

Committees:	Dates:	
Streets and Walkways Sub-Committee Project Sub	14 February 2017 17 February 2017	
Subject: Newgate Street / Warwick Lane Safety Improvements	Gateway 4/5 Authority to Start Work Light	Public
Report of: Director of the Built Environment Report Author: Albert Cheung		For Decision
<p style="text-align: center;"><u>Summary</u></p> <p>Dashboard</p> <ul style="list-style-type: none"> • Project Status: Amber • Timeline: Gateway 4/5 • Total Estimated Costs: £180,000 (externally funded through TfL) • Spend to Date: £31,493 (externally funded through TfL) • Overall Risk Project: Amber <p>Overview</p> <p>The Newgate Street/Warwick Lane junction has consistently had a poor accident record. At the time of the last gateway (1/2) report, the data ranked this junction as the 9th most dangerous location on the City's highway network. However, in the latest data, it is now ranked the second behind Bank Junction due to a combination of improvements being achieved elsewhere (eg. Holborn Circus) and a worsening of safety at this junction.</p> <p>The proposal is therefore to make this junction safer and improve pedestrian amenity wherever possible, whilst minimising any impacts on vehicle journey times.</p> <p>A number of options have now been evaluated, However, the most beneficial and recommended option is to introduce Option 4: Traffic signals to control all movements including the introduction of pedestrian green/red man facilities throughout. This option is expected to save an average of 2.6 collisions per year. The other collisions are too random in nature such as inattention (e.g shunts or opening of vehicle doors) and therefore these proposals are unlikely to have much impact on reducing these collisions.</p> <p>Extensive traffic modelling and assessments (to TfL requirements) have been completed. This demonstrates that there is no significant impact on vehicle journey times. The data is currently being verified by TfL and their formal approval is expected towards the end this financial year.</p> <p>Work to implement the traffic signals will be relatively minor in nature but some road or lane closure will be necessary. This is mainly to enable new cables to be laid, resurfacing of the carriageway and the reconstruction of the traffic/pedestrian islands to be installed. This would be carried out over two weekends to minimise traffic disruption.</p>		

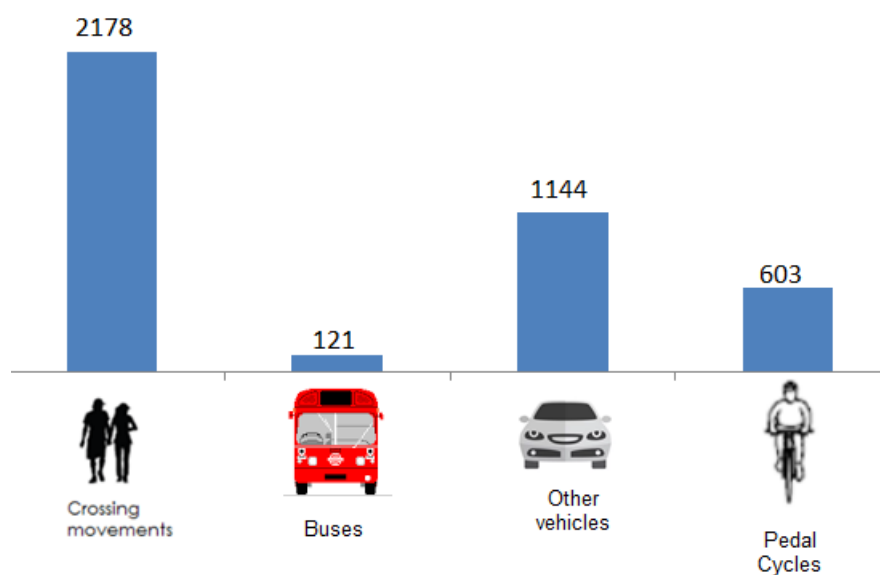
The Road Traffic Act 1988 places a duty on local highway authorities to prepare and implement a programme of measures designed to promote road safety. Under Section 122 of the Road Traffic Regulation Act 1984, the City must have regard to securing the expeditious, convenient and safe movement of traffic including pedestrians. The proposal in this report is therefore consistent with these duties.

Traffic Function and Flow

Newgate Street forms part of the Strategic Road Network as defined under the Traffic Management Act 2004. This places a much greater requirement for traffic movement (including pedestrians) and therefore requires formal approval from TfL.

- Newgate Street carries a fairly consistent traffic flow of around 900 vehicles an hour in each direction during weekdays in the AM (8am-9am), Inter (1pm-2pm) and PM (5pm-6pm) peak hours.
- In contrast, the volume of traffic using Warwick Lane varies between 56 and 112 vehicles northbound and, between 106 and 180 vehicles southbound during the peak hours.
- Cycling accounts for 31% of all vehicles through the junction during the peak hours.
- 1800 pedestrians cross Warwick Lane during the AM peak hour and over 600 cross Newgate Street during the Inter peak hour.

