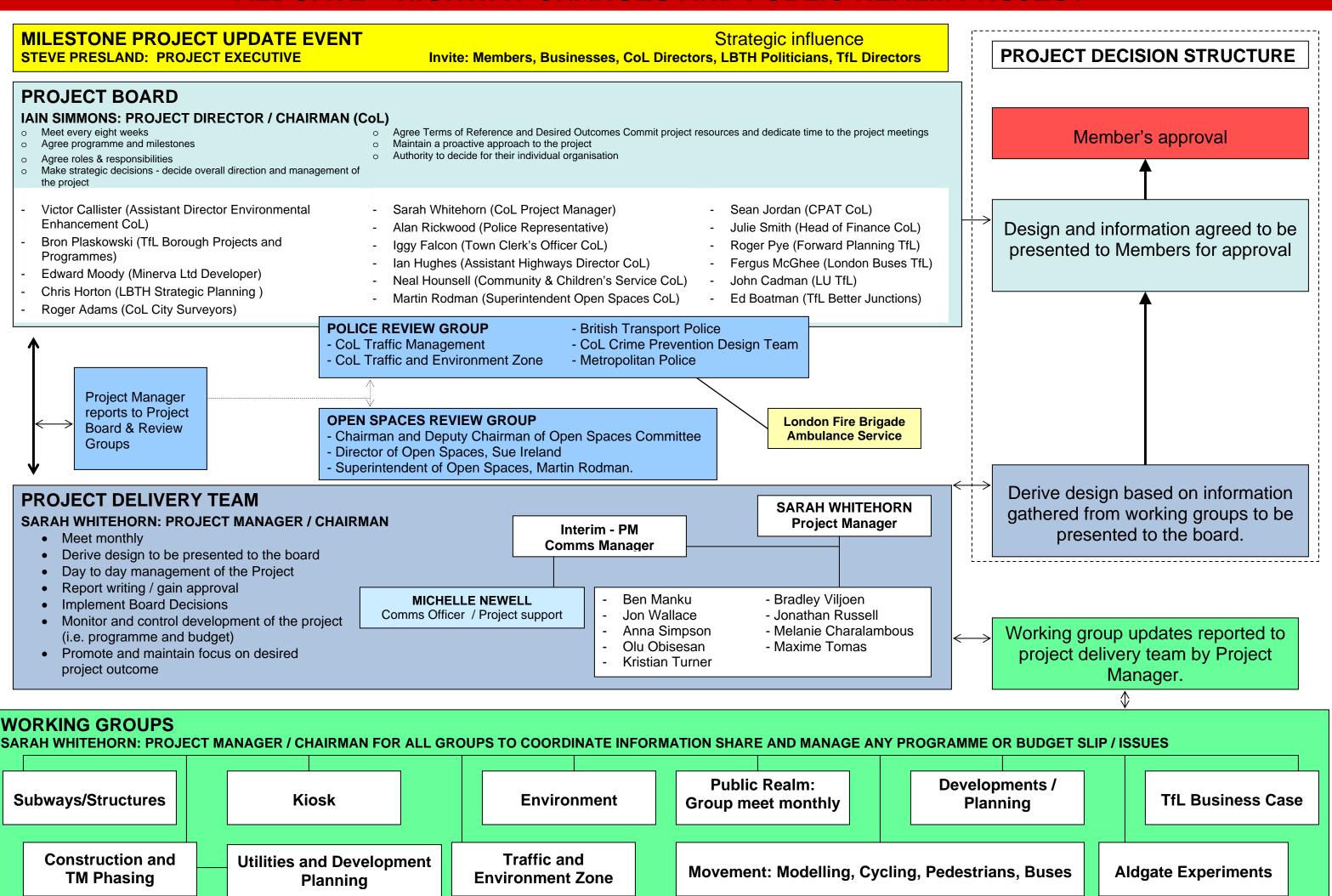
Appendix A

# ALDGATE - HIGHWAY CHANGES AND PUBLIC REALM PROJECT



Appendix B



#### **Further Information on Highway Changes**

#### **Existing Highway Situation**

The existing road network in the Aldgate and Tower Hill areas are formed of highly trafficked one way streets between Tower Hill and Liverpool Street. The main gyratory at Aldgate was built in the 1960's in a time where the priority was for the movement of traffic and subways were constructed for pedestrians.

