

City Cluster Healthy Streets Plan



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1. Introduction

1.1 What is the Healthy Streets Approach?

The Healthy Streets Approach is a human-centred framework for embedding public health in transport, public realm and planning. The Approach is based on 10 evidence-based Healthy Streets Indicators that capture the elements that are essential for making streets attractive and accessible places to walk, cycle and spend time, and for supporting social and economic activity.

Figure 1.1 Healthy Streets Indicators



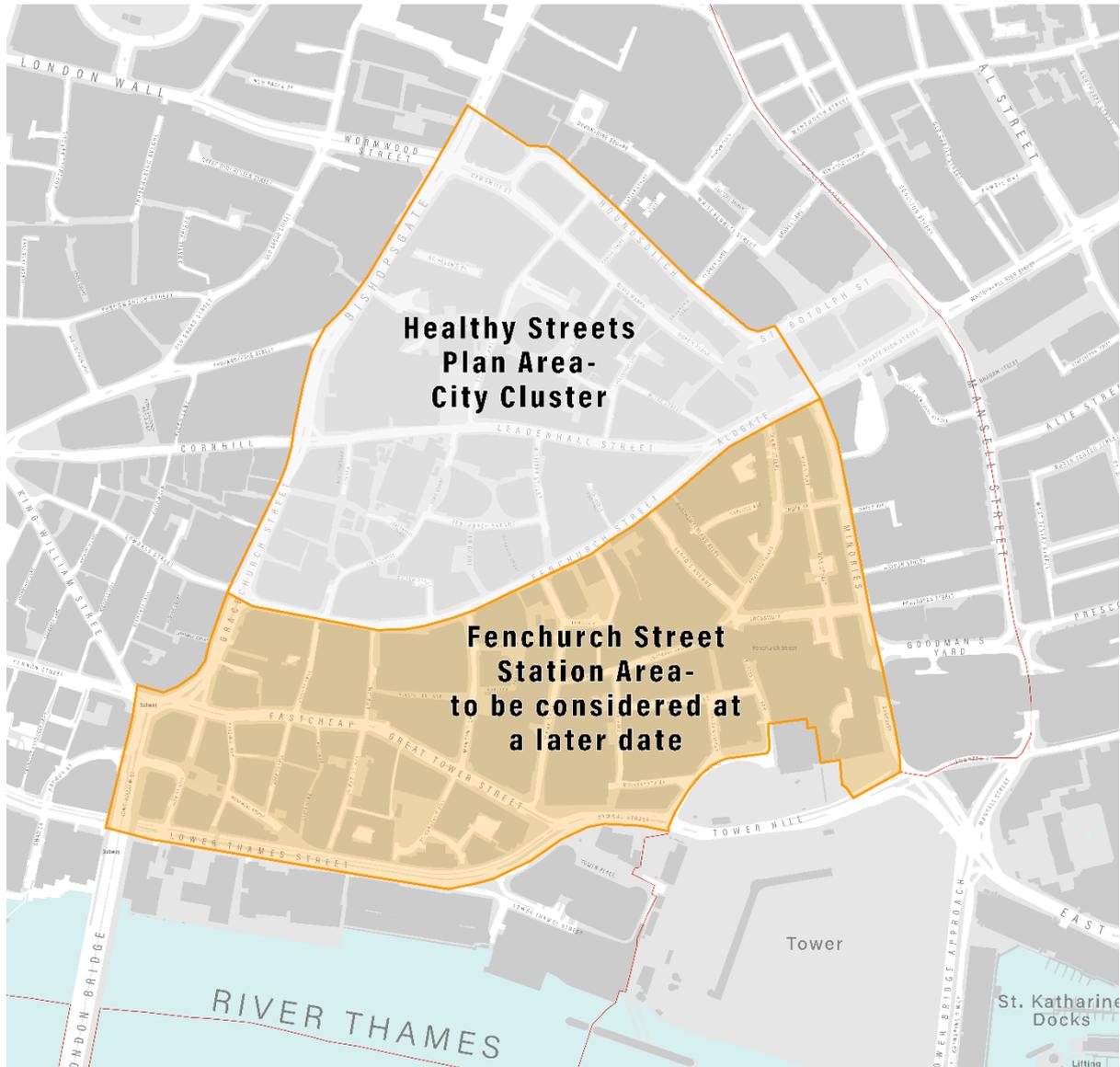
Further information on the Healthy Streets Approach can be viewed at the website <https://www.healthystreets.com/>.

1.2 What is a Healthy Streets Plan?

A Healthy Streets Plan is a term used in the [City of London Transport Strategy](#) to develop an integrated approach to public realm improvements and traffic management for an area of the Square Mile. The traffic management measures will look to reduce the use of Local Access streets by through traffic and therefore enable improvements to the walking and cycling experience, enhance the public realm and create new public space. It will also consider how other elements of the Transport Strategy can be delivered or incorporated through proposed changes to the street network. There are four plans identified in the Transport Strategy for different areas of the Square Mile and each Healthy Streets Plan will be tailored to the specific aspirations and vision that have been or will be developed for that area.

The City Cluster (and Fenchurch Street) area has been identified for the development of a Healthy Streets Plan to respond to the growth of the City Cluster and enable the delivery of the City Cluster Vision. This Healthy Streets Plan covers a portion of the original City Cluster and Fenchurch Street area set out in the Transport Strategy. It focuses on the area that the City Cluster Vision has been developed for. The remaining area will be considered at a later date.

Figure 1.2 City Cluster Healthy Streets Plan Area



Throughout this Healthy Streets Plan, other Transport Strategy proposals that cover or affect the City Cluster are also considered such as potential City Cluster zero emission access restrictions and the core cycling network in the City Cluster.

Appendix A sets out how the traffic management proposals (and enabling Vision proposals) in this Healthy Streets Plan will help deliver the Transport Strategy targets and highlights the links to the City of London Climate Action Strategy and Corporate Plan.

1.3 City Cluster Vision

The [City Cluster Vision](#) was adopted in May 2019 and sets out the framework for the transformation of the streets and spaces over the next ten years, in order to successfully manage the projected growth within the Cluster. The development of the framework was a collaboration between the City Corporation and local stakeholders. Consultation of the Vision expressed widespread support for the framework and the proposals made to the City Cluster streets.

The Vision outlines concept proposals in response to the perceived issues, objectives and consultation responses identified in the Vision's development. Many of the proposals directly or indirectly require changes to the street network in order to be delivered.

Since adoption of the Vision, three programmes have been set up to deliver the City Cluster Vision:

- Programme 1: Pedestrian Priority and Traffic Reduction
- Programme 2: Wellbeing and Climate Change Resilience
- Programme 3: Activation and Engagement

The Healthy Streets Plan is one of the first deliverables to be undertaken in Programme 1 to understand the traffic impacts of the proposals.

1.4 Content and Structure

This Healthy Streets Plan primarily considers the changes required to the street network in order to enable the delivery of the City Cluster Vision. In doing so, it also considers other high priority projects and schemes for the City Cluster and Square Mile and how the street changes will enable them to be delivered.

Section 2: Sets out the objectives of the Vision and how the streets propose to accommodate the future growth forecast for the area.

Section 3: Outlines how the street network currently functions and what traffic management measures are required to deliver the Vision objectives in Section 2.

Section 4: Considers how related proposals for the area can be accommodated with the traffic management measures proposed, including future zero emission access restrictions and the security scheme.

Section 5: Identifies where other non-traffic related schemes and programmes need to be considered with changes to traffic management, particularly around delivering the Climate Action Strategy and environmental resilience.

Section 6: Summarises the modelling results of the traffic management changes set out in Section 3 and the impacts this has on journey times.

Section 7: Sets out the Delivery Plan of proposed street network changes in the City.

2. City Cluster Vision

2.1 Objectives and Proposal Summary

The City Cluster Vision seeks “to provide an exceptional urban environment for a thriving world-class destination, where people feel comfortable and safe and the quality of the user experience is paramount.”

