

Transport and Environment Committee

10.00am, Thursday, 7 December 2017

Slateford Road/Shandon Place Junction – Traffic Signal Priorities

Item number	7.1
Report number	
Executive/routine	Executive
Wards	9 - Fountainbridge/Craiglockhart
Council Commitments	CC18 , CC19

Executive Summary

A petition was considered by the Transport and Environment Committee on [10 August 2017](#). The petition requested that the traffic signal priorities are reviewed at the junction of Slateford Road and Shandon Place.

This report responds to the Committee request with:

- the results of the group site visit;
- a breakdown of collision history; and
- potential options to reduce driver confusion at the junction.

A preferred option has been identified which entails altering junction staging, simplifying signal heads and having an all stop pedestrian stage to reduce driver confusion. The viability of this option will be subject to detailed design.

Slateford Road/Shandon Place Junction – Traffic Signal Priorities

1. Recommendations

- 1.1 It is recommended that the Transport and Environment Committee:
 - 1.1.1 notes that the review of the site at Slateford Road/Shandon Place junction has been undertaken to observe traffic compliance with signals;
 - 1.1.2 notes that the junction is not a priority for full refurbishment at present, according to the City of Edinburgh Council (the 'Council') agreed maintenance criteria; and
 - 1.1.3 agrees that Option 3 (altering junction staging, simplifying signal heads and having an all stop pedestrian stage) should be progressed, subject to the successful outcome of detailed design.

2. Background

- 2.1 On [10 August 2017](#), the Transport and Environment Committee considered a petition of 150 signatories - "Redesign the traffic light priorities at Junction of Slateford Road and Shandon Place".
- 2.2 The petitioner who spoke on behalf of the petition expressed concerns that the junction prioritises vehicles in a way that is dangerous for pedestrians and confusing for car drivers. The junction is on route to Craiglockhart Primary School for children in the catchment area, to Tynecastle Nursery School and students to Tynecastle High School. The junction is also a route for local residents to access the local amenities on Gorgie Road and bus stops on Slateford Road.
- 2.3 The Committee agreed that a group site visit should be arranged in order to inspect the junction and observe the issues.
- 2.4 The site visit has now taken place and Officers have explored several options aimed at reducing driver confusion. These options have been broadly assessed in terms of cost and benefit and a preferred option has been recommended.

3. Main report

Junction Arrangement

- 3.1 Slateford Road forms part of the A70, an arterial route through the city of Edinburgh, extending from the west of Edinburgh at Balerno, to Haymarket in the city centre. Slateford Road is single carriageway, which is currently subject to a 20mph speed limit. A bus stop is located on the westbound Slateford Road carriageway, approximately 50m to the east of its junction with Shandon Place.
- 3.2 Slateford Road forms a T-junction with Shandon Place on a railway bridge at the top of a hill crest. Shandon Place is a largely residential street leading towards Craiglockhart Primary School to the south. Shandon Place is single carriageway with a speed limit of 20mph, forming an additional T-junction with Shandon Crescent just before its junction with Slateford Road. Appendix 1 shows the location of the junction.
- 3.3 The junction is on a key public transport corridor linking the city centre with south west Edinburgh. Lothian Buses services 4, 44, 34, 38 and 300 all travel through the junction.
- 3.4 The eastbound Slateford Road approach to its junction with Shandon Place has an ahead and a right turn lane, each movement is signalled independently with green arrows. The westbound Slateford Road approach has an ahead and left turn lane, again each movement is signalled independently with green arrows. The Shandon Place approach does not have individually marked lanes. The left turn movement has a green arrow whereas the right turn movement has a green signal. The junction layout is displayed in Appendix 2.
- 3.5 A signal controlled pedestrian crossing is located on Slateford Road on the eastern arm of the junction with Shandon Place. A School Crossing Patrol Guide currently operates at this crossing during the morning and afternoon school peak periods. There is also a signal controlled pedestrian crossing on Shandon Road just before the junction, which includes a refuge island in the centre of the carriageway.

Collision History

- 3.6 In the five-year period, up to the end of 2016, there were two collisions at the junction, both resulting in slight injuries. Neither of the collisions were directly attributable to the signalling at the junction:
 - 3.6.1 a vehicle failed to brake due to cramp in a driver's leg, resulting in collision with two other vehicles; and
 - 3.6.2 the driver of a vehicle travelling westbound on Slateford Road applied brakes sharply, resulting in a collision with two other vehicles.
- 3.7 The Slateford Road and Shandon Place junction has not been identified as a site for concern by the Council's Road Safety team.

