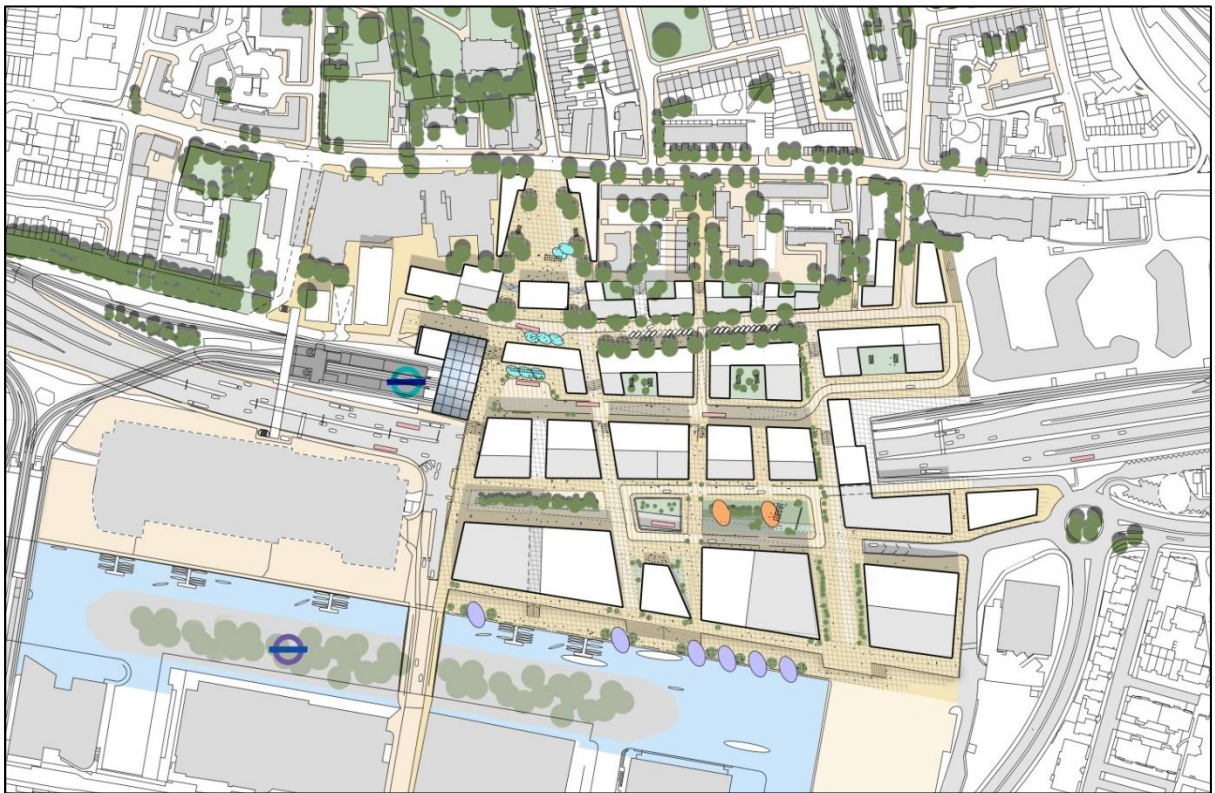




A1261 Aspen Way Decking at Poplar

Strategic Outline Business Case



Date: March 2017

Version: 4.0

Document control

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Executive Summary

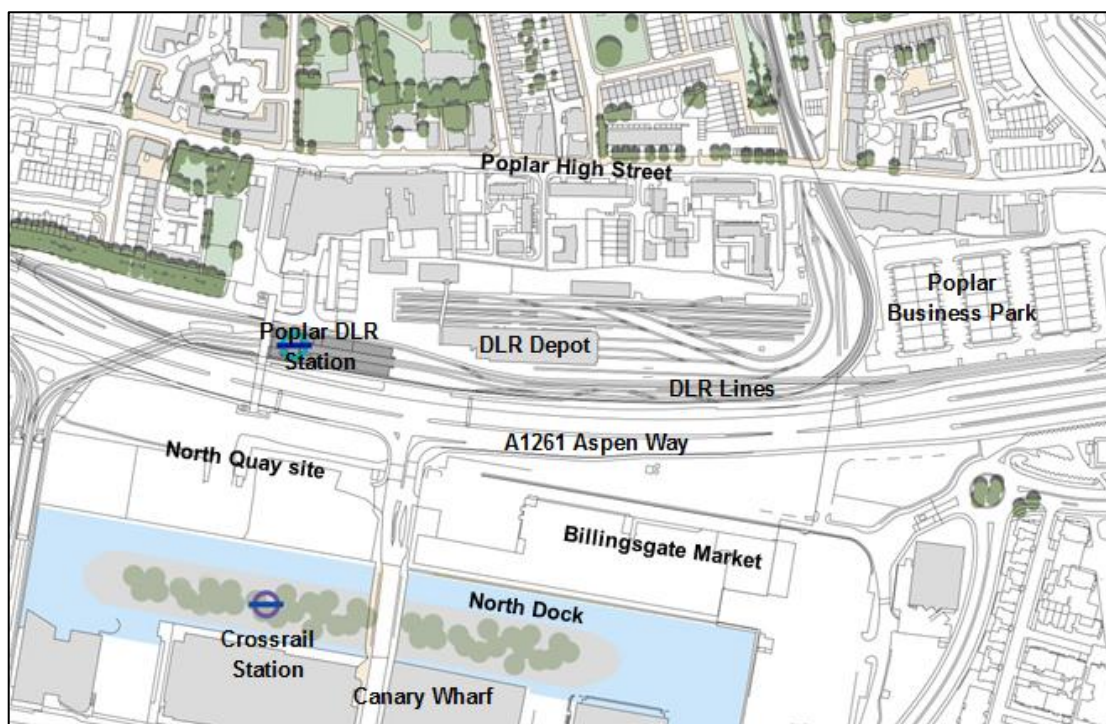
Purpose of this document

1. Transport for London (TfL) is proposing a major road-decking scheme on the A1261 Aspen Way at Poplar. The proposal is to build a deck over the A1261 Aspen Way and surrounding land across an area stretching for over 200m from Poplar High Street to North Dock.

About the scheme

2. The scheme has been identified following the recommendations of the Roads Task Force (RTF)¹. This scheme is one of four schemes along key road corridors which form part of the second tranche of opportunities identified by TfL to address movement and place based challenges on the Transport for London Road Network (TLRN), and which have been subject to initial feasibility work. All four schemes are at an early stage in the development cycle and further, more detailed design and assessment will need to be undertaken in due course.