City Cluster Vision Objectives

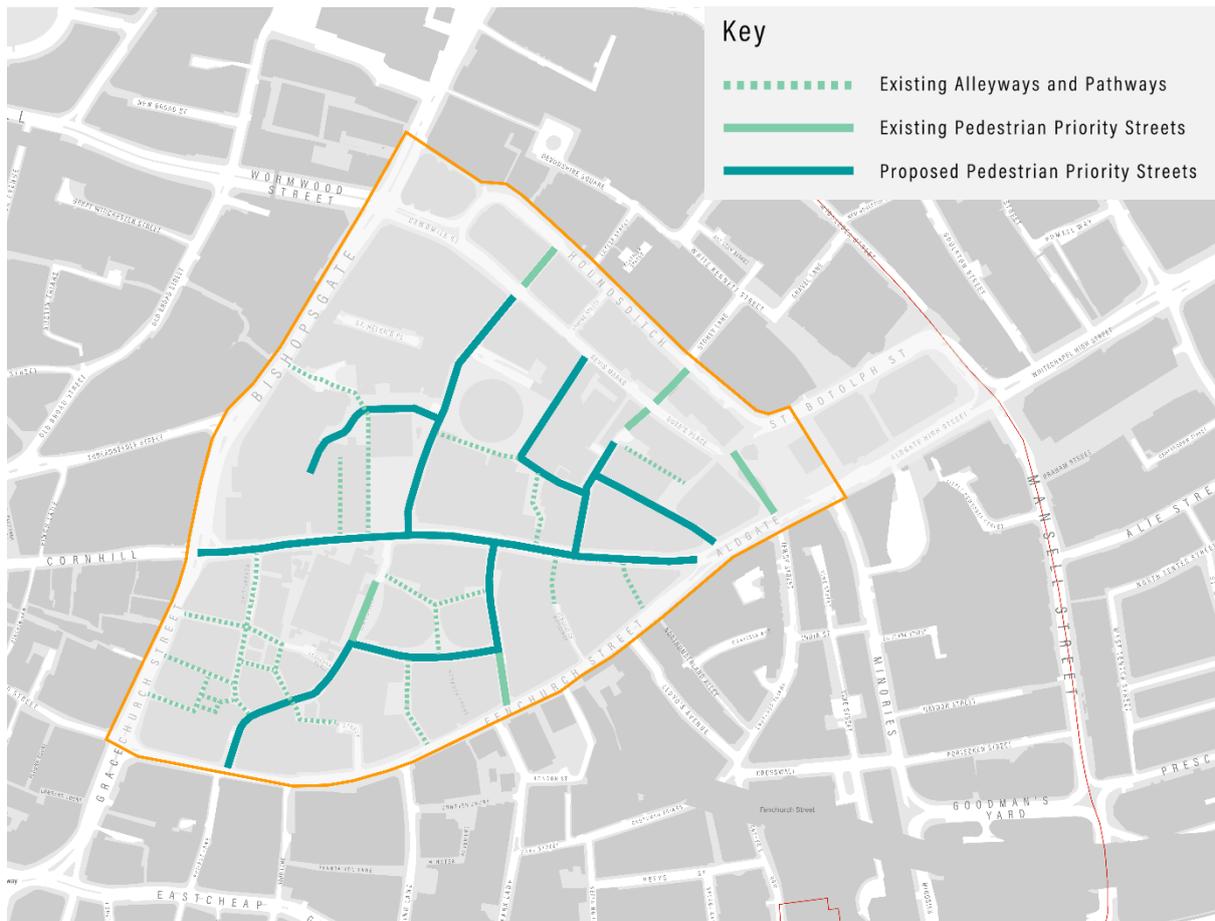
Enable positive growth To make the public realm function well and respond to change	Enrich the sense of place To provide healthy and characterful spaces	Create a world-class destination To create a smart and vibrant environment that strengthens the area's unique offer
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Enabling positive growth is focused on accommodating projected increases in the number of people working and therefore walking in the City Cluster, especially on major walking routes to stations and key destinations. Providing a pedestrian priority core within the City Cluster area is a key requirement to achieving this and unlocking the delivery of the other objectives. Delivering pedestrian priority is also one of the key proposals in the City Corporation's Transport Strategy and Climate Action Strategy to ensure the needs of people walking are put first.

A significant number of new pedestrian priority streets are proposed in the area, as shown in Figure 2.1. The pedestrian priority core is focused on the east-west axis of Leadenhall Street and on the north-south axis of St Mary Axe and Lime Street. Alongside this, pedestrian priority interventions on smaller secondary streets and new public spaces are proposed to promote quieter streets and spaces as alternative walking routes and to enhance the sense of place.

Incorporating more greenery, climate resilience and cultural and leisure activities in the new pedestrian and public realm spaces reduces the impact of climate change and enhances the area's reputation as a world-class destination and leading centre for business

Figure 2.1. Existing Pedestrian Priority streets and delivery of proposed streets through the City Cluster Vision



The following sections of this Healthy Streets Plan will set out what traffic management measures are required to deliver the Vision objectives and to enable the implementation of a pedestrian priority core, introduce more greenery and climate resilience measures and create new public space.

The City Cluster Vision includes proposals for the City Cluster streets, including potential measures for traffic management. The Vision proposes a timed closure to motor vehicles on St Mary Axe and further potential closures on Bury Street, Mitre Street and Creechurch Lane. There are two outline options proposed for Leadenhall Street. Option 1 requires minimal traffic management measures and focuses on traffic calming through realignment of the street, wider pavements and pavement build outs. Option 2 is a timed closure of the middle segment of the street that will require more significant traffic management measures but provides more opportunity for space reallocation and pedestrian priority. The next section builds on the traffic measures in the proposals to further consider what could be implemented.

3. Street space and Traffic Management

As set out in Section 2, the way the street space is managed in the City Cluster is central to enabling improvements to the public realm and enhancing the experience for people walking and cycling.

3.1 Street Network Changes and Street Hierarchy

The core tenet of the City Cluster Vision is to see the streets as spaces and address the imbalance that currently exists between space given to people walking and cycling compared to motor traffic. Delivering pedestrian priority on the streets within the City Cluster is a key component to addressing this imbalance.

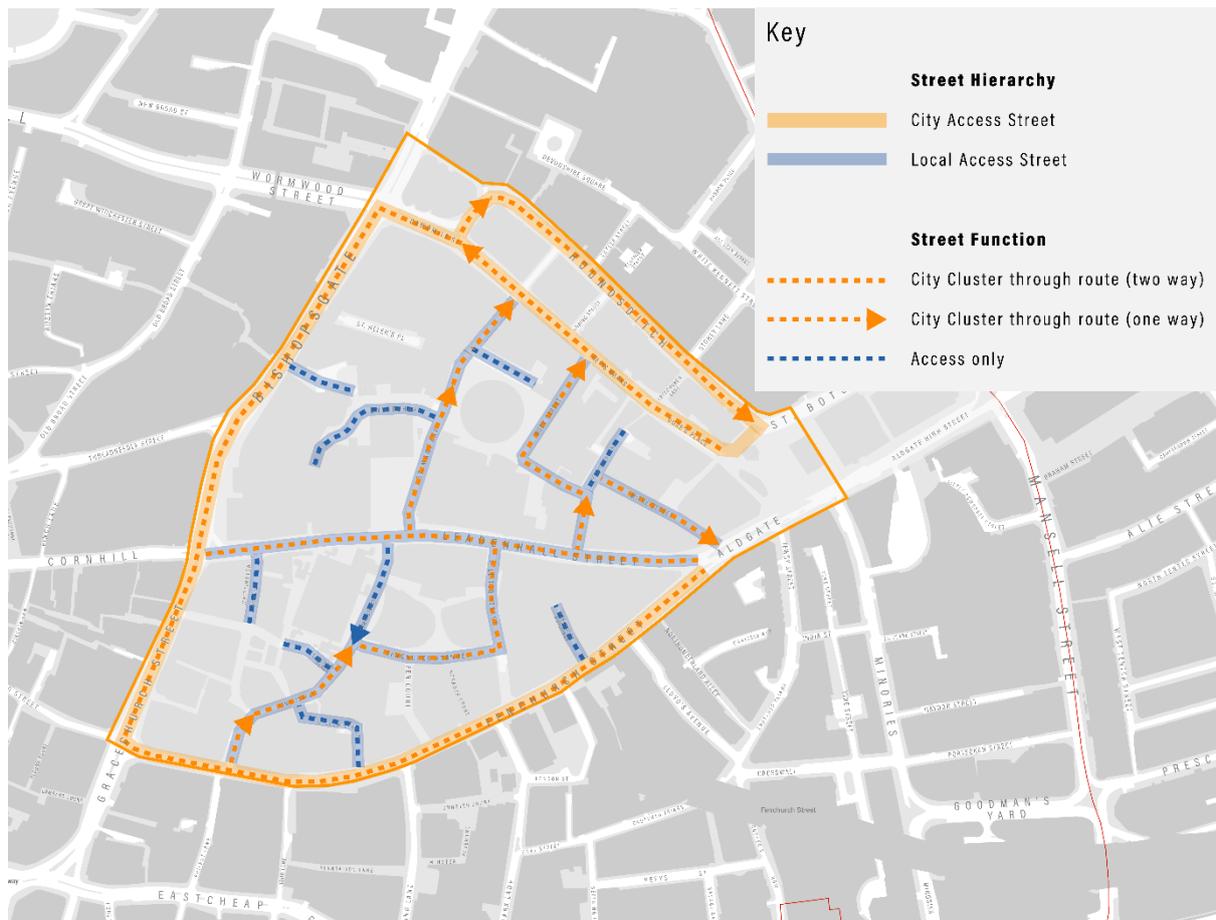
Currently, motor traffic dominates the City Cluster streets in terms of both street space and priority over other street users. As shown in Figure 2.1 in Section 2, there are only a limited number of streets that currently prioritise people walking over motor vehicles. This is reflected in how the streets are designed for motor traffic movement and how they currently function compared to how they are categorised in the Transport Strategy's street hierarchy. The street hierarchy describes the function of every street as one of three street types:

- London Access streets
- City Access streets
- Local Access streets

The perimeter streets of the City Cluster; Bishopsgate, Fenchurch Street, Bevis Marks and Houndsditch, are categorised as City Access streets. These are the preferred streets for motor vehicles travelling around the Square Mile or to immediately adjacent destinations.