Figure1: Movement through the junction during the AM peak hour (8am-9am)



Collision analysis

Newgate Street / Warwick Lane is now the second most dangerous junction on the City's highway network. In the latest three years (to July 2016), there were 17 collisions which resulted in 19 casualties. Of these one was serious and 18 slight. Of all the collisions, all but one involved a vulnerable road user (motor cyclist, pedal cyclists and pedestrians). Table 1 below illustrates the collisions and casualties.

Table 1 – Casualty Breakdown

Collisions involving	Casualty	Severity
Pedestrian/cyclist	Pedestrian & cyclist	Slight & Slight
Cyclists/Taxi	Cyclist	Slight
Cyclists/Taxi	Cyclist	Slight
Motorcyclist/Taxi	Motorcyclist	Slight
Car/Bus	Car driver	Slight
Pedestrian/Car	Pedestrian	Slight
Pedestrian/Motorcyclist	Pedestrian & Motorcyclist	Serious & Slight
Cyclist/GDS	Cyclist	Slight
Motorcyclist/taxi	Cyclist	Slight
Cyclist/Car	Cyclist	Slight
Cyclists/Taxi	Cyclist	Slight
Cyclists/Taxi	Cyclist	Slight
Cyclists/Taxi	Cyclist	Slight
Cyclists/Motorcyclist	Cyclist	Slight
Pedestrian/Car	Pedestrian	Slight
Cyclists/Motorcyclist	Cyclist	Slight
Cyclists/Taxi	Cyclist	Slight

Table 2 provides a collision analysis at Newgate Street / Warwick Lane. Further analysis of the data is also shown below and in Appendix 1.

Table 2: Collision Analysis

Collision Category	Frequency in 3 Years (at Newgate Street / Warwick Lane)
All collisions*	17
Slight casualty	18
Serious casualty	1
Pedestrian collision	4
Pedal cycle collision	11
Motor cycle collision	5
Right turn collision	4
Left turn collision	2
Dark condition	5
Wet condition	1

* two collision resulted in two casualties

Progress to date

Following the approval of Gateway 2 in April 2016, officers have now completed the collision investigation and assessed the improvement options. It is considered that the most effective way to improve road safety is to introduce traffic signals on all approaches to the junction. This is because all conflicting movements will be controlled as well as providing full red/green man pedestrians crossing facilities. The Newgate Street / Warwick Lane junction is located on the Strategic Road Network (SRN) as defined in the Traffic Management Act (TMA) 2004. It is therefore necessary to obtain formal approval from Transport for London (TfL) to install proposals of this nature. This process requires comprehensive traffic assessments including traffic modelling to demonstrate that the proposals will not be detrimental to the overall network operation e.g congestion. This work also includes taking into

account current proposals such as those proposed for the Bank junction. The City Corporation has now completed its traffic modelling and considerations, and it is expected that TfL will complete their assessment by March 2017.

Consultation with local and key stakeholders, including Ward Members, on the preferred option has been completed. This indicated an overall support for Option 4.

Overview of options

Four options to improve road safety at the Newgate Street / Warwick Lane junction have been evaluated. The options range from low intervention measures such as prohibiting manoeuvres to more complex measures such as the introduction of traffic signals. The four options are summarised below and detailed in the Options Matrix. Layout plans are shown in Appendix 2.

Option 1 – Right turn ban into Warwick Lane.

The accident data shows that there have been 4 injury collisions involving vehicles turning right into Warwick Lane. This option therefore prohibits this manoeuvre and would involve minimal changes to the existing junction layout. Only an additional traffic sign on the eastbound approach of Newgate Street will be necessary. However, traffic wishing to access Warwick Lane is likely to use Old Bailey and Ludgate Hill. The volume of this traffic is fairly low and it is unlikely to cause any significant implications to these routes. This option provides no improvements for pedestrians but it is expected to save an average of 1 collision per year.

Option 2 – Mini roundabout with improved pedestrian crossing refuge.

This option involves some kerb realignments to create room to install a mini roundabout, new pedestrian crossing refuge and changes to the give-way priority. It also involves the removal of the cycle lanes to reduce the “filtering” conflict (a cyclist under/overtaking traffic whilst a vehicle is turning). This option is likely to reduce some collisions but equally may also encourage other manoeuvres which could increase risks such as “U” turning. Collision savings are therefore expected to be neutral.

Option 3 – Signalled controlled junction incorporating a single pedestrian crossing.

This option involves traffic signals on all approaches to the junction to control all conflicting movements. It includes a green/red man pedestrian crossing on the eastern arm of the junction and retains the existing cycle lanes. The option does not include a dedicated right turning lane into Warwick Lane and as such, traffic journey times are likely to increase by up to 12 seconds along Newgate Street. However, this option is likely to provide good collision saving of about 1.5 collisions per year.

