| Committee(s): | Date(s): | |
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| Streets & Walkways Sub Committee<br><br>Projects Sub Committee | 19 November 2012<br><br>21 November 2012 | |

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| **Subject:**<br>Outline Options Appraisal – Leadenhall Street Pedestrian Crossing Improvements | **Public** |
| **Report of:**<br>Director of the Built Environment | **For Decision** |


## Summary

Dashboard

- Project Status: Green
- Timeline: Gateway 3
- Total Estimated Cost: £635,659 (recommended option)
- Spend to Date: £67,659
- Overall project risk: Green

Context

This is an important "Road Danger Reduction" project. Leadenhall Street is a local access road in the City's highway hierarchy but forms part of the Transport for London's Strategic Road Network (SRN) in the eastern part of the City of London. The proposal is being brought forward to address the poor accident records along Leadenhall Street. Although large numbers of pedestrians cross Leadenhall Street, pedestrian crossing facilities are extremely limited. It is considered that this is a major factor in the high proportion of accidents involving pedestrians. Further, the existing pedestrian crossing at the junction with St Mary Axe is not fit for purpose as it does not support existing pedestrian desire lines. Both of these issues are frequently cited as problems by pedestrians and local businesses alike. The situation is anticipated to deteriorate further if no action is taken given the projected growth in the daytime population which will take place when all of the proposed Eastern City Cluster developments are built and occupied.

Brief description of project

The aim of the project is to improve pedestrian crossing facilities at key crossing points at Leadenhall Street, particularly at the junctions of:

(a) Leadenhall Street / St Mary Axe / Lime Street

(b) Leadenhall Street / Fenchurch Buildings / Cunard Place

(c) Immediately outside the new development at 122 Leadenhall Street

(d) West of Billiter Street

Options

Options presented for appraisal involve central pedestrian refuges and signalised crossing facilities.

| **Description** | **Option 1 Relocate Existing Signal Crossing** | **Option 2 Introduce Small Signalised Junction** | **Option 3 Introduce Large Signalised Junction** |
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| Total Estimated Cost | £448,659 | £620,659 | £635,659 |
| Tolerance +/- | 20 percent | 20 percent | 20 percent |
| Likely Funding Strategy | Fully externally funded by the 122 Leadenhall Street s106 Transport Improvement contribution of £778,000 | | |

Full details of all options are available in section 11. The tolerances above reflect the uncertainty at the current concept design stage. These tolerances are expected to reduce as the scheme is developed at detail design stage (subject to approval) when more accurate cost estimates can be obtained.

**Recommendations**

Option(s) recommended to develop to next Gateway
It is recommended that Option 3 (a large signalised junction) be progressed further for reasons described in Section 22.

Next Steps
The next step involves developing and refining the approved option to meet the aims of the project in consultation with key stakeholders, ensuring consistency with relevant Area Strategies and with consideration towards available funding. Subject to agreement at Gateway 3, it is envisaged the project can progress to a combined Gateways 4 and 5.

Resource requirements to reach next Gateway and source of funding

Design fees = £20,000

Safety audit = £2,500

Consultation = £5,000

City Transportation staff costs = £35,000

Highway staff costs = £26,400

Total to progress to Gateways 4 and 5 = £88,900

These will be fully funded by the s106 Transport Improvement contributions from the 122 Leadenhall Street development.

Plans for consultation prior to the next Gateway report
The following consultation will be undertaken if approval is given to proceed:
(a) Consultation with Transport for London, in their capacity as traffic signal authority and in accordance with their network management duties; and
(b) Consultation with ward members and the local community (e.g. businesses, residents, places of worship).

Tolerances
It is recommended the project be allowed to proceed to Gateways 4 and 5 within +/- 20 percent of the resources required to reach these Gateways (£88,900 as detailed above).