The streets within the perimeter, including Leadenhall Street and St Mary Axe, are categorised as Local Access streets. These are primarily to be used for the first and final part of a journey, providing access for vehicles to properties. Figure 3.1 shows how the City Cluster streets currently function compared to the street hierarchy categorisation. In particular, Leadenhall Street (and St Mary Axe to an extent) permits motor traffic to travel through the City Cluster and function more like a City Access street. Other smaller streets, such as Lime Street through to Billiter Street via Fenchurch Avenue, and Creechurch Lane through to Bury Street, do allow motor vehicles with no purpose in the City Cluster to navigate these routes but they are much less used due to being smaller, narrower streets and the routes being less direct.

Figure 3.1 Existing Street Network



It is proposed that the streets within the City Cluster area only provide vehicle access to properties. This would allow the City Cluster streets to better reflect their role as Local Access streets. This in turn will reduce traffic levels and enable carriageway space to be better balanced towards people walking and cycling through implementing pedestrian priority streets. It will also create opportunities for new public realm.

The key change required is to remove the ability for motor traffic with no destination in the City Cluster from travelling along Leadenhall Street. This would stop Leadenhall Street being a through route from Bishopsgate to Aldgate and redirect this through movement to the City Access streets around the perimeter of the City Cluster; Bevis Marks, Houndsditch and Fenchurch Street. Other routes that permit through movement within the City Cluster also begin at, end at or include Leadenhall Street. Therefore the change to Leadenhall Street will also help limit the use of other streets by motor traffic.

As City Access streets, the streets on the perimeter of the City Cluster will still need to allow movement for through traffic and largely operate as they do now.

3.2 Traffic Management Measures

Traffic management measures will be needed to ensure that the City Cluster streets are used in accordance with the street hierarchy. A mixture of measures can be implemented to ensure motor vehicles use Local Access streets appropriately and to enable pedestrian priority:

- Motor vehicles permitted for access only (timed or 24/7)
- All motor vehicles restricted/point closures (timed or 24/7)
- Changes to the feel of the street through design (raised carriageways/signage/traffic calming)

Some streets require more traffic management interventions than others to enable them to function as Local Access streets.

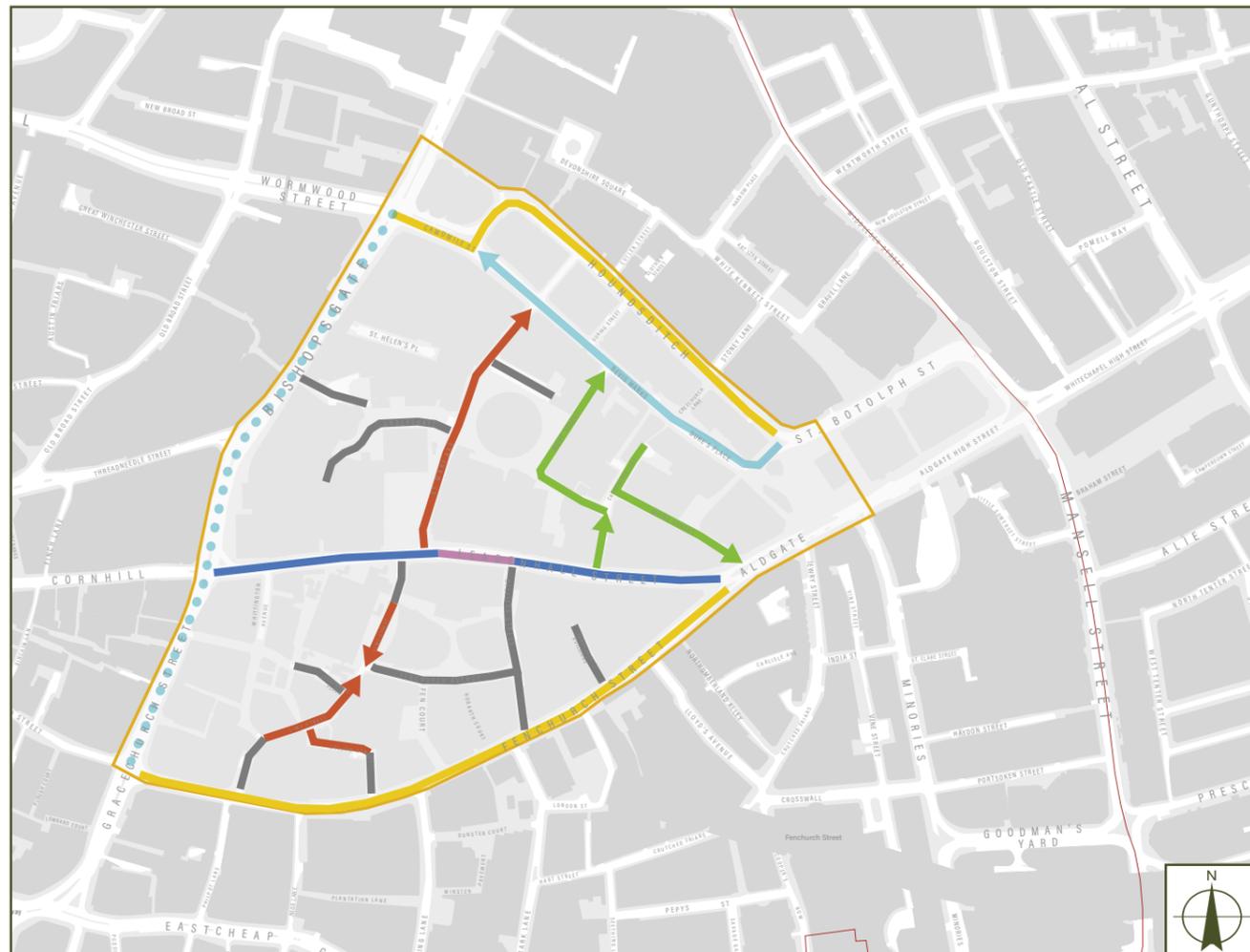
Leadenhall Street will need the most significant changes. Smaller and quieter streets, such as Creechurch Lane and Mitre Street, are unlikely to need traffic management measures. Instead the focus will be on design changes to make it undesirable as a through route and rebalance the street space.

Other streets that are only used for access as they are dead-ends, such as Undershaft and Whittington Avenue, require no traffic management changes but may need design changes to alter the priority of street users.

City Access streets will retain the existing access for motor vehicles to enable movement around the Square Mile. While no traffic management changes are proposed on these streets, they will be subject to capacity restrictions through carriageway narrowing to enable more space for people walking and cycling.

The figure and tables overleaf identify the proposed traffic management and/or design measures to enable streets to function as Local Access streets and deliver pedestrian priority. To note, Leadenhall Street shows Option 2 on the map as this is the option that requires traffic management measures.

Proposed Traffic Management Measures



Local Access Streets	Change Required	Proposed Traffic Network Change	Potential enforcement measure
St Mary Axe	Moderate	Timed restriction for motor traffic (daytime closure or peak hours). Closure to all through traffic and possibly for access vehicles. Exemptions: cycles, emergency vehicles, access for disabled drop-off/pick-up and disabled parking. Exemptions to be considered: access to off-street premises (all vehicles), taxis. Traffic reduction: Through traffic makes up 50% of vehicles in AM peak. At least 50% reduction depending on access exemptions.	Traffic gate at southern end of St Mary Axe or camera enforcement
Leadenhall Street (Option 1)	Moderate	Carriageway narrowing and traffic calming Restriction type: N/A Exemptions to be considered: N/A Traffic reduction: Through traffic makes up 50% of vehicles in AM peak. Moderate reduction levels would be achieved.	Signage and traffic calming
Leadenhall Street (Option 2)	Significant	Vehicles permitted for local access only (timed or constant) Restriction type: Point closure between St Mary Axe and Billiter Street Exemptions to be considered: Through point closure: cycles, buses, taxis Either side of point closure: access to kerbside/frontages and other Local Access streets Traffic reduction: Through traffic makes up 50% of vehicles in AM peak. At least 50% reduction on either side of point closure, 90% reduction through point closure.	Signage, bus gate / camera enforcement
Lime Street (between Fenchurch Avenue and Lime St passage)	Minimal	Timed restriction for motor traffic (daytime closure) Restriction type: Closure to all through traffic and possibly for access vehicles. Exemptions: cycles, emergency vehicles, access for disabled drop-off/pick-up and disabled parking Exemptions to be considered: access to off-street premises (all vehicles), taxis Traffic reduction: Minimal, very low levels in AM peak with most traffic already for access.	Traffic gate or camera enforcement
Bury Street, Mitre Street and Creechurch Lane	Minimal	Access only restriction for motor vehicles with possible timed closures Exemptions: cycles, emergency vehicles, access for disabled drop-off/pick-up and disabled parking Exemptions to be considered: access to off-street premises (all vehicles), taxis Traffic reduction: Minimal, low levels in AM peak with most traffic already for access.	Signage and traffic calming