Site Visits

- 3.8 Council Officers visited the site to observe the junction and driver behaviours on the 17 August 2017 and 30 August 2017 for approximately one hour per visit. They observed a high level of driver compliance with the traffic signals. One illegal vehicle movement was observed when a driver travelled ahead on Slateford Road using the right turn lane, the signal for the ahead movement was green.
- 3.9 At the request of the petitioners, a group site visit which took place on 6 September 2017 between 0915 and 1015. Most of those invited attended including the lead petitioners, relevant Council staff members and local Councillors. The full invitation list and attendees is included in Appendix 3.
- 3.10 During this site visit, one instance was observed of a vehicle going through a red signal when turning right from Slateford Road.

Issues and Concerns

- 3.11 During the site visit, the petitioners reported that drivers go through red signals daily, resulting in regular near misses. There is a perceived danger to pedestrians and vehicles using the junction. Specific concerns include:
- 3.11.1 confusion reading the right and left turn arrows at traffic signals on all approaches;
 - 3.11.2 particular poor traffic signal compliance by those turning left from Slateford Road, particularly when loading vehicles are parked on Slateford Road obscuring the signal heads;
 - 3.11.3 perception that the duration of the pedestrian stage on Shandon Place is too short;
 - 3.11.4 vehicles turning left from Shandon Terrace can block traffic approaching the junction from Shandon Place; and
 - 3.11.5 the position of the traffic signals is difficult to see due to their location on different elevations.

School Crossing Patroller Consultation

- 3.12 Council Officers consulted with the School Crossing Guide based at the Slateford Road pedestrian crossing.
- 3.13 The Guide was concerned that near misses occur between vehicles and pedestrians on a regular basis, highlighting that from his own experience, the primary issue is drivers not stopping at the red signal when travelling eastbound on Slateford Road.

Police Scotland Consultation

- 3.14 Police Scotland were also consulted to understand any issues and concerns they may have in relation to the junction.
- 3.15 Their feedback suggests there is anecdotal evidence suggests that there may be an issue with vehicles complying with traffic signals.

- 3.16 As accident numbers are low at the junction, it is not currently deemed a Police priority for enforcement of driver compliance with signals.
- 3.17 It was agreed that in the interim, the local Police team would give it attention if the opportunity arises.

Condition of Equipment and Road Markings

- 3.18 The traffic signal heads were reviewed during the site visit and they appeared to be in satisfactory working condition.
- 3.19 The signal heads on the Slateford Road eastbound approach were recently upgraded to modern replacements to reduce the effect of sun glare. The number of signal heads and their locations at the junction comply with national guidelines.
- 3.20 The road markings at the junction on Shandon Place were found to be badly faded. The Council South West Locality team have confirmed that the junction is on a programme of maintenance to be reviewed and refreshed, aiming to have this completed by the end of November (weather dependant).

Traffic Signal Staging

- 3.21 Following the site visit and petitioners concerns about the duration of the pedestrian stage, the sequencing of the traffic signals was reviewed. All the junction stage timings comply with national standards, providing sufficient time for pedestrians to cross the road safely.
- 3.22 During the pedestrian stage at the Shandon Place crossing, the green man is on for six seconds, followed by a clearance period of 16 seconds before the traffic from Slateford Road can turn onto Shandon Place.
- 3.23 During the pedestrian stage at the Slateford Road crossing, the green man is on for a minimum of six seconds. As the pedestrian crossing runs with the right turn into Shandon Place, this time can be extended dependent on traffic demand and typically runs for around 12 seconds during the day. This is followed by a clearance period of 12 seconds before the traffic from Slateford Road can flow.

Possible Options to Addressing Petitioners Concerns

- 3.24 In order to address the petitioners concerns, four potential options have been explored and are outlined below:

Option 1 - Do nothing	
Description	No modifications to existing junction, the junction currently conforms to national standards.
Benefit	Benefit neutral.
Approximate Cost	£0
Funding Source	N/A

Option 2 - Minor modifications	
Description	Using the same signal heads but amending the staging of signals to reduce driver confusion, by always preventing the right turn during ahead movement phase, and vice versa.
Benefit	May reduce driver confusion as drivers would become accustomed to the traffic phases on Slateford Road eastbound never both moving together, thereby reducing ambiguity. Note there would be no change to the signalling arrangement on Slateford Road westbound.
Approximate Cost	£400 Updating existing junction controller configuration £509 staff costs (testing and site review). Total Cost: £909
Funding Source	South West Locality budget.

