

Meeting:	Traffic and Road Safety Advisory Panel
Date:	21 September 2005
Subject:	Pedestrian crossing improvements and removal of turning restrictions at the Headstone Drive/Cecil Road/Ellen Webb Drive junction
Responsible Officer:	Andrew Trehern, Director of Area Services (Urban Living)
Contact Officer:	Steve Swain, Transportation Manager
Portfolio Holder:	Phil O'Dell, Portfolio Holder for Environment and Transport
Key Decision:	No
Status:	Part 1

Section 1: Summary

Decision Required

That the Panel:

Authorises officers to conduct an origin and destination survey to establish the volume of non-local traffic using Cecil Road and to develop a scheme to introduce traffic signals, with pedestrian crossing facilities, at the Ellen Webb Drive/Headstone Drive/Cecil Road junction that will actively discourage such traffic from using Cecil Road.

Authorises officers, subject to the survey showing that a workable solution is achievable, to:

- conduct a public consultation exercise to demonstrate that there is local support for the scheme
- seek approval from Transport for London
- prepare notification on the relocation of the Toucan crossing on Ellen Webb Drive and its conversion to a Pelican crossing
- prepare traffic orders to revoke the right turn restriction on the Headstone Drive (East) exit and make any modifications to waiting and loading restrictions that are necessary

and, subject to the foregoing issues being considered further by the Portfolio Holder for Environment and Transport, implement the scheme.

Reason for report

To report the findings of an investigation into removing turning restrictions and providing pedestrian crossing facilities at the Headstone Drive/Cecil Road/Ellen Webb Drive junction and to seek authority to develop a solution that redirects traffic from Cecil Road.

Benefits

The proposed option will substantially improve access to the town centre for pedestrians, cyclists and disabled people. It will also improve convenience for shoppers and servicing traffic by removing the right turn restriction on the exit to Headstone Drive (East). A reduction in traffic flow at peak times in Cecil Road and residential roads further north will make the neighbourhood cleaner and safer.

Cost of Proposals

The cost of introducing signal control at the junction is estimated at approximately £146,500. Transport for London (TfL) funding to implement the scheme is available in the current financial year.

Risks

Survey work may show the proposal to be unfeasible.

TfL may not approve the scheme

There is a risk of complaints from motorists, local residents and businesses over the congestion that will be caused on Cecil Road while traffic adapts to the new arrangement.

Road closures may be necessary to make the scheme work.

Implications if recommendations rejected

It is likely that the current layout of the junction will remain largely unchanged as there does not appear to be any other means of introducing crossing facilities and removing turning restrictions.

The funding made available by TfL will have to be returned or permission sought to redistribute it to other walking schemes in the borough.

Section 2: Report

2.1 Brief History

The current layout of the junction dates back to the construction of the George Gange Way and Ellen Webb Drive relief roads in 1995/96, measures aimed at removing through traffic from the main shopping area of the High Street. Ellen

Webb Drive and its continuation into Headstone Drive (West) became the east-west route transferring traffic from Canning Road/Headstone Drive route.

Land constraints and the need to maintain continuity on this new east-west route led to an awkward junction arrangement where Ellen Webb Drive met Cecil Road and the easternmost section of Headstone Drive. Two very closely spaced priority junctions were created on the north side of the main road. To ensure their safe operation in an area of complex turning manoeuvres it was necessary to make the exit from Headstone Drive a left turn only. A roundabout a short distance away at the High Street/Masons Avenue/The Bridge/Ellen Webb Drive junction allowed drivers wishing to head to the north or west to make a U-turn. As the easternmost section of Headstone Drive had become a cul-de-sac the right turn from the road was very light. Restricting the right turn from this exit, rather than the Cecil Road exit, minimised the number of people who were inconvenienced.

As well as inconveniencing drivers, the right turn ban also created difficulties for cyclists on this key link in the London Cycle Network. This problem was addressed by introducing a Toucan crossing on Ellen Webb Drive a short distance from the junction.