Aldgate is the eastern gateway to the City with the Inner Ring Road running along Mansell Street and Whitechapel High Street. The main streets within the Aldgate Project area are Aldgate High Street, Duke's Place, Houndsditch, Jewry Street, Mansell Street, Middlesex Street, Minories, St. Botolph Street and Whitechapel High Street. The City is the Highway Authority for most of these streets, with the exception of Mansell Street and Whitechapel High Street which are TfL roads.

The highway is used for numerous functions typical of a busy street in the City, with high volumes of vehicles and pedestrians, loading demands, bus stops and shop front activity. Both Aldgate Underground Station and Aldgate Bus Station are located within the gyratory area and Aldgate also serves as a stopping location for morning Commuter Coach Services.

Cycle Superhighway Route 2 starts and ends on Whitechapel High Street at the City boundary.

#### Proposed scheme

The scheme proposes to change the operation of the Aldgate High Street / St. Botolph Street / Middlesex Street gyratory into a two-way system which will enable the closure of the western side of the gyratory between Sir John Cass's Foundation Primary School and St. Botolph Without Aldgate Church. A new, high quality public space will be created in this location that will greatly enhance the public realm in the Aldgate area. The Highway changes will result in a narrowing of the carriageway width with commensurate increases in footway width.

Aldgate High Street will become a more traditional high street location with two-way traffic flows, bus stops located in the vicinity of the underground station and direct pedestrian crossing points into the public square and station. A double pedestrian crossing (similar to the one on St Paul's Church Yard) will be provided to cross Aldgate High Street between the southern footway and the new square.

Aldgate High Street will be the primary focus for cycling improvements based on the results of innovative trial layouts designed to deliver safe and separated space for cyclists. These trials will be developed to create a more comfortable environment on Aldgate High Street for cyclists, the principles of which are safety, directness, coherence, comfort, attractiveness and adaptability.

St. Botolph Street will become a two way street with one traffic lane in each direction with an additional bus stop and the street realigned to link to Duke's Place around the new public square. Two metre wide advisory cycle lanes are to be provided on both sides of the street.

It is proposed that a section of Middlesex Street to the north of St. Botolph Street will be closed to motorised traffic south of New Goulston Street. Cyclists will still be able

to use this link to provide access to St. Botolph Street. At the junction of Aldgate High Street and Middlesex Street, the Traffic Enforcement Zone (TEZ) control point will be relocated from Duke's Place onto Middlesex Street between Aldgate High Street and St. Botolph Street. A 1.5m segregated cycle lane will be provided for cyclists to bypass the chicane, turning into a 2.0m advisory cycle lane as the road turns into St. Botolph Street.

The traffic signals at the junction of Aldgate High Street with Jewry Street will be maintained and linked with the double crossing on Aldgate High Street. The existing cycle contra-flow on Jewry Street will be retained and improved and a two-way facility will be introduced near the junction for northbound cyclists to cross Aldgate High Street to the square in parallel with the pedestrian crossing.

Minories, which is currently one-way southbound, will be made two-way with priority control at the junction with Aldgate High Street. This provides improved access for traffic to Minories, and is in keeping with the rest of the scheme in that it replaces a multi-lane one-way carriageway with a single lane two-way carriageway. It is proposed that there will be no right-turn into or out of the northern end of Minories. A removable traffic island will provide a physical barrier to undertaking these movements. A zebra crossing will be introduced to the north of the bus station entrance.

It is proposed that the length of Minories be treated with a similar public realm approach to that taken for Cheapside with footways widened to cater for increasing pedestrian demands. Due to the location of utilities and the need to provide loading facilities, it is proposed that the western footway is widened and the carriageway narrowed to eight metres with shared use parking/loading bays on the footway on the western side of the road. At peak times parking and loading on the eastern side of the road would be restricted, allowing for free flowing traffic conditions northbound and southbound. Between Aldgate High Street and the bus station entrance it will be necessary to restrict peak time loading activity except for one inset bay that is to be provided on the western footway. The loading restrictions are required so that southbound traffic can progress without blocking back to Aldgate High Street as there will be a traffic queue in the northbound direction in the AM peak preventing southbound traffic from overtaking loading vehicles.

The Minories junction with Goodman's Yard will be altered to allow traffic northbound access to Minories.

Pedestrian crossings will be shortened throughout the scheme where possible and broadened in consideration of expected levels of demand. All of the existing pedestrian subways are to be closed and sealed off with at grade surface crossings provided.

