

<b>Committee(s):</b>	<b>Date(s):</b>
<b>Streets &amp; Walkways Sub Committee Projects Sub Committee</b>	<b>16 September 2013 25 September 2013</b>
<b>Subject:</b> Outline Options Appraisal – Ludgate Hill crossing review (30 Old Bailey)	<b>Public</b>
<b>Report of:</b> Director of the Built Environment	<b>For Decision</b>
<b><u>Summary</u></b>	
<u>Dashboard</u>	
<b>Project status:</b> Green	
<b>Timeline:</b> Outline Options Appraisal	
<b>Total estimated cost:</b> £116,000	
<b>Spend to date:</b> £17,652	
<b>Overall project risk:</b> Low	
<u>Context</u>	
<p>This report sets out a proposal to achieve a better balance between all modes, including pedestrians, cyclists and vehicles, by replacing the existing zebra crossing on Ludgate Hill, adjacent to St Paul’s Cathedral, with a signalised crossing facility. In July 2007 a report was received by Streets &amp; Walkways Sub Committee which considered the replacement of the zebra crossing on Ludgate Hill with a signalised crossing. The report concluded that the zebra crossing should be retained owing to the perceived aesthetic impact of installing traffic signals close to the Cathedral.</p>	
<p>A further investigation into a signalised crossing was carried out in 2011. This concluded that the potential disadvantage to pedestrians (increased waiting times) outweighed the potential benefits to vehicular traffic (improved localised traffic flow and removal of the perception that vehicles are restricted by a constant flow of pedestrians). A further review was carried out in 2012 utilising Transport for London (TfL) funding which assessed the merits of full signalisation of the junction of Ludgate Hill and Ave Maria Lane as an alternative to the existing crossing. This review of the fully signalised junction involved modelling and assessment which demonstrated that, although some modest journey time benefits were predicted, the success of this option was dependent on the relocation of adjacent bus stops and servicing activity and this was not considered practical within the scope of this project. An extended traffic signal cycle would also be required in order to accommodate traffic using Ave Maria Lane, which would also have additional impacts on pedestrians crossing Ave Maria Lane who would experience additional delay. Therefore this option has been discounted; a summary of the implications of introducing a fully signalised junction is contained in Appendix 1.</p>	
<p>A Project Proposal (Gateway 2) was approved by Members on 17<sup>th</sup> July 2012, which gave authority to review the operation of the existing crossing; this had been identified as a high priority by Members and had been brought to the attention of the local Ward Mote and Committee meetings. Since this approval Officers have considered the preferred option for Ludgate Hill in the wider context of the Fleet Street to St Paul’s corridor, of which the crossing forms a key part.</p>	

The option for a signalised crossing is now considered the most effective solution in this context, notwithstanding the aforementioned concerns relating to aesthetic impact. However it is proposed that this is done on a trial basis to allow the potential impact on pedestrians to be monitored.

Brief description of project

The aim of the project is to achieve a better balance between all modes, including pedestrians, cyclists and vehicles on Ludgate Hill. While pedestrians currently have priority to cross on the zebra crossing, this often results in vehicles queuing back along Ludgate Hill. This report proposes to introduce a signalised crossing facility on a trial basis in order to assess its ability to smooth traffic flow and regulate pedestrian movement. The current layout consists of narrow footways on the southern side of Ludgate Hill, and so it is proposed to widen the footway in this location on a temporary basis, allowing sufficient space for pedestrians to wait and circulate.

It is proposed to undertake a 12-month trial of a signalised crossing initially, using temporary traffic signals and high quality materials to construct temporary footway build-outs. This will allow officers to fully assess the function of the crossing and identify any potential areas for improvement. Following the trial, should the results prove favourable, it is intended to implement a permanent scheme; any permanent works proposal will be the subject of a further report.

