23RD JANUARY 2020

Cycle Route Quality Criteria

Update to Investment Delivery Planning

EVERY JOURNEY MATTERS

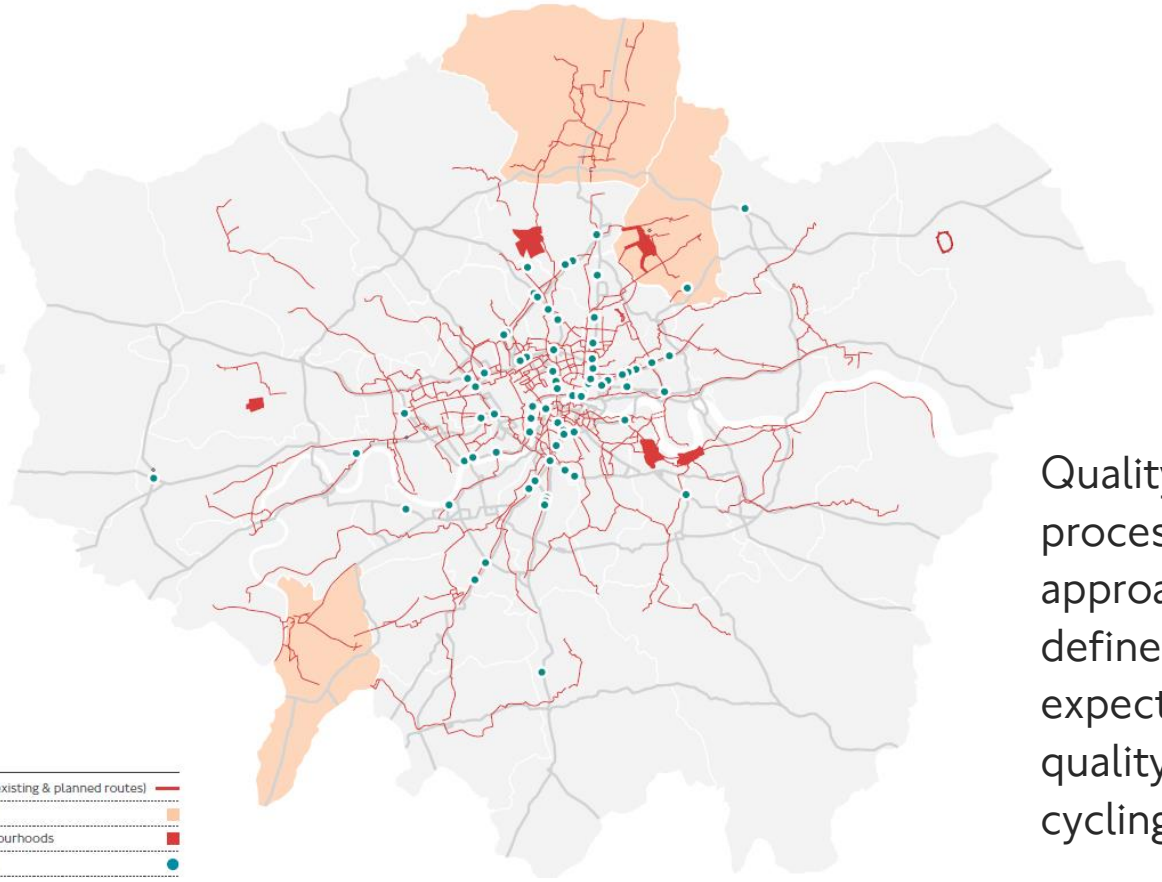
Purpose of today's presentation

To introduce the Cycle Route Quality Criteria launched in May 2019, including:

- An overview of why and how the Quality Criteria were developed
- A summary of the process and expectations for how it will be applied to schemes
- Details on what the automated tool does and how it can be used

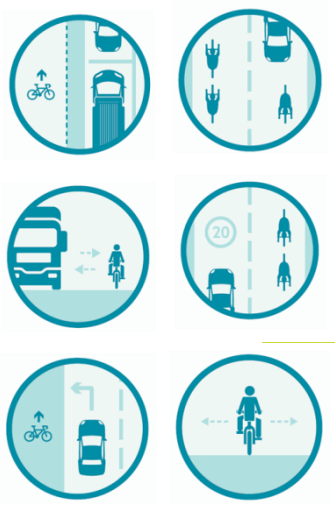
Streets that enable cycling

Investment in over 450km of new cycle infrastructure



A unified cycle network branding

Quality Criteria process - an approach that defines an expected level of quality for cycling



Where does the Quality Criteria process apply?

