



HIGHWAYS ADVISORY COMMITTEE

10 February 2015

REPORT

Subject Heading:

**PROPOSED BROXHILL ROUNDABOUT
Outcome of public consultation**

Report Author and contact details:

Mark Philpotts
Principal Engineer
01708 433751
mark.philpotts@havering.gov.uk

The subject matter of this report deals with the following Council Objectives

Clean, safe and green borough	<input checked="" type="checkbox"/>
Excellence in education and learning	<input type="checkbox"/>
Opportunities for all through economic, social and cultural activity	<input type="checkbox"/>
Value and enhance the life of every individual	<input checked="" type="checkbox"/>
High customer satisfaction and a stable council tax	<input type="checkbox"/>

SUMMARY

This report sets out the responses to a consultation to convert the signalised junction of Broxhill Road, Noak Hill Road, Lower Bedfords Road and Straight Road to a kerbed roundabout and seeks a recommendation that the proposals be implemented.

The scheme is within **Heaton** ward.

RECOMMENDATIONS

1. That the Committee having considered the representations made recommends to the Cabinet Member for Environment that the replacement of the traffic signal-controlled junction of Noak Hill Road, Broxhill Road, Lower Bedfords Road and Straight Road with a roundabout (and associated works) as set out in this report and shown on QN025/PC/02 (contained within Appendix I) is implemented;
2. That it be noted that the proposed zebra crossing element of QN025/PC/02 is subject to a further public consultation and public advertisement and a further report will be placed before the committee in the near future.
3. That it be noted that the estimated cost of £280,000 for implementation will be met by Transport for London through the 2014/15 Local Implementation Plan allocation for the Lower Bedfords Road/ Straight Road/ Lower Bedford Road/ Broxhill Road junction review (£180,000) and the S106 contribution for highway improvements linked to the planning consent for the redevelopment of the former Whitworth Centre granted under P1558.11 (£100,000).