Options

<b>Description</b>	<b>Option 1 £</b>
Total Estimated Cost	<b>£116,000*</b> Staff costs - £34,000 Fees - £19,000 Works - £63,000
Tolerance +/-	10%
Likely Funding Strategy	Section 106 (30 Old Bailey)

NB Full details of the proposal are available in paragraphs 11 to 19.

\* It should be noted that this figure is based on the temporary installation. The cost of permanent implementation will be set out at the next Gateway if required (likely to be an additional £100,000-£130,000, to be met from the Section 106 funding).

**Recommendations**

Option(s) recommended to develop to next Gateway

It is recommended that Option 1 is progressed on a trial basis for a period of 12 months. This will allow Officers to monitor the performance of the signalised crossing and the results will be reported back to Members in due course.

Next Steps

Should the preferred option be approved, Officers will progress with a design for a temporary layout of a signalised crossing. The City of London has a statutory duty

under the Road Traffic Regulation Act 1984 (S.23) to consult with various bodies, including the City of London Police, on the proposals; therefore it is requested that Members approve the project as outlined above, subject to this consultation and the delegated consideration of the responses.

Once installed, the crossing will be monitored for a period of 12 months to assess the impact of the new layout on all users of the area. The results will then be analysed and reported back to Members, at which time a decision will be taken on whether to deliver permanent changes.

#### Resource requirements to reach next Gateway and source of funding

The current approved budget is £63,000, with an actual spend to date of £17,652 (as of 19 August 2013). This spend has been used to develop the initial options appraisal and determine the extent of the trial crossing.

A total of £116,000 is requested to progress the project to the next Gateway, which equates to an additional £70,652 on top of the current approved budget. This will allow for management of the detailed design process and associated fees for the design elements; it will also allow for the removal of the temporary infrastructure (approximately £16,000).

#### Plans for consultation prior to the next Gateway report

The trial crossing will be monitored by Officers for a period of 12 months. The impact on all users, including pedestrians, cyclists and vehicles, will be assessed to determine how people respond to the changes and to understand the benefits and drawbacks of a signalised crossing in comparison to the existing zebra crossing.

#### Tolerances

It is recommended that the following tolerances be agreed in order to reach the next Gateway:

- Cost – a tolerance of 10% is recommended in order to cover potential increases in works costs relating to utility services (see Section 14);
- Time – a tolerance of three months is recommended in order to allow for additional time to assess the results of the temporary crossing should this be required.

## **Main Report**

### **Overview**

<b>1. Evidence of Need</b>	A key finding of the 2011 study was that, in addition to the zebra crossing, traffic flow on Ludgate Hill is affected by other factors such as servicing, bus operations, interaction with traffic from side roads and queuing traffic at the Ludgate Circus and New Change junctions. This study also found that pedestrian volumes on either side of the crossing are significant,
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	<p>with over 4,500 pedestrians per hour between 1200-1300. Pedestrians also made up the highest modal share (58%) during the midday peak period.</p> <p>The perceived delay to vehicles arising from the priority afforded to pedestrians under the current layout is a key consideration of this report. The previous studies have suggested that either a signalised crossing or a signalised junction would provide journey time benefits to vehicles, but that pedestrians would be disadvantaged by having to wait to cross. However, localised footway widening would mitigate this impact, and would tie-in with the emerging proposals for the wider Fleet Street to St Paul's corridor.</p> <p>The pedestrian flow on this corridor, the key route between the West End and St Paul's, will increase in importance and volume due to its prominence as the main pedestrian link between the City and the West End and its designation as a Principal Shopping Centre in the City's Local Plan. Therefore, developing options for an enhanced environment on this key section of the wider corridor will act as a catalyst for change.</p>
<p><b>2. Success Criteria</b></p>	<ul style="list-style-type: none"> <li>• Improved balance between all modes on Ludgate Hill, including pedestrians, cyclists and vehicles;</li> <li>• An enhanced environment in the vicinity of St Paul's Cathedral.</li> </ul>
<p><b>3. Project Scope and Exclusions</b></p>	<p>The project will assess the option to introduce a signalised crossing facility immediately east of the junction with Ludgate Hill and Ave Maria Lane, in order to improve conditions for vehicular traffic.</p> <p>Any changes should be considered in the context of the wider Fleet Street to St Paul's Major Project, which seeks to enhance the environment and reconfigure the operation of the entire corridor.</p>
<p><b>4. Link to Strategic Aims</b></p>	<p><i>Aim 1: To support and promote 'The City' as the world leader in international finance and business services</i></p> <p>The project at Ludgate Hill will seek to smooth the traffic flow on Ludgate Hill and St. Paul's Churchyard whilst minimising any potential impacts on pedestrians.</p> <p><i>Aim 2: To provide modern, efficient and high quality local services and policing within the Square Mile for workers, residents and visitors with a view to delivering sustainable outcomes</i></p> <p>The City's working population is expected to grow by 89,000 from 2007 to 2026. The improvements will</p>

