

<b>Committees:</b>		<b>Dates:</b>	
Streets and Walkways Sub-Committee Projects Sub Committee		30/11/2015 01/12/2015	
<b>Subject:</b> Bank Junction Improvements Project: 'All Change at Bank'		<b>Gateway 3 Outline Options Appraisal</b>	<b>Public</b>
<b>Report of:</b> Director of the Built Environment			<b>For Decision</b>
<b><u>Summary</u></b>			
<b>Dashboard:</b>			
<ul style="list-style-type: none"> <li>• Project Status: Green</li> <li>• Timeline: Gateway 3</li> <li>• Total approved funding to date: £532,000</li> <li>• Estimated Construction Cost at Gateway 2: £ 4-6 million</li> <li>• Estimated Cost at Gateway 3 depending on the option developed: £4-18M</li> <li>• Spend and Commitments to Date: Spend approx. £ 434,000</li> <li>• Overall Project Risk: Green</li> </ul>			
<b>Key summary points:</b>			
<ul style="list-style-type: none"> <li>• Bank is an area of congestion that has a poor road safety record, particularly for pedestrians and cyclists.</li> <li>• Work has been undertaken to assess the movement patterns, servicing and delivery activity and pick up and drop off activity in and around the Bank junction area of interest.</li> <li>• Five options have been assessed with the use of a local traffic model (model parameters developed with TfL) to reduce the number of vehicles in the junction to allow for reprioritisation of space to more vulnerable road users.</li> <li>• It is recommended that four of the five options should proceed forward to design work and possible public consultation. This includes the option for the complete removal of motor traffic from the six arms of the junction.</li> <li>• The main project programme has been reviewed to see if it could be shortened. It is considered that no significant reduction can be achieved therefore there is also a proposal to deliver an interim scheme four years ahead of the main scheme.</li> <li>• The interim proposal will make Bank a safer place for all road users. During the working day people on foot, pedal cycle or bus will be able to cross the junction, all other vehicles will be able to drive along the approaches for access, but not drive through the junction.</li> <li>• The interim proposal traffic modelling suggests that the concept is viable, but proceeding will be dependent on satisfying TfL that the impact on the road network is acceptable both locally and on the wider network.</li> </ul>			
1. Bank Junction is a six arm traffic dominated junction with a poor safety record. It is also located within a conservation area and surrounded by highly			

significant listed buildings (including Mansion House and the Bank of England). The aim of the project is to improve safety, improve air quality and enhance its sense of place, while also addressing the functioning and efficiency of the junction and surrounding road network. Gateway 2 was approved by Planning and Transportation and Project Sub Committee, 26 November and 5 December 2013 respectively, following the adoption of the Bank Area Enhancement Strategy in May 2013. The Strategy objectives included addressing conflicts and managing future growth, and improving the function of the junction for all modes of transport across the area.

2. A range of options have been considered to gauge impacts on the road network including, a full closure to motor vehicles; the removal of four or two arms; to a 50% reduction in capacity on all six arms (which in this instance is the best way to model the impact of a potential 'shared space' solution). This captures an increasing recognition that a significant change at Bank Junction is essential to cope with continuing growth. Work to date confirms that significant change at Bank is possible and that all traffic implications should be contained within the City. Options require careful and detailed consideration, and at this stage officers believe that four of the five options considered should be taken forward, see paragraph 42.
3. Officers have assessed the programme to assess if we can shorten it in order to tackle the growing concerns around safety, but it is not possible to significantly bring forward the entire programme. Officers have developed a concept for an interim scheme that could be implemented in late 2016 which is to allow pedal cycle and buses only through the junction during the working day. The interim scheme will deliver a significant safety benefit and help improve pedestrian crossing and crowding issues in and approaching the junction. Detailed work needs to be undertaken to ensure the wider area is not adversely impacted as a whole, however early indications are that the impact is manageable and could deliver benefits for bus movements and other road users. Officers are seeking formal approval to progress this with Transport for London (TfL).
4. A total of approx. £434k has been spent developing the project to-date, see Table 1. During this time TfL provided an unexpected contribution of £250,909 during the 2014/15 financial year. The TfL funding was utilised in place of some of the S106 money, as shown in Table 2.

**Table 1 - spend to-date (26 /10/15)**

<b>16800287 - Bank Junction Improvements</b>			
<b>Description</b>	<b>Approved Budget (£)</b>	<b>Spend to Date (£)</b>	<b>Balance (£)</b>
Highways Staff Costs	8,000	-	8,000
P&T Staff Costs	260,000	196,255	63,745
Fees	254,000	237,587	16,413
Revenue	10,000	100	9,900
<b>TOTAL</b>	<b>532,000</b>	<b>433,943</b>	<b>98,057</b>

The balance of the approved budget is still required to progress to Gateway 4

**Table 2 - funding sources to Gateway 3**

Description	Original (£)	Actual (£)	Balance (£)
125 Old Broad Street - Section 106 - Transport	150,000	150,000	-
Mondial House (Watermark Place) - Section 106 - Transport	276,835	25,926	250,909
1 Lothbury - Section 106 - Transport	34,410	34,410	-
The Pinnacle - Section 106 - Transport	60,755	60,755	-
125 Old Broad Street - Section 106 - Transport (Revenue)	10,000	10,000	-
Transport for London grant - 2014/15	-	250,909	
<b>TOTAL</b>	<b>532,000</b>	<b>532,000</b>	<b>250,909</b>

5. This project started with an estimated cost range of £4-6 million which was based on the Bank Area Strategy indicative figure. It is fair to say that the work undertaken to date suggests that we can look to be more ambitious than the area strategy had indicated. If we are seeking a scheme which requires large scale change to infrastructure to accommodate different uses, this costing range is likely to be too conservative. For example if we were to change the surface material over the whole of the junction above the London Underground structure, rather than just part of it, physically changing materials with shallow depths requires different working methods during construction which is more time consuming and therefore more costly. There is also the undefined number of additional junctions which may need to be modified to assist the traffic flow around Bank. This may be as little as modifying signal timings or could be relatively major junction changes. At this time, with no design, officers are not able to determine this at this stage.
6. Experience of developing schemes such as Cheapside and Aldgate, suggests that if the option chosen to progress to implementation was the full closure and associated changes, the total project cost is likely to be in the region of £18m. The project cost will depend upon the overall area that needs material change, the total number of junctions that will require signal changes and other possible modifications, and the quality of materials chosen. The cost could vary substantially between the options. Officers request that Members note the potential for a revision to the overall budget range from £4-6 million to up to £18 million. This will be narrowed down at Gateway 4 when the final option to progress for full detail design will be identified.