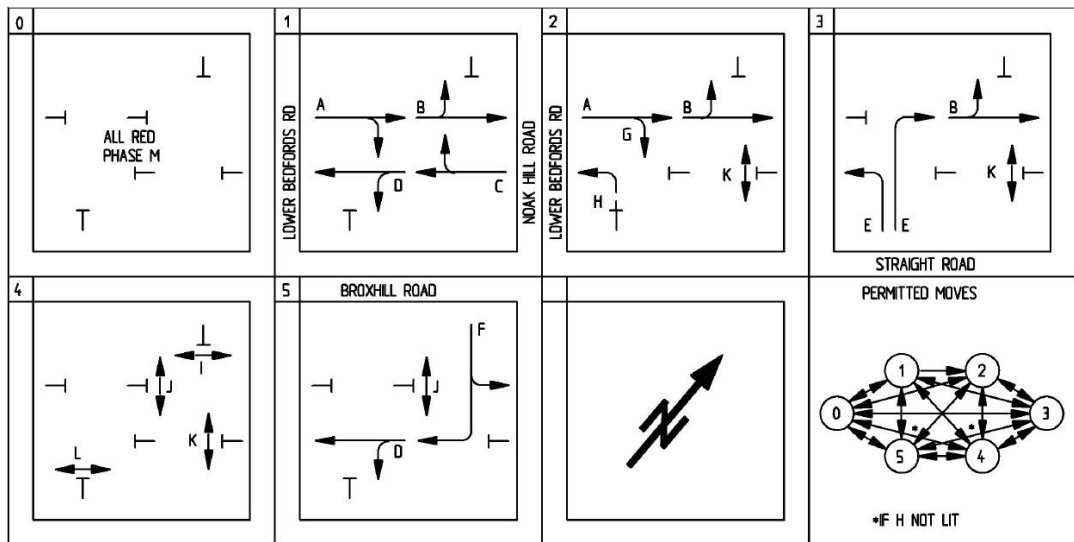
REPORT DETAIL

1.0 Background

- 1.1 As part of the Transport for London Local Implementation Plan, funding has been provided to review the operation of the junction of Broxhill Road, Noak Hill Road, Lower Bedfords Road and Straight Road. In addition, a S106 (Town & Country Planning Act 1990 as amended) agreement with Persimmon Homes has secured funding towards “highway improvements” in the vicinity of the residential redevelopment of the former Whitworth Centre (planning reference P1558.11).
- 1.2 The junction currently forms a staggered crossroads which is controlled by automatic traffic signals. Noak Hill Road into Lower Bedfords Road is the major road through the junction with Straight Road and Broxhill Road being the minor arms. Pedestrians currently have controlled facilities (“green men”) over the entry to Straight Road, over the entry to Broxhill Road and via a 2-stage, staggered, crossing over Noak Hill Road between the side roads.
- 1.3 Noak Hill Road runs into Lower Bedfords Road and comprises a short 2-lane dual carriageway through the junction with right turn lanes for

movements into the side roads. The right turn into Straight Road has an early cut-off whereby traffic travelling southwest along Noak Hill Road is held and traffic completing the right turn into Straight Road receives a green arrow to allow the junction to clear. The junction is within an area subject to a 30mph speed limit.

- 1.4 The junction carries two bus routes. The 256 runs between Straight Road and of Noak Hill Road. The 499 runs through the junction along Noak Hill Road/ Lower Bedfords Road.
- 1.5 The traffic signals date back to at least 1996 based on Transport for London's records, with various signal timing adjustments and equipment upgrades over the life of the layout. The method of control is vehicle actuated with 5 stages with mixed pedestrian movements. There is a digital speed camera on the southwest arm of the junction which detects speed and red signal violations for traffic heading northeast. The following figure shows the operation of the junction;



- 1.6 The junction was selected for review because of a history of complaints about motor traffic congestion, a relatively poor casualty record and because of locally committed and expected development in the Harold Hill area and especially the residential development of the former Whitworth Centre and the proposed Broxhill Park on the former Broxhill Centre.
- 1.7 In terms of casualties, in the 3 years to July 2014, 5 casualty collisions were recorded. 2 collisions were recorded as serious injury and 3 were recorded as slight injury. All of the collisions involved vehicles colliding with other vehicles with 4 involving right turns.

2.0 Junction Review

- 2.1 The Council's term consultant was appointed to undertake a review of the junction with the objectives of reviewing both capacity and safety of the

junction. Allied to the review was consideration of providing a surface level pedestrian/ cyclist crossing of Noak Hill Road between the residential and park developments to replace the footbridge removed as part of the redevelopment. This crossing is a project which would be brought forward separately in the future. The report was completed in 2012, but not taken forward due to lack of funding.

2.2 The review examined a variety of options for the junction, outline sketches are contained within Appendix I;

- Optimisation of the current traffic signals and bringing operation in line with current guidance, including consideration of a Toucan crossing to the north-east of the junction.
- As above, but relocating the staggered pelican crossing northeast of Broxhill Road; although the stagger would not be in accordance with current guidance to have people walking towards traffic within the central reservation (The opposite of the current layout).
- Complete removal of the traffic signals and the introduction of a large 2-lane “oval” shaped roundabout linked all four arms of the junction with uncontrolled pedestrian crossings to replace current signalised crossings. The left turn from Straight Road into Lower Bedfords Road would be by a dedicated slip road. The Noak Hill Road and Lower Bedfords Road arms would have 2-lane entries and exits.
- Compact (kerbed) roundabout at the junction of Noak Hill Road/ Lower Bedfords Road with Straight Road and the junction of Noak Hill Road and Broxhill Road changed to a basic major/ minor “T” junction (Broxhill Road being the minor arm).

2.3 In traffic capacity assessment terms, an important consideration is the “Degree of Saturation” (DoS) occurring on any given traffic arm with 90% generally being accepted as the ceiling for a junction operating efficiently. If the DoS exceeds 90%, then it is more likely that traffic congestion will occur with increased vehicle queues and knock-on impacts for highway safety.