The left-turn for northbound traffic from Mansell Street onto Aldgate High Street will be prohibited. This allows the introduction of a straight across pedestrian crossing on Aldgate High Street. Traffic that currently uses Mansell Street to turn left to access Leadenhall St or Fenchurch St will be able to use Minories northbound.

The layout of the Aldgate High Street / Mansell Street / Middlesex Street / Whitechapel High Street junction has been realigned to account for the new traffic movements. Footways will be widened and it will have a pedestrian crossing on each arm. Straightover crossings will be provided on the Mansell Street and Aldgate High Street arms, with staggered crossings on Middlesex Street and Whitechapel High Street. This is a key junction on the Inner Ring Road.

### **Minories Highway Changes**

Minories is currently a nine metre wide one way street for southbound traffic with parking bays on the western side of the road, bus stops on the eastern side of the road and kerbside loading on both sides of the road.

One of the key requirements of the project is to remove the gyratory whilst at the same time allowing for the existing traffic flows without causing additional traffic congestion. Re-introducing two-way traffic increases the number of turning movements to be accommodated at the Mansell Street junction with Aldgate High Street. There is a finite amount of time in each traffic signal cycle that needs to be attributed to each movement, as well as allowing sufficient time between each stage so that movements are not in conflict. Prohibiting the left turn from Mansell Street reduces the total number of movements and allows the junction to operate smoothly for the existing level of traffic.

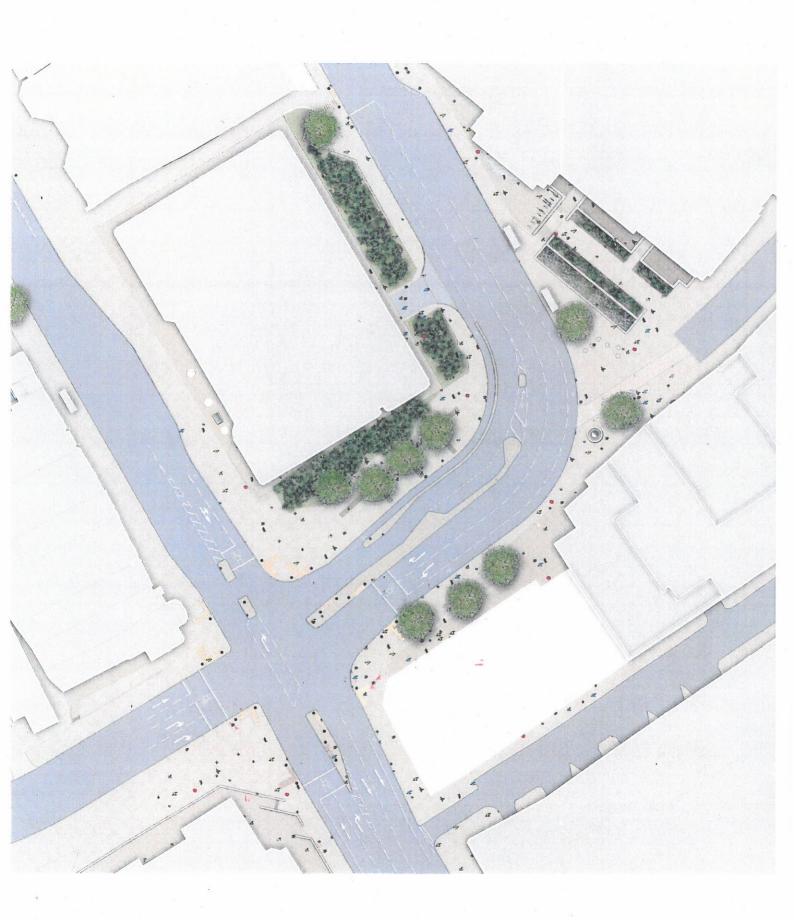
As a result it is necessary for roads such as Middlesex Street, St. Botolph Street and Minories to "work harder" to compensate.

In the proposed design, Minories is to be two way for traffic so that traffic entering the City can turn left from Minories into Aldgate High Street. This saves a certain amount of traffic that allows the left turn from Mansell Street onto Aldgate High Street to be removed. As turning traffic generally slows to turn, the resulting "ahead" lane from Mansell Street to Middlesex Street is able to flow at a constant rate.