City Access Streets	Change Required	Proposed Traffic Network Change
Fenchurch Street	Minimal	Change Reduced network capacity through improved pedestrian crossings
Bevis Marks	Minimal	Change Reduced network capacity through carriageway narrowing and improved pedestrian crossings. Implementation of a segregated cycle lane from carriageway space
Bishopsgate *Managed by TfL*	Significant	Change To be determined but possible to include traffic restrictions on segments of the street and carriageway narrowing

3.3 Walking Improvements

3.3.1 Local Access Streets

The combined traffic management measures within the City Cluster would enable significant improvements to be made for people walking. Traffic levels would be low enough to implement pedestrian priority on all Local Access streets and reallocate far greater space for people walking. Where timed closures are proposed or traffic volumes are minimal, people walking can utilise the whole width of the street. Pedestrian comfort levels would be greatly improved and opportunities can be identified for introducing seating and greening.

3.3.2 City Access Streets

City Access streets will improve the experience for people walking wherever possible, while retaining movement of motor traffic. This will be delivered by widening pavements where carriageway widths allow and improving signal-controlled crossings by seeking to reduce waiting times and giving pedestrians longer to cross. New pedestrian crossings or the relocation of existing crossings can ensure that they align with pedestrian desire lines.

3.4 Cycling Improvements

The Transport Strategy sets out a proposed core cycling network, which will provide a network that has either low levels of motor traffic volumes (below 150 vehicles per direction) or protected cycle lanes. Within the City Cluster, Bishopsgate, Bevis Marks, Leadenhall Street and Billiter Street form part of this network and the traffic management measures proposed will complement the delivery of these routes and improve the cycling experience on other streets.

3.4.1 Leadenhall Street

By removing through traffic from Leadenhall Street and keeping access for cycles, the low number of vehicles target set out in the Transport Strategy can be met without need for a protected cycle lane.

3.4.2 Bevis Marks

A temporary protected cycle lane as part of the COVID-19 recovery measures has been implemented by reallocating the space of one traffic lane. This route is being considered as part of the City's Cycling Programme and in the short term is proposed to be upgraded with semi-permanent materials.

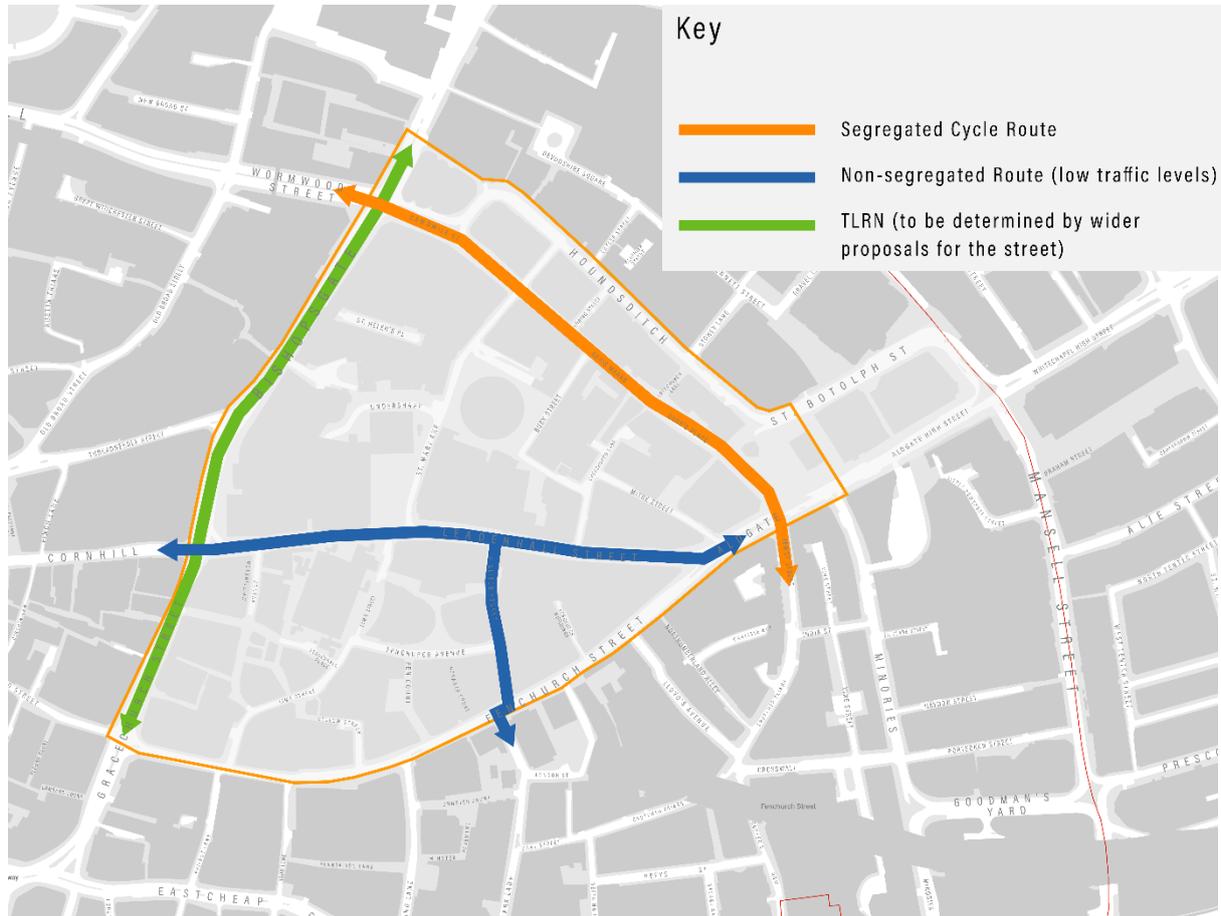
3.4.3 Bishopsgate

Bishopsgate (managed by Transport for London) is also part of the City's core cycling network. Plans for Bishopsgate are still to be determined as part of any wider proposals for the street but any proposed changes will be developed with consideration of other cycling improvements for the City Cluster.

3.4.4 Billiter Street

Billiter Street experiences very low levels of motor traffic at peak times and already meets the cycling level of service for an unprotected cycle route. The traffic management changes for the City Cluster will keep the traffic levels on this street low.

Figure 3.3 Proposed City of London Cycle Network in the City Cluster



3.4.5 Other Streets

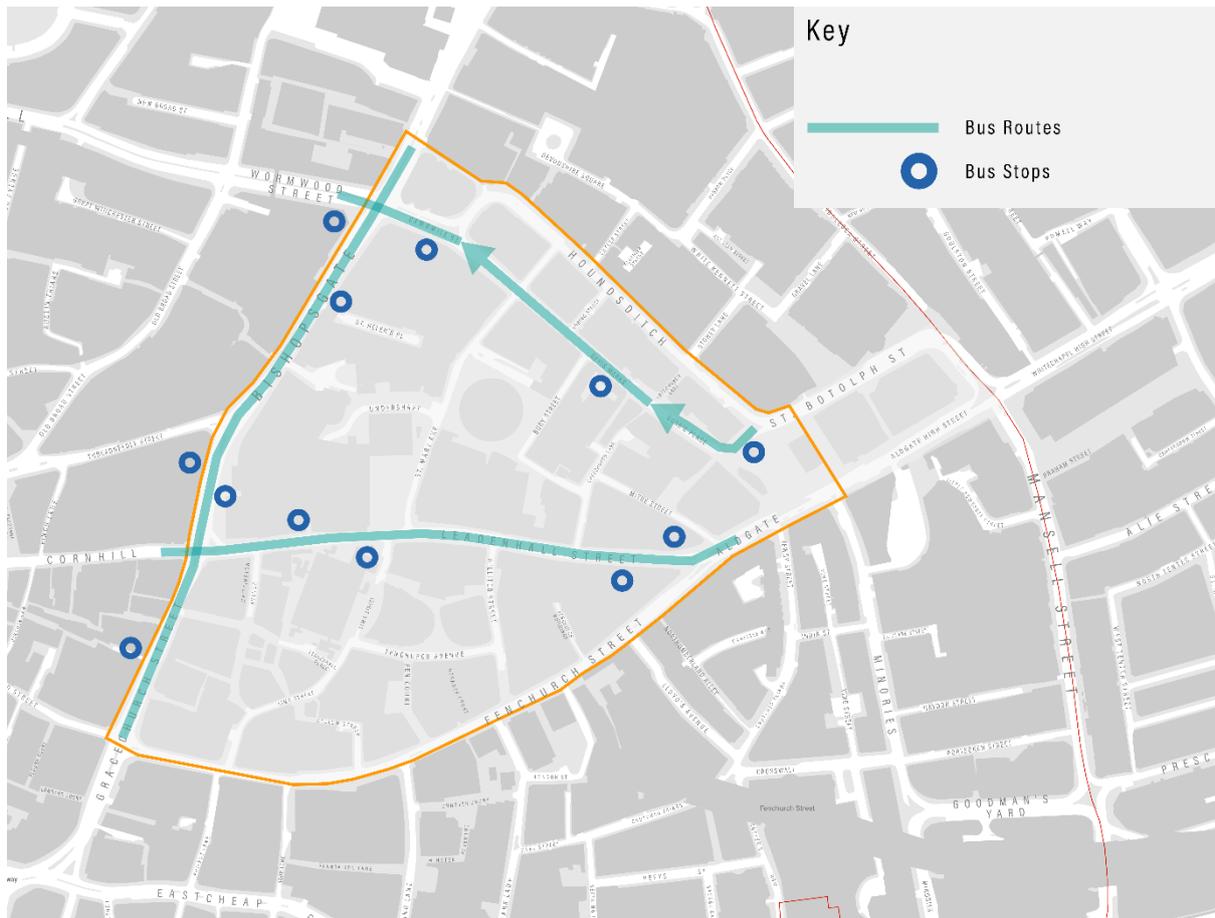
Fenchurch Street is classified as a City Access street and will still accommodate moderate levels of traffic. The narrowness of the street does not allow protected cycle lanes to be implemented here and it does not form part of the core cycling network. It has a high number of cycles at peak times, however the improvements that are proposed to Leadenhall Street would provide an alternative east-west route that will be quieter, safer and quicker.