2.4 Traffic capacity assessments are concerned with averages and so user experience can vary with use of the junction at peak times in that it could be clearer one day or busier another. It should also be noted that modelling is merely a tool to be used to inform decisions, but there may be wider issues which need consideration.

2.5 In the morning peak, the current layout has two movements which are considered to be congested (in assessment terms); traffic turning right from Lower Bedfords Road into Straight Road has a DoS of 90% and traffic turning right out of Straight Road has a DoS of 93%.

2.6 In the evening peak traffic turning right from Lower Bedfords Road into Straight Road has a DoS of 105%. Traffic turning right out of Straight road has a DoS of 91%.

- 2.7 The provision of a Toucan crossing to the northeast of the junction (to replace the bridge) had a negligible impact on traffic. For the basic optimisation option this led to a DoS of 87% for Broxhill Road in the morning peak and 86% for Lower Bedfords Road into Straight Road for the evening peak. With the option of relocating the pelican crossing, this led to a DoS of 85% and 89% for Lower Bedfords Road into Straight Road in the morning and evening peaks.
- 2.8 With roundabouts, similar capacity checks can be made, but rather than the Degree of Saturation, it is the Ratio of Flow to Capacity (RFC) which is of interest. The RFC is expressed as a decimal of 1 and 0.85 is taken as the ceiling for a roundabout to be operating efficiently.
- 2.9 The 2-lane oval roundabout would have a maximum RFC of 0.60 for Straight Road in the morning peak and 0.63 for Broxhill Road in the evening peak and therefore more efficient than traffic signals.
- 2.10 This layout would be far less sensitive to congestion, but in terms of the two-lane entries/ exits for the Noak Hill Road arms, these would be extremely difficult for pedestrians to cross, especially at peak times. The oval shape could also promote high speeds through the junction which is not desirable.
- 2.12 With the roundabout at the junction of Noak Hill Road and Straight Road only, the maximum RFC would be 0.40 and 0.39 for the Straight Road arm in the morning and afternoon peaks respectively.
- 2.13 The layout would have 2-lane approaches in the Noak Hill and Straight Road arms and again, pedestrian impact is a concern. Right turns from Broxhill Road would be difficult and would require a 2-stage give way (once at Broxhill Road and once in the centre of the junction). This is considered to be an unusual arrangement which is likely to create a collision problem.
- 2.14 The two traffic signal options provide capacity improvements over the current operation, but the modelled DoS show that sensitivities remain. If no other work was proposed, then optimisation of the signals would be recommended, but not with the relocation of the pelican crossing as it is contrary to guidance.
- 2.15 The two roundabout options improve capacity, but create issues for pedestrian safety. Although pedestrian numbers are currently low, the residential and park developments are likely to generate movements. Both have issues in terms of traffic speeds within the oval roundabout and right turn conflicts with the option which has Noak Hill Road/ Broxhill Road operating at a T-junction.

3.0 Current Proposal

- 3.1 As funding is now available through the TfL LIP and from the S106 contribution, Staff have revisited the study and sought to develop an

alternative layout which may deal with some of the issues from the original options. Drawing QN025/PC/01 shows a conventional (compact) roundabout created by extending the line of Straight Road to create 4-arms. The left turn from Straight Road into Noak Hill Road would be created by a slip road.