In the morning (AM) peak the longest traffic queue is in the northbound direction with a maximum queue length of ~70m of vehicles waiting to turn left from Minories into Aldgate High Street. With this queue of traffic, it will be necessary to restrict loading activity between the bus station entrance and Aldgate High Street as any kerbside activity would block northbound traffic and prevent southbound traffic from overtaking and cause traffic to back up back onto Aldgate High Street.

Appendix C





# Aldgate Public Realm proposals

#### Overview and objectives

The main objective of the project is to deliver transformational change in the Aldgate area and a major part of this change is improvements to the public realm.

The Aldgate area currently has a poor standard public realm, with streets dominated by traffic and very little greenery or public space. Guard railing is prevalent throughout the area and creates barriers to movement. People generally do not use the existing subways under the gyratory which feel enclosed and are perceived to be unsafe and attract rough sleepers, litter and antisocial behaviour. There are an increasing number of pedestrians in this area and it is necessary that the streets and spaces are adapted to accommodate these additional demands.

The main objectives for the public realm changes were set out in the Gateway 3 report and are summarised as follows:

- i. To create attractive, inviting and comfortable spaces that are destinations in their own right. The spaces must feel public with a consistent, joined-up feel that lifts the quality of the area. Account must be taken of the needs of the variety of users from the community, including children and parents, workers, residents and visitors that will be using the spaces at different times of the day;
- ii. To add greenery to the spaces with a variety of planting including trees, planting beds and lawn areas. There is a strong desire for greenery to be introduced in order to promote biodiversity, improve local air quality and mitigate the urban heat island effect;
- iii. To incorporate sustainable urban drainage (SUDs) into the design as appropriate. There is considerable potential in this area for SUDs which will 'future-proof' the area against flood risk and promote the re-use of rainwater;
- iv. To enliven and activate the spaces. This could include several aspects including a retail kiosk or suitable use to encourage activity and draw people in, encouraging play or providing space for events, art or cultural activities;
- v. To ensure that users of the area feel safe and it is designed to limit opportunities for anti-social behaviour, taking into account the evening and night-time use of the area and the impact of the night-time economy which is increasingly active;

- vi. To better connect the spaces and ensure that walking routes and desire lines are taken into account, particularly routes to and from the school, stations and building entrances and the route between Mansell Street and Middlesex Street estates. The design must also respond appropriately to its surroundings, taking account of listed buildings, archaeology and uses;
- vii. To have regard to road safety, limit conflict between pedestrians and cyclists and take account of cyclists' movement through the spaces;
- viii. To ensure that the streets and spaces are accessible for all users. Walking routes should be comfortable and easy to navigate and steps should be avoided. Seating areas will include seats with backs and arm-rests that are suitable for disabled people;
  - ix. To consider the re-use of the redundant subways. These have great potential for re-use for a variety of functions including SUDs, storage or other activities; and
  - x. To ensure that the design is developed with maintenance in mind in terms of materials and longevity, and accords with the City's street scene manual.

## **New Public Square proposals**

The main public realm enhancement involves the creation of a new square between St Botolph without Aldgate and Sir John Cass's Foundation Primary School, facilitated by the removal of the gyratory.

The square will include a central oval space, with trees, planting and seating around it. The boundary with the church has been softened to form a church garden with delicate planting and small scale play equipment aimed at younger children. It has been designed as a series of 'rooms', separated by low hedges, lawns and winding paths. This church garden space is proposed to be enclosed by railings with lockable gates that prevent it being used at night by rough sleepers or for antisocial behaviour which has been highlighted through the consultation as an issue in the wider area.

On the western side of the square, a wide footway with trees has been provided adjacent to the school. The paving design has been developed to reflect the façade of the listed school building and link it with the square. There is also a desire for some informal play equipment and seating to be installed in this area.

A two-way cycle route is proposed north-south through the square. It will be adjacent to the wide western footway and will be segregated by kerbs with planting and seats providing further separation from the footways. Three mini zebra crossings are proposed at intervals across the cycle lane to ensure that

pedestrians can cross it comfortably and safely, which is particularly important given its proximity to the school. It is proposed that the larger central zebra crossing will be patrolled by a school crossing patrol officer during the school start and finish times until the project embeds or for as long as required.

Following comments received during the public consultation, the design has been adapted to include a lawn in the centre of the square instead of the previously proposed fully paved space. This means that the planned water feature, which was also a popular feature during the consultation, has been adapted to make it smaller and it has been relocated to the northern paved section of the central space.