Other streets within the City Cluster, in particular St Mary Axe, will see a further reduction in traffic levels compared to current levels. Very low traffic levels, along with priority being given to people walking and cycling, will enhance the experience of cycling through the City Cluster. It is not envisaged that any pedestrian priority streets will need to restrict access to cycles.

3.5 Bus Routes

Bus routes within the area primarily travel along the perimeter of the City Cluster. Bishopsgate is a major bus route for the Square Mile with 9 routes. There are several buses that route along Bevis Marks. One route travels through the City Cluster on Leadenhall Street and is one of Transport for London's key bus routes (Route 25 Ilford to City Thames Link).

Figure 3.4 Bus Routes in the City Cluster



It is proposed that buses would still travel on Leadenhall Street under both options as a priority bus corridor in the City's Transport Strategy. Being the central east-west corridor within the City Cluster, the route through Leadenhall Street retains the maximum level of accessibility to bus services. Reducing general traffic on Leadenhall Street would provide greater bus priority. Bus services on Bevis Marks would remain unchanged.

The traffic management changes have been modelled to identify the impact on bus journey times. This is set out in Section 6.

3.6 Kerbside Management

There are opportunities for further reclamation of space for people walking from on-street parking bays and restricting loading at the kerbside. This will need to be balanced with providing sufficient access for essential vehicles.

On Local Access streets without timed access restrictions, it is proposed that access will be maintained for passenger drop-off and pick up and for on-street loading and unloading. However kerbside waiting and loading restrictions may need to be reviewed, in consultation with local businesses and occupiers, to better suit the aspirations for pedestrian priority and the public realm. Safe locations for vehicles to turn around will also need to be considered where vehicles for access need to enter and exit the street using the same route.

Where timed access restrictions for motor vehicles are proposed, an access and loading assessment will be undertaken as schemes are developed in order to understand how access to the kerbside (and to off-street premises) needs to be managed. This will include:

- Identifying the locations of off-street delivery/servicing areas and disabled parking
- Identifying how access to disabled parking (on and off-street) and disabled passenger drop-off and pick-up can be retained
- Considering whether on-street parking bays (if applicable) will be relocated or removed depending on current usage and future expected demand
- Considering suitable relocation sites for taxi ranks (if applicable), based on proposed routing into and out of the City Cluster
- Proposing what changes are required to kerbside waiting and loading restrictions
- Considering where temporary access to construction sites is required
- Engaging with local businesses and occupiers on current and future vehicle access requirements

The Transport Strategy seeks to increase short stay cycle parking on-street and provide bays for dockless bike parking. There may be opportunities to implement additional kerbside cycle parking where kerbside access is changed and space is reallocated from motor vehicles.

4. Street Network Considerations

4.1 Network Resilience

The City's Transport Strategy sets out how a resilience network for motor vehicles will be maintained that can be 'switched on' in response to significant disruption. This resilience network comprises several Local Access streets that will be designed to allow temporary reopening to through traffic or occasionally accommodate higher volumes of motor vehicles.

Leadenhall Street is identified as part of this resilience network and will be able to allow temporary reopening to through traffic with the proposed traffic management changes. As the street proposes to remain as a bus route, the street will retain a design that can accommodate through traffic when required. The design of the point closure, if implemented, will also take this into account.

4.2 Emergency Vehicles

Emergency vehicles will be able to access all streets at all times within the City Cluster to respond to emergency incidents. Any changes to the design of the streets will be developed in consultation with the emergency services.

As the traffic management schemes are developed, engagement and consultation will be undertaken with the Emergency Services to ensure journey response times and new routes around the City Cluster are considered.

4.3 Area-wide opportunities for freight management

Motor vehicles undertaking deliveries and servicing are likely to be the majority of vehicles that remain in the City Cluster. While these are essential journeys, the cumulative effect of these vehicles within the City Cluster at peak times still needs to be considered in relation to providing appropriate pedestrian priority. A key target of the Transport Strategy to reduce the number of freight vehicles overall, with significant reductions at peak times.

An area-wide approach to implement timed restrictions for deliveries and/or a consolidation service could make a significant impact on reducing the number of freight and servicing trips into the City Cluster, especially at peak times. An area-wide approach will also simplify the restrictions for delivery drivers and companies. There are significant opportunities for this in the City Cluster as:

- New large developments in the area are already obligated to restrict deliveries to outside of peak hours and use a consolidation service, as part of their planning conditions.
- There are strong local business links being built through the EC partnership, a business-led organisation, that provides an opportunity for collaboration at an area-wide level
- The density of businesses in the area makes consolidation a viable option
- Proposals to introduce last mile logistic centres across the City of London

4.4 Zero Emission Access Restrictions

The Transport Strategy proposes a Zero Emission Zone covering the City Cluster while the Central London Zero Emission Zone by Transport for London is being developed.

The proposed traffic management measures in this plan will provide initial air quality improvements by reducing motor traffic levels. Option development and feasibility will then be undertaken to understand what controls could be used for zero emission restrictions alongside the traffic management measures. Any remaining time periods that traffic is permitted in the area or on specific streets could then be subject to zero emission standards, which could include:

- Restrictions on St Mary Axe and Leadenhall Street based on emission standards of vehicles
- Area-wide restrictions with cordon style entry points
- The use of geofence technology to switch on zero emission mode in vehicles (likely to be a voluntary measure initially if implemented)

4.5 Security

There is a long-standing need to respond to the risk of the City Cluster being subject to security threats due to the existence of several iconic buildings, the nature of the occupants business and the high level of footfall. A security project is being progressed to provide a framework for security in the City Cluster area. The implementation of the proposed traffic management schemes is critical to the initial delivery of the security strategy by significantly reducing traffic levels. The security scheme will then aim to implement flexible and adaptable security measures once the traffic management changes have been delivered.

5. Other Considerations and Opportunities

The delivery of the traffic management changes in the City Cluster need to consider other high priority City Corporation initiatives and programmes such as the Climate Action Strategy and other City Cluster Vision Programmes.

5.1 Climate Action Strategy

The City of London Corporation adopted a radical Climate Action Strategy in October 2020 that sets out how the organisation will achieve net zero, build climate resilience and champion sustainable growth over the next two decades. It commits to supporting the achievement of net zero for the Square Mile by 2040.

The Climate Action Strategy sets out that pedestrian Comfort Levels of A+ and an additional 20km of timed street closures are required to reach net zero. For the City Cluster, the traffic management changes that are proposed would provide significantly more space for people walking that would improve pedestrian comfort levels as much as possible while providing access for essential traffic. The proposed timed closures would also contribute to the additional 20km target.

The Strategy also sets out that the Square Mile needs to be more climate change ready with more green spaces and urban greening in the public realm. The Cool Streets and Greening Programme within the Strategy seeks to improve the resilience of the City's streets and spaces to climate change. This programme will include:

- Developing a catalogue of resilience measures and assessment methodology for consideration in planned public realm, transport, highways and open spaces schemes (by the end of 2020)
- Identifying sites for climate resilience measures such as sustainable drainage (SuDS) and heat resilient materials (by the end of 2021/22) and implementation with monitoring measures (by Spring 2023).