Option 3 - Modifications	
Description	Altering junction staging, simplifying signal heads and having an all stop pedestrian stage at both pedestrian crossings. The viability of this option would be subject to detailed design.
Benefit	Reduced driver confusion as all vehicles would be required to stop when the pedestrian stage is called at either of the crossings. Would provide greater benefit than Option 2, as no traffic movement would be permitted at all during a pedestrian stage thereby removing ambiguity.
Approximate Cost	£1,320 six new signals heads (including installation) £2,654 replace controller (including installation) £790 new junction controller configuration (including installation) £1,500 traffic surveys (for modelling) £1,274 staff time (modelling, detailed design, testing and site review). Total Cost: £7,538
Funding Source	£5,000 South West Locality budget. £2,538 Planning and Transport budget.

Option 4 – Full refurbishment of junction	
Description	Fully refurbish the junction including replacing and repositioning poles, signal heads, controller and cabling/ducting. Potential to implement an all stop pedestrian stage and/or increase the number of signalised pedestrian crossings at the junction, as well as implementing modifications to ensure full Disability Discrimination Act (DDA) compliance. At present, the junction is not considered high priority on the Council maintenance programme for upgrade due to its age in comparison to other signal installations throughout the city and the fact it already has pedestrian facilities.
Benefit	A complete refurbishment would provide many benefits to all junction users. It would give the opportunity to reduce driver confusion by simplifying the staging as well as renewing equipment and ensuring crossing points are in line with the latest standards, fully benefitting those with mobility impairments.
Approximate Cost	> £100,000
Funding Source	£5,000 South West Locality budget. £2,538 Planning and Transport budget. (£92,462 funding sources not yet identified).

3.25 Option 3 (altering junction staging, simplifying signal heads and having an all stop pedestrian stage) at both pedestrian crossings is recommended as the preferred option. This option would provide greater benefit than Options 1 or 2, and can be met from existing Council resources.

4. Measures of success

4.1 Achieving a reduction in driver confusion.

5. Financial impact

5.1 The costs for the options have been stated in the main report. Funding for option 3 has been identified from existing resources.

6. Risk, policy, compliance and governance impact

- 6.1 There are no significant health and safety, governance, compliance or regulatory implications expected as a result of approving the recommendations of this report.

7. Equalities impact

- 7.1 Any improvements to junction would enhance equalities and rights by improving access for all.

8. Sustainability impact

- 8.1 The impacts of this report in relation to the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties have been considered, and the outcomes are summarised below. Relevant Council sustainable development policies have been taken into account and are noted at Background Reading later in this report.
- 8.2 The proposals in this report will reduce carbon emissions because the junction would become easier to navigate which would in turn increase levels of active travel and reduce traffic.
- 8.3 The need to build resilience to climate change impacts is not relevant to the proposals in this report because the proposals will not impact on resilience.
- 8.4 The proposals in this report will help achieve a sustainable Edinburgh because the proposals would result in increased active travel. This would help people to become more physically active and improve physical and mental health.

9. Consultation and engagement

- 9.1 Consultation and engagement was carried out with the following stakeholders:
- Petitioners (residents)
 - Police Scotland
 - Local Councillors
 - School Crossing Patrol Guide

10. Background reading/external references

- 10.1 [Minute of Transport and Environment Committee 10 August 2017](#)
- 10.2 [Sustainable Edinburgh 2020](#)
- 10.3 [Transport 2030 Vision](#)