- 3.2 On the south side of the junction and into Straight Road, wide shared-use cycle tracks are provided with uncontrolled crossings of Noak Hill Road, Straight Road and the slip road, all being single traffic lanes. The cycle tracks variously would have places for people to leave or join the carriageway. In addition, the bus stops on Lower Bedfords Road and Straight Road (southbound) would be made fully accessible.
- 3.3 Staff are of the opinion that the layout is more intuitive than an oval roundabout and the inclusion of Broxhill Road eliminates the right turning issues and is a layout more expected by drivers.
- 3.4 When modelled, the key arms were the Noak Hill Road with an RFC of 0.88 and Lower Bedfords Road with an RFC of 0.81 during the morning peak. The same arms had RFCs of 0.71 and 0.81 in the evening peak respectively. The left turn slip road from Straight Road into Noak Hill Road contributed to a net increase in capacity through the junction as a whole.
- 3.5 The conclusion was that the compact roundabout provided some capacity increases in the morning peak, but at the expense of Noak Hill Road and Lower Bedfords Road. This is an indication that Broxhill Road and Straight Road would be improved. In the afternoon peak, the roundabout improved capacity over the current situation.
- 3.6 The compact roundabout proposal was taken to public consultation with approximately 380 letters were sent to those potentially affected by the scheme on 8th December 2014, with a closing date of 9th January 2015 for comments. In addition, ward councillors, HAC members and standard consultees (London Buses, emergency services, interest groups etc) were sent a set of the consultation information. Consultation information was also provided on the Council's website on the "road works, street closures and events" page.

4.0 Outcome of public consultation

- 4.1 By the close of consultation, 9 responses were received as set out in Appendix I to this report. Staff also met with the chair of the Sunset Drive Residents' Association and the matters discussed are also summarised in Appendix I.
- 4.2 The Metropolitan Police (Roads & Transport Policing Command) supported the scheme.
- 4.3 Cllrs Frederick Thompson and Philip Hyde supported the scheme.

- 4.4 A resident of Whitworth Avenue was concerned that the proposed roundabout lack capacity and would queue as with the roundabout at Collier Row Town Centre. That Broxhill Road should be diverted to meet Noak Hill Road at the Le Noke Avenue roundabout. That pedestrians should have priority on the shared-use cycle tracks.
- 4.5 A resident of Whitworth Avenue objected to the scheme as it would remove the green from outside their new-build property and moves the road closer to their property. They suggest that they would not have bought the house if they had known about the scheme. The resident was also concerned about the health and safety of their family and reduction in property values.
- 4.6 A resident of Broxhill Road made a number of comments in relation to that street and not the scheme under consultation.
- 4.7 A resident of Sunset Drive was concerned about the lack of controlled pedestrian crossings and that the bus stop on Lower Bedfords road was not accessible and should be moved nearer the housing development.
- 4.8 A member of the Havering Council Cycling Liaison Group was concerned that the lane widths proposed would mean that cyclists could not filter past traffic queuing back towards Collier Row (into Lower Bedfords Road).
- 4.9 A resident of Straight Road agreed that the proposal was safer, but made comments in relation to disturbance from building works and buses; she requested the bus stop near her property be relocated.
- 4.10 In regard to the meeting held with the Sunset Drive Residents' Association, it was confirmed that the residents were not against the proposals, but felt the money would be better spent at Gallows Corner. Concerns were raised about the lack of provision for popular pedestrian routes and lack of controlled facilities. They also raised concerns about the potential for future parking problems created by the Broxhill Park scheme.

5.0 Staff Comments

- 5.1 Staff have further refined the layout of the roundabout and modelled the provision of two-traffic lanes on the two Noak Hill Road arms and agree that additional capacity can be provided and could easily be incorporated in the scheme. The diversion of Broxhill Road to the Le Noke Avenue is beyond the scope of this scheme and is certainly not funded.
- 5.2 The proposed shared-use cycle tracks are for both pedestrians and cyclists to share with the established principle that cyclists do not ride in a way in which pedestrians are put at risk. The signage used would be to the National standard.
- 5.3 The roundabout would remove an area of highway verge and move the carriageway closer to some new-build properties. Members will need to

decide the weight of this objection against the wider improvements to traffic capacity at the junction.