Option 4 (recommended option) – Signalled controlled junction with pedestrian crossings on all arms

This option is similar to Option 3 but it incorporates green/red man pedestrian crossings on all arms of the junction and a dedicated right turn lane into Warwick Lane by removing the cycle lanes. Removal of the cycle lanes will encourage cyclists to take a dominant and safer road position. The proposal therefore only increases journey time by an average of 4 seconds along Newgate Street. However, very good collision saving of about 2.6 collisions per year is expected.

An assessment of the options has been carried out using a seven point scoring system (Table 3b) similar to that used for the Bank on Safety project. This assesses the objective opportunities against the potential traffic implications. The scoring is detailed in Table 3a.

Table 3a: Options Assessment

	Project Objectives		Traffic Impact	
	Casualties	Pedestrian amenity	General traffic journey times	Network resilience
Option 1 Right turn ban	✓✓	0	✓	0
Option 2 Mini roundabout	0	0	0	0
Option 3 Signalisation - one pedestrian crossing	✓✓	✓	x	0
Option 4 Signalisation – all pedestrian crossings	✓✓✓	✓✓✓	x	0

Table 3b: 7 Point Scoring Key

	Casualty, Pedestrian Amenity & Network Resilience Impact	Journey Time Impact
✓✓✓✓	Good opportunity / positive impact	Decrease over 31%
✓✓	Some opportunity / positive impact	Decrease of between 16-30%
✓	A little opportunity / positive impact	Decrease of between 6-15%
0	Neutral	Plus or minus 0-5%
x	A little negative impact	Increase of between 6-15%
x x	Some negative impact	Increase of between 16-30%
x x x	High negative impact	Increase over 30%

Preferred Option

From the above assessment, it can be seen that Option 4 provides the greatest potential for collision reduction and pedestrian amenity whilst minimising traffic impact. This option is therefore recommended.

The new traffic signals will be linked to the existing traffic signals at the Old Bailey and King Edward Street junctions to ensure the traffic signals are running efficiently. Some minor signal timings to these junctions will also be carried to improve the efficiency of the route.

Extensive traffic modelling has been undertaken and it is predicted that there will be a small average increase of 4 seconds in journey times between the traffic signals at Old Bailey and King Edward Street. Journey times beyond these junctions are not affected. However, most vehicles travelling along Newgate Street will arrive at a green signal and will not experience any extra delay. A small proportion of vehicles will inevitably be held at a red signal. The predicted maximum queue lengths will be up to 5 vehicles for eastbound traffic and up to 17 vehicles for the westbound traffic.

Although this may sound excessive, it is likely that most vehicles will clear the junction within each green traffic signal cycle, provided that the network is not congested because of other reasons. Table 4 below shows the journey time comparison between the current situation and Option 4.

Figure 2: Newgate Street measured journey time extents

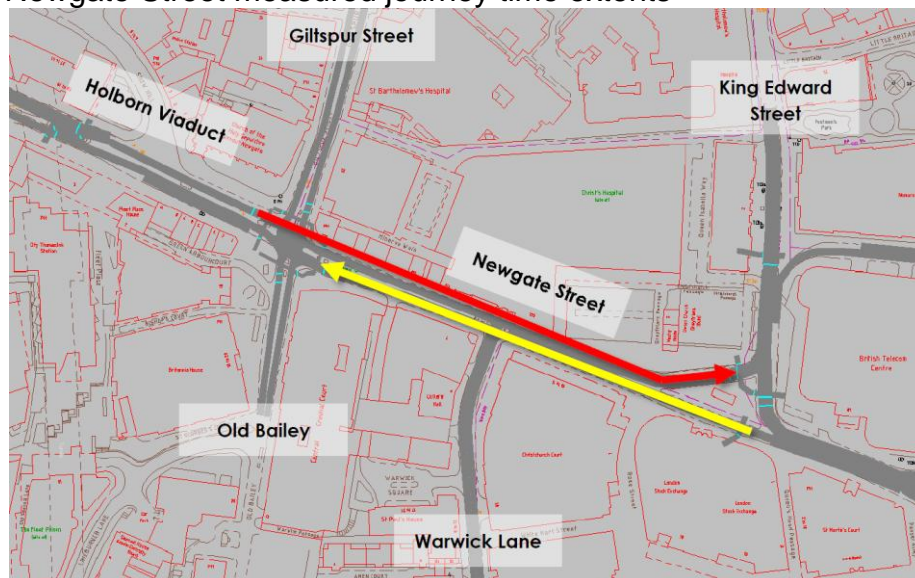


Table 4: Journey Time Comparison between Old Bailey and King Edward Street

Peak	Eastbound Journey Time / (sec)			Westbound Journey time/ (sec)		
	Existing	Proposed	Difference	Existing	Proposed	Difference
AM	47	52	+5	56	52	-4
Inter	45	51	+6	50	50	0
PM	48	56	+8	54	52	-2
Average	47	53	+6	53	51	-2

The journey time for traffic exiting Warwick Lane is anticipated to be neutral as the majority of traffic will be able to clear the junction on each signal cycle.