**Background:**

**Overview of work undertaken to date:**

7. A copy of the movement report, which gives a full overview of what happens in and around the junction, can be found in the Members Reading Room. The following are some of the key highlights from the report.

### Vehicular flow:

#### 8. Key Points:

- Motor vehicle flow remains fairly consistent throughout the day (approx. 1600 vehicles an hour)
- Cycling accounts for 50% of all vehicle flow through the junction in the AM peak hour and 41% in the PM peak hour.

Figure 1: Vehicular flow between 6am and 8pm on an average weekday. (larger version in appendix 2)

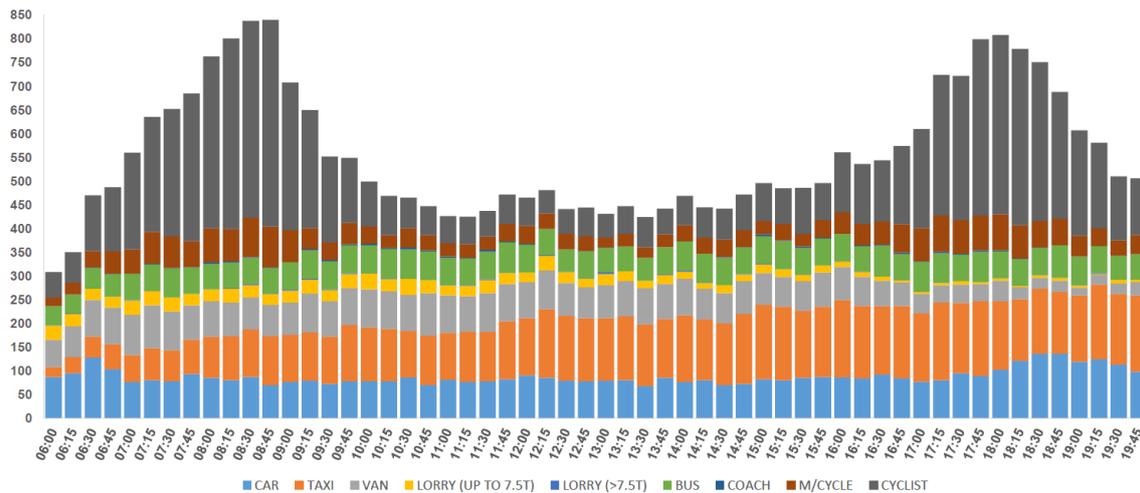
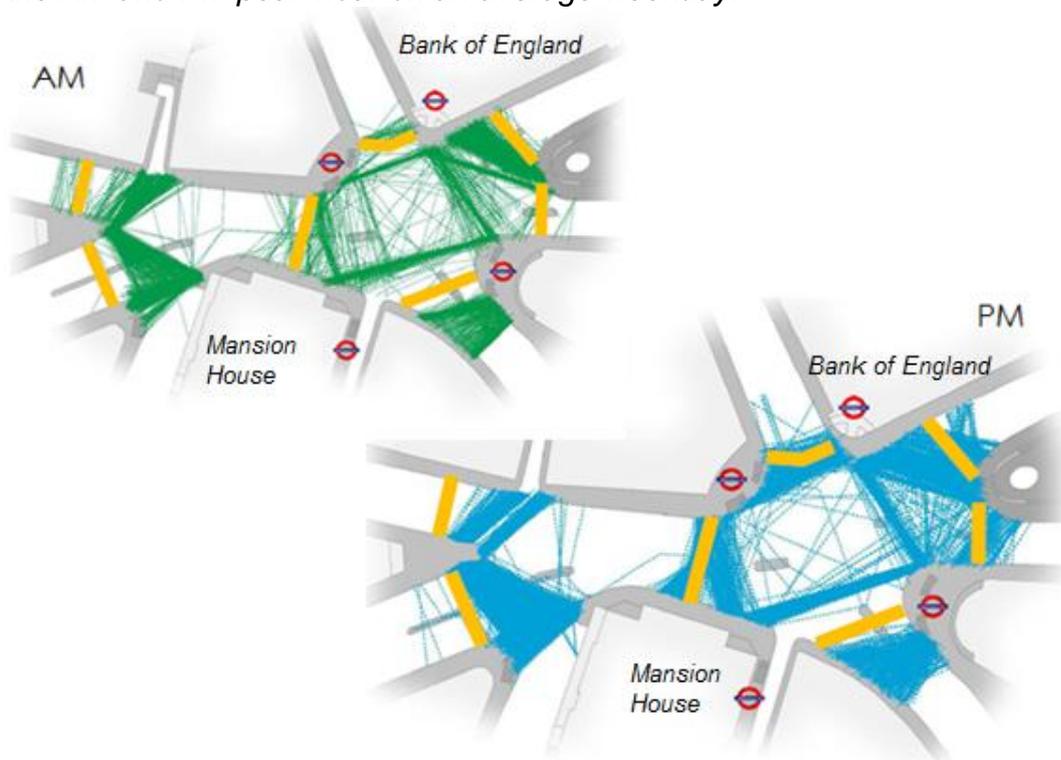


FIGURE 3.2.1 – WEEKDAY VEHICLE FLOW PROFILE

### Pedestrian Movements:

Figure 2: Pedestrian crossing movements outside of the formal crossing points in the AM and PM peak hour on an average weekday.



(formal crossing areas shown in yellow)

9. Key Points:

- There are around 18,000 pedestrian crossing movements made in the AM peak hour and 20,000 in the PM peak hour.
- Figure 2 shows observed 'informal' crossing movements, approximately 5,000 movement's take place outside of formal identified crossing zones within the junction in the AM peak, and 6,000 in the PM peak.

10. With so many pedestrian crossing movements taking place, it often leads to conflict between users. This can result in collisions and casualties.