- 5.4 Staff have reviewed the pedestrian routes to the Sunset Drive estate, which also formed some of the discussions with the Sunset Drive Residents' Association. Amendments are being considered which will be consulted on and be the subject of a further report if the scheme is taken forward. The bus stop will remain accessible and when the surface level crossing is considered for Noak Hill Road in the future, an additional bus stop could be provided.
- 5.5 The traffic capacity improvements will improve traffic flow through the junction and it is not envisaged that cyclists will need to filter, although the lane widths on the Lower Bedfords Road arm of the roundabout would be sufficient for this to take place.
- 5.6 The southbound bus stop on Straight Road serves the adjacent residential areas and so it is not proposed to relocate it. However, the layout can be adjusted to reduce the current issues. The disturbance created by the adjacent development work is beyond the scope of this report.
- 5.7 The pedestrian routes and crossing issues raised by the Sunset Drive Residents' Association have been considered and amendments will be consulted on and be the subject of a further report if the scheme is taken forward.
- 5.8 The funding from Transport for London is for this junction review scheme and not available for other schemes. Gallows Corner is not part of Havering's network, being managed by Transport for London.
- 5.9 Potential impacts created by the Broxhill Park development are beyond the scope of this report.
- 5.10 Drawing QN025/PC/02 shows a revised layout which takes on board comments raised through the consultation. In terms of capacity, the 2-lane approach at Noak Hill Road gives a maximum RFC of 0.61 in the morning peak and the 2-lane approach of Lower Bedfords Road gives an RFC of 0.55 in the evening peak which represents additional capacity over the consulted design.
- 5.11 In addition (and subject to the committee's recommendation on the scheme as a whole) Staff propose zebra crossings on the Lower Bedfords Road and Straight Road arms of the roundabout which have been taken into account for modelling purposes and would be the subject to an additional report to the committee.
- 5.12 In summary, Staff recommend that the revised layout shown on Drawing QN025/PC/02 be implemented, with the zebra crossings being the subject of a report in the near future.

IMPLICATIONS AND RISKS

Financial implications and risks:

This report is asking HAC to recommend to the Cabinet Member the implementation of the above scheme

The estimated cost of £280,000 for implementation will be met by Transport for London through the 2014/15 Local Implementation Plan allocation for the Lower Bedfords Road/ Straight Road/ Broxhill Road junction review (£180,000) and the S106 contribution for highway improvements linked to the planning consent for the redevelopment of the former Whitworth Centre granted under P1558.11 (£100,000).

The Transport for London funding associated with this scheme will need to be spent by 31st March 2015, to ensure full access to the grant. Should the scheme be approved for implementation, the Transport for London funding will be drawn down first, allowing the construction stage to extend into 2015/16 utilising the S106 funding.

The costs shown are an estimate of the full costs of the scheme, should all proposals be implemented. It should be noted that subject to the recommendations of the committee a final decision then would be made by the Lead Member – as regards actual implementation and scheme detail. Therefore, final costs are subject to change.

This is a standard project for StreetCare and there is no expectation that the works cannot be contained within the cost estimate. There is an element of contingency built into the financial estimate. In the unlikely event of an overspend, the balance would need to be contained within the overall StreetCare Capital budget.

Legal implications and risks:

Bus Stop Clearways do not require traffic orders, but Department for Transport guidance suggests that local consultations should take place as has been the case with the proposals set out in this report.

Human Resources implications and risks:

None.

Equalities Implications and Risks:

The Council has a general duty under the Equality Act 2010 to ensure that its highway network is accessible to all users. Where infrastructure is provided or substantially upgraded, reasonable adjustments should be made to improve access. In considering the impacts and making improvements for people with protected characteristics (mainly, but not limited to disabled people, the young and older people), this will assist the Council in meeting its duty under the Act.

The provision of fully accessible bus stops assists with making public transport more inclusive to all sectors of the community, but most especially disabled people and people using pushchairs. Accessible bus stops will be of benefit to people using wheelchairs, but also people who have walking, balance and dexterity difficulties; and blind and partially-sighted people.

The provision of crossing facilities makes it easier for all sectors of the community to cross busy streets or have more confidence in crossing streets. This is especially helpful to disabled people, children (lone and accompanied), young families and older people.

Good quality footways and reduced street clutter can help pedestrians negotiate and navigate the public realm and is especially helpful for disabled people.