A kiosk is planned to enliven the space and provide surveillance. This will house a café, possibly with a social enterprise element and will incorporate publically accessible toilets (including a disabled access toilet) that will be operated by the café as part of the community toilet scheme. The café will be open 7 days a week and will also manage the moveable tables and chairs that are to be positioned in the square.

### Public Realm proposals across the wider area

The proposals for the wider area have been developed to create a consistent and easy to navigate street environment that is attractive and accessible for all.

#### **Middlesex Street**

Middlesex Street forms the eastern edge of the improvement works. There is significant potential here to introduce trees and planting, particularly in the redundant subway ramps. Some seating is also planned along with lighting improvements. The design and materials of this area reflect the design of the main new space to the west of the church, to create a consistent public realm.

#### **Aldgate High Street**

The aim is for Aldgate High Street to become a smart High Street with York stone paving on the footways and large street trees where underground conditions allow. The street will also be better connected to Whitechapel High Street to the east which will create a more joined up feel. Unnecessary street clutter will be removed and street furniture rationalised to create an attractive City Street. Footways will be widened to create more space for the increasing number of pedestrians that use this area. Footways will also have to cater for pedestrians waiting to cross or board buses and loading activities

#### St Botolph Street

St Botolph Street will be better connected with fewer barriers to movement. The footways will be primarily paved in York stone to create a consistent feel with the wider area, except for a small section over the bridge deck that will be finished in mastic asphalt. Street trees will be planted where feasible and lighting will be enhanced.

#### **Minories**

Minories lies above a shallow tube tunnel and so there is no scope for tree planting in this street. The footways here are already predominantly paved in York stone which will be renewed where necessary. Unnecessary street clutter will also be removed to create a simple streetscape.

## Connecting Routes/Lighting

Connecting routes such as St Botolph Row, the subway ramp between Aldgate Station and Aldgate House and the northern section of Little Somerset Street, will be enhanced to ensure that consistent, accessible and better connected routes are created. A lighting strategy has been developed for the area that includes the installation of new building-mounted led light fittings, with occasional columns of a matching style where building-mounted units are not feasible. Feature lighting will also be introduced in the form of uplighters to trees and within alleyways.

Appendix D

# **APPENDIX D**

**Capital and Revenue** 

Note that all capital costs exclude contingencies, KPIs etc.

	Cleansing		
		Capital	Revenue pa
Urilifts		£140,000	£16,000
Big Belly Bin		£24,000	£1,000
Green Machine Sweeper		£14,500	£3,500
Staff		-	£38,000
Cleansing Subtotal		£178,500	£58,500
	Less Existing	-	£10,000
Cleansing Cost increase		£178,500	£48,500

Soft Landscaping					
Capital Revenue pa					
Proposed Landscaping Costs		£253,771	£103,347		
	Less Existing	-	£34,174		
Landscaping Cost		£253,771	£69,174		

Public Realm			
	Capital	Revenue pa	
	£500,000-	unknown	
Kiosk	£1,200,000	unknown	
Feature Seating	£44,000	-	
SUDS	£20,000	-	
Planter Wall and Cladding	£120,000	-	
Church railings, gate and fountain	£300,000	-	
Feature Lighting	£45,000		
Water Feature	£300,000	£22,400	
Drinking Fountains	£22,500	£200	
Play Equipment	£50,000		
Art and Interpretation	£75,000	-	
Public Realm Total		£22,600	

Civils Works			
		Capital	Revenue pa
Highways Works		£5,554,216	£19,690
	Less Existing	-	£10,000
Civils Cost		£5,554,216	£9,690

Street Lighting			
		Capital	Revenue pa
Highways		£121,310	
Landscaping & Feature Lighting		£427,840	
Cost pa			£13,388
	Less Existing	-	£9,000
Street Lighting Cost		£121,310	£4,388
<b>Grand Total</b>			£154,352

Appendix E

## APPENDIX E

#### **Capital Costs & Funding Summary**

#### Table 1. Forecast Costs to September '13

 Fees
 996,000

 Staff
 453,000

 Experiments
 54,000

 Total
 1,503,000

#### Table 2. Forecast Cost to Gateway 5

 Fees
 1,080,986

 Staff (DBE)
 444,000

 Staff Open Spaces
 11,000

 Total
 1,535,986

Table 3. Forecast Construction and Total Cost

	Option 1		
	Low Estimate	High Estimate	
Works	10,046,283	10,746,283	
Contingency	2,493,634	2,563,634	
Management (staff)	450,000	450,000	
Supervision (staff)	289,000	289,000	
Total To Build	13,278,917	14,048,917	
Expenditure to G5	3,038,986	3,038,986	
Overall Project Cost	16,317,903	17,087,903	