	provide more accessible routes between offices and public transport interchanges, destinations for workers at lunchtime and cultural and leisure facilities.
<b>5. Within which category does the project fit</b>	Fully reimbursable. Asset enhancement / improvement (capital).
<b>6. What is the priority of the project?</b>	Advisable.
<b>7. Governance arrangements</b>	Regular design team meetings and progress meetings with the Senior Responsible Officer.
<b>8. Resources Expended To Date</b>	Fees: £3,600 Staff costs: £14,052 <b>Total: £17,652</b>  The resources expended thus far have allowed for the initial assessment of options and exploring the feasibility of undertaking a trial of the signalised crossing.
<b>9. Results of stakeholder consultation to date</b>	Ward Members have been briefed on the proposals and are supportive of the investigation of options to improve the function of the crossing.
<b>10. Consequences if project not approved</b>	The existing zebra crossing will remain in place with no additional improvements made, and the perception of delays to vehicles will remain.

### Outline Options Appraisal

<b>11. Commentary on the options considered</b>	<p>A signalised crossing is expected to see journey time benefits realised for eastbound traffic. Although the journey time benefits may not be significant, the preferred option would reduce the perception that traffic is continuously held-up by pedestrians using the zebra crossing. Likewise, it would bring a disbenefit for pedestrians compared to the existing situation as they would lose the priority status afforded them by the zebra crossing; therefore the trial will include widening footways.</p> <p>Taking these factors into account, there is a strong case for footway widening and the relocation of kerbside activity in the vicinity of the crossing. In terms of the form of control (i.e., zebra crossing or signalised crossing), a signalised crossing would offer greater flexibility in terms of allocating capacity and priority</p>
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	<p>between different modes, primarily through adjustments to the ‘green man’ phase for pedestrians and ‘green signal’ phase for vehicles, to achieve an optimum balance.</p> <p>On the basis that previous proposals to introduce permanent change have not been approved, it is now proposed to undertake a trial of a signalised crossing to fully assess the impacts. This proposal is set out below.</p> <p><b><u>Option 1</u></b></p> <p>The introduction of a signalised crossing, replacing the existing zebra crossing in roughly the same location. This will require the widening of the footways in the vicinity of the crossing in order to provide sufficient space for pedestrians to wait to cross.</p> <p>It is proposed to undertake a trial of this proposal should it be approved, using high-quality temporary materials in keeping with the setting of the crossing relative to the Cathedral. These materials are to be determined, but are likely to consist of granite kerbs, asphalt footways in the widened areas and ‘full’ traffic signals (instead of poles cased in barrels). A trial arrangement would allow officers to assess the impact of the changes and determine if it is the optimum solution for all users.</p> <p>This proposal will involve the introduction of traffic signals to this section of Ludgate Hill; this may have an impact on the setting of the Cathedral as it is ‘framed’ in view from further west on Ludgate Hill. This proposal will also involve alterations to the carriageway and so consideration will need to be given to the impact on the processional route, particularly the Lord Mayor’s Show. This will be factored into the detailed design stage.</p>
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**Information Common to All Options**