At the roundabout on the High Street a pedestrian crossing was provided on the Ellen Webb Drive approach to create a safe link between the High Street and Harrow and Wealdstone station, an area of very high pedestrian activity. The nature of the roundabout layout mean that the crossing had to be set back a short distance from the junction. However, rather than travel the short distance to the crossing, many pedestrians chose a direct line to and from the station walking outside of the guard railing and making a hazardous crossing of the roundabout circulatory area. To deal with this problem the roundabout was replaced by traffic signals in 2001/02. Full pedestrian and cycle crossing facilities were created as close as possible to the desire lines significantly improving safety and enhancing pedestrian and cycle access to the station.

It was recognised when the removal of the roundabout was proposed that this would also remove the U-turn facility and create difficulties for drivers wishing to head to the north and west out of Headstone Drive, but the benefits of the signal scheme were judged to significantly outweigh the disadvantage for the small number of drivers involved. The scheme was introduced as soon as possible but with a view to dealing with the Headstone Drive problem as soon as further funding could be obtained.

At around the same time as the proposal to remove the roundabout was being drawn up Living Streets (formerly the Pedestrians Association) was commissioned by the Council to carry out a walking audit of pedestrian routes to Harrow-on-the-Hill and Harrow and Wealdstone stations. The aim was to identify impediments to safe pedestrian movement and recommend improvements that would encourage more travel to the stations on foot. The Cecil Road/Headstone Drive/Ellen Webb Drive junction area was highlighted as particularly difficult for pedestrians and controlled crossing facilities were recommended for both Cecil Road and Headstone Drive (West).

It was clear from the audit suggestions and the difficulties created by the removal of the roundabout that introducing traffic signals at the junction would be the best means of addressing the problems. A bid for funding to introduce signals was made to Transport for London (TfL) in July 2003 as part of the

2003/04 Borough Spending Plan (BSP). The bid was unsuccessful. Funding was however made available from Harrow Council's Capital budget to begin an investigation into a traffic signal solution while a further bid for implementation funding was made to TfL as part of the 2004/05 BSP. This second bid was successful and TfL have made £146,500 available in the current financial year. The funding has been made available from TfL's Walking budget with the primary aim of dealing with the difficulties experienced by pedestrians.

2.2 Options considered

The investigation into a traffic signal solution looked at a number of different layouts and methods of operation that would provide the desired pedestrian facilities and also remove the right turning restriction. In all cases traffic capacity problems were found, and on a scale that suggested that further fine-tuning of the layouts would have little impact. Queues in the range 100 to 200 vehicles were typical on the three main approaches to the junction: Ellen Webb Drive, Headstone Drive (West) and Cecil Road. On those options with the least queuing the traffic islands needed to provide safe pedestrian crossing points would impede the swept paths of large vehicles and would require HGV access restrictions immediately to the west of the junction. However even queuing at this lower end of the scale (100 vehicles, equivalent to a queue length of approximately 600 metres) would be sufficient to cause gridlock over a wide area. On Ellen Webb Drive the queue would extend back through the High Street/Masons Avenue junction as far back as the Masons Avenue/Byron Road roundabout and possibly also through The Bridge, High Street and Palmerston Road onto George Gange Way. On Headstone Drive (West) the queue would extend to the traffic signal junction at Harrow View and on Cecil Road the queue would extend back through the width restriction. It was clear from this initial work that a traffic signal option that addressed all of the issues and satisfactorily accommodated the current traffic flows was not achievable.