Cycleways Network Development programme (formerly the Cycle Superhighways, Quietways and Grid programmes): **All new schemes should apply the Quality Criteria**

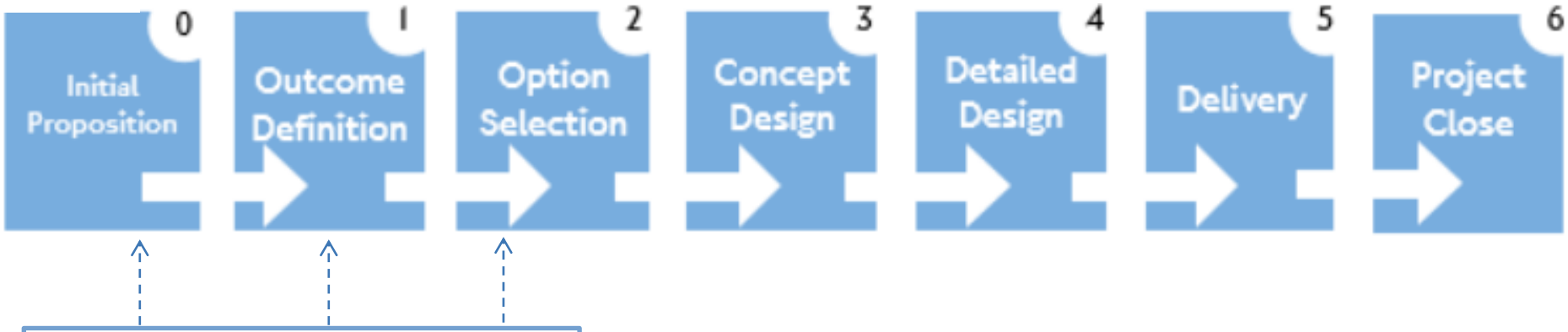
LIP and TLRN schemes **which coincide with the Strategic Cycle Network**:

- **Schemes that have a substantial cycle route component should apply the Quality Criteria**
- Corridor-based schemes such as bus priority schemes on this network should consider if the criteria can be achieved along the corridor as part of outcome definition / feasibility, but would not be expected to achieve the criteria if not found to be feasible without compromising the primary outcome of scheme.
- Smaller schemes (for example, a new pedestrian crossing) will not be expected to apply the criteria.

All other **new** schemes funded by TfL **should aspire to meet the Quality Criteria if possible**

This approach was confirmed by HSPIM in April 2019

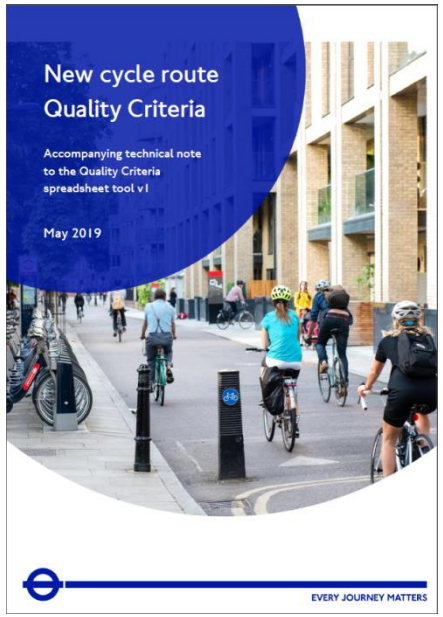
The **Pathway process** will be used to ensure that applicable schemes apply the Quality Criteria process early in the design process, by assessing existing conditions and as part of the Option Selection stage.