## Main Report

### Overview

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| **1. Context and Evidence of Need** | **Context**<br>Leadenhall Street is a local access road in the City's highway hierarchy but forms part of the Transport for London Strategic Road Network (SRN) in the eastern part of the City of London. There are currently several major developments, at various stages, in the vicinity including 122 Leadenhall Street (Leadenhall Building).<br>**Evidence of Need**<br>The accident analysis of Leadenhall Street shows that 23 personal injury accidents occurred over a 36 month period ending December 2011. Fourteen of these involved pedestrians (60.9%). This is notably higher than the average pedestrian accident ratio for the City of London (25.9%). The Leadenhall Street / St Mary Axe / Lime Street junction is the sixth most dangerous junction on the City's highway network. This situation is anticipated to deteriorate further if no action is taken given the projected growth in the Eastern City Cluster area.<br>Leadenhall Street / St Mary Axe / Lime Street Junction<br>The existing pedestrian crossing facility at this junction could be significantly improved to make it safer and more convenient to use. It does not currently support pedestrian desire lines resulting in pedestrians often ignoring the current crossing and putting themselves at increased risk of accident.<br>The deficiencies of this pedestrian crossing was the second most cited concern in a public consultation exercise conducted in September 2010, and is a regularly raised issue by local businesses. The project |

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| | is being progressed in advance of the finalisation of the Fenchurch and Monument Area Enhancement Strategy (currently at consultation) as 122 Leadenhall Street is now being constructed and will be occupied upon completion.<br><br>Approximately 6,000 pedestrians cross in both directions at the intersection of Leadenhall Street / St Mary Axe / Lime Street during each of the three-hour morning and evening peaks. These figures are expected to increase upon completion and occupation of numerous developments in the area.<br><br><u>Other locations along Leadenhall Street</u><br><br>There are currently no pedestrian crossing facilities at the junctions of:<br><br>(a) Leadenhall Street / Fenchurch Buildings / Cunard Place junction; and<br><br>(b) Leadenhall Street / Billiter Street<br><br>Both locations are important pedestrian links between the Eastern City Cluster area and public transport hubs such as Fenchurch Street Station and Liverpool Street Station.<br><br>Responses to the 2010 consultation suggested that pedestrians experienced difficulties crossing in these areas. These difficulties were exacerbated by on-street servicing activity, which prevents pedestrians from being able to see on-coming traffic easily.<br><br>There are no pedestrian crossing facilities directly outside the Leadenhall Building, currently being constructed at 122 Leadenhall Street. These premises are understood to have been leased to an insurance firm with close working relationships with Lloyds of London. This will likely see an increase in the north-south pedestrian movement across Leadenhall Street between the two buildings. |
| **2. Success Criteria** | Implement a design that:<br><br>a) Reduces danger for all road users including cyclists;<br><br>b) Serves the existing and immediate future pedestrian crossing desire lines;<br><br>c) Meets the existing and projected increase in pedestrian volume;<br><br>d) Increases the footway space at the junction of Leadenhall Street / St Mary Axe / Lime Street; |

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| | e) Is able to be fully delivered within the available s106 Agreement funds of £778,000 plus interest ie at no cost to the City; and<br>(f) Is consistent with the objectives and priorities outlined in the Eastern City Cluster Area Strategy and the draft Fenchurch and Monument Area Enhancement Strategy. |
| **3. Project Scope and Exclusions** | <u>Project Scope</u><br>The main aim of the project is to improve pedestrian crossing facilities at key crossing points at Leadenhall Street particularly at the junctions of:<br>(a) Leadenhall Street / St Mary Axe / Lime Street;<br>(b) Leadenhall Street / Fenchurch Buildings / Cunard Place;<br>(c) Immediately outside the new development at 122 Leadenhall Street; and<br>(d) West of Billiter Street<br>This includes a review of loading restrictions along Leadenhall Street with the aim of protecting sight lines for pedestrians.<br>All costed options allow for retention and minor extension of existing mastic footway only. In accordance with the corporate "Review of Materials" adopted in December 2010, consideration in relation to the use of York stone, where appropriate, will be given at the detail design stage.<br>Provision of cycling facilities will be considered as part of the project, and such provisions will be designed in accordance with the London Cycling Design Standards (LCDS).<br><u>Exclusions</u><br>The accident analysis has also identified a higher than average number of accidents at the junction of Leadenhall Street / St Mary Axe / Lime Street occurring during the hours of darkness. It is considered likely that poor lighting may be a contributory factor. However, lighting at this junction will be reviewed as part the "Strategic Review of Street Lighting in the City of London" subject to approval by relevant Committees in mid 2013. This Review aims to upgrade street lighting in the City and has identified Leadenhall Street as a high priority due to the high energy consumption of the existing street lighting and the high accident rates at the above-mentioned junction. |