<b>12. Key benefits</b>	<ul style="list-style-type: none"> <li>• An enhanced environment for pedestrians resulting from improved condition of footways;</li> <li>• Improved accessibility in the vicinity of the crossing.</li> </ul>
<b>13. Estimated programme and key dates</b>	<ul style="list-style-type: none"> <li>• Design of the trial crossing: October 2013 – February 2014</li> <li>• Trial crossing installed: March – April 2014</li> <li>• Trial crossing monitoring &amp; assessment: May 2014 – April 2015</li> </ul>

	<ul style="list-style-type: none"> <li>• Detailed option appraisal (Gateway 4/5): June 2015</li> <li>• Implementation: October 2015 – March 2016</li> </ul>
<b>14. Potential risk implications</b>	<p>Overall project – low risk</p> <p>Risk breakdown:</p> <p><i>1. Design does not achieve positive results</i></p> <p>It is proposed to undertake a trial of the preferred option in order to assess the performance of the new layout.</p> <p><i>2. Presence of utilities requires diversion of services</i></p> <p>A survey of utilities in the area will be undertaken should permanent works be progressed. Utilities are not expected to present a major risk for the trial option, although there may be some minor adjustments required.</p> <p><i>3. Objections are received relating to the visual impact of the additional signal equipment on the view and setting of St Paul's Cathedral</i></p> <p>Comments will continue to be monitored during the trial period and will be taken into account when considering any permanent changes.</p>
<b>15. Anticipated stakeholders and consultees</b>	<ul style="list-style-type: none"> <li>• City Surveyors</li> <li>• Chamberlains</li> <li>• Comptroller &amp; City Solicitor</li> <li>• Access Team</li> <li>• Local residents and occupiers</li> <li>• St Paul's Cathedral</li> <li>• Transport for London</li> </ul>
<b>16. Legal implications</b>	<p>It is proposed to install the trial crossing under S.23 of the Road Traffic Regulation Act 1984. Therefore the implementation of the trial crossing is subject to successful consultation with the Chief Officer of Police and a statutory notice to the public.</p> <p>Members should note that the City of London has duty, under S.122 of the Road Traffic Regulation Act 1984 to secure the expeditious, convenient and safe movement of traffic, including pedestrian traffic (as far as practicable).</p> <p>The City of London also has a duty, under S.16 of the Traffic Management Act 2004 to secure the efficient use of the road network avoiding congestion and disruption.</p>
<b>17. HR implications</b>	Not applicable.
<b>18. Anticipated source(s) of</b>	The project is fully funded through the Section 106

<b>funding – capital and revenue</b>	agreement relating to the development at 30 Old Bailey.
<b>19. Affordability</b>	Both options are affordable within the existing Section 106 allocation.
<b>20. Next steps</b>	<p>Should the proposal be approved the details of the materials and layout of the crossing will be finalised, and a methodology for monitoring the impacts will be determined. The trial crossing will then be installed in early 2014 for a period of 12 months.</p> <p>The Traffic Management team will be closely involved during the detailed design stage to ensure that the proposals are compatible with the requirements of the processional route, particularly the Lord Mayor’s Show.</p>

**Outline Options Appraisal Matrix**

See attached.

**Appendices**

<b>Appendix 1</b>	Summary of a fully signalised junction
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**Contact**

<b>Report Author</b>	Tom Noble
<b>Email Address</b>	tom.noble@cityoflondon.gov.uk
<b>Telephone Number</b>	020 7332 1057