The proposal retains the existing right turn ban for vehicles exiting Warwick Lane. This is to ensure that Warwick Lane is not used as a “rat-run” from Ludgate Hill to King Edward Street and therefore will not increase traffic volumes. In addition this will maximises the road safety benefits of the scheme. However, acknowledging the need to keep traffic moving and following a full assessment of the Bank junction changes, the need to retain the right turn prohibition from Warwick Lane will be reviewed.

Proposed way forward

Officers have been working with TfL since June 2016 to design, cost and then to seek formal TMA approval for the recommended option (Option 4). The design and costing is now almost complete and formal TMA approval is expected by March 2017. This process has taken TfL much longer than usual because they have had a significant increase in traffic signals work. This has therefore delayed the implementation until 2017/18. However, as the project is funded from the Local Implementation Plan grant from TfL for this financial year, and to utilise this funding

opportunity, it is therefore proposed that the traffic signal activity is procured and paid for by 31 March 2017. This payment process has been approved by TfL and the Chamberlain.

Implementation of the scheme will then follow and will be co-ordinated with other highway works to minimise any disruption on the road network. This is anticipated to commence from June 2017.

The proposed funding to complete the remaining work will be met from the 2017/18 LIP grant. Further information on this can be found later on in this report.

Procurement approach

As TfL are the traffic authority for traffic signals in London, they will take ownership of any new installation, and will therefore supply and install the traffic signalling equipment. The remainder of the work will be implemented by JB Riney under the City's term contract for highways schemes and, if relevant, by other statutory utility companies.

Programme and key dates

- TfL scheme approval - March 2017
- Construction – from June 2017
- Monitoring on-going
- Outturn report – Early 2019

Outstanding Risks

The main outstanding risks are detailed below:

- TMA approval not granted by TfL. To mitigate against this risk, all work to demonstrate the implications of the proposal have been completed and submitted to TfL for their assessment. Their approval is expected by March 2017.
- Unforeseen underground conditions including utility plant and equipment. To mitigate against this risk, a radar survey has been commissioned and if any significant implications are found, appropriate action will be taken prior to commencement of the works and if need be an issues report brought back to Committee.

Financial implications

A summary of the financial implications for Option 4 is detailed in Table 5 below. Appendix 3 shows the current spend against the current approved budgets.

Table 5: Project Costs

Item	Proposed Cost / Funding Resource		
	LIP 16/17	LIP 17/18	Total
Staff costs	£25K	£10K	£35K
Fees	£35K	-	£35K
Works / materials	£60K	£50K	£110K
Project Totals	£120K	£60K	£180K

A total of £170,000 has been made available through the Road Danger Reduction Programme of the 2016/17 TfL LIP Grant. The total estimated cost required for this financial year is now £120,000. The remainder of the implementation cost of £60,000 can be met from the 2017/18 TfL LIP Grant allocation. A report detailing these grants together with any 2016/17 LIP underspend/reallocation will be submitted to the Planning & Transportation Committee on 28 February 2017 and Resource Allocation Sub-committee on 16 March 2017.

The City Corporation currently pays TfL an annual charge of £61,000 for the maintenance of traffic signals on the City's highway. The additional cost to maintain the new traffic signals at Newgate Street / Warwick Lane will be £3,350 per annum (at 2017/18 prices) which will be met from within the existing DBE local risk budgets.

Success Criteria

Significant safety improvement

- A total personal injury collision reduction 2.6 collisions per year (or 45%) is anticipated – success would be a minimum reduction of 1.4 collisions (or 25%).

Not unreasonably impact traffic

- Minimise impact on network resilience
- Impact on Newgate Street journey times is no worse than 2 seconds of the predicted delay.

Progress Reporting

Monthly updates will be provided via Project Vision and any projects changes will be sought by exception via an Issues Report to the Spending and Project Sub Committees.

Recommendations

It is recommended that Members:

- Approve Option 4 subject to the project obtaining TfL scheme approval;
- Approve the procurement approach and the proposed way forward
- Approve a budget allocation of £90,000 to be funded from LIP allocation for 2016/17
- Approve, subject to the Planning & Transportation Committee agreeing an additional £60,000 from the LIP grant for 2017/18 to be allocated to this project

- Authorise the start of works.