When the catalogue is prepared, this will be a key consideration to be included in the design of traffic management and public realm measures that will be delivered on the City Cluster streets. As the traffic management changes are implemented, streets will also be assessed for opportunities for new available space to incorporate SuDS, heat resilient materials, climate resilient planting and natural shade.

5.2 Infiltration SuDS

The Greater London Authority (GLA) has prepared a mapping study looking at opportunities for retrofitting SuDS to manage surface water on a site by site basis. In terms of roads and pavements, the study highlights that there are various SuDS opportunities associated with road resurfacing, traffic calming measures and pavements wider than two metres.

For the City Cluster area, opportunities are identified for bioretention, filter drains and surface rain gardens. The study notes that bioretention measures in the road requires traffic calming to be present and is only suitable for roads classified as "local

street” or “minor road”. The proposed traffic changes could therefore be a key opportunity to retrofit SuDS into designs.

5.3 Thermal Comfort

Outdoor spaces need good microclimatic qualities to provide a comfortable experience for people walking, cycling or spending time on the street. By combining data on wind, sunlight, temperature and humidity, the thermal comfort level for an area can be understood to inform how a microclimatic character of a place actually feels to street users.

The City Corporation has prepared new guidelines¹ on thermal comfort. While this is aimed at new developments, the information is useful in informing areas for timed closures and public realm enhancements. It is particularly important in the City Cluster as this area experiences lower levels of Thermal Comfort than most other areas of the City across autumn, winter and spring due to higher wind speeds and a lower sunlight access. During typical summer weather the shadowing and higher wind speeds in the City Cluster creates a slight benefit under warmer summer conditions.

Thermal Comfort levels will be considered in the design of public realm measures that will be delivered on the City Cluster streets once traffic management measures have been implemented. The eastern ends of Bevis Marks, Leadenhall Street as well as Creechurch Lane, Mitre Street and Bury Court, provide the most acceptable seasonal comfort levels and will be important locations to consider going forward for the reallocation of highway space to new public realm.

5.4 City Cluster Vision - Wellbeing and Climate Change Resilience Programme

The Wellbeing and Climate Resilience Programme is one of the three programmes delivering the City Cluster Vision and will:

- Increase the amount of greenery to help mitigate the impacts of climate change, noise and air pollution and soften the urban environment.
- Deliver more accessible and attractive spaces to rest and spend time in, including responding to the need for social distancing.
- Create ‘green corridors’ along busy pedestrian routes.
- Deliver spaces which offer opportunities for place activation in a safe street environment i.e. facilitation of Programme 3 - Activation and Engagement.
- Deliver sustainable urban drainage systems (Suds) in line with the emerging Climate Action strategy.

Initial projects are planned on existing off-carriageway sites. Opportunities for further projects will be developed in line with the programme objectives and coordinated with the Cool Streets and Greening Programme. This will include improvements to further off-carriageway sites along with opportunities for greening on existing carriageway that will be enabled through delivering the traffic management measures, including on Leadenhall Street, Fenchurch Street and Creechurch Lane.

¹ <https://democracy.cityoflondon.gov.uk/documents/s144605/Item%20%20-%20thermal-comfort-guidelines-for-developments-in-the-city-of-london.pdf>

5.5 City Cluster Vision - Activation and Engagement Programme

The third programme under the delivery of the City Cluster Vision is the Activation and Engagement Programme. This seeks to contribute to the creation of a pleasant street environment and welcoming destination where people can enjoy spending time outdoors. It will also develop the area as a vibrant destination, for both workers and visitors.

Delivering the traffic management changes will provide the opportunity for more of the City Cluster spaces to be activated. The following two projects will benefit from relocating carriageway space for public realm:

- Activating Space Through Food Markets
- Activating Space by developing Urban Greening & Meanwhile Spaces

As traffic management measures are implemented, new locations can be identified for activation on existing carriageway space where there are timed closures.

6. Traffic Modelling

This section sets out the initial modelling of the traffic management changes set out in this Healthy Streets Plan.

Initial traffic modelling has been undertaken to understand the potential impacts on journey times if the traffic management measures are implemented. VISSIM Micro-simulation software has been used to identify the potential journey time impacts for buses and general traffic during the morning and evening peak hours.

The traffic flows, signal timings and bus route/ frequency information that informs the model is dated from November 2019. The proposed All Change at Bank scheme has been included in all the Scenario tests. The modelling also keeps most of the existing traffic within the model when in reality it may use alternate routes outside of the modelled area. These three assumptions would be verified (or otherwise) by further modelling work for scheme development using the strategic ONE model, but for the purposes of this Healthy Streets Plan it is viewed as a robust sensitivity test.

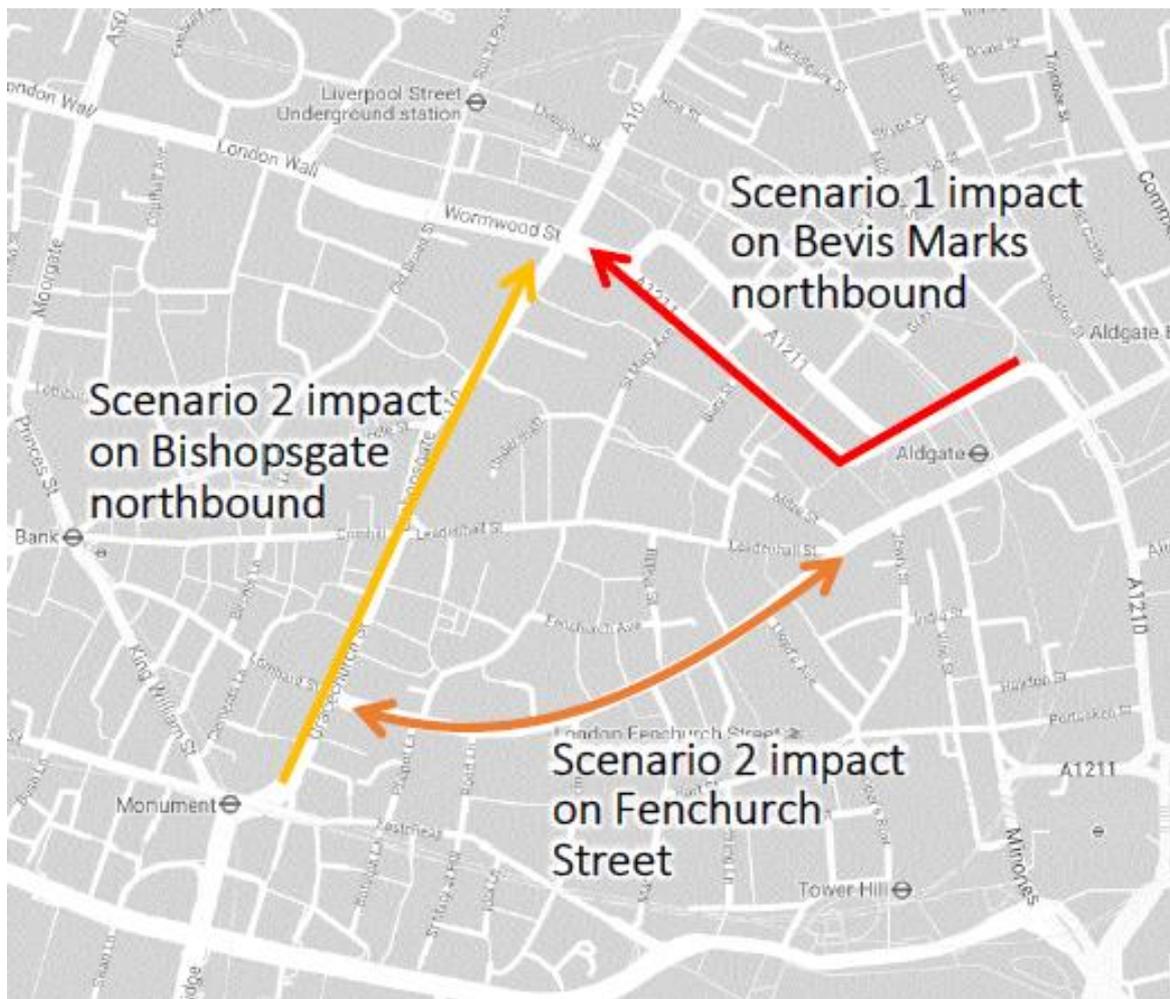
6.1 City Cluster Proposed Network changes

The modelling has been centred on testing the closure of Leadenhall Street to motor traffic except buses and cycles. This would reflect the change of all City Cluster streets to Local Access streets, and the rerouting of through traffic on to the perimeter streets. This closure has been modelled on its own, named Scenario 1. The results show that there is an increase in bus journey times for the two routes that use Bevis Marks (5-7 minutes) as the majority of general traffic that would use Leadenhall Street is reassigned to Bevis Marks. The journey time impacts are particularly acute in the morning peak.

A further test of the closure of Leadenhall Street, with reduced capacity on Bevis Marks and Fenchurch Street, was also undertaken to understand the overall impact of all proposed traffic changes to the City Cluster. This has been named Scenario 2. This Scenario also uses the latest available traffic modelling, including traffic that has been reassigned due to other schemes in the vicinity of the study area such as the Beech Street scheme.