Where routes are expected to have an impact on other strategic networks (e.g. Buses, Walking, Freight, Network Resilience), a full Outcome Definition process will be expected to ensure the needs of these networks have been fully considered, and key decisions about road space allocation and priority made and agreed at an early stage

The exact process of reviewing the application of the Quality Criteria will need to be discussed on a case-by-case basis with the relevant Network Sponsor in TfL. However, early engagement and engagement throughout the process will be crucial, and where impacts on strategic networks are expected, Outcome Definition and engagement with internal stakeholder teams will be recommended.

What's new about these criteria?



- Will Norman asked TfL to introduce quality thresholds for cycle routes, included as a key commitment in the Cycling Action Plan 2018.
- While the London Cycling Design Standards (LCDS) describes levels of service to work towards, it does not set out what constitutes an acceptable standard of provision for cycling.
- This process draws on existing guidance but frames it in a way that sets out new quality thresholds expected for schemes that will be signed as part of the future Cycleways network.
- The design principles set out in the LCDS are consistent with the new Quality Criteria and the LCDS will remain the primary resource for cycling design guidance in London.

How did we develop the Quality Criteria?

TfL working group stage 1	• Internal working group set up including Sponsorship, Engineering and Bus Client team to identify key issues and delivery challenges
Literature review	• Review of best practice guidance including LCDS, Dutch CROW manual, and DfT LTN 2/08 update to understand existing and emerging tools
On-site testing and early development	• On-site research to collect vehicle flows and appraise delivered Quietways to critique existing schemes and best practice guidance
Stakeholder engagement 1	• First phase of engagement with Grid boroughs and LCC to present emerging thinking around use of a streamlined tool with six criteria
Cycling Action Plan announcement	• December 2018 public announcement of the overarching principles of the six Quality Criteria
Tool development	• Development of the automated tool and draft technical note with Sponsorship testing this across the portfolio of upcoming cycle schemes
Stakeholder engagement 2	• Borough and stakeholder workshop on the draft Quality Criteria tool and approach
TfL working group stage 2	• Refinement of the tool to tackle comments raised by internal stakeholders and boroughs
Governance development	• Transport Strategy and Sponsorship engaging across the business to develop a governance framework for the application of the tool

The starting point for the Quality Criteria

Figure 2.3 Cycling Level of Service assessment matrix (part 1)

Factor	Indicator	Critical*	Basic CLoS *(score=0)*	Good CLoS *(score=1)*	Highest CLoS *(score=2)*	Score
Safety						(48)
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes 'critical' if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes 'basic' if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	

Six interrelated Quality Criteria

Criteria 1:
Total volume of motor traffic

Criteria 2:
Speed of motor traffic

Criteria 3:
Width provided for people cycling

Criteria 4:
Collision risk between people cycling and turning vehicles

Criteria 5:
Kerbside activity impact

Criteria 6:
Interaction between HGVs and people cycling

Combining target levels of provision to determine whether it is appropriate to design for people cycling to mix with general traffic

Target ‘green’ levels are set as preferred higher levels of provision to aim for – these need to be considered together across the different criteria to ascertain what can be considered appropriate for different streets.

Required ‘grey’ levels set the absolute minimum benchmark – these can be considered in isolation as safety critical standards.

The gap between ‘target’ and ‘required’ gives the designer the flexibility that is needed to ensure that we are pushing for higher levels of quality while recognising deliverability challenges. The combination allows us to set out minimum standards as well as more challenging levels of provision to strive for.

Criteria 1

The degree of separation for people cycling is appropriate for the total volume of two-way motorised traffic

• The design of new cycle routes should only mix people cycling with motorised traffic where there are fewer than 500 motor vehicles per hour (vph – two-way) at peak times, and preferably fewer than 200vph.
• The design of new routes will provide as an absolute minimum, a light segregated cycle lane where there are more than 1000 motor vehicles per hour at peak (vph – two-way).

Criteria 2

The speed of motorised traffic is appropriate for people cycling

- The design of new routes should only mix people cycling with motorised traffic where the existing 85th percentile speed is less than 25mph *or* measures should be put in place to reduce speeds where the existing 85th percentile speed is more than or equal to 25mph.

- The design of new routes will not mix people cycling with motorised traffic where the existing 85th percentile speed is more than 30mph, unless speed reduction measures are proposed.