Appendices

- Appendix 1 – Collision Analysis
- Appendix 2 – Proposed Layout Options
- Appendix 3 – Financial Spend and Budget Tables

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Options Appraisal Matrix

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>
1. Brief description	<ul style="list-style-type: none"> Prohibits right turn manoeuvre into Warwick Lane. Only an additional traffic sign on the eastbound approach of Newgate Street will be necessary. However, traffic wishing to access Warwick Lane will likely be diverted onto Old Bailey and Ludgate Hill. 	<ul style="list-style-type: none"> Introduce a mini roundabout. This involves some kerb realignments to create room to install a mini roundabout, new pedestrian crossing refuge and changes to the give-way priority. It also involves the removal of the cycle lanes to reduce the “filtering” conflict. 	<ul style="list-style-type: none"> Traffic signals on all approaches to the junction to control all conflicting movements. It includes a green/red man pedestrian crossing on the eastern arm of the junction and retains the existing cycle lanes. The option does not include a dedicated right turning lane into Warwick Lane 	<ul style="list-style-type: none"> This option is similar to Option 3 but it incorporates green/red man pedestrian crossings on all arms of the junction and a dedicated right turn lane into Warwick Lane by removing the cycle lanes.
2. Scope and exclusions	<ul style="list-style-type: none"> Low intervention measure. Only traffic signs required. The turning prohibition will require a traffic management order Enforcement to ensure compliance may be necessary 	<ul style="list-style-type: none"> Footway kerb realignment to accommodate the mini roundabout Give-way priority modified Additional signs required New pedestrian refuge 	<ul style="list-style-type: none"> Newgate Street cycle lanes retained One formal pedestrian crossing on the eastern arm of the junction Right turning vehicles have an unopposed stage Includes an advanced cycle waiting reservoir Includes carriageway 	<ul style="list-style-type: none"> Dedicated lane and waiting area for right turning vehicles into Warwick Lane Pedestrian crossings on all arm of the junction Right turning vehicles have an unopposed stage Cycle lanes removed to make room for dedicated

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>
			resurfacing to achieve the required level of skid resistance for 50m	turning lane. <ul style="list-style-type: none"> Includes an advanced cycle waiting “reservoir” Includes carriageway resurfacing to achieve the required level of skid resistance for 50m
Project Planning				
3. Programme and key dates	<ul style="list-style-type: none"> Traffic management order requires further consultation. If no objections, implementation within one week and by May 2017. 	<ul style="list-style-type: none"> May require further public consultation but installation could commence as quickly as May 2017. Works would be completed within four weeks 	<ul style="list-style-type: none"> Installation works could commence from June 2017 and be completed within 8 weeks. 	
4. Risk implications	<ul style="list-style-type: none"> Likely to have objections to the proposal Right turn prohibition ignored by vehicles - requiring additional enforcement Route diversion increases journey times and distances 	<ul style="list-style-type: none"> Potential for injury collisions to increase May attract more traffic to use Warwick Lane due to improved exiting priority Does not cater for the needs of pedestrians 	<ul style="list-style-type: none"> Pedal cycles continue to filter past queuing traffic at speed. Therefore there may be still a high proportion of collisions involving cyclists Impacts on journey times may be greater than modelled. However, this 	<ul style="list-style-type: none"> Right turning vehicles can still turn between gaps in westbound traffic, risking a collision with an opposing vehicle Pedestrians are still likely to cross informally between queuing traffic and risk being struck

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>
	<p>for those wishing to access Warwick Lane.</p> <ul style="list-style-type: none"> Potential to increase congestion along Ludgate Hill. Does not cater for the needs of pedestrians. 		<p>is unlikely to be significant</p> <ul style="list-style-type: none"> Does not fully cater for the needs of pedestrians. 	
5. Benefits and disbenefits	<p><i>Benefits</i></p> <ul style="list-style-type: none"> Low cost Low intervention Will remove right turn collisions Retains cycle lanes Predicted reduction: 1.2 injury collisions per year <p><i>Disbenefits</i></p> <ul style="list-style-type: none"> Only addresses right turn collisions (4 of 17 collisions) May require additional enforcement No pedestrian safety benefits 	<p><i>Benefits</i></p> <ul style="list-style-type: none"> Relatively low cost Improves difficult to turn manoeuvres due to traffic volumes Potential to reduce traffic speeds <p><i>Disbenefits</i></p> <ul style="list-style-type: none"> Removal of cycle lanes Does not provide additional road safety benefits for pedestrians or pedal cyclists Unlikely to reduce personal injury 	<p><i>Benefits</i></p> <ul style="list-style-type: none"> Retains cycle lanes Improves one pedestrian crossing on eastern arm only Unopposed right turn stage into Warwick Lane provided Predicted reduction: 1.5 injury collisions per year <p><i>Disbenefits</i></p> <ul style="list-style-type: none"> More expensive than options 1 and 2 Collisions involving pedal cyclists filtering likely to continue Reduce priority for 	<p><i>Benefits</i></p> <ul style="list-style-type: none"> Improved pedestrian crossing facilities on all junction arms A safe waiting area for right turners into Warwick Lane Unopposed right turn stage into Warwick Lane provided Predicted reduction: 2.6 injury collisions per year <p><i>Disbenefits</i></p> <ul style="list-style-type: none"> More expensive than options 1 and 2 Removal of cycle lanes