Because of these difficulties roundabout options were explored. Roundabout capacity modelling showed that current traffic flow levels could be better accommodated than with signals but there would still be an unacceptably long queue on the Headstone Drive (West) approach. A queue length of approximately 70 vehicles (over 400 metres) was predicted which would extend back beyond Walton Road and would block the Princes Drive/Hailsham Drive junction. In addition other significant difficulties were identified with roundabout options. The arrangement of the approach roads severely compromises any layout to the extent that it is not possible to devise a scheme that meets current roundabout design standards. Apart from Ellen Webb Drive, where there is land available to the south, there is no scope to modify the alignment of the approach roads to achieve a satisfactory layout. The main difficulty is in achieving sufficient deflection on the approaches to the Give Way lines to discourage high approach speeds. This in turn has a significant impact on the ability to provide safe pedestrian crossings in the two key locations identified in the walking audit, Headstone Drive (West) and Cecil Road. It is not appropriate to use signal-controlled crossings in close proximity to a roundabout as they can be mistaken for signal control of the junction and lead to drivers ignoring Give Way requirements when they see a green light. Zebra crossings are the usual means of providing crossings in such circumstances. However, in this particular case, the lack of deflection on

the approaches and the high speeds that will follow, coupled with limited visibility, is likely to make zebra crossings hazardous. The high traffic flows will also make it very difficult for pedestrians to assert priority when trying to use the crossings. Roundabouts have the added difficulty that they are hazardous for cyclists. A roundabout option does not therefore appear to offer a suitable solution either.

As a result of the difficulties encountered above it was clear that a solution that addressed all of the issues was unlikely to be found. Other options were therefore explored to find a solution that met as many of the aims as possible. One of these options investigated the manipulation of traffic conditions on the junction approaches to favour the most difficult or important approaches over the least difficult/important.

The roundabout method of traffic control relies on driver interaction to regulate behaviour and in situations such as this, where there is very little land available to create extra lanes at the entries, offers no scope to manipulate the capacity of the entries to favour one approach over another in an attempt to spread the queuing load and reduce the length of the queue on Headstone Drive (West). With their direct method of control signals do, however, offer such opportunities and will also allow local traffic effects to be exploited to help find a solution.

A key local effect on Cecil Road that could be exploited to improve a signals option is evident from the traffic flow information gathered for the study. It is clear from the volume of southbound traffic on Cecil Road in the morning peak, and from the large proportion that turns right, that there is a significant amount of non-local traffic using the road to avoid congestion on the main road network. If this could be re-directed back to the main road network it might be possible to redistribute some of the signal green time on Cecil Road to the other arms of the junction to reduce queuing and achieve a more acceptable solution than those investigated in the initial phase of the study.

Further modelling has shown that if the AM peak, southbound flow on Cecil Road can be reduced by 50%, and the crossing of Headstone Drive (West) can be omitted, a workable solution might be possible (see Appendix A for a potential layout). Given this possibility, authority is sought from the Panel to investigate whether such a reduction is achievable and to pursue the concept further.

It should be noted that, in their role as Traffic Authority for all signals installations in London, TfL would have to give final approval to any scheme. They will take account of the geometric layout (and some features of the junction here prevent current design standards from being met) and will also need to consider the effects on the main road network of the redistribution of traffic from Cecil Road. Approval cannot therefore be assured at this stage, but this redistribution approach seems to offer the only means of meeting at least some of the objectives of the project and appears to be worth pursuing further regardless of the uncertainty surrounding TfL approval.

Assuming the concept proves to be feasible the intention would be to install a traffic signal system that limited the green time on Cecil Road to only 50 % of that needed to accommodate the current traffic flow. This is likely to result in queues of approximately 120 vehicles (700 metres) building when the scheme is first introduced (significant queuing is not expected to develop on the other

arms of the junction). It is anticipated that most non-local drivers will find the delay that this creates (over ten minutes) unacceptable and will redistribute back to the main road network, reducing the pressure on Cecil Road, and bringing the queue down to an acceptable equilibrium level. Should this not prove to be the case in practice, road closures could be introduced to prevent through traffic from using Cecil Road but measures of this sort would also inconvenience local people and are not recommended in the first instance.