Combining target criteria levels

The process identifies whether conditions are expected to be appropriate for a design to mix people cycling with motor traffic. It is structured such that schemes should be aspiring for a high target level of provision across a range of criteria, and are not just meeting a minimum required quality level.

Scenarios which may be considered as acceptable	*Criteria 1 Flows*	*Criteria 2 Speed*	*Criteria 3 Width*	*Criteria 4 Turning risk*	*Criteria 5 Kerbside activity*	*Criteria 6 HGVs*
Scenario 1	*Meets the target level across all criteria*					
Scenario 2	*Falls below the target level*	*Meets the target level*	*At least 2 out of 3 criteria achieve the target level of provision*			*Proportion of HGVs* must be less than 5%** (except where width requirements are met)*
Scenario 3	*Meets the target level*	*Falls below the target level*	*At least 3 out of 4 criteria achieve the target level of provision*			
Scenario 4	*Meets the target level*	*Meets the target level*	*At least 2 out of 4 criteria achieve the target level of provision*			

** Heavy Goods Vehicle (HGV) – defined as lorries and trucks with 3 or more axles*

*** Based on the 12 hour average % of motor vehicle traffic, 7am to 7pm*

Ensuring consistency

The Quality Criteria process encourages a consistent approach to data collection:

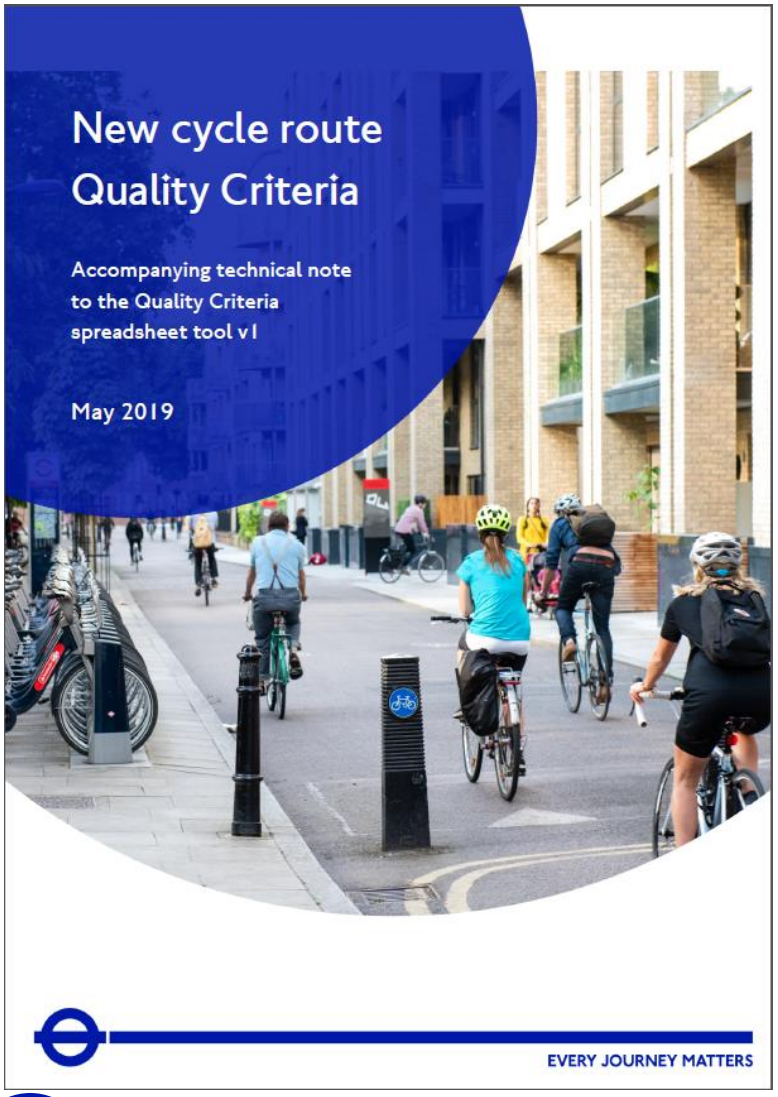
- Peak hour existing motor vehicle flows.
- HGV flows (defined as lorries and trucks over 3.5 tonnes).
- Classified turning counts at major junctions on the route.
- 85th percentile speed data for a typical weekday.
- Carriageway dimensions.
- Kerbside parking and loading width and operation, where relevant.