3. As shown in Figure 1 below, the proposed deck would extend for over 200m from both north to south and east to west. It would extend from Poplar High Street in the north to North Dock in the south, and from Upper Bank Street in the west to Poplar Business Park in the east. The deck would be constructed above the current DLR depot, existing DLR lines, the A1261 Aspen Way and the site that currently houses Billingsgate Market. The operations of the DLR lines and depot, as well as the A1261 would remain as at present underneath the deck.

Figure 1: Proposed location of decking of the A1261 at Poplar

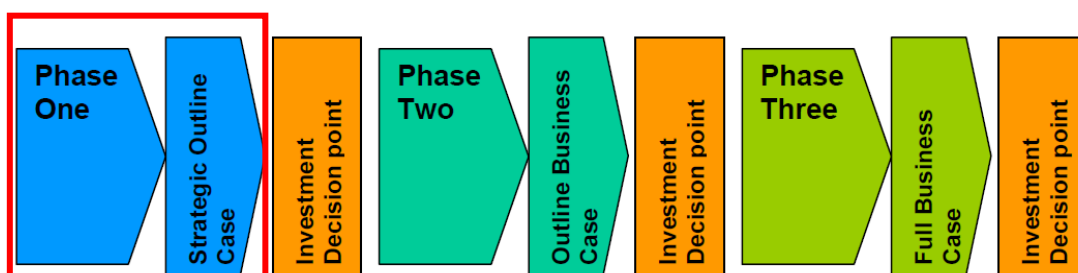


¹ See [‘The Vision and Direction for London’s Streets and Roads’](#), Roads Task force, July 2013

4. The A1261 Aspen Way decking would unlock a transformational change for the local area by tackling problems of severance, the inhospitable local environment and the current poor prospects for redevelopment. The A1261 Aspen Way decking scheme has the potential to enable highly significant development of much-needed housing and commercial space to take place on development sites around Poplar

About this document

5. This document is the Strategic Outline Business Case (SOBC), the first phase of the decision making process. The SOBC sets out the strategic fit for the scheme and scopes out the initial intervention proposal.