**Collisions:**

11. Key points:

- In the five year period ending November 2014, there were 105 collisions which resulted in 118 casualties. Of these, 16 were classified as serious and one person was a fatality.
- All serious and fatal casualties were from the most vulnerable road user category (i.e. pedestrians (9), cyclists (6) or a powered two wheeler rider (2)).
- The two top causation factors for collisions in this period were pedestrians stepping into the path of a vehicle (including cyclists) and vehicles making a turn. These two causes account for just under 40% of all collisions.
- Since this data was collated, there have been 10 collisions recorded with 10 casualties (provisional statistics) with zero serious and one fatality at the junction to the end of June 2015.

*Figure 3: Nov 2009- Nov 2014 Collision location and number (see appendix 3 for larger version)*



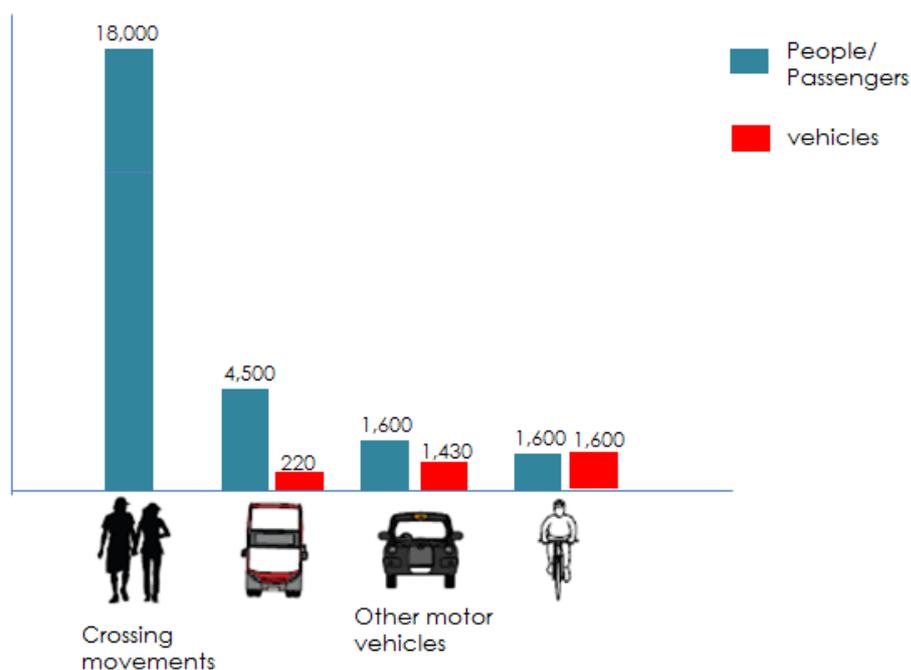
### People Movement:

12. Figure 4 shows the number of crossing movements made by people, by different modes, and then the context of the number of vehicles that cross the junction in comparison to the number of people.

### 13. Key Points

- The diagram shows that there are significantly more pedestrians that cross the junction than any other mode type. (Please note that a pedestrian may cross more than one arm of the junction and the above figure represents the number of crossings not pedestrians. Pedestrians that do not physically cross a street are not included in the above figure)
- In terms of the numbers of vehicles that cross the junction in the same time frame, it puts into perspective that the existing allocation of space to users is very disproportionate.
- Pedestrians make up approximately 63% of the total people movement through the junction in the combined am and pm peak hours. This includes all pedestrian movements not just the crossing movements.

Figure 4: People movement through the junction in the AM peak hour (0800-0900).



### Pick up and set down activity:

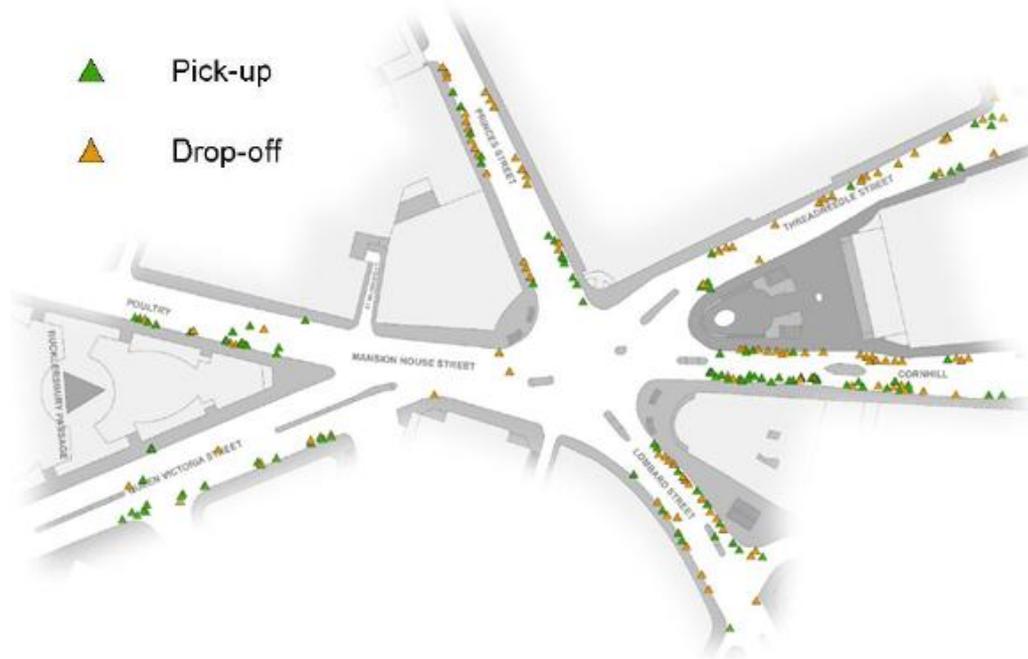
14. Figure 5, shows the location of pick up and drop activity from all vehicles – substantially taxis and private hire vehicles.

### 15. Key points:

- There were 228 pick-up and drop off occurrences observed over 12 hours on a weekday.
- It can be seen that the approaches to the junction are not heavily used for pick up and drop off when compared to the number of known taxis that passed through the junction in the same time period, approximately 5,900.

- The data shows that this particular area is not a desirable location to pick up and drop off during the day time. If all of the above activity was undertaken by taxis over the course of the 12 hour day it would account for 4% of all taxi activity through the junction. This number is likely to be less as there would have been private hire vehicles undertaking kerbside activity too.
- Further work would need to be undertaken to establish use in the evenings and overnight as there is a strong night-time economy in the area.

