycle accidents Pedal Way, see also point 8.3 for Velo Way
13	Safety audit status of the scheme (what audit level has been carried out to date):
	Stage 2 audit to be commissioned once consultation complete

Additional data for shared and adjacent use schemes (Refer to LTN 2/04)	
14	Proposed surface materials for cycle, pedestrian and shared areas:
	N/A
15	State any issues relating to obstructions (e.g. trees, bus stops) and how they are addressed by the design:
	Opportunity to review signs to reduce street clutter.
16	Nature of pedestrian usage, including elderly and disabled people and any related issues:
	Med to High pedestrian flows of all ages, include OAP's
17	If cyclists are required to negotiate steps, ramps, bridges or subways and the like, state any restrictions or specific provision in the scheme:
	N/A
TROs – Traffic Regulation Orders applied for (Y/N or N/A):	N/A

DESIGN CHECK PROCEDURE
Design Overview Pro-forma
Pro forma Example

Other issues	
18	DDA issues that the checker should be aware of, including details of any relevant audit:
	Cycle gap to be widened to minimum 1.5metres
19	Bus related issues that the checker should be aware of:
	7 Bus route use Velo Way, but Pedal Rd is not on a bus route and is not required as a diversion route during street road works.
20	Details of Interface with other boroughs or authorities, including boundary issues and third party scheme involvement:
	Velo Way on TLRN and will require involvement of TfL Area Team

The London Cycling Design Standards	
21	The following recommendations in the draft London Cycling Design Standards could not be satisfied for the reasons stated:
	All LCDS standards have been met for this proposed scheme.

NB: Where a question is not relevant to a scheme state NA in the box (do not leave box empty)

Additional information
Any additional information should be provided on separate sheet(s).

The following information should be clear on scheme drawings:
Key dimensions – carriageway and motor traffic/cycle/bus lane widths
– footway, cycle track and gap widths
Frontage Activity
Trees, sign posts, lighting columns and other relevant street furniture
Drainage gullies
Waiting and loading restrictions
Street names
One-way streets
Significant gradients
Signing details (diagrams and sizes) – or provide on separate schedule
Signal phasing diagrams where relevant
Cycle parking
Possible opportunities for future highway widening

*Guidance notes

6: For CRISP related issues, note any subsequent developments, changes to road layout and the impact of other external factors such as the congestion charge extension.

Additionally, where the scheme proposed on an LCN+ Link differs significantly from recommendations from the related CRISP report, state how the CRIM stakeholders have been consulted.

7.1: 'Main objectives of scheme', make reference to how the scheme will support growth of cycling on the link by:

Improving cyclist journey times, addressing any pre-existing safety issues and explaining how the scheme converts the existing situation into LCN+ standard

8.1 – 11.2: For survey requirement guidelines please refer to LCDS Chapter 4, section 4.1.9 and also note Figure 4.2 "Diagram of cycle facility solutions based on motor traffic volume and speed"