

Committees:	Dates:	Item no.
Streets and Walkways Sub-Committee Projects Sub Committee	17/11/2014 09/12/2014	
Subject: Cheapside 4A – Gresham St Scheme	Gateway 7 Outcome Report	Public
Report of: Director of the Built Environment		For Decision
<p><u>Summary</u></p> <ul style="list-style-type: none"> • Project Status - Green • Project Stage - Gateway 7 – Outcome Report • Approved Budget - £168,355* • Final Cost – £150,762* • Overall project risk - Green <p>* Figures quoted above include pre-evaluation and are accurate as of October 2014. Please see Appendix A for the financial breakdown.</p> <p>Recommendations</p> <p>It is recommended that:</p> <ol style="list-style-type: none"> 1. The lessons learnt highlighted in this report be noted and the project be closed. 		

Main Report

<p>1. Brief description of project</p>	<p>In June 2010, the junction of Gresham Street and St Martins Le Grand was re-opened to eastbound traffic to facilitate works along Cheapside and surrounding areas. Over the course of the temporary two-way arrangement the City received a number of requests to formalise the temporary arrangement and make this junction permanently open to traffic in both directions.</p> <p>This project was to make the two way arrangement permanent thereby improving vehicle accessibility and to also improve cyclist accessibility. The project included construction of a raised table with the primary reasons of improving junction safety and pedestrian accessibility. .</p> <p>The raised table was constructed with a buff anti-skid surfacing rather than granite, This was done given the cost of construction and maintenance of granite tables and the longer construction time associated with granite tables.The</p>
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	<p>intention was to assess whether a coloured surface was as effective as granite in making vehicles yield to pedestrians, slow approach speeds, and reduce accidents.</p> <p>Works were completed on programme in September 2013.</p>
<p>2. Assessment of project against success criteria</p>	<p>Success criteria for this project:-</p> <ol style="list-style-type: none"> 1. <u>Improved motor vehicle accessibility for local occupiers</u> <p>Achieved by the introduction of eastbound vehicle movements through the junction of Gresham St and St Martins Le Grand. Before and after surveys (2010-2014) suggest this has been achieved as vehicle volumes show an increase from 3089 to 4150 vehicles per day.</p> 2. <u>Improved highway network resilience</u> <p>Achieved by the introduction of two way traffic movements through the junction. The introduction of two-way traffic flows at the junction provides more potential diversion routes in the event that streets in the local area had to be closed. This would reduce the impact of road closures on local businesses.</p> 3. <u>Improved cycling accessibility, convenience and safety</u> <p>The introduction of a shared pedestrian/cycle route from Angel Street to Gresham Street has improved accessibility, convenience and safety for cyclists on this important east/west cycle route.</p> <p>Post implementation surveys and feedback from cyclists was generally positive with the majority considering the junction to be safe. However, a similar majority of cyclists surveyed also thought the junction looked like a standard City junction and that the raised surface treatment did not encourage them to reduce speed. This may be due, in part, to the approach speeds of vehicles exiting the Museum of London rotunda.</p> <p>Behavioural observations from the study also showed that regularly cyclists do not slow down when entering the junction and frequently weave through pedestrian traffic on the crossing. This may be due to the large radius of the entry arm from St Martins Le Grand. It must be noted that this design element was essential due to the Gresham St and St Martins Le Grand forming part of the Lord Mayor's carriage and Cart Marking day route. A full breakdown of the on street interviews and behavioural observations can be found</p>

in Appendix C of this report.

4. Usability for pedestrians

Accessibility has been improved by the introduction of a raised courtesy crossing. The raised crossing better meets the needs of people with physical disability. Over 60% of those interviewed considered the crossing safe with another 23% offering no opinion. However it was observed that little courtesy to pedestrians was offered at this location. This is possibly due to the speed vehicles approach from St Martins Le Grand which makes this a rather atypical junction against which to assess the effectiveness of coloured anti-skid in delivering courtesy.

a. Pedestrian Comfort

Survey data indicates that most pedestrians consider this junction to be safe and are in support of having the road surface raised to footway level. This is seen as particularly useful for mobility impaired users. This is further reinforced as no collisions have been recorded to date.

The main comments from pedestrians interviewed are as follows:

- that vehicles do not always slow down when entering the junction;
- that vehicles often come close to pedestrians;
- that cars take sharp turns when entering Gresham Street; and
- that the main safety issue is that some pedestrians assume that they have priority and cross through traffic.

However, behavioural observations show that in practice most pedestrians wait for the junction to be free of vehicles before crossing. In contrast a small number of pedestrians were also observed crossing without looking either left or right, which may imply that they felt that they had priority or simply indicate inattention.

b. Driver Responses

Post implementation interviews with drivers showed that they considered the junction to be safe. In general most drivers believed that the junction looked like a standard City street. Behavioural observations showed that approximately half of motor vehicles slowed down

when entering the crossing area however the shallow gradient of the raised table does not seem to force drivers to consistently slow down and a number of vehicles were observed taking sharp turns at relatively high speed when entering Gresham Street. This is possibly due to drivers being concerned about being hit from behind by fast moving following traffic.

c. Vehicle Speed & Volumes

Overall analysis of vehicle numbers, speeds, and material type from 2010-2014 suggests that the junction is considered to function safely by the vast majority of users. However, whilst the accessibility benefits of the raised courtesy crossing are widely recognised, the buff antiskid surface dressing and gradient of the approach ramps only seems to significantly modify the behaviour of around 50% of drivers in terms of speed reduction. Overview