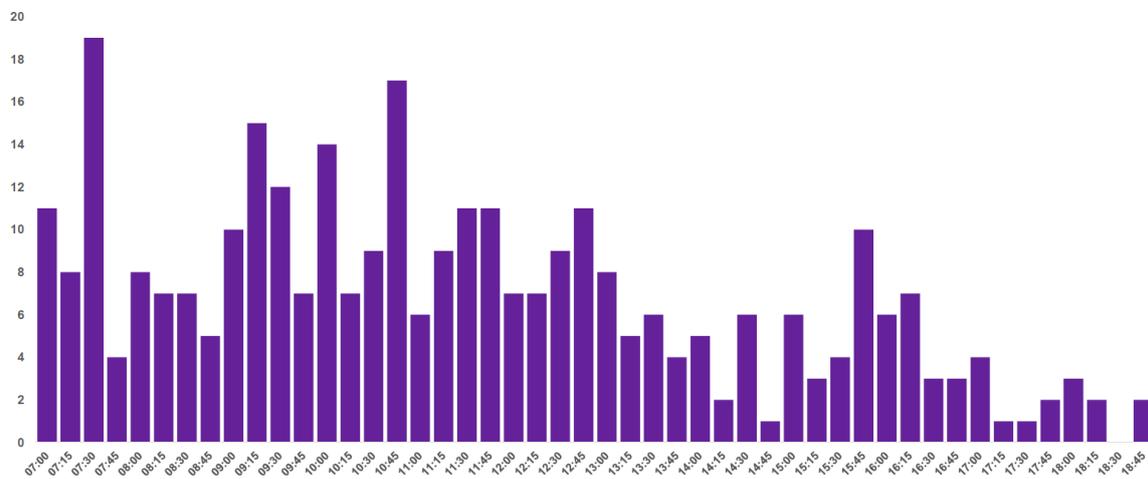
Figure 5: Pick up and drop off activity for one weekday between 7am and 7pm



**Servicing activity:**

16. In terms of servicing vehicles, the area observed was extended to include more of Lombard Street and Lothbury/Bartholomew Lane by the Bank of England. Figure 6 is a profile of the activity observed.

Figure 6: Delivery and servicing activity profile on a weekday 0700-1900



**17. Key Points:**

- Observation shows that 325 activities of servicing and delivery were noted

- in the survey area over 12 hours (7am to 7pm) on a weekday.
- Of this activity, 78% occurs between 7am and 1pm.

**Overview of Options:**

18. There have been five options assessed for their likely impacts on the local traffic network using traffic modelling simulation. The five options represent a sliding scale of possible change. These options all require the removal of motor vehicles to varying degrees on:

- Option 1: - all six arms (i.e. complete closure)
- Option 2: - King William Street and Princes Street (no north/south movement)
- Option 3: - Poultry, Queen Victoria Street, Threadneedle Street and Cornhill (no east/west movement).
- Option 4: - Poultry and Cornhill (one east/west corridor removed); and
- Option 5: - a 50% reduction in capacity on all six arms with a view to designing the junction as a shared space.

Options 1 to 4 all assume the closed approaches to the junction would be used by pedestrians and pedal cyclists only.

19. The objectives of the project are to:

- 1) Reduce casualties
- 2) Reduce pedestrian crowding levels
- 3) Improve air quality; and
- 4) Improve perception of place as a place to spend time in rather than pass through.

20. At this stage the degree to which the options meet the objectives cannot be specified exactly, therefore they have been assessed against the opportunity they present in being able to best achieve them. The traffic impacts, in terms of average journey times, are based on the modelled outcomes of the changes.

21. Table 4, shows an outline assessment, using a seven point scale, of how the five options perform against each other in terms of the opportunity to meet each objective and the impact or benefit to average journey times. The scoring is detailed in Table 3.

**Table 3: Scoring Key**

	<b>7 point Scoring scale for the objectives</b>	<b>Scoring for the journey time increases</b>
✓✓✓	Great opportunity or impact	Decrease of over 31%
✓✓	Some opportunity or impact	Decrease of between 16-30%
✓	A little opportunity or impact	Decrease of between 6-15%
0	neutral	Plus or minus 0-5%
✗	A little impact	Increase of between 6-15%

<b>xx</b>	Some impact	Increase of between 16-30%
<b>xxx</b>	Great impact	Increase of over 31%

22. The objectives are equally weighted; however moving forward Members may wish to decide priorities within the four key objectives for future use. For the purposes of this appraisal, traffic impact has been assessed on the level of journey time increase and is shown in Table 4.

**Table 4: Project options assessment**

Weighting	Project Objectives				Traffic Impact	
	25%	25%	25%	25%		
Objective	1 Casualties	2 Pedestrian crowding	3 Air quality	4 Place	General Traffic Average journey time	Bus Average Journey time
<b>Option 1:</b> (Full Closure)	✓✓✓	✓✓✓	✓✓✓	✓✓✓	<b>x</b>	<b>xx</b>
<b>Option 2 –</b> (No North South movement)	✓✓	✓✓	✓✓	✓	<b>0</b>	<b>x</b>
<b>Option 3</b> (No East West Movement)	✓✓✓	✓✓	✓✓✓	✓✓	<b>xxx</b>	<b>xxx</b>
					Fail in traffic terms	Fail in traffic terms
<b>Option 4</b> (Remove Poultry and Cornhill)	✓✓	✓	✓✓	✓	✓	✓
<b>Option 5</b> (Reduce Capacity by 50% on all arms.)	✓✓	✓	✓✓	✓	✓	<b>x</b>

23. Officers believe at this stage that the traffic impact for Option 3 is too much to mitigate for both general traffic and bus journey times and therefore would not pass through TfL's approval process. Officers recommend that on this basis we focus our efforts on looking at how we can further mitigate the impacts on bus and general traffic journey times through design work for the remaining

options. Some of the options show signs of making improvements to average journey times at this early stage of work which is very encouraging. It is also worth noting that post Crossrail, bus services are likely to be rationalised through the City and there is likely to be reduced bus movement through Bank. This will improve the results of the modelling.