The results for Scenario 2 show that changing the way that traffic reassigns from Leadenhall Street affects bus journey times across the network. The journey time increases on Bevis Marks in Scenario 1 are reduced to 2-3 minutes in the AM peak. However, there are increases in Scenario 2 on Bishopsgate northbound as this is where the traffic that was on Bevis Marks reassigns to. This affects a number of bus routes. Scenario 2 has fewer vehicles diverted to Bevis Marks from Leadenhall Street compared to Scenario 1. In Scenario 2 more vehicles assign to use Fenchurch Street and Bishopsgate. This will mitigate the impacts on Bevis Marks shown in Scenario 1.

Figure 6.1 Traffic Modelling Results Impact



6.2 Other Scenarios

Several other scenarios were also assessed based on other potential changes being implemented in close proximity to the City Cluster:

- TfL's temporary Bishopsgate Streetspace scheme (as currently configured)
- Pedestrian Priority Programme schemes with traffic management changes to the west of Bishopsgate (as currently configured)

Scenarios with the Bishopsgate Streetspace scheme in its current capacity causes extensive congestion and queueing in the model. With the assumptions used for the modelling purposes, this would have a significantly detrimental impact on journey times. More detailed modelling would be required with clarity on the modelling assumptions and consideration of mitigation options, to understand how future proposals for Bishopsgate will work alongside the City Cluster proposals.

The results for Scenarios in combination with nearby Pedestrian Priority schemes show that the traffic reassignment has a significant negative impact. The main reason the journey times increase significantly is because the model gets very congested due to the additional traffic on London Wall eastbound. As with the Bishopsgate Streetspace scheme, more detailed modelling would be required to

understand how the schemes can be developed and mitigated to work alongside the City Cluster proposals.

6.3 Traffic Modelling Outcomes for City Cluster Proposals

The traffic modelling indicates that under a robust assessment with worst case assumptions there are potential journey time impacts for buses and general traffic of the City Cluster traffic changes, although these are at a level where mitigation options can be explored.

However, scenarios where Bishopsgate Streetspace scheme and pedestrian priority schemes are included in their current arrangement show significant impacts on the City's street network. Further detailed modelling work is required to understand what the wider reassignment of traffic may be beyond the boundaries of this model, and with more clarity on likely future traffic levels. Traffic reduction levels for the City of London, as a result of the COVID-19 pandemic and/or the implementation of traffic reduction initiatives, is likely to alleviate the impact.

Each proposal and scheme will be developed with more detailed analysis and modelling at key project decision points. Each scheme will also be developed closely with Transport for London to meet their traffic management approvals and ensure future proposals on Bishopsgate and other Transport for London Roads can work alongside the City Cluster proposals.

7. Delivery Plan

This section sets out a proposed delivery plan for the traffic management changes in the City Cluster and the consideration of constraints, opportunities and dependencies of other proposed projects and workstreams. The main constraint to the delivery of traffic changes is the major construction works for new development over the next eight years.

7.1 New Development

The City Cluster has the highest density of construction and new development within the Square Mile. This new development is one of the main driving forces for changing the way the streets operate in order to provide sufficient space for the additional number of people expected to be walking and cycling.

The scale and number of new developments being built in the City Cluster will have a significant impact over the next eight years. The timing of construction work and the impacts this has on the streets has been considered in the delivery plan. This pipeline is likely to be subject to change and will need to be reviewed regularly to provide more certainty on construction timelines and constraints on network changes. Regular reviews have been included in the delivery plan and will determine when permanent streetscape improvements can be delivered.

Figure 7.1 Development Pipeline (as of May 2021)

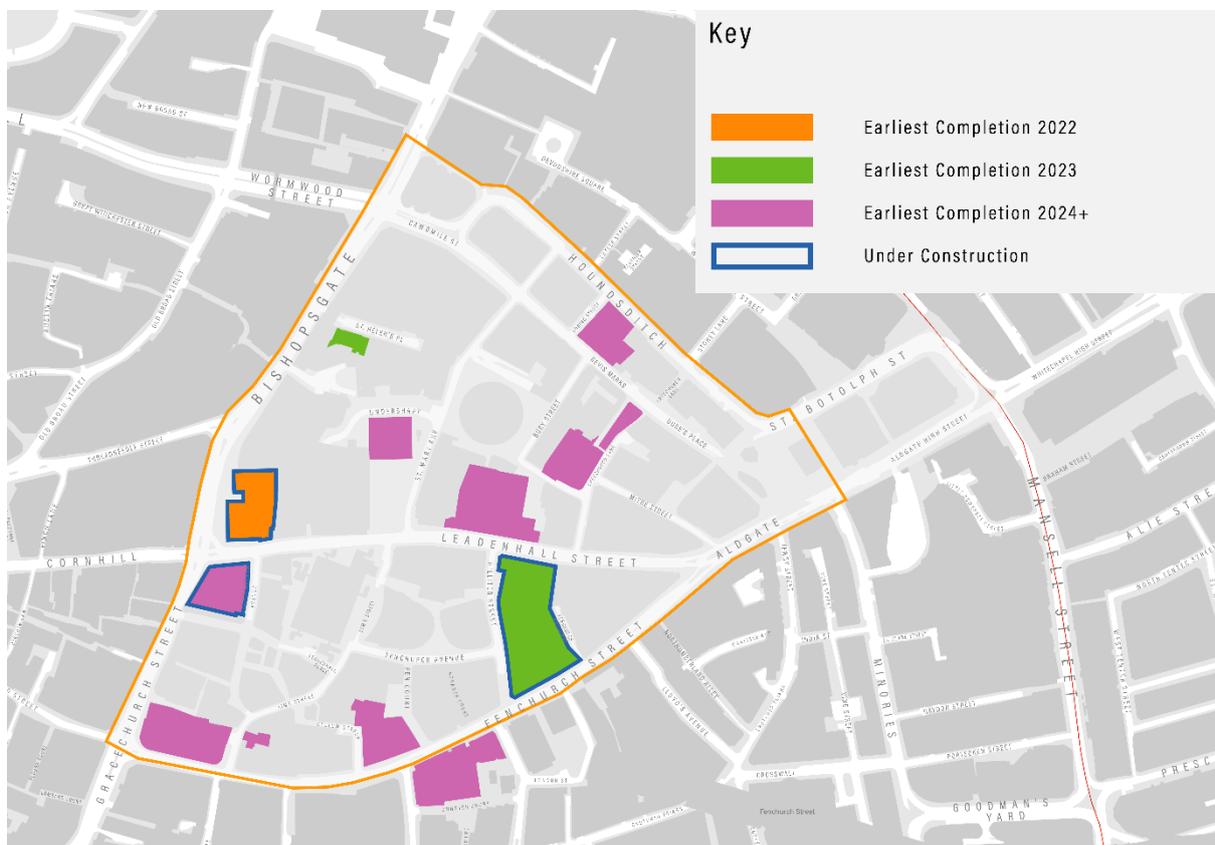


Figure 7.2 Construction Timescales (as of May 2021)

Development	Status	2021/22				2022/23				2023/24				2024/25				2025/26				2026/27				2027/28			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
40 Leadenhall St	Construction Commenced	[Green bars from Q1 2021/22 to Q3 2023/24]																											
1 Leadenhall	Construction Commenced	[Green bars from Q1 2021/22 to Q3 2024/25]																											
6 - 8 Bishopsgate	Construction Commenced	[Green bars from Q1 2021/22 to Q3 2022/23]																											
25 Lime Street	Consented	[Green bars from Q1 2021/22 to Q3 2024/25]																											
130 Fenchurch St	Consented	[Green bars from Q1 2021/22 to Q3 2024/25]																											
31 Bury House	Pending approval	[Grey bars from Q1 2021/22 to Q3 2025/26]																											
The Tulip*	Pending enquiry	[Grey bars from Q1 2021/22 to Q3 2024/25]																											
33 Creechurch Ln	Pending approval	[Grey bars from Q1 2021/22 to Q3 2025/26]																											
50 Fenchurch St	Consented	[Green bars from Q1 2021/22 to Q3 2026/27]																											
1 Undershaft	Consented	[Green bars from Q1 2021/22 to Q3 2027/28]																											
100 Leadenhall	Consented	[Green bars from Q1 2021/22 to Q3 2027/28]																											
70 Gracechurch St	Pending approval	[Grey bars from Q1 2021/22 to Q3 2026/27]																To 2030											

*Original estimated completion date was 2025, likely to be extended if appeal successful

7.2 Experimental Change – Approach to Delivery

The approach for the delivery of the traffic management changes is to seek approval for experiments to first take place under Experimental Traffic Orders. As part of the City’s transport response to the COVID-19 pandemic, a number of measures were implemented in the City Cluster to provide more space for people walking and cycling and enable social distancing in public spaces. These changes broadly resemble the traffic network changes proposed in this Healthy Streets Plan and were implemented as Temporary Traffic Orders:

- St Mary Axe: Timed closure to motor vehicles 7am – 7pm except for access to off-street premises and cycles
- Leadenhall Street: A 24/7 point closure to all motor vehicles except buses and cycles to the east of St Mary Axe/Leadenhall St junction
- Lime Street (between Fenchurch Avenue and Lime St Passage): Timed closure to motor vehicles 7am – 7pm except for access to off-street premises and cycles
- Bevis Marks: Removal of a carriageway lane for a cycle lane and pavement widening

Temporary greening and parklets on the carriageway were also implemented on Creechurch Lane and Philpot Lane as part of the COVID-19 response.