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| | This project will exclude any improvements at St Helen's Square (corner of Leadenhall Street and St Mary Axe) which is the subject of a separate improvement scheme. It further excludes the investigation into contra-flow cycle lane facilities at St Mary Axe being progressed under the Cycle Revolution Programme. |
| **4. Link to Strategic Aims** | This project seeks to deliver against the following Strategic Aim:<br>To support and promote 'The City' as the world leader in international finance and business services.<br>This will be delivered by ensuring the highway (built environment) is best able to facilitate the safe and efficient passage of pedestrians to / from public transport hubs and their place of work.<br>In addition, the project seeks to deliver the following objectives in the City of London Local Implementation Plan 2011:<br>• LIP2011.3 Reduce road traffic dangers<br>• LIP2011.5 Increase permeability, connectivity and accessibility in the City<br>• LIP2011.8 Plan a City with an operational Crossrail, significantly increased total public transport capacity and significantly increased numbers of pedestrians & cyclists. |
| **5. Within which category does the project fit** | The project fits into the following categories:<br>2) Statutory<br>4) Fully reimbursable<br>7a) Asset enhancement / improvement (capital)<br>The City of London, in its capacity as Highway Authority, has a duty to ensure its road network is safe and efficient as set out in the Road Traffic Regulation Act 1984 and the Traffic Management Act 2004 respectively. As highlighted in Section 1, Leadenhall Street has a notably higher than average pedestrian accident ratio. In addition, the Leadenhall Street / St Mary Axe / Lime Street junction is the sixth most dangerous junction on the City's highway network. |
| **6. What is the priority of the project?** | Essential for reasons outlined in Sections 1 and 5 above. |

<table>
<tr><td>7. Governance arrangements</td><td>Regular meetings with Senior Responsible Officer (Assistant Director, City Transportation).</td></tr>
<tr><td>8. Resources Expended To Date</td><td>A total of £778,000 (including interest to end of March 2012) is available for this project as part of the s106 Transport Improvement contribution from the 122 Leadenhall Street development.<br><br>Committee approval of £68,650 has been received to date for the following:<br><br>
<table>
<tr><th>Item</th><th>Approval</th><th>Actual Expenditure to Date</th></tr>
<tr><td>Preparation for Leadenhall Street / St Mary Axe Junction Improvements including City Transportation staff cost, overheads, extensive public consultation including on-street surveys, pedestrian and traffic flow surveys, freight surveys and consultant fees.</td><td>£68,650</td><td>£67,659</td></tr>
<tr><td>Total</td><td>£68,650</td><td>£67,659</td></tr>
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</td></tr>
<tr><td>9. Results of stakeholder consultation to date</td><td>The two major issues highlighted in the public consultation exercise in September 2010 were (a) pedestrian sight lines being obscured by servicing vehicles, and (b) the deficiencies of the existing crossing at the junction of Leadenhall Street / St Mary Axe / Lime Street.<br><br><u>Obstructed pedestrian sight lines</u><br><br>Currently, loading restrictions allow service vehicles to stop along a large section of Leadenhall Street during peak hours, often obscuring the sight lines of pedestrians, particularly at Fenchurch Buildings.<br><br><u>Deficiencies of the existing crossing at the Leadenhall Street / St Mary Axe junction</u><br><br>A significant number of respondents felt the existing pedestrian crossing just east of the junction with St Mary Axe is in the wrong place, and should be moved further west towards Lime Street.</td></tr>
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| | Other complaints about this same junction include the short length of time the lights allow pedestrians to cross such a wide road, and that the facility is not responsive enough to people who want to cross (ie there is a long wait before the "green man" phase).<br><br><u>Other issues</u><br><br>Another common complaint is the lack of crossing facilities along other parts of Leadenhall Street. |
| **10. Consequences if project not approved** | Leadenhall Street already suffers from a poor accident record with a higher than expected number involving pedestrians. There is currently a lack of suitable crossings along Leadenhall Street. If the project is not approved, the accident rates are likely to get worse with the working population projected to increase significantly as a result of major office developments in the Eastern City Cluster.<br><br>This projected increase in pedestrian usage requires provision of appropriate crossing facilities particularly on key routes connecting public transport hubs and the Eastern City Cluster area. The importance of this project is further heightened with 122 Leadenhall Street (Leadenhall Building) having recently been leased to an insurance firm with close working relationships with Lloyds of London, which will lead to an increase in the north-south pedestrian movements across Leadenhall Street between the two offices. |