#### Table 4. Funding Requirement

	Total Available	Funding Require	ment £'000		
Source	01000	To September	Gateway 5	Construction	TOTAL
Received Funds	£'000				
TfL LIP Major Scheme allocation 2011/12 &2012/13	579	579			579
TfL LIP Major Scheme allocation 2013/14	320	320			320
TfL LIP Major Scheme bid Step 2 Submission	7,101	320		7,101	7,101
S106 – Heron Transportation Improvements Payment & Uplift	138	138		7,101	138
S278 - Heron Tower	350	350			350
S106 – St Botolphs House Minerva Transport	28	20	8		28
S106 – St Botolphs House Minerva LCE	1,148	96	1.052		1.148
S106 – 6 Bevis Marks Transport 09/00450/FULMAJ	102	30	102		102
S106 – 0 Bevis Marks Transport 09/00430/1 OEIMAS	50		50		50
Triggered Funds (invoice raised but not received yet)	30	I	50		30
S278 – Heron Tower Highway works (S&W Feb 2013)	396		232	164	396
S106 Mitre Square LCE 10/00371/FULMAJ	92		92	104	92
Received Funds - Amendment to S106 Required	32	l	32		32
S106 – St Botolphs House Minerva LCE	200	l		200	200
S106 - Pinnacle	651			651	651
S106 - 5 Broadgate	900			900	900
Potential Funds, Awaiting Building Commencement	300	l		300	300
S106 – 120 Fenchurch Transportation 11/00854/FULEIA	387			387	387
S106 – 100 Bishopsgate Transportation 11/00332/FULEIA	2.502			2,502	2,502
S106 Mitre Square Transport 10/00371/FULMAJ	260			260	260
S106 – 60-70 St Mary Axe Transportation 08/00739/FULEIA	318			318	318
S106 – 60-70 St Mary Axe Transportation 00/00735/1 GEE/A	663			663	663
S106 – 52 Lime Street etc Transport 12/00870/FULEIA	399			399	399
S278 – Heron Plaza deferred improvement works	320			320	320
Potential Funds, Awaiting Building Commencement & Amenda		l.		020	020
S106 – 120 Fenchurch LCEIW 11/00854/FULEIA	1.290			1,290	1.290
S106 – 60-70 St Mary Axe LCEIW 08/00739/FULEIA	230			230	230
S106 – 52 Lime Street etc LCE 12/00870/FULEIA	1,330			1,330	1,330
S106 Mitre Square LCE 10/00371/FULMAJ	729			729	729
Total Available	.20	1,503	1,536	17,444	20,483
Funding Required By Stage (Low Estimate)		1,503	1,536	13,279	16,318
Funding Required By Stage (High Estimate)		1,503	1,536	14.049	17.088

Table 5. Status of Potential Developments

Agreement	Comment from CPAT
S106 – 120 Fenchurch Transportation 11/00854/FULEIA	Consented, but not commenced
S106 – 120 Fenchurch LCEIW 11/00854/FULEIA	Consenied, but not commenced
S106 – 100 Bishopsgate Transportation 11/00332/FULEIA	Site cleared, awaiting pre-let.
S106 – 100 Bishopsgate LCE 11/00332/FULEIA	One cleared, awaiting pre-let.
S106 – 60-70 St Mary Axe Transportation 08/00739/FULEIA	Consented but not commenced
S106 – 60-70 St Mary Axe LCEIW 08/00739/FULEIA	Consenied but not commenced
S106 – 52 Lime Street etc Transport 12/00870/FULEIA	About to start site clearance. Occupier-led scheme, likely to go to construction soon.
S106 – 52 Lime Street etc LCE 12/00870/FULEIA	Thousand distributions of the desiration of the
S278 – Heron Plaza deferred improvement works	Site cleared, awaiting pre-let.
(£80K pa * assumed 4 years worth) (S&W Feb 2013)	ono ciodica, anaming pro ion
S106 Mitre Square LCE 10/00371/FULMAJ	Site clearance underway.
S106 Mitre Square Transport 10/00371/FULMAJ	Cité dedicardice directivaly.