The evidence to date suggests that whilst the level of courtesy offered is not as high as experienced at some other courtesy crossings in the City, eg:

- Fleet Street / Salisbury Court
- London Wall / Circus Place
- London Wall / Copthall Avenue
- Newgate Street / Warwick Lane

Never the less approximately 50% of vehicles were observed slowing down or offering more pedestrian priority. The junction has proved to date to be safe in that to date no collisions or casualties have been recorded. However experience elsewhere suggests that tighter radii, shorter crossing distances, and steeper entry and exit ramps would be likely to deliver further safety. It should be noted that due to utility locations and design features to accommodate the Lord mayors Show these design features were not practicable at this junction. These peculiarities are considered to make this an atypical junction for the purposes of assessing the effectiveness of coloured anti-skid in delivering speed reductions and pedestrian courtesy.

5. Minimise the impacts of increased traffic using Gresham Street

As had been anticipated. Traffic flows on Gresham Street have increased from 3,089 to 4,150 per day. Average traffic speeds on Gresham Street have also increased, from 13mph to 20.6mph. A contributing

factor to the increased speeds is the large radii needed for Lord mayors Show.

6. Reducing accidents in line with the City's Road Danger Reduction Plan

Table 1:

Accident Analysis 2006 to 2013 (Junction of Gresham St and St Martins le Grand)

Gresham/St Martins Le Grans	ACCIDENTS		
	Fatal	Serious	Slight
2006	0	0	0
2007	0	0	1
2008	0	0	0
2009	0	0	0
2010	0	0	1
2011	0	0	1
2012	0	1	1
2013	0	0	0
Totals	0	1	4

From Table 1 above it can be seen that as a whole collisions have slightly increased since the junction was changed from a one way exit westbound (2009) to two-way movements through the junction (2010-13). However, since the completion of the project in September 2013 there have been no recorded accidents.

It is considered that the accident rate at the junction could have been even lower if it had been constructed with tighter radii and greater vertical deflection, as research indicates that motorists are more likely to yield to pedestrians when these design features are implemented. However, these design features were not practical at this junction as set out in 4c above.

3. Programme

The project was completed within the agreed programme

4. Budget

The project was completed within the agreed budget

The quoted underspend is in relation to piped subway works estimated for but not required.

Review of Team Performance

5. Key strengths	<ul style="list-style-type: none">• Working in partnership with the City's term contractor (Riney's) to deliver the project on budget and to programme;• Managing communications successfully through a robust communications strategy to ensure that the local businesses were aware of the project's start and end dates inclusive of the benefits the project will bring; and• Establishment of standardised pre-post implementation survey methodologies which can be applied to the future implementation of courtesy crossings within the City.
6. Areas for improvement	<ul style="list-style-type: none">• Improve on design and data collection methodologies to ensure year on year analysis of courtesy crossings is undertaken to allow for a City Wide quantitative assessment of their increasing ability of reduce road danger.
7. Special recognition	Sam Lee - Cheapside Area Improvements Project Manager Geoff Pluck – Project Manager (No Longer at the City) Johnathon Russell – Highways JB Riney – Term Contractor

Lessons Learnt

8. Key lessons	<p>The key lessons learnt from this project are:</p> <ol style="list-style-type: none">1. Ensure that standardised data sets are collected over time to facilitate ease of assessment and comparison. By establishing a standardised format for the collection of traffic data it will enable historic and future City wide data sets to be collected and analysed giving more precise results, which in turn will inform future design;2. To minimise disruption an attempt was made during construction to minimise the curing time prior to applying the antiskid surface. This impacted upon the bonding of the antiskid surfacing and has resulted in some premature deterioration of the surface. To
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	<p>ensure maximum benefit/cost for utilisation of any materials on courtesy crossings in future sufficient curing time or standoff periods should be observed before vehicle over running is allowed. This will significantly reduce the whole life cost of a scheme and reduce likelihood of defects occurring in the short term.</p> <p>3. Further trials of the effectiveness of coloured anti-skid are recommended at more typical City junctions to better assess its effectiveness in reducing traffic speeds and encouraging pedestrian courtesy.</p>
<p>9. Implementation plan for lessons learnt</p>	<ul style="list-style-type: none"> • Officers will utilise information and lessons learnt from this project to inform material types, and successful design elements when designing and implementing future courtesy crossings within the City ; and • The findings above will be utilised to prepare a wider trial of courtesy crossing construction which it is proposed will consider costs and most appropriate use of materials and design.

Appendices

Appendix A	Detailed Finance Breakdown
Appendix B	General Arrangement Drawing
Appendix C	Full details of interviews and observations

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APPENDIX A – DETAILED FINANCE BREAKDOWN

Cheapside Stage 4A - Gresham Street			
Description	Budget (£)	Actual (£)	Balance (£)
Pre evaluation			
Fees	17,110	15,875	1,235
Staff Cost	49,390	47,328	2,062
Total Pre evaluation	66,500	62,203	3,297
Implementation			
Fees	13,150	11,373	1,777
Staff Cost	22,000	21,463	537
Works	57,850	39,964	17,867
Total Implementation	93,000	72,799	20,201
Total Outcome report			
Staff Cost	8,555	14,760	(5,905)
Total scheme cost	168,355	150,762	17,593