SQA-8569 - Scheme Impact Report (SIR)

Wrottesley Road

October 2018

Contents

Purpose

The Scheme Impact Report (SIR) is to be used to identify the impact of implementing a scheme on the network to provide the client/sponsor and Planned Intervention (PI) team with all of the required information to make an informed decision on the project.

The Scheme Impact Report (SIR) will be initiated and submitted by the scheme sponsor / promoter. Traffic Engineering (TE) Signals will complete the Signals Design Technical Assurance section. The SIR is then handed to Road Space Management (RSM) Outcomes Management, to inform on the integrity of the modelling and network impact. Once complete, the SIR is handed back to the sponsor/client who will then submit the scheme to RSM's Planned Interventions for approval.

A SIR must be completed for all schemes planned for implementation on the Transport for London Road Network (TLRN), Strategic Road Network (SRN) and on borough roads if bus operation is also impacted.

Scheme types:

- Aggregation of schemes in the area
- Significant changes to large sections of the network
- Major schemes
- Large schemes
- Small to medium schemes – localised impacts
- Low or no impact schemes

All of these scheme types require a SIR to assess the impact on the network.

Reference documents

Document Number	Document Title
SQA-0448	Signal Design Review Sheet
SQA-0064	Design Standards for Signal Schemes in London
SQA-0184	Model Audit Process (MAP) Overview

Document Control for Scheme Submission

Version	Date	Prepared by	Reviewed by	Approved by
1	04/10/2018	Adam Greenland	Heidi Smart	Andrew Rogers

Scheme Overview

RSPG Version	Changes	Date
N/A	N/A	N/A

Cycling		
Walking		
Bus Network		
Environment		
Freight & Servicing		
General Traffic		
Taxis		

Contact Details

Scheme Sponsor		Date Signed
Sponsor (Client):	Annesley Tennent- LB Brent- annesley.tennent@brent.gov.uk 02089375372	31/08/2018
Promoter (Design Consultant):	Lee Deacon- Steer- Lee.Deacon@steergroup.com 02079105595	31/08/2018

Traffic Engineering		Date Signed
TE Traffic Control Engineer:	N/A	N/A
TE Principal Traffic Control Engineer:	David Brown	03/09/2018

Outcomes Delivery		Date Signed
OM Traffic Control Engineer:	Adam Greenland	05/09/2018
OM Area Performance Manager:	Andrew Rogers	04/10/2018
Outcomes Design Engineer:	N/A	N/A

Planned Interventions		Date Signed
Network Impact Assessment Engineer:		
Network Impact Assessment Manager:		

Scheme Summary

Name:	Wrottesley Road		
Type of scheme:	Minor		
Borough:	Brent	**Road Network:**	Other
Location & scope of works:	Junction 28/077- Wrottesley Road/Harrow Road		

Scheme objective (from Scheme Brief form):	Implement a signalised pedestrian crossing on the western arm of the junction.
Scheme justification & benefits (from Scheme Brief form):	Concerns were raised by local residents and ward members about safety of school children crossing the road at the junction.
Changes to scheme brief	None

Traffic Engineering: Safety checks

Designs approved in Principle:	Yes
Design shown in drawing PRO/28/077/07 has passed through the stage 1 and 2 Engineering safety check process and has been signed off as acceptable.	

Safety review (including safety timings:	Yes
Buildability Review:	Yes
Maintainability Review:	Yes

Comments or additional supplementary information:
No additional comments.

Signal Design Technical Assurance of design drawings listed in Appendix.

This Assurance constitutes "Approval in Principle". Full AMD Technical Approval of the Signals Design will be given in detailed design.

Changes to layout or facilities following public consultation or in detailed design may affect the timings, buildability, maintainability and safety assessment of the design(s).

Prohibited movements require Traffic Management Orders prior to implementation.

Model Integrity

Modelling in line with MAP Standards:	LMAP	**Yes**
	TMAP	No
	VMAP	No
Date of traffic flow data:		05/10/2017
Traffic peak times modelled:	AM peak	**Yes**
	Off-peak	No
	PM peak	**Yes**
	Weekend	No
Strategic modelling undertaken:	ONE	No
	Other	No
Scenarios modelled:	Base	**Yes**
	Future Base	No
	Do Something	**Yes**
	Sensitivity	No
Feasibility modelling undertaken in Linsig:		No
Key modelling assumptions/exceptions:		

Network Impact Assessment:

Walking

The purpose of this scheme is to improve accessibility at this junction for pedestrians by simplifying the existing pedestrian staging
arrangements and introducing a new signalled pedestrian phase across the West arm of the junction.
This scheme offers a significant improvement in safety due to the simplified arrangement and the new pedestrian facility on the western arm of the junction.

Region/Area	Cycle Time (s)					
	AM Peak		Off-peak		PM Peak	
	Base	*DS*	*Base*	*DS*	*Base*	*DS*
Wrottesley Road/Harrow Road (R215)	104	104	104	104	104	104

Network Impact Assessment:

Cycling

This scheme is a pedestrian safety scheme and there are no significant benefits for cyclists as a result of the changes proposed. However, as part of the scheme, Advanced Cycle Stoplines will be introduced at this junction on all arms in order to provide a safe space for cyclists to wait in front of general traffic.