24. Through the modelling work completed to date, it has become clear that Monument Junction is also close to capacity on a day to day basis. This poses a challenge for all of the options that have been assessed for Bank. Therefore diverting traffic through Monument junction away from Bank will put more pressure on an existing weak point in the network. To achieve substantial change at Bank there is therefore a dependency on improving Monument Junction. Monument junction is a TfL managed Junction and TfL have initiated feasibility work to identify how it can be improved. The City's initial traffic modelling suggests that changing King William Street gives greater flexibility to achieving change at Monument, which could then potentially offer a safer and more pedestrian and cycle friendly junction. This would be a win win situation for the City.
25. It is important to note that the traffic modelling work undertaken to date does not appear to preclude change at Bank and progressing schemes around the Cultural Hub, such as London Wall and the Newgate Street Gyratory investigations. More detailed work will determine this; however any conflict is unlikely to be major if it is not showing up at this early stage of the feasibility modelling.
26. At this early stage it is difficult to predict what enhancing Bank as a place will mean in terms of physical space, but the impact of the changes will significantly improve the amenity of the area and safety. As the project progresses the impacts of place making can be better understood and quantified. The aspiration is to create a high quality space that is fitting for this important setting surrounded by buildings of significance both locally and nationally.

#### **Overview of the Interim Safety scheme:**

##### **Why is this scheme being proposed?**

27. One of the key objectives for the project is to reduce casualties. The timing of achieving this has been refocused following the fatality at the junction in June 2015. Given the time frame for the completion of the whole scheme (which may not be until 2020) it was considered appropriate to explore interim measures to improve safety as soon as possible.
28. In order to make a significant safety improvement at the junction, there is no choice but to make a fairly radical difference to traffic movements within the junction. Small improvements, such as extending the cycle advance stop lines, will not make a significant contribution to reducing casualties, but Officers are still progressing this as a minor improvement.
29. Other options explored were changing traffic signal timings to give pedestrians more time to cross, but which would do little for cyclists safety. Similarly banning more turns in the junction would assist with cycle safety, but the bans

would also apply to the cyclists. Removing classes of vehicles from approaching the junction, has also been considered as an option to reduce the number of vehicles.

30. The conclusion to this review, using the work that had already been undertaken to inform the above longer term options for the overall project, was that the removal of classes of vehicles would make a significant difference to improving safety and hence the proposal below..

**What is proposed?**

31. It is proposed that (subject to the outcome of the statutory processes involved in making the necessary traffic orders) during the working day Bank becomes a place which people on foot, pedal cycle or bus can cross. All other vehicles will be able to drive along the approaches, for access purposes, but not drive through the junction. The research to date suggests that this type of scheme will improve bus journey times through Bank but equally not negatively impact on the average journey times for general traffic passing through the modelled area.
32. The removal of all motor vehicles from the junction, other than buses, is the best way forward to provide safety benefits for cyclists and pedestrians in the short term. Officers believe that this could be implemented towards the end of 2016. This is not to say that this scheme is not challenging, however this is true of any changes that are worth making in this area.
33. This proposal would remove approximately 85% of the general motor traffic movements through the junction in the peak six hours, significantly reducing conflict and providing a priority for buses in terms of reliability through the junction, which is currently variable. It also offers the option of improving pedestrian crossing times across the junction. The top causation factors for accidents in the area are pedestrians walking into/in front of vehicles and vehicles making turns. This scheme would reduce the probability of both of these occurring.
34. Officers believe that whilst difficult, this interim scheme can be made to work in the peak periods in terms of traffic movement around the City, and that the impact can be contained within the City boundary. There is still a dependency on Monument Junction being improved at the same time in order to provide enough capacity through that junction to cope with additional demand. Officers are working with TfL on this and will need to go through the appropriate TfL approval process as there would need to be changes on the Strategic Road Network.
35. Key to this scheme is not to make surrounding junctions more dangerous and simply moving the pressure somewhere else, and ensuring that traffic flows around the related road network. A full monitoring process would be put in place and will be detailed in the Gateway 5 report when seeking formal approval to proceed to implementation. This interim proposal would make a significant contribution to reducing casualties and a positive step forward in reducing nitrogen dioxide levels in the junction and therefore improving air quality.

36. There is a need for further detail to be established, particularly regarding the way in which servicing and delivery requirements, as well as pick up and drop off activity is undertaken. In addition the needs of those with mobility restrictions will need to be addressed. This will involve working with stakeholders within the area of impact to establish their needs and to develop a solution that balances these needs and the desire to improve safety. Work will also be undertaken to assess the implications on the resilience of the road network for future road closures for works, by using the traffic model to test scenarios of closures.
37. At this early stage of planning for the interim safety scheme, Officers would suggest proceeding on the basis of using an experimental road traffic order to give the needed flexibility to make changes following implementation. This will mean that the public consultation on the interim scheme will be after the scheme has gone in and based on the experience of the scheme in place. A decision would need to be made within 18 months of implementation as to whether or not the scheme should be made permanent until the final project has been approved for implementation.
38. There is also an opportunity to encourage the trial of an area-wide servicing plan, which could encourage businesses to work with each other to consolidate orders to reduce the number of deliveries that need to be made. This would link with the emerging City of London Freight Strategy and the Air Quality Strategy.
39. Supporting this interim scheme provides a strong commitment from the City Corporation to making significant change in this area and that we are determined to address and improve road danger.
40. When assessed, on a consistent basis with the main options (see Table 5), it can be seen that this interim scheme is predicted to provide the opportunity to make a good start in creating a safer and less polluted area. The feasibility modelling has also indicated that there should be positive benefits for both general traffic and bus movements (based on average journey times of all vehicles passing through the modelled zone).

**Table 5: Interim scheme assessment**

Weighting	Project Objectives				Traffic Impact	
	25%	25%	25%	25%		
Objective	1	2	3	4	General Traffic Average journey time	Bus Average Journey time
Interim scheme	✓✓	✓	✓✓	0	✓✓	✓

41. Detailed estimates still need to be undertaken and decisions on how this scheme would be enforced need to be made, which could have implications on costs. Officers believe this scheme is likely to cost in the region of £0.5m. Funding options are being assessed at this present time; however TfL have advised that they will meet the necessary modelling costs of this scheme and we are in discussions with them regarding the funding of the other elements.

**Proposed way forward;  
Long term project**

42. All of the options other than option 3 (no east west movement), which has significant traffic implications and would not be acceptable to TfL nor the City, should be progressed to Gateway 4. Option 1 has the second largest traffic implications for bus journey time, but Officers feel that there is scope to make this better, particularly if in the future there may be less bus services through Bank.