This data will be central to all future cycle route design discussions.

TfL sponsors will lead on data collection management and ensure the tool is applied as per the programme requirements.

Technical note and spreadsheet tool

https://tfl.gov.uk/corporate/publications-and-reports/cycling



Route information	Route
	Borough
	Project Number
	Location
	Length of link (metres)
	Number of buses per hour (for reference)

Existing Conditions Data inputs (Part 1a)	Is this a one-way or two-way street?	?
	What is the peak hour motor vehicle flow?	?
	What is the 85th %ile speed? (mph)	?
	What is the width of the nearside running lane for general traffic? (metres - include the width of kerbside bays)	?
	What is the width of the kerbside parking / loading? (metres)	?
	Turning risk - does the existing arrangement fulfil the criteria? (see Guidance Notes tab)	?
	What is the peak hour HGV flow?	?
	What is the peak hour HGV flow as a % of the total motor vehicle flow for that hour?	?
User comments on data inputs		?
Output 1a	Are existing conditions expected to be suitable for people cycling to be mixed with motor traffic?	

Dedicated space for cycling (Part 1b)	Is a light segregated cycle lane or full separation provided currently?	?
Output 1b	Recommended action	

Case study – CS10 (existing conditions)

Existing Conditions Data inputs (Part 1a)	Is this a one-way or two-way street? ?	Two-way	Two-way
	What is the peak hour motor vehicle flow? ?	1755	643
	What is the 85th %ile speed? (mph) ?	28	28
	What is the width of the running lane for general traffic? (metres - include the width of kerbside bays) ?	3	3
	What is the width of the kerbside parking / loading? (metres) ?	2.7	2.7
	Turning risk - does the existing arrangement fulfil the criteria? (see Guidance Notes tab) ?	No	No
	What is the peak hour HGV flow? ?	32	15
	What is the peak hour HGV flow as a % of the total motor vehicle flow for that hour? ?	2.2%	2.5%
	User comments on data inputs ?	Peak vehicle flows and HGV flows have been taken from counts for the junction of Wood Lane and Du Cane Road	Peak vehicle flows and HGV flows have been taken from counts for the junction of Wood Lane and Ariel Way
Output 1a	**Are existing conditions expected to be suitable for people cycling to be mixed with motor traffic?**	No	No

Case study – CS10 (proposed design)

Proposed dedicated space for cycling (Part 1b)	Is a light segregated cycle lane or full separation proposed? ?	Yes	Yes
Output 1b	Recommended action	Complete Part 2 below	Complete Part 2 below

Data inputs for when dedicated space for cycling is proposed (Part 2)	Layout of light segregated cycle lane, track or shared use facility, if proposed ?	Two-way	Two-way
	Proposed width of cycle lane, track or shared use facility (metres) ?	3	3
	Proposed buffer zone width adjacent to kerbside activity where a cycle lane is provided (metres) ?	2.5	2.5
	Does the design provide a cycle early release signal at signal controlled junctions, where needed? ?	N/A	N/A
	Are conflicting movements between cycle traffic and motor traffic separated with dedicated signals for cycles, where needed? ?	Yes	Yes
Output 2	Additional design considerations	Expected to provide a good level of provision for cycling	Expected to provide a good level of provision for cycling
User comments on proposed approach ?		Cycle track is a standard width of 3.0m except for specific pinch points at bus stop bypasses where the track width reduces to 2.5m	Cycle track is a standard width of 3.0m except for specific pinch points at bus stop bypasses and the junction with Ariel Way where the track width reduces to 2.5m

Next steps

- Sponsors are encouraged to initiate an ‘existing conditions’ assessment for all proposed **schemes that have a substantial cycle route component**

- For projects that are expected to intersect a future cycle route, it is recommended to use the tool to futureproof the design to tie in with the wider strategic cycle network quality targets

- A review is underway to monitor the process to see whether Cycleway schemes are able to deliver on the expected quality, and further review whether the quality thresholds are fit for purpose