Paul Lawrence

Executive Director of Place

Ewan Kennedy, Service Manager – Roads Network

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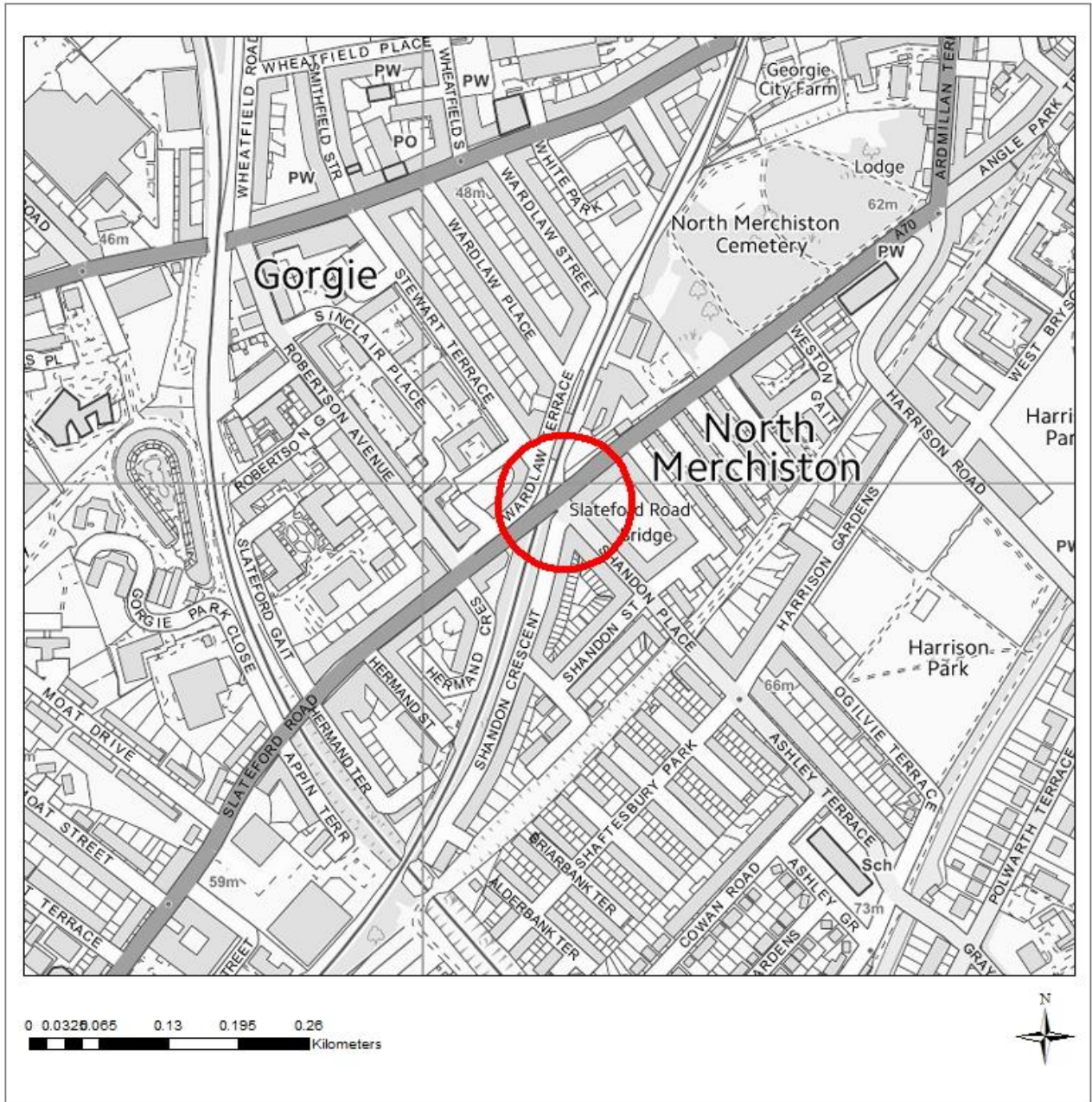
11. Appendices