6. This SOBC is presented in accordance with the DfT's Business Case Guidance which stipulates a five case model to developing transport business cases which considers whether the scheme:
- is supported by a robust case for change that fits with wider public policy objectives – the '**strategic case**';
 - demonstrates value for money – the '**economic case**';
 - is commercially viable – the '**commercial case**';
 - is financially affordable – the '**financial case**'; and
 - is achievable- the '**management case**'.

The Strategic Case

7. The Strategic Case demonstrates the need for an intervention, the problems identified, and the possible solutions to the problems. It is set out in eight parts, as summarised below.

PART A: MAXIMISING THE ECONOMIC POTENTIAL OF LONDON THROUGH SUPPORTING SUSTAINABLE GROWTH

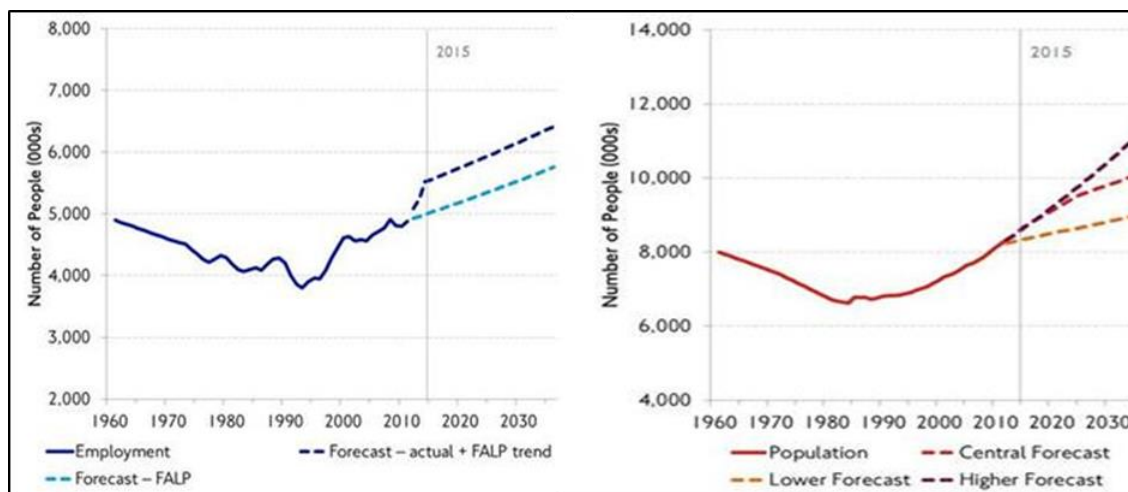
The future of the UK's economic performance lies in improving the performance of its cities. In particular, London is the driver of the UK's economic growth

8. Cities drive the UK economy – they are home to 54% of the population, generating 60% of its GVA, containing 53% of all businesses and 72% of all highly skilled

workers² within just 9% of the UK's land area. London contributes an estimated 21% of total UK tax revenues³.

9. London's rapidly growing population is linked to and necessary to its strong economic performance. Over the period 1991 to 2011, London's population increased by 1.4 million, enabling the number of jobs in the capital to increase by 900,000. London's population surpassed its 1939 peak of 8.6 million in early 2015 and is forecast to reach 10.1 million by 2036, as Figure 2 below shows.

Figure 2: Historic trends and projected growth in London's employment and population to 2036



10. Since 1994, on average, 29,700 new jobs a year have been created within London. This employment growth is expected to continue. London Plan forecasts suggest that the number of jobs in London is expected to grow by 1.4m between 2011 and 2036. This growth is expected to be largely concentrated within central London, as businesses take advantage of agglomeration and clustering benefits. This is also shown on Figure 2 above.
11. Recent trends suggest that the actual level of growth could be significantly greater; therefore London would make a greater contribution to the success of the wider UK in terms of its productivity and competitiveness.