43. At this stage there are many issues which have not been investigated as Officers have been establishing the scale of possibility. As we progress to Gateway 4, consideration of the way the design may impact on the historic context of the area as well as the needs for movement by those with disabilities, and the impact of material changes on sustainability and drainage, will all be considered through the design group. Specific consideration will be given to how cyclists and pedestrians can interact with each other safely and how this can be approached and enforced.

44. The National Planning Policy Framework (NPPF) and City of London Local Plan place a statutory duty on local authorities' to seek opportunities to enhance or better reveal the significance of such designated heritage assets and their settings. This duty will be a consideration in the design of any works at Bank.

**Interim Scheme**

45. To undertake the necessary work to develop the bus and cycle only access scheme to Bank Junction with the view to, if viable, implementation taking place in late 2016 in order to focus on delivering casualty savings in the junction.

**Procurement Approach**

46. As agreed with City Procurement, for the project as a whole, consultancy contracts for continuing design will be let through the TfL Professional Services Framework agreement. For the Interim scheme both the design and construction elements will be handled through the existing highway contract with JB Riney (see appendix 1). The timing of any works will be carefully co-ordinated with other works affecting the road network to minimise disruption to traffic flows.

**Table with Financial implications**

47. Table 6 shows the estimated expenditure needed to reach Gateway 4 for the overall project, taking forward four of the above options through initial design. This does not include the interim scheme proposals costs which can be found in Table 7.

**Table 6: Estimated budget to reach Gateway 4**

<b>16800287 - Bank Junction Improvements</b>				
<b>Description</b>	<b>Approved Budget (£)</b>	<b>Additional Resources required to reach Gateway 4 (£)</b>	<b>Revised Budget to next Gateway (£)</b>	<b>Immediate Budget allocation (£)</b>
Highways Staff Costs	8,000	14,000	22,000	5,000
P&T Staff Costs	260,000	168,000	428,000	50,000
Fees	254,000	*415,000	669,000	90,909
Surveys	-	50,000	50,000	
Revenue	10,000	-	10,000	5,000
<b>TOTAL Bank Junction Improvements</b>	<b>532,000</b>	<b>647,000</b>	<b>1,179,000</b>	<b>150,909</b>

\*includes a provision of £75k for structural engineer advice - this might not be needed in its entirety

48. A funding application to TfL was submitted in early September 2015 for major schemes funding for £250K in 2016/17 and £300k 2017/18 to progress Gateway 4 and the start of Gateway 5. Whether or not we have been successful, at the time of writing, has not been announced.
49. Officers are also proposing that the remaining £20,000 from the underspend of the Cheapside stage 4 works be allocated to the Bank Junction Project for use to develop the proposals to Gateway 4.
50. Given that we do not yet have funding confirmation from TfL of our allocation, Officers propose that in order to keep momentum of the project that we use the previously allocated but unspent s106 monies (£250,909) relating to Mondial House ( see table 2 earlier in this report).Of these available s106 funds it is proposed £150,909 be used to cover costs in relation to the long term project to help move this towards Gateway 4 until the remaining funding is finalised in the Mayor's transport settlement in December. Officers will then submit an issues report in the New Year with confirmation of funding sources and related funding strategy. The remaining S106's to be utilised are detailed in Table 8 in the Options Appraisal Matrix in section 22.
51. Separately, there is also the need to fund the Interim Safety Scheme. It is therefore proposed that the remaining £120,000 from the Mondial House S106 be used in the meantime to keep the momentum of the Interim scheme, as described in Table 7. At the time of writing, Officers are in discussion with TfL regarding further potential funding of this interim scheme.

**Table 7: Estimated resource needed to design and build the Interim safety scheme:**

	Estimated Cost (£)	Immediate Budget allocation
P&T Staff Costs	300,000	45,000
Highways Staff Costs	50,000	10,000
Fees	100,000	65,000
Works	50,000	-
<b>TOTAL</b>	<b>500,000</b>	<b>120,000</b>

52. The above estimated cost is indicative for the interim scheme based on the experience of implementing the 20MPH scheme.

53. Officers will submit an issues report once a firm offer of funding and estimates have been established in the New Year. The S106 to be utilised can be found in Table 9 in the Options Appraisal Matrix (section 22).

### **Recommendations**

1. Agree the progression of Options 1 (full closure), 2 (no north south), 4 (one east west route removed) and 5 (50% capacity reduction on each arm) to be carried forward into detailed options appraisal, Gateway 4.
2. Note the increase of the potential top end expenditure for the total project to £18m
3. Approve the inclusion of the remaining £20,000 S106 from the Cheapside stage 4 underspend into the Bank Junction Project.
4. Agree the inclusion of £150,909 into the Capital programme for continuation of the overall project to Gateway 4.
5. Approve the development of the interim safety scheme as part of the programme for the Bank Junction Improvements Project. This element will be reported back to both committees for approval at the authority to start works stage as a separate Gateway 5 report, subject to confirmation of funding.
6. Approve the Inclusion of £120,000 into the Capital Programme for the Interim Safety scheme.
7. Delegated authority to be given to the Director of the Built Environment and Head of Finance to adjust the budget between the fees, staff costs and surveys/works (as indicated above for both the long term and short term projects) once more robust estimates have been established, providing it remains within the approved budgets.

### **Options Appraisal Matrix**

See attached.

### **Appendices**

<b>Appendix 1</b>	PT4 FORM(PROCUREMENT) for interim scheme
<b>Appendix 2</b>	Figure 1 – Vehicular flow over the day
<b>Appendix 3</b>	Figure 3 – 2009-2014 collision location and number

## **Contact**

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## Options Appraisal Matrix

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
<b>1. Brief description</b>	Complete closure of Bank Junction to all motor vehicles	Closure to Motor vehicles on the North/South axis (King William Street/Princes Street)	Closure to motor vehicles on the East/West axis (Poultry, Queen Victoria Street, Cornhill, Threadneedle Street)	Closure to Motor Vehicles on Cornhill and Poultry.	A 50% reduction in available capacity to motor vehicles on all six arms
<b>2. Scope and exclusions</b>	<p><b>Scope:</b></p> <ul style="list-style-type: none"> <li>• Removing motor vehicles from the junction to reduce conflict</li> <li>• Redistribution of road space from motor vehicles to pedestrians to improve crowding and safety</li> <li>• Redistribution of road space from motor vehicles to cyclists to improve safety and priority</li> <li>• Understanding the impact of the removal of motor traffic from these arms on other corridors/junctions</li> <li>• To investigate further banned movements, if appropriate, to reduce conflict further within the above 5 options.</li> <li>• Assumed that the Processional Route function remains.</li> <li>• At the same time ensure the safe and convenient movement of traffic and efficient use of the road network for all forms of transport in the wider area</li> </ul> <p><b>Excludes at this stage:</b></p> <ul style="list-style-type: none"> <li>• Decisions as to what this space would look like with or without motor vehicles</li> <li>• Discussion about what the Place function may be</li> <li>• Design decisions about how access to buildings is controlled for the Buildings impacted – this will be established as part of the work to reach Gateway 4.</li> <li>• Quantifiable explanation of the impacts on air quality of each option other than by the reduction in the number of motor vehicles</li> </ul>				