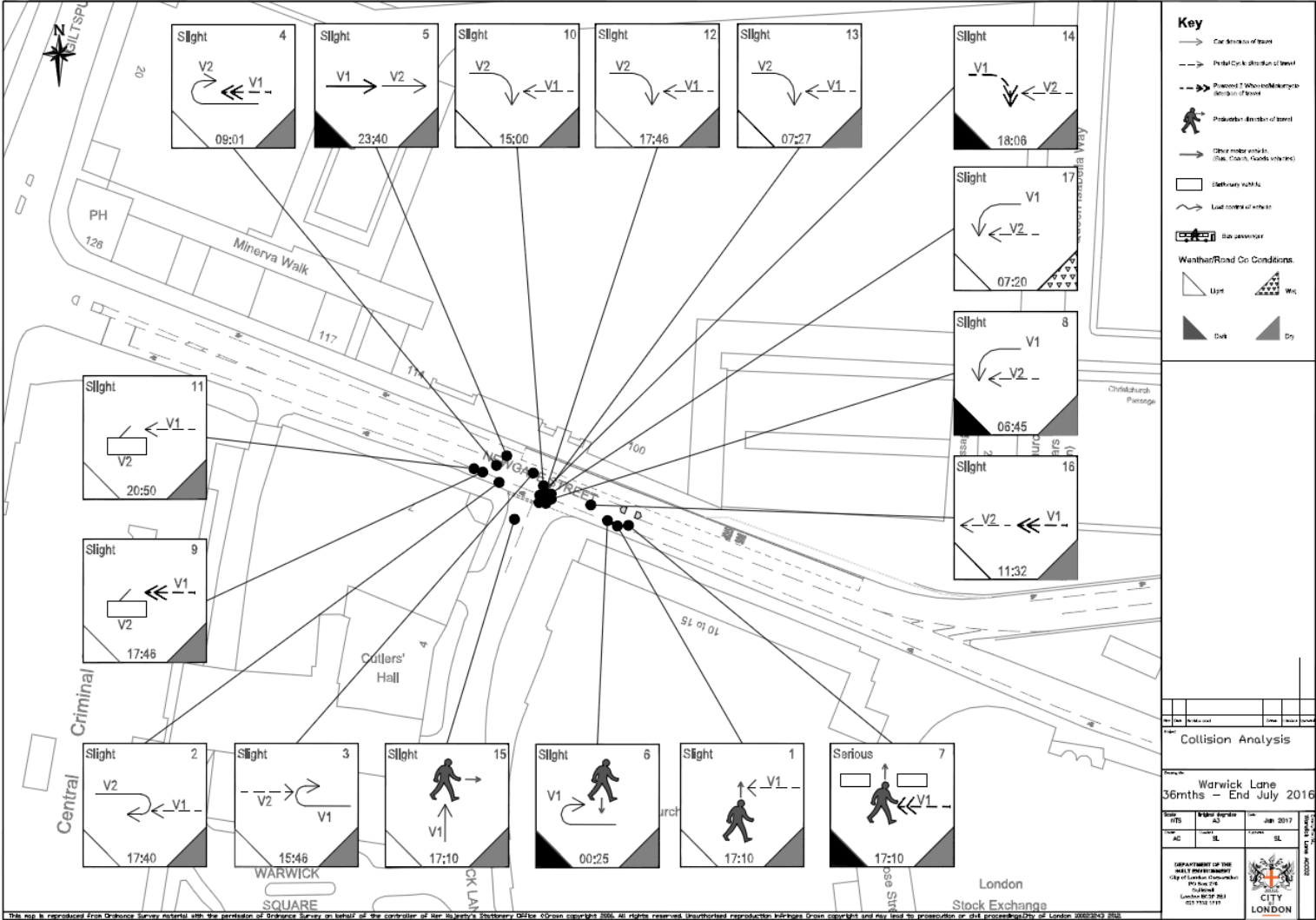
	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>
		collisions <ul style="list-style-type: none"> • Footway kerb realignment will reduce some footway space • Could increase congestion if more traffic is attracted to use Warwick Lane 	pedestrians crossing Warwick Lane <ul style="list-style-type: none"> • No safe waiting area for right turning into Warwick Lane • Vehicles waiting to turn right will block ahead traffic causing additional eastbound delays • More visual impact on the street environment 	<ul style="list-style-type: none"> • Vehicles can still choose to turn right into Warwick Lane against opposing eastbound traffic • More visual impact on the street environment
6. Stakeholders and consultees	<ul style="list-style-type: none"> • Transport for London • City of London Police • Street users • Local occupiers • User groups • Ward Members 			
<i>Resource Implications</i>				
7. Total Estimated cost (including costs incurred so far for evaluation)	£40,000	£80,000	£170,000	£180,000
8. Funding strategy	<ul style="list-style-type: none"> • TfL Local Implementation Plan (LIP) 2016/17 • TfL Local Implementation Plan (LIP) 2017/18 			