London is ranked alongside New York as the most competitive city in the world⁴, but its success cannot be taken for granted

12. Recent evidence suggests some deterioration in London's international rankings, including cost of staff (a result of a high cost of living) and quality of life. The housing issues that lie behind these factors are fundamental to maintaining London's competitiveness and will be exacerbated by continued population growth.

² [City by City](#), Centre for Cities.

³ [London's Finances and Revenues](#), City of London Corporation & CEBR, November 2014.

⁴ based on the Global Financial Competitive Index assembled by Longman Finance and the Qatar Financial Centre Authority, 2015



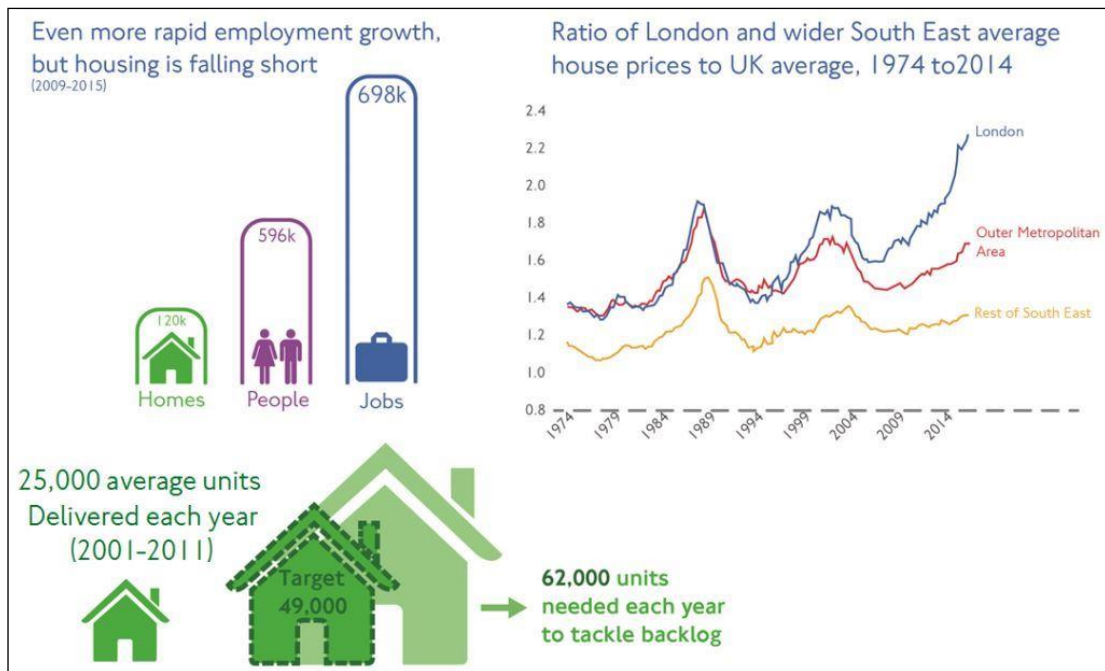
London must offer an attractive public realm to remain competitive

13. Some of the most successful cities around the world have invested in improvements to the quality of the urban realm alongside investment in public transport capacity. Providing cover over major roads helps to maintain road network functioning while delivering higher-quality places where people will want to live and socialise.
14. By contrast, failing to invest in the road network while congestion is increasing will lead to a deteriorating quality of place. This could make London a less attractive location for footloose companies to be based, reducing investment and the economic success of the city.

London's future economic growth depends on having an increased housing availability to support labour supply

15. London's projected employment and population growth provide an opportunity for further driving the UK's economy, but also present a considerable challenge. As Figure 3 shows below, the Greater London Authority (GLA) estimates that 49,000 new housing units need to be built each year for housing supply to keep up with the growth in demand. An even higher figure of 65,000 new housing units are estimated to be needed every year up to 2031 if the current gap between supply and demand (which has built up due to the failure in recent years to construct sufficient housing) is to be eliminated.

Figure 3: Summary of housing supply and affordability issues facing London



London must unlock new development opportunities to support delivery of new housing and jobs

16. London's supply of new land to support housing and jobs growth is limited and the development potential of brownfield land must be maximised. An innovative approach to unlocking this land to support new development is therefore urgently required if the Capital's housing needs are to be met.