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
	<ul style="list-style-type: none"> <li>• Design decisions about flexibility of space to keep resilience of the network</li> </ul>				
<b>Project Planning</b>					
<b>3. Programme and key dates</b>	<p>Indicative programme:</p> <ul style="list-style-type: none"> <li>• Late 2016 - Public consultation</li> <li>• Mid 2017 – Gateway 4</li> <li>• Mid 2018 – Gateway 5</li> <li>• Late 2018 – Construction start</li> <li>• 2020 construction completes</li> </ul> <p>(this does not include the interim scheme proposal)</p>				
<b>4. Risk implications</b>	<p>Medium</p> <p>All Options have a dependency on Monument Junction being made to work more efficiently to cater for reassigned traffic. The City is working with TfL to develop this. Monument Junction (and approaches) are also poor for road safety, and therefore there is a strong case for change. The risk is that TfL cannot deliver the necessary changes in the right time frame. All Options are also subject to the necessary traffic orders being made, which is a separate statutory process involving consideration of consultation responses</p>				

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
	<ul style="list-style-type: none"> <li>• The ambition to achieve a full (as near to full as possible) closure to motor vehicles is met with a bad reaction from motor vehicle lobby groups.</li> <li>• Concern from businesses regarding ability to service their buildings brings negative reaction to significant change.</li> </ul>	<ul style="list-style-type: none"> <li>• Does not meet the desired Place aspect</li> </ul>	<ul style="list-style-type: none"> <li>• Unable to overcome the difficulties of rerouting general traffic making the traffic impact unmanageable.</li> </ul>	<ul style="list-style-type: none"> <li>• Doesn't meet the desired Place aspect.</li> <li>• Doesn't do enough to improve safety if hard turns remain in the design option.</li> </ul>	<ul style="list-style-type: none"> <li>• The vision of shared space is too controversial</li> <li>• Shared space success is reliant on behaviour change.</li> <li>• Pedestrian movement is too great to deliver effective shared space</li> </ul>
<b>5. Benefits and disbenefits</b>	<ul style="list-style-type: none"> <li>• Provides the greatest opportunity for achieving the objectives with greatest beneficial impact.</li> </ul>	<ul style="list-style-type: none"> <li>• Removes hard right and left turns by vehicles</li> </ul> <p>Over the 6 hours of the two peaks on a weekday:</p>	<ul style="list-style-type: none"> <li>• Would provide two large areas for creating a sense of place</li> </ul> <p>Over the 6 hours of the two peaks on a</p>	<ul style="list-style-type: none"> <li>• Opportunity for two smaller spaces perhaps offering different appeals.</li> </ul> <p>Over the 6 hours of</p>	<ul style="list-style-type: none"> <li>• All arms remain open, limiting reduction in turning movements –</li> </ul> <p>Over the 6 hours of</p>

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
	<p>Over the 6 hours of the two peaks on a weekday:</p> <ul style="list-style-type: none"> <li>around 53,000 pedestrian crossing movements on the main junction would be without vehicle interaction</li> <li>Around 7,200 motor vehicle turns would be removed</li> <li>A reduction of 9,900 motor vehicles contributing to air pollution in this location</li> </ul>	<ul style="list-style-type: none"> <li>Provides safer crossing with no motor vehicle interaction for 42,000 on/near the two closed arms.</li> <li>Could remove up to 4,000 motor vehicles and reduces hard turns by around 2,500.</li> <li>Does not provide a great deal of opportunity for creating a sense of Place as the space would be split by flowing traffic.</li> </ul>	<p>weekday:</p> <ul style="list-style-type: none"> <li>Completely remove turning movements from the junction making a significant improvement to safety- Around 7,200 motor vehicle turns would be removed.</li> <li>36,000 pedestrian crossing movements could be made without vehicle interaction.</li> <li>Traffic impacts for redistribution are likely to be difficult to mitigate.</li> </ul>	<p>the two peaks on a weekday:</p> <ul style="list-style-type: none"> <li>Very limited reduction in turning movements as alternative options are available. Would remove around 2,200 E/W turns from the junction as there would only be one street to travel along</li> <li>Would assist 13,800 pedestrian crossing movements</li> </ul>	<p>the two peaks on a weekday:</p> <ul style="list-style-type: none"> <li>assume a 50% reduction (3,600 vehicle turns</li> <li>Redistribution of dedicated space would be more limiting with traffic still running on all arms; however a shared space option design would allow redistribution of space but not dedicated space.</li> </ul>
<b>6. Stakeholders and consultees</b>	<ul style="list-style-type: none"> <li>No formal public consultation has been undertaken with these options as they are to assess the scale of change possible and there is no design to discuss.</li> <li>The Bank of England and the Royal Exchange retail lease holder are represented on the Project Board for this project.</li> </ul>				

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
	<ul style="list-style-type: none"> <li>TfL (Borough Projects and Programmes) and London Underground (Bank Station Upgrade) are represented on the Project Board</li> <li>City of London Police are Represented on the Project Board</li> <li>City Officers represent interests of Department of the Built Environment, Finance, and Mansion House on the Project Board.</li> </ul>				
<b>Resource Implications</b>					
<b>7. Total Estimated cost</b>	up to £18m				
<b>8. Funding strategy</b>	A mixture of S106, CIL, TfL major Scheme funding and City money to deliver the overall project. To reach Gateway 4, S106, Anticipated TfL major schemes funding.				
<b>9. Estimated capital value/return</b>	To be confirmed at the next gateway				
<b>10. Ongoing revenue implications</b>	To be confirmed at the next gateway				
<b>11. Investment appraisal</b>	To be confirmed at the next gateway				
<b>12. Affordability</b>	To be confirmed at the next gateway				