## Outline Options Appraisal

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| **11. Commentary on the options considered** | Three options consisting of different configurations of a signal-controlled crossing are presented for option appraisal.<br><br>A "do nothing" option was rejected due to the disproportionately high number of pedestrian accidents along Leadenhall Street (as discussed in Section 1), and the City's statutory obligation as Highway Authority to address this issue (as outlined in Section 5).<br><br>A central refuge is not considered appropriate for the junction of Leadenhall Street / St Mary Axe / Lime Street due to the high volume of pedestrians crossing at this location and the number of turning movements at the intersection. Consideration was given to a zebra crossing option at the two key intersections of St Mary Axe / Lime Street and Fenchurch Buildings / Cunard Place. However, these were not deemed appropriate |

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| | due to the high volume and steady flow of pedestrians at morning, lunchtime and evening peaks which would result in vehicular traffic in both directions of Leadenhall Street being held up for considerable periods of time. These options were therefore discounted from option appraisal.<br><br>Concept design drawings for the options outlined below are attached overleaf.<br><br>**Option 1 Relocate Existing Signal Crossing**<br><br><u>Leadenhall Street / St Mary Axe / Lime Street</u><br><br>• Relocate existing signalised crossing to the east of St Mary Axe to the west side (i.e. in between Lime Street and St Mary Axe).<br><br>• Widen footways at the junction.<br><br><u>Other locations along Leadenhall Street</u><br><br>• Introduce central pedestrian refuge between Fenchurch Buildings and Cunard Place.<br><br>• Introduce central pedestrian refuge west of Billiter Street.<br><br>• Introduce central pedestrian refuge immediately outside 122 Leadenhall Street.<br><br>• Restrict loading activities at these locations to preserve sight lines for pedestrians (to be undertaken in coordination with the on-going City-wide review of on-street loading restrictions.<br><br>**Option 2 Introduce Small Signalised Junction**<br><br><u>Leadenhall Street / St Mary Axe / Lime Street</u><br><br>• Retain existing signalised crossing to the east of St Mary Axe, and introduce new signalised crossing to the west of St Mary Axe (signal timings coordinated with the former).<br><br>• Raise junction from west of Lime Street to east of St Mary Axe.<br><br>• Widen footways at the junction as per Option 1.<br><br><u>Other locations along Leadenhall Street</u><br><br>• Proposal for other locations as per Option 1.<br><br>**Option 3 Introduce Large Signalised Junction**<br><br><u>Leadenhall Street / St Mary Axe / Lime Street</u><br><br>• Retain existing signalised crossing at the east of St Mary Axe, and introduce new signalised crossing to the west of Lime Street (signal timings coordinated |

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| | with the former).<br>• Raise junction from west of Lime Street to east of St Mary Axe, widen footways at the junction as per Option 2.<br><u>Other locations along Leadenhall Street</u><br>• Proposal for other locations as per Option 1. |

**<u>Information Common to All Options</u>**

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| **12. Key benefits** | A safer crossing environment for pedestrians by improving crossing facilities along the length of Leadenhall Street particularly at key crossing points with St Mary Axe / Lime Street and Fenchurch Buildings / Cunard Place. In addition, improvements will support pedestrian desire lines and cater for the projected increase in pedestrian numbers. Provisions for cycling will be maintained or improved where possible. |
| **13. Estimated programme and key dates** | Subject to a positive outcome at Gateway 3, it is envisaged that the project can progress efficiently by combining Gateways 4 and 5.<br>**Gateway 4/5 report:**<br>Depending on the outcome of traffic modelling and the necessary network assurance approval by Transport for London, a combined Gateway 4/5 report will be submitted to the Streets & Walkways Sub Committee and the Projects Sub Committee in early / mid 2013.<br>**Implementation:**<br>Construction can commence in the 2013/14 financial year subject to detailed programming and availability of external project partners (Transport for London).<br>The proposed implementation in the 2013/14 financial year captures a financial synergy with Transport for London who is planning to renew the existing signal equipment at Leadenhall Street / St Mary Axe at their expense. This coordination further reduces the amount of traffic and highway disruptions to the public. |
| **14. Potential risk implications** | A key risk is that high accident rates will continue to occur along Leadenhall Street if no actions are taken. Further, there is possible risk to corporate reputation, if approval is not granted or delays occur during the project process. This especially so when the s106 contribution from 122 Leadenhall Street (Leadenhall Building) is available to specifically address any traffic / |