17. A number of key sites with potential to host high levels of housing growth, such as Poplar and the northern part of Canary Wharf, are currently under-utilised due to the negative impacts of busy roads and DLR infrastructure on public realm, connectivity and environmental quality. By unlocking these areas, several thousand new homes and large numbers of jobs could be created.

PART B: THE PROBLEMS AFFECTING TLRN CORRIDORS IDENTIFIED

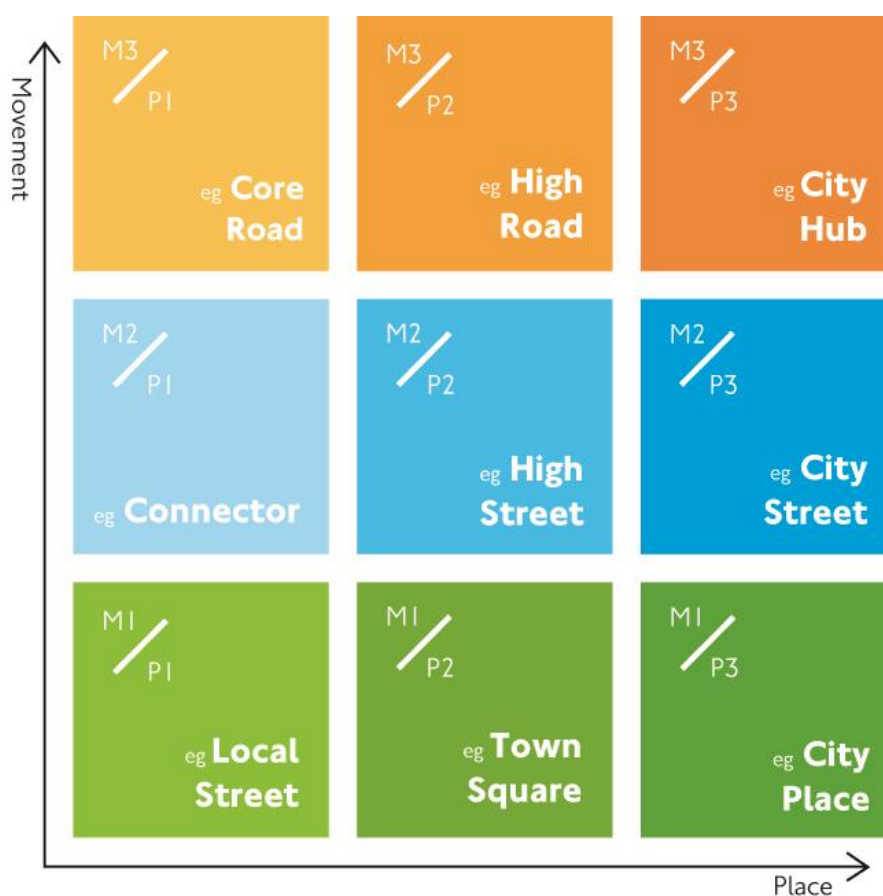
The Mayor's Roads Task Force (RTF) has set the vision for London's roads and streets

18. The RTF report set out three core aims:
- To enable people and vehicles to move more efficiently on London's streets and roads;
 - To transform the environment for cycling, walking and public transport; and
 - To improve the public realm and provide better and safer places for all the activities that take place on the city's streets, and provide an enhanced quality of life.
19. Particular objectives from the RTF report of relevance to this business case include:
- Release land at the surface for development;
 - Improve the public realm;
 - Create new green space;
 - Provide better facilities for pedestrians, cyclists and public transport users;
 - Reduce severance;
 - Reduce the negative impacts of roads on noise and air quality.

TLRN roads have a movement function and a place function – the relative importance of each function varies

20. The road network in London serves a wide range of functions. At one end of the scale, core roads and main corridors form the TLRN function as the principal routes for movement of vehicular traffic.
21. At the other end of the scale, streets with lower traffic flows often have a primary 'place' function. TfL and boroughs need to work together to find the appropriate balance between the movement and place demands on roads and streets.
22. The Roads Task Force report identifies nine typologies of road corridors or streets that reflect whether they play a strategic or local movement or place function. These nine street types are shown in the matrix below at Figure 4. Traffic levels can affect the vitality of town centres and quality of place and life through creating severance, noise and air pollution.