	Option 1	Option 2	Option 3	Option 4								
9. Estimated capital value/return	The Department for Transport reported average value for prevention of a road collision in 2015 is shown below.											
	<table><tr><th>Collision Type</th><th>Cost per Collision</th></tr><tr><td>Fatal</td><td>£2,000,000</td></tr><tr><td>Serious</td><td>£200,000</td></tr><tr><td>Slight</td><td>£24,000</td></tr></table>				Collision Type	Cost per Collision	Fatal	£2,000,000	Serious	£200,000	Slight	£24,000
	Collision Type	Cost per Collision										
	Fatal	£2,000,000										
	Serious	£200,000										
Slight	£24,000											
The estimated return (to the community) on collision reduction over three years is £73,000	The estimated return (to the community) on collision reduction over three years is £0	The estimated return (to the community) on collision reduction over three years is £152,000	The estimated return (to the community) on collision reduction over three years is £294,000									
10. Ongoing revenue implications	Minimal – maintenance work will be carried out through business as usual activities	Minimal – maintenance work will be carried out through business as usual activities	£2,610 per year for TfL to maintain additional traffic signals. Other maintenance work will be carried out through business as usual activities	£3,250 per year for TfL to maintain additional traffic signals. Other maintenance work will be carried out through business as usual activities								
11. Investment appraisal	The estimated First Year Rate of Return = 60%	The estimated First Year Rate of Return = 0%	The estimated First Year Rate of Return = 30%	The estimated First Year Rate of Return = 54%								
12. Procurement strategy	The works will be undertaken by JB Riney under the Highways term contract and statutory utility companies where their services are affected.		The traffic signal equipment will be ordered and installed by TfL. The remaining works will be undertaken by JB Riney under the Highways term contract, or by statutory utility companies where their services are affected.									
13. Legal implications	In carrying out its traffic functions, the City must have regard, inter alia, to its duty to secure the expeditious,											