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| | highway impact resulting from the development.<br><br>The progress of this scheme is dependent on securing necessary approvals from Transport for London who are the traffic signal authority, and have network assurance duties under the Traffic Management Act 2004 since Leadenhall Street forms part of the Strategic Road Network. |
| **15. Anticipated stakeholders and consultees** | • Ward members<br>• Access Team<br>• Transport for London (Traffic Directorate, Network Assurance, Buses)<br>• City of London Police<br>• Local community including businesses, residents, places of worship and educational facilities, cyclists and pedestrians |
| **16. Legal implications** | There are no legal implications. |
| **17. HR implications** | There are no HR implications. |
| **18. Anticipated source(s) of funding – capital and revenue** | The proposed pedestrian crossing improvements along Leadenhall Street (bar the lighting improvements) will be fully funded by the s106 Transport Improvement contribution from the 122 Leadenhall Street development which has been received in full by the City. (See also Section 19 below.)<br><br>The proposed implementation in the 2013/14 financial year captures a financial synergy with Transport for London which is planning to renew the existing traffic signal equipment at Leadenhall Street / St Mary Axe at their expense.<br><br>There are minor revenue implications relating to Options 2 and 3 by the introduction of an extra set of traffic signals at the intersection of Leadenhall Street / St Mary Axe / Lime Street. The City makes a contribution to Transport for London (traffic signal authority) for the operation and maintenance of traffic signals within the Square Mile. However, this marginal increase can be absorbed by the existing local risk budget. |
| **19. Affordability** | There is sufficient external funding to progress any of the three options outlined in this report. The |

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| | recommended Option 3 is estimated to cost £635,659 +/- 20 percent, which is within the available balance of the s106 Transport Improvement contribution of £778,000. |
| **20. Next steps** | The next step involves developing and refining the approved option to meet the aims of the project in consultation with key stakeholders, ensuring consistency with relevant Area Strategies and with consideration towards available funding. Subject to agreement at Gateway 3, it is envisaged the project can progress to a combined Gateway 4/5. |

**Outline Options Appraisal Matrix**

The only variations between the three options are as follows:

| **Financial Implications** | ***Option 1 Relocate Existing Signal Crossing*** | ***Option 2 Introduce Small Signal Junction*** | ***Option 3 Introduce Large Signal Junction*** |
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| **21. Total Estimated cost (£)** | Total (excluding tolerances) = £448,659<br>Resources expended to date (see section 8) = £67,659<br>Design fees = £20,000 (including Transport for London)<br>Safety audit = £5,000<br>Consultation = £5,000<br>Staff cost<br>City Transportation (Gateways 3, 4, 5, 6 and 7) = £70,000<br>Highways (detail design, site supervision) = £42,000<br>Implementation = £239,000<br>NB: All options allow for retention and minor extension of existing mastic footway only. | Total (excluding tolerances) = £620,659<br>Staff cost<br>Highways (detail design, site supervision) = £64,000<br>Implementation = £389,000<br>All other cost as per Option 1. | Total (excluding tolerances) = £635,659<br>Staff cost<br>Highways (detail design, site supervision) = £65,000<br>Implementation = £403,000<br>All other cost as per Option 1. |

| **Recommendation** | ***Not Recommended*** | ***Not Recommended*** | ***Recommended*** |
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| **22. Reasons** | An improvement to the current situation by providing a safer crossing environment for most (but not all) pedestrian desire lines with limited level of future-proofing to accommodate projected growth in the area. There are no net improvements for cyclists. | A significant improvement over the current situation by providing a safer and wider pedestrian crossing area that caters to more desire lines but only a medium level of future-proofing to accommodate projected growth in the area. Cyclists to benefit from introduction of advanced stop line facilities at signalised junction. | A significant improvement over the current situation by providing a safer and wider pedestrian crossing area that best caters to all desire lines with the most comprehensive level of future-proofing to accommodate projected growth in the area. Cyclists to benefit from introduction of advanced stop line facilities at signalised junction. |

## Contact


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