With regard to the omission of the crossing on Headstone Drive (West), it does not appear to be possible to provide this crossing without the traffic islands that would be needed impeding the turning movements of heavy goods vehicles. It would however be investigated further if approval is given to pursue the traffic redistribution approach suggested above.

The existing Toucan crossing immediately to the east of the junction would need to be relocated a further 20 metres to the east so that it would not interfere with the operation of the signals at the junction. It would be retained to provide a north-south link to the station but converted to a pelican crossing as cycle crossing facilities would no longer be needed. Cyclists will be able to turn right directly out of Headstone Drive (East) along with other vehicles.

This existing crossing was not judged in the walking audit to serve the need of providing a direct access across Headstone Drive into the town centre for people approaching from the southwest. If a more direct crossing cannot be accommodated within the new junction layout it will be pursued as part of a proposal to improve the Headstone Drive/Princes Drive/Hailsham Drive junction.

The findings from the initial part of this study and the proposal to develop a solution for the junction by disadvantaging non-local traffic on Cecil Road were submitted to the Wealdstone Regeneration Advisory Panel (WRAP) on 20 September 2005. Panel members were closely involved in the original walking audit work and the information was provided both to give a report on progress and to provide an opportunity for WRAP to indicate this Panel whether it supports this approach to solving the problem. The outcome of the WRAP meeting will be reported orally to this meeting.

Should approval be given to proceed the next step will be to carry out an origin and destination survey to quantify the volume of non-local traffic using Cecil Road. This will take place in early October and will show whether or not a 50% reduction in traffic is achievable and if the proposal is therefore feasible. Number plate surveys will be carried out at all entry points off Long Elmes and the High Street, to a cordon bounded by Ellen Webb Drive, the railway, the High Street and Long Elmes (see Appendix B for cordon area). A similar survey will be carried out at the Cecil Road/Headstone Drive junction. Matching of the information will show how much traffic on Cecil Road is generated from outside of the local (cordon) area.

Funding for the scheme is available only until the end of the financial year. This leaves a very tight programme for clearing the remaining development, design and constructions phases. Key amongst these are seeking approval from TfL, conducting a public consultation exercise to measure local support and the preparation of traffic orders to revoke the right turn ban or make any modifications to waiting and loading restrictions that might be necessary. Approval to proceed through all phases is therefore being sought at this stage,

subject to the origin and destination survey showing the scheme to be feasible, as there will be insufficient opportunity through the Panel timetable to report back on consultation findings, seek authority to publish traffic orders and report on objections to the traffic orders at separate stages. Continuation through these stages will be subject to the approval of the Portfolio Holder for Environment and Transport.

2.3 Consultation

Local residents and businesses in the cordon area (see Appendix B) together with key stakeholders will be consulted by means of letter and questionnaire. More general consultation will be via press release and by posting of the proposals on the Council's website.

Because of the limited time remaining to fully develop the scheme consultation will be carried out in parallel with seeking TfL approval. Consultation documents will advise that implementation is conditional upon TfL consent.

2.4 Financial Implications

£21,700 of Harrow Capital and £146,500 of TfL funding is available to complete the investigation and implement the scheme. The final cost will be dependent upon the outcome of the further investigations proposed but the sum available should be sufficient to introduce a traffic signal scheme.

2.5 Legal Implications

Revocation of the traffic order to remove the right turn restriction on Headstone Drive (East) can be made under Section 6 of the Road Traffic Regulation Act 1984.

Conversion from Toucan crossing to Pelican can be made under Section 23 of the Road Traffic Regulation Act 1984.

Changes to waiting and loading restrictions necessitated by the changes to the junction layout can be made under Section 6 of the Road Traffic Regulation Act 1984.

2.6 Equalities Impact

The proposed pedestrian improvements will also greatly benefit disabled, elderly and vulnerable groups.

Section 3: Supporting Information/Background Documents

Appendix A: Plan showing a potential traffic signal junction layout

Appendix B: Plan showing cordon area for traffic survey and proposed area of coverage for public consultation