The proposed approach is to build on the measures delivered through the Temporary Traffic Orders and develop updated schemes to be implemented using Experimental Traffic Orders. This will include the assessment of monitoring information and feedback from the temporary measures and engagement with local businesses and stakeholders.

Interim and temporary measures to widen footways, install planters and greening, and improve the public realm will also delivered where feasible in line with any approved Experimental Traffic Orders. These measures can be implemented with high-quality materials that provide a permanent feel but are easily removed or modified. The materials can then also be reused in any permanent measures or in other locations.

If the experiments are successful following further monitoring and public consultation, then approval would be sought to make the Orders permanent.

7.3 Permanent Change – Approach to Delivery

Following the implementation of traffic management changes, further improvements are proposed to be delivered to transform streets to rebalance the space and enhance the public realm. As the level of construction work in the City Cluster is so significant, it needs to be considered when phasing the implementation of improvements. Where permanent changes are constrained by access for construction or construction works, further interim and semi-permanent measures will be sought to allow some improvements to be made sooner.

Most change is likely to be made from 2023 onwards, which ties into the end of experimental traffic schemes and when a number of developments are expected to be completed. This will be reviewed, alongside the latest development information, at regular intervals over the next two years to help inform more detailed delivery dates and designs. Scope of works will also be considered based on funding sources and funding availability.

7.4 Delivery Plan

The following pages set out indicative timescales for experimental/interim phases and permanent/transformational schemes. The timescales have been proposed with consideration of constraints due to construction related works

Figure 7.3 High Level Overview of Indicative Implementation of City Cluster Projects

City Cluster Projects Indicative Implementation		 Experimental / Interim Phase  Permanent Changes / Public Realm Improvements  Other City Cluster Programme Delivery	2021/22				2022/23				2023/24				2024/25				2025/26			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
			Traffic Reduction and Pedestrian Priority	Leadenhall Street	Experimental Traffic Order - Point Closure (Phase A)																	
Transformative Change (Phase B)																						
St Mary Axe	Experimental Traffic Order - Timed Closure (Phase A)																					
	Transformative Change (Phase B)																					
Fenchurch Street	Western end Interim Pavement Widening																					
	Full Length Scheme																					
Bevis Marks	Interim Cycle Lane																					
	Pedestrian Crossing Improvements																					
Lime Street (southern end only)	Experimental Traffic Order - Timed Closure Extension																					
	Transformative Change																					
Creechurch Ln, Bury & Mitre St	Pedestrian Priority																					
Wellbeing and Climate Change Resilience	Improvements to existing public spaces	St Helen's Bishopsgate Churchyard																				
		St Andrew Undershaft Churchyard																				
		Jubilee Gardens																				
		St Botolph Bishopsgate Churchyard																				
		St Peter Upon Cornhill Churchyard																				
	Green Streets	Creechurch Lane/Stoney Lane/Rood Lane/Philpot Lane																				
		Billiter Street																				
		Eastcheap																				
	Climate Action Initiatives	Bevis Marks and Houndsditch SuDs																				
	Area wide tree planting	Implementation of 30 trees over 3 years																				
Activation and Engagement	Across the City Cluster, various locations.	Initial measures and activities																				
		Year 2 measures and activities																				
		Year 3 measures and activities																				

St Mary Axe

	Funding Strategy	Constraints	Opportunities	Dependencies	Timescales	Next Steps
Phase A - Experimental/interim changes Timed closure to motor vehicles implemented through an Experimental Traffic Order	<ul style="list-style-type: none"> TfL Liveable Neighbourhoods fund (TBC) S106 REVEAL 	<ul style="list-style-type: none"> Outcome of Tulip Public Enquiry (if consented, Tulip construction and access from St Mary Axe) 	<ul style="list-style-type: none"> Consider for site for Cooling and Greening scheme 	<ul style="list-style-type: none"> Experiment decision and associated traffic reduction levels support the Zero emission aspirations and City Cluster security strategy 	2021-23	Stakeholder engagement to resume over different options available.
Phase B – Permanent, transformative changes Changes to street design and layout, enhanced public realm	<ul style="list-style-type: none"> S278 S106 	<ul style="list-style-type: none"> Outcome of Tulip Public Enquiry (if consented, Tulip construction and access from St Mary Axe) 1 Undershaft construction and access 	<ul style="list-style-type: none"> Seek to incorporate infiltration SuDs into design 	<ul style="list-style-type: none"> Experiment decision impact on streetscape design 	2023-29	Yearly reviews to consider updated constraints from development and funding opportunities

St Mary Axe		2021/22				2022/23				2023/24				2024/25				2025/26			
		Q1	Q2	Q3	Q4																
Experimental Timed Closure (Phase A)	Issue Report		*																		
	Stakeholder Engagement																				
	Gateway 5 (ETO Approval)			*																	
	ETO Implementation																				
	ETO Monitoring and Consultation																				
	Gateway 5 (ETO Decision)								*												
Permanent Transformative Change (Phase B)	Year Review for Phase B works																				
	Scheme Design																				
	Scheme Impementation																				
Other Noteable Timescales	The Tulip Public Enquiry Decision																				
	1 Undershaft Construction																				to 2027

Leadenhall Street

	Funding Strategy	Constraints	Opportunities	Dependencies	Timescales	Next Steps
Phase A – Experimental/interim changes Point closure to motor vehicles implemented through an Experimental Traffic Order	<ul style="list-style-type: none"> TfL Liveable Neighbourhoods fund (TBC) S106 REVEAL 	<ul style="list-style-type: none"> Outcome of Bishopsgate streetspace appeal and future plans 	<ul style="list-style-type: none"> Consider for site in Cooling and Greening scheme 	<ul style="list-style-type: none"> Experiment decision and associated traffic reduction levels support the Zero emission aspirations, City Cluster security strategy and cycle route 	2021-23	A G1/2 report to PSC/S&W A G3/4 report to PSC/S&W Options to be explored taking the constraints listed into consideration
Phase B – Permanent Transformative Change Changes to street design and layout, enhanced public realm	<ul style="list-style-type: none"> S278 S106 CIL/ Central 	<ul style="list-style-type: none"> 1 Undershaft construction Any delay to construction of developments expected to be completed 2023 	<ul style="list-style-type: none"> Seek to incorporate infiltration SuDs into design 	<ul style="list-style-type: none"> Experiment decision impact on streetscape design 	2023-29	Yearly reviews to consider updated constraints from development and funding opportunities

Leadenhall Street		2021/22				2022/23				2023/24				2024/25				2025/26			
		Q1	Q2	Q3	Q4																
Experimental point closure (Phase A)	Gateway 1/2		*																		
	Stakeholder Engagement																				
	Gateway 3/4			*																	
	Gateway 5			*																	
	ETO Implementation																				
	ETO Monitoring & Consultation																				
	Gateway 5 (ETO Decision)									*											
Permanent Transformative Change (Phase B)	Scheme Design																				
	Scheme Impementation																				
Other Noteable Timescales	6-8 Bishopsgate construction																				
	40 Leadenhall construction																				
	1 Leadenhall construction																				
	100 Leadenhall St construction																				to 2027

Fenchurch Street

	Funding Strategy	Constraints	Opportunities	Dependencies	Timescales	Next Steps
Interim Pavement Widening (western end)	<ul style="list-style-type: none"> S106 	<ul style="list-style-type: none"> Outcome of Bishopsgate streetspace appeal and future plans Access requirements to 70 Gracechurch St 	-	-	2022	Develop scheme design
Transformative change for full length of street	<ul style="list-style-type: none"> S278 S106 	<ul style="list-style-type: none"> Completion of Fenchurch Street development construction 	<ul style="list-style-type: none"> Seek to incorporate infiltration SuDs into design 	-	2023-26	Yearly reviews to consider updated constraints from development and funding opportunities

Fenchurch St		2021/22				2022/23				2023/24				2024/25				2025/26			
		Q1	Q2	Q3	Q4																
Interim pavement widening (western end)	Scheme Design																				
	Implementation																				
Full Length street scheme	Year Review for full scheme																				
	Scheme Design																				
	Implementation																				
Other Notable Timescales	40 Leadenhall St Construction																				
	50 Fenchurch St Construction																				
	70 Gracechurch St Construction																				

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