Network Impact Assessment:

Bus Network - Mitigated Impacts

Bus journey times have not been modelled as part of the scheme assessment because the assessment of this scheme was based on LinSig modelling only.

There is only one route running through this junction, however, this is a very high frequency route and it is considered a "flagship" route for this part of London.

The LinSig modelling suggests that Degree of Saturation will increase slightly in the AM peak on the Eastern arm (base 64%, proposed 67%), but decrease slightly on the Western arm (base 92%, proposed 88%). Similarly the expected queue lengths for the AM peak increase slightly on the Eastern arm (base 10 PCUs, proposed 11 PCUs), but decrease slightly on the Western arm

Network Impact Assessment:

Environment

The environmental impact of this scheme has not been assessed. The extent of the works are limited to changes to signal poles, no additional civils works are required and there are no changes to the pedestrian environment.

Network Impact Assessment:

Freight & Servicing

Freight vehicles are expected to experience an overall increase in journey times - similar to general traffic. There are no changes to loading planned as part of this scheme.

Network Impact Assessment:

General Traffic

The LinSig modelling suggests that Degree of Saturation will increase slightly in the AM peak on the Eastern arm (base 64%, proposed 67%), but decrease slightly on the Western arm (base 92%, proposed 88%). Similarly the expected queue lengths for the AM peak increase slightly on the Eastern arm (base 10 PCUs, proposed 11 PCUs), but decrease slightly on the Western arm (base 17 PCUs, proposed 16 PCUs).

PM peak results suggest that the Degree of Saturation will increase in both directions in the PM peak, particularly the Eastern arm (base 62/66%, proposed 99%), with the Western arm already being fairly highly saturated (base 99%, proposed 100%). Similarly the PM peak queue lengths are expected to increase on both arms, Eastern arm increasing from 9 to 19 PCUs, Western arm

Degrees of saturation (values in %)

Link/Road	AM Peak			Off-peak			PM Peak		
	Base	*DS*	*Difference*	*Base*	*DS*	*Difference*	*Base*	*DS*	*Difference*
Wrottesley Rd	100	99	**-1**	N/A	N/A	-	65	97	**32**
Harrow Rd (E)	64	67	**3**	N/A	N/A	-	64	99	**35**
Harrow Rd (W)	92	88	**-4**	N/A	N/A	-	99	100	**1**

Queue length (values in metres)

Link/Road	AM Peak			Off-peak			PM Peak		
	Base	*DS*	*Difference*	*Base*	*DS*	*Difference*	*Base*	*DS*	*Difference*
Wrottesley Rd	31	30	**-1**	N/A	N/A	-	6	13	**7**
Harrow Rd (E)	10	11	**1**	N/A	N/A	-	9	19	**10**
Harrow Rd (W)	17	16	**-1**	N/A	N/A	-	37	39	**2**

Network Impact Assessment:

Taxis

Taxi and private hire vehicles are expected to experience an overall increase in journey times - similar to general traffic.

Healthy Streets Criteria

Pedestrian

1	Are pedestrian wait times 74 seconds or less?	No
2	Do pedestrian crossings double cycle?	N/A
3	Are pedestrian crossings protected from exit blocking?	No
4	Is pedestrian linking possible at staggered crossings?	N/A
5	Will pedestrian system tools be implemented?	Yes
6	Can all pedestrians clear the footway in one cycle/invitiation period?	Yes
7	Is overcrowding on footways or central islands prevented?	Yes

Cycles

1	Can all cycles clear the stopline in one cycle?		Yes
2	Has cycle progression (e.g. offsets) been applied?		N/A
		CSH	N/A
		QW	N/A
		Other	N/A
3	Are cycle movements prevented from exit blocking?		N/A
4	Have cycle wait times been minimised?		No
5	Will cycle SCOOT be implemented?		No

Buses

1	Has UTC Bus Priority been applied?	Yes
2	Are bus lane entry points free from obstruction and queueing?	N/A
3	Have bus speeds/journey times been improved or maintained?	N/A
4	Are buses able to clear the stop line in one cycle?	N/A

4	

General Traffic

1	Will call/cancel be applied at this location?	**Yes**
2	Have offsets been set for the predominant movement by time of day?	**N/A**
3	Have strategic traffic movements been prioritised over non-strategic traffic movements?	**Yes**

Overview Summary

						
Cycling	Walking	Bus Network	Environment	Freight/Servicing	General Traffic	Taxis

Healthy Streets Criteria

Have Healthy Streets Criteria objectives been met?	Partially met
The introduction of a new pedestrian phase on the Western arm of the junction provides a new, direct and safe crossing point for pedestrians to cross Harrow Road.	

Summary

Although there are increases in queueing predicted, the scheme provides a new, direct and safe crossing point for pedestrians to cross Harrow Road on the Western arm of the junction with Wrottesley Road. This is on the pedestrian desire line for parents and children to/from a local school. The impact of the new crossing has been mitigated as follows:
- The most efficient possible design has been adopted to reduce the impact of the new crossing;
- UTC Bus priority will be used at this junction to prioritise buses as much as possible;
- Call cancel detection will be used to prevent the pedestrian crossing being called in unnecessarily.

Additional Information

List of additional documents (to be included with SIR submission or links provided):

Document title	Date last updated
Name	

File Information:

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Additional comments:

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