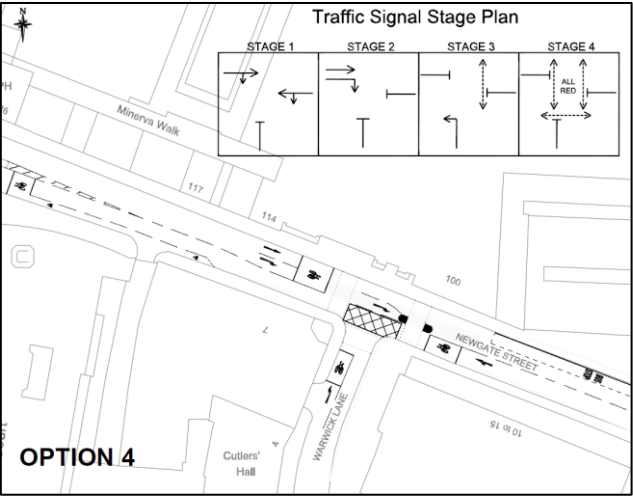
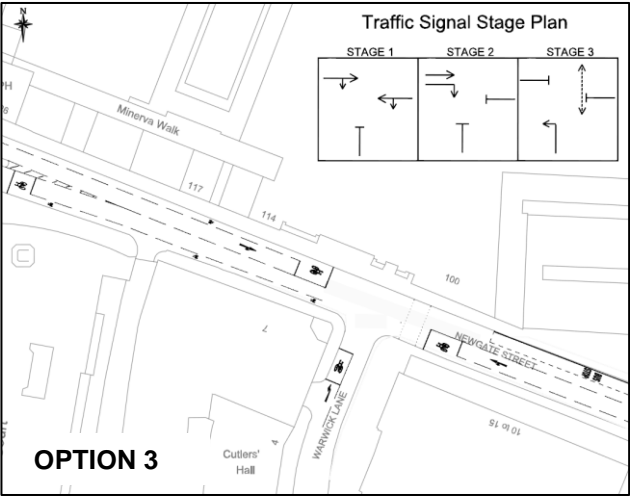
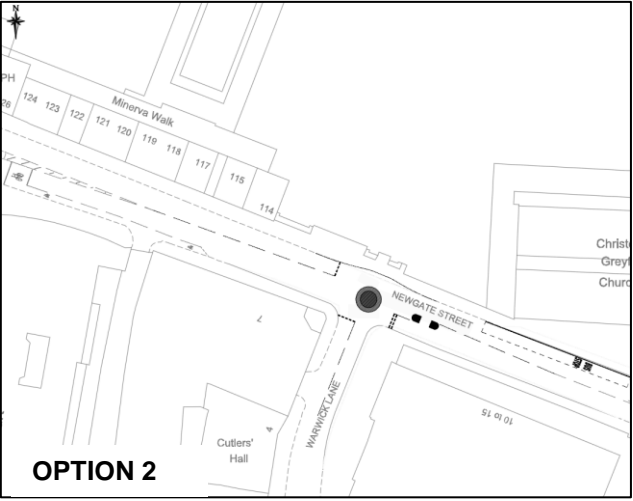
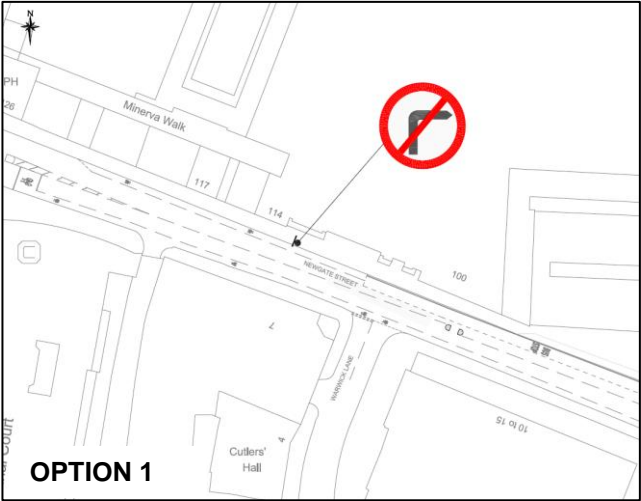
	Option 1	Option 2	Option 3	Option 4
	convenient and safe movement of vehicular traffic and other traffic (which includes pedestrians) - s.122 Road Traffic Regulation Act 1984; and its duty to secure the efficient use of the road network (s.16 Traffic Management Act 2004).			
14. Traffic implications	The proposal would divert up to 100 vehicles / per hour via Old Bailey and Ludgate Hill. The works are very minor and will have no impact on traffic.	The proposal could increase more traffic to use Warwick Lane because of changes to the give way priority associated with a roundabout. The works will require a road closure. For approximately one weekend.	Overall the introduction of traffic signals will increase in journey times on average of x seconds on Newgate Street.	Overall the introduction of traffic signals will have a small increase in journey times on average of 6 seconds on Newgate Street.
			The proposals offers much improved pedestrian crossing facilities. The works will require a road closure/other traffic management for approximately 2 weekends and will be co-ordinated with other highway works to minimise disruption.	
15. Sustainability and energy implications	The materials used will conform to the City’s agreed palette.			
16. Equality Impact Assessment	It is anticipated that the impacts will be neutral/no change		There will be benefits for all user groups. Traffic signals will incorporate facilities which will significantly assist pedestrians including those with certain disabilities.	
17. Recommendation	Not recommended	Not recommended	Not recommended	Recommended

	Option 1		Option 2		Option 3			Option 4				
18. Next Gateway	Gateway 7 – Outturn Report											
19. Resource requirements to reach next Gateway												
	Item	Cost £k	Item	Cost £k	Item	Cost £k / LIP Funding			Item	Cost £k / LIP Funding		
		LIP 17/18		LIP 17/18		16/17	17/18	Total		16/17	17/18	Total
	Staff	£3.5	Staff	£10	Staff	£10	£10	£20	Staff	£10	£10	£20
	Fees	£5.5	Fees	-	Fees	£20	-	£20	Fees	£20	-	£20
	Work	£1	Work	£40	Work	£55	£45	£100	Work	£60	£50	£110
	Total	£10	Total	£50	Total			£140	Total			£150

Appendix 1 – Collision Analysis



Appendix 2 – Proposed Layout Options



Appendix 3

Table 1 - spend to date*

Newgate Street / Warwick Lane Safety Scheme			
	Approved (£)	Spend (£)	Balance (£)
Staff Cost	12,300	13,799	(1,499)
Fees	17,700	17,694	6
Total	30,000	31,493	(1,493)

* Overspend can be met by the proposed £90K budget allocation

Table 2 - approved budget FY2016/17 **

Newgate Street / Warwick Lane Safety Scheme			
	Approved (£)	Allocation (£)	Revised (£)
Staff Cost	12,300	12,700	25,000
Works	0	60,000	60,000
Fees	17,700	17,300	35,000
Total	30,000	90,000	120,000

**reflects allocation of £90k from 2016/17 LIP

Table 3 - total estimated cost ***

Newgate Street / Warwick Lane Safety Scheme			
	Approved (£)	Allocation (£)	Revised (£)
Staff Cost	12,300	22,700	35,000
Works	0	110,000	110,000
Fees	17,700	17,300	35,000
Total	30,000	150,000	180,000

***subject to P&T approval of £60k from 2017/18 LIP