	<b>Option 1</b>
<b>21. Brief description</b>	This option involves the introduction of a signalised crossing, replacing the existing zebra crossing in roughly the same location. This option will require the narrowing of the carriageway in the vicinity of the crossing in order to provide sufficient pedestrian space, particularly on the southern footway.
<b>22. Scope and Exclusions (where different to section 3)</b>	N/A
<b>23. Key benefits (where different to section 12)</b>	<ul style="list-style-type: none"> <li>• Smoother traffic flow on Ludgate Hill by removing the zebra crossing, giving clear periods of priority to both pedestrians and vehicle;</li> <li>• A better balance between all modes, including pedestrians, cyclists and vehicles.</li> </ul>
<b>24. Estimated Programme (where different to section 13)</b>	N/A
<b>25. Potential risk implications (where different to section 14)</b>	N/A
<b>26. Anticipated stakeholders and consultees (where different to section 15)</b>	N/A
<b>27. Legal implications (where different to section 16)</b>	N/A
<b>28. HR implications (where different to</b>	N/A

	<b>Option 1</b>
section 17)	

<b>Financial Implications</b>	<b>Option 2</b>
<b>29. Total Estimated cost (£)</b>	<p><b>£116,000*</b></p> <p>Staff costs - £34,000</p> <p>Fees - £19,000</p> <p>Works - £63,000</p> <p>This figure includes provision for the implementation and monitoring of the temporary arrangement. It should be noted that this figure is based on the temporary installation. The cost of permanent implementation will be set out at the next Gateway if required.</p>
<b>30. Anticipated source of project funding (where different to section 18)</b>	N/A
<b>31. Estimated capital value/return (£)</b>	N/A
<b>32. Fund/budget to be credited with capital return</b>	N/A
<b>33. Estimated ongoing revenue implications (£)</b>	<p>The cost of monitoring the trial crossing is estimated to be approximately £16,000; this is included in the costs shown above.</p> <p>There would be some nominal additional costs associated with maintaining the traffic signal infrastructure. This will be fully assessed at the next Gateway.</p>
<b>34. Anticipated source of ongoing revenue</b>	N/A

<b>funding (where different to section 18)</b>	
<b>35. Fund/budget to be credited with income/savings</b>	N/A
<b>36. Affordability (where different to section 19)</b>	N/A
<b>37. <u>Recommendation</u></b>	<b><i>This option <u>is recommended</u> for progression to the next Gateway.</i></b>
<b>38. Reasons</b>	This option will allow for the changes to be fully assessed during a 12 month monitoring period. The outcome of the monitoring will be reported at the next Gateway.

## **Appendix 1 – Summary of a fully signalised crossing**

In October 2011 Streets & Walkways Sub Committee approved the use of TfL funding to investigate the removal of the zebra crossing and the full signalisation of the Ludgate Hill / Ave Maria Lane junction (including signalised crossing facilities on each arm of the junction). This study sought to assess wider impacts such as: traffic movement on the entire Ludgate Circus to New Change corridor; the impact of on-street loading activity; and the impact of narrowing the carriageway.

Traffic modelling was undertaken and kerbside activity was assessed. The study found that a signalised junction has potential to significantly reduce eastbound traffic queuing and moderately reduce westbound queuing. The modelling also showed improved eastbound journey times on the entire corridor, although there was negligible difference westbound. However, the introduction of a signalised junction presents disadvantages in terms of pedestrian movement as they would face excessive wait times to cross, in contrast to the priority they currently have using the zebra crossing. This disadvantage is magnified under this option as it would include pedestrians crossing the Ave Maria Lane arm, who currently benefit from uncontrolled movement. To mitigate this, localised footway widening would have to be provided to ensure that there is sufficient space for pedestrians to wait.

This option would also not have a significant impact on vehicle journey times when compared to the single signalised crossing, and would require a longer signal cycle owing to the inclusion of an additional 'arm' to the junction. This option would also require additional measures such as footway widening and relocation of nearby bus stops and servicing activity (which may not prove practicable) in order to allow sufficient clearways on the approaches to the junction. It would also be necessary to convert Creed Lane to a left turn only exit on to Ludgate Hill owing to its proximity to the junction.

Taking all of these factors into consideration, it is concluded that a fully signalised junction is not feasible in the absence of a comprehensive review of the function of the entire corridor, the timescale for which is not compatible with the immediacy of the work to investigate options for the existing zebra crossing.