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
<b>13. Procurement strategy</b>	Consultancy contracts through the TfL Professional Services Framework Design and Construction contracts through the JB Riney Highway Contract				
<b>14. Legal implications</b>	In exercising its traffic management functions the City has statutory duties including to secure the expeditious convenient and safe movement of traffic and to secure the efficient use of the road network				
<b>15. Corporate property implications</b>	There should not be any negative Corporate property implications – an improved junction will enhance the local amenity and better address growth demands.				
<b>16. Traffic implications</b>	<ul style="list-style-type: none"> <li>Major benefits for approximately 6,500 individual cyclists. No conflict with motor vehicles on the approach to and within the existing junction.</li> <li>Bus journey times in the modelled area are likely to increase (modelled at an average of 27%). Services diverted</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 3,400 individual cyclists would use one of the closed arms over the 6 hour peak with almost 2,000 using both.</li> <li>Bus journey time in the modelled area is likely to increase (modelled at an average of approximately 10%).</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 4,500 individual cyclists would use one of the closed arms over the six hour peak period with 3,000 of them using two arms.</li> <li>Bus journey time in the modelled area is likely to increase (modelled at an average of approximately 45%).</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 5,800 individual cyclists would use one of the closed arms with approximately 850 using both over the six hour peak.</li> <li>Bus journey time in the modelled area is likely to reduce (modelled at an average of approximately 6% on average)</li> </ul>	<ul style="list-style-type: none"> <li>No Closed arms, so all movements are still assumed to be viable but with a 50% reduction.</li> <li>Bus journey time in the modelled area is likely to increase (modelled at an average of approximately 9%) despite not having to divert routes.</li> </ul>

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>	<b>Option 5</b>
	<p>from Bank would have difficulty moving through the Cannon Street/monument area without additional changes being made here contributing to the Increase in Journey time.</p> <ul style="list-style-type: none"> <li>Approximately 23,065 bus passengers would be diverted in the AM and PM peak periods (six hours) combined.</li> <li>General traffic Journey times are likely to increase by around 6% to the “do nothing” base.</li> <li>Overall displacement of</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 7130 bus passengers would be diverted from their original routeing in the AM PM peak six hours.</li> <li>Average general traffic journey times likely to remain fairly stable with, at this stage, a modelled reduction of 3%.</li> <li>Overall displacement of up to approximately 4,000 vehicles over the six hour peak.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 15,935 bus passengers would be diverted from their original routeing in the AM PM peak six hours.</li> <li>Average general journey time likely to increase by approximately 43% compared to the do nothing base.</li> <li>Overall displacement of up to 7,200 vehicles over the six hour peak.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately bus passengers would be diverted from their original routeing in the AM PM peak six hours.</li> <li>Average general traffic journey time modelled to improve by an average of 8%</li> <li>Overall displacement of up to 4,000 vehicles (but likely to divert through the junction)</li> </ul>	<p>This would not divert any passengers from the original routing.</p> <ul style="list-style-type: none"> <li>Average general traffic journey time is also modelled to increase by approximately 9%.</li> <li>Overall displacement of approximately 4,950 vehicles</li> </ul>

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
	9,900 vehicles over the six hour peak.				
<b>17. Sustainability and energy implications</b>	At this stage there are no sustainability and energy implications other than the ability to improve air quality by reducing the number of vehicles and therefore the emissions.				
<b>18. IS implications</b>	N/A				
<b>19. Equality Impact Assessment</b>	The concept of significant change does not adversely impact on any of the equality groups. A full equalities impact assessment will be undertaken as we progress designs to ensure that we identify any impact and try to design out such implications particularly for the shared space (option 5) design development.				
<b>20. <u>Recommendation</u></b>	Recommended	Recommended	Not recommended	Recommended	Recommended
<b>21. Next Gateway</b>	Gateway 4 – Detailed Options Appraisal				

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>	
<b>22. Resource requirements to reach next Gateway</b>	Table 6 - revised budget to reach Gateway 4					
	<b>Bank Junction Improvements</b>					
	<b>Description</b>			<b>Approved Budget (£)</b>	<b>Additional Resources required to reach next Gateway (£)</b>	<b>Revised Budget to next Gateway (£)</b>
	Highways Staff Costs			8,000	14,000	22,000
	P&T Staff Costs			260,000	168,000	428,000
	Fees *			254,000	415,000	669,000
	Surveys			-	50,000	50,000
	Revenue			10,000	-	10,000
	<b>TOTAL Bank Junction Improvements</b>			<b>532,000</b>	<b>647,000</b>	<b>1,179,000</b>
	*includes a provision of £75k for structural engineer advice - this might not be needed in its entirety					
Table 8 - Funding sources to Gateway 4 (long term proposals)						
<b>Description</b>				<b>Proposed (£)</b>		
Mondial House (Watermark Place) - Section 106 - Transport				130,909		
Cheapside Improvements underspend				20,000		
TfL Grant 2016/17 **				250,000		
TfL Grant 2017/18 **				300,000		
<b>TOTAL</b>				<b>700,909</b>		
The TfL grant for 2017/18 includes funds to get to Gateway 5						

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>								
	<p>Table 9 - Funding sources to Gateway 5 (Interim Scheme)</p> <table border="1"> <thead> <tr> <th><b>Description</b></th> <th><b>Proposed (£)</b></th> </tr> </thead> <tbody> <tr> <td>Mondial House (Watermark Place) - Section 106 - Transport</td> <td>120,000</td> </tr> <tr> <td>TfL Grant 2016/17 **</td> <td>380,000</td> </tr> <tr> <td style="text-align: right;"><b>TOTAL</b></td> <td><b>500,000</b></td> </tr> </tbody> </table> <p>** funding to be confirmed</p>					<b>Description</b>	<b>Proposed (£)</b>	Mondial House (Watermark Place) - Section 106 - Transport	120,000	TfL Grant 2016/17 **	380,000	<b>TOTAL</b>	<b>500,000</b>
<b>Description</b>	<b>Proposed (£)</b>												
Mondial House (Watermark Place) - Section 106 - Transport	120,000												
TfL Grant 2016/17 **	380,000												
<b>TOTAL</b>	<b>500,000</b>												