Appendix 1 – Site Location

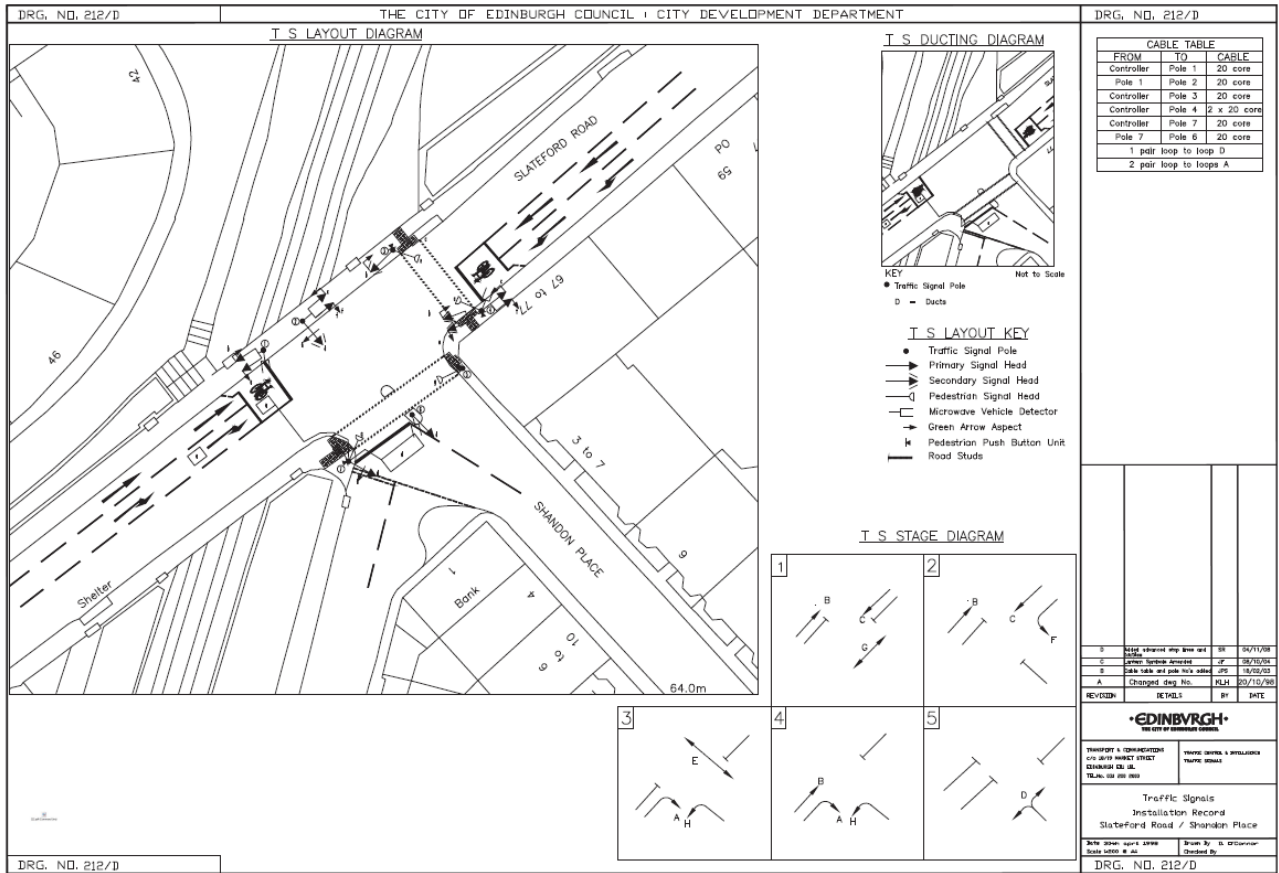
Appendix 2 – Junction Arrangements

Appendix 3 – Site Visit Invitation List

Appendix 1 Site Location



Appendix 2 Junction Arrangements



Appendix 3 Site Visit Invitation List

Name	Summary	Attended
Mrs Nuala Fahey	Lead Petitioner	Y
Mr Alex Stuart	Petitioner	Y
Councillor Gavin Corbett	Ward: Fountainbridge /Craiglockhart, Party: Scottish Green Group	Y
Councillor Andrew Johnston	Ward: Fountainbridge/Craiglockhart, Party: Conservative Group	
Councillor David Key	Ward: Fountainbridge/Craiglockhart, Party: SNP Group	Y
Robert Mansell	The City of Edinburgh Council Senior Transport Team Leader – Citywide Networks	Y
Suzanne Hunter	The City of Edinburgh Council Transport Officer – Network Development	Y
Andy Edwards	The City of Edinburgh Council Transport and Environment Manager (South West Locality)	Y
Allan Hoad	The City of Edinburgh Council Transport Officer - Road Safety and Active Travel	
Councillor Lesley Macinnes	The City of Edinburgh Council Transport and Environment Committee Convener	
Councillor Karen Doran	The City of Edinburgh Council Transport and Environment Committee Vice Convener	

Apologies received: Councillor Lesley Macinnes, Councillor Karen Doran, Councillor Andrew Johnston, and Allan Hoad.