BACKGROUND PAPERS

Project file: QN025, Noak Hill Road/ Broxhill Road/ Straight Road junction review

**APPENDIX I
CONSULTATION RESPONSES
SCHEME DRAWINGS**



Respondent	Drawing Reference & Location	Response and Staff Comments (where required)
PC Martin Young Metropolitan Police Roads & Transport Policing Command	QN025/PC/01	Fully support the scheme and see no issues with the plans presented.
Councillor Frederick Thompson	QN025/PC/01	In support of the proposals and suggests that the proposed layout will be a great improvement on the existing junction.
Councillor Philip Hyde	QN025/PC/01	In support of the proposals and agrees that the proposed layout is a good solution to some of the problems at that junction.
Resident 16 Whitworth Avenue	QN025/PC/01	<p>Rejects to the proposals on the grounds that it will create a similar scenario to that of the roundabout in Collier Row town centre whereby several lanes of traffic will now be reduced to single lane on approach to and from the proposed roundabout and exits being blocked. The resident explains that the traffic will be worse during the PM peak on Lower Bedfords Road with three lanes reducing to the one and suggests that the proposals need to include:</p> <ul style="list-style-type: none">• A double lane roundabout with 2 lanes on the Lower Bedfords Road approach• Divert Broxhill Road across the land intended for a sports centre to connect with the roundabout at Neave Place• Indicate that pedestrians have priority on shared use footways due to the presence of elderly and disabled in the area.• Wants to be keep informed of build duration should the roundabout proceed and uses the Sports Centre development as an example of the Council not fulfilling promises.

<p>Resident 39 Whitworth Avenue</p>	<p>QN025/PC/01</p>	<p>Resident has recently purchased the new build property on the adjacent Whitworth Centre redevelopment and as such the proposed roundabout will result in the carriageway being closer to her property by the removal of a landscaped verge area. Objects to the proposals on the grounds of health and safety, an increase in noise and close traffic being too dangerous for her family Would not have purchased the property had she been aware of the proposals and is concerned about a reduction in value due to the lack of appeal for a property that borders a heavy traffic roundabout.</p>
<p>Resident Broxhill Road</p>	<p>QN025/PC/01</p>	<p>Had not made any direct comments about the proposed roundabout but would like to see traffic calming on Broxhill Road to reduce vehicle speeds and accidents. Due to overgrown shrubbery and trees, there is limited space for pedestrians and cyclists with lighting also reported as being poor.</p>
<p>Resident Sunset Drive</p>	<p>QN025/PC/01</p>	<p>Concerned with the lack of a controlled pedestrian crossing facility and suggests that the bus stop on Lower Bedford's Road is not accessible and needs to be moved back towards the new housing development.</p>
<p>Member Havering Council Cycle Liaison Group member</p>	<p>QN025/PC/01</p>	<p>With queuing PM on traffic on Lower Bedford's Road a common occurrence, member wanted to ensure that there would be adequate lane widths should cyclists wish to overtake stationary traffic on the nearside.</p>
<p>Resident 394 Straight Road</p>	<p>QN025/PC/01</p>	<p>Resident agreed that the proposed layout would be safer but was distressed by the noise from the on-going building works, idling buses and general traffic at the busy junction. Requested that the bus shelter be moved away from her property to reduce the temptation for the general public to trespass and litter her property.</p>

Site Meeting held with Sunset Drive Residents' Association, 17th December 2014

<p>Chairman and Vice Chairman</p> <p>Sunset Drive Residents' Association</p>	<p>QN025/PC/01</p>	<p>Residents were not against the proposals but suggested money would be better spent improving Gallows Corner roundabout as the improvements in that location would benefit the wider area.</p> <p>Discussed existing mobility issues faced by vulnerable road users and how the proposals would affect popular pedestrian movements particularly with the lack of a controlled crossing facility in the immediate vicinity.</p> <p>In preparation for the parking demand associated with the Sports centre development – waiting and loading restrictions on Broxhill Road should be implemented to prevent overspill parking at weekends and creation of a potentially dangerous situation.</p>
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