Figure 4: The RTF street types matrix

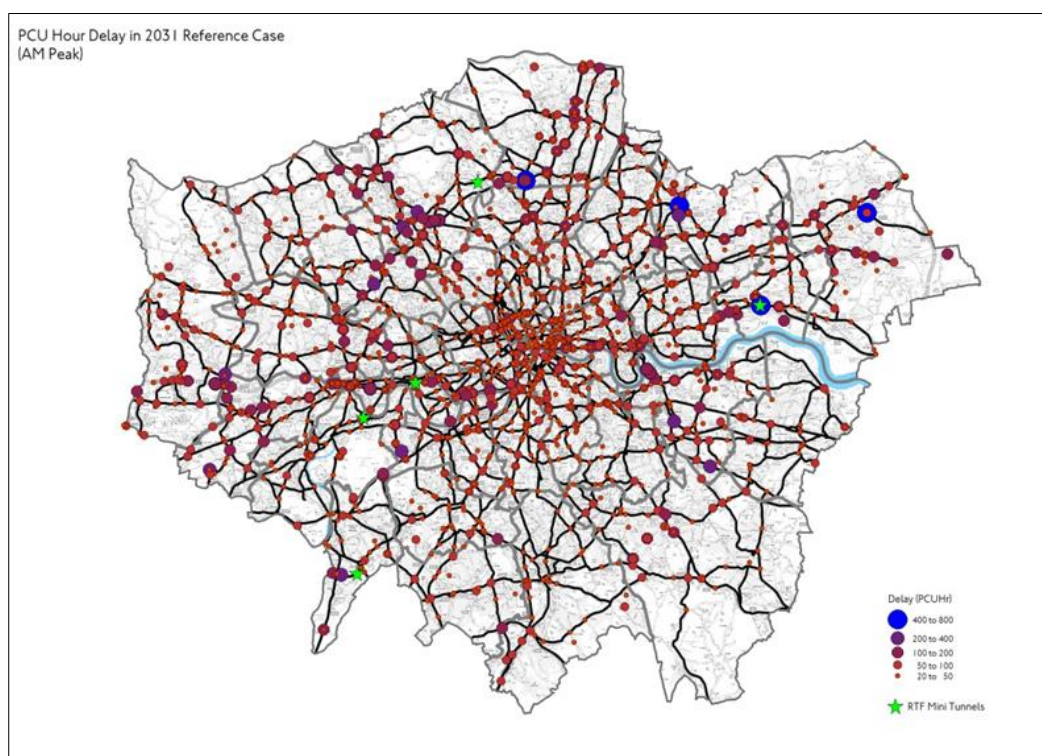


23. Following the publication of the RTF's report, TfL undertook a series of studies to identify opportunities for decking over or tunnelling under roads at a number of locations around London in order to unlock development opportunities.
24. The initial phase of work identified 70 potential locations, and sifting work identified 15 locations suitable for high level feasibility work. This feasibility work identified nine locations with the potential to make a significant contribution to achieving the aims and objectives of the Roads Task Force. Further feasibility work was carried out for five of these locations during 2015, resulting in the production of a Strategic Outline Business Case for each scheme. A second phase of the remaining four schemes has been developed over 2015 and early 2016, and A1261 Aspen Way Decking is one of this second tranche of schemes.

TLRN traffic levels will increase significantly in future: without infrastructure interventions, this will lead to both worsening congestion and impacts on quality of life

25. As shown below in Figure 5, there will be increasing demand for vehicle travel. On many corridors, delays in vehicle traffic, including buses, are forecast to worsen, particularly at junctions. This will significantly affect quality of life for those living and working near these road corridors, leading to higher levels of noise and air pollution, worsening of existing severance, and having substantial negative impacts on health. In turn, these impacts will make locations along the TLRN, including A1261 Aspen Way, less attractive for development.

Figure 5: PCU Hour delay in 2031 reference case



There has been extensive recent investment in rail public transport, but similar levels of investment have not been made to the road network in London

26. To enable the city to grow, and to continue to succeed economically, London will require investment to increase the capacity and efficiency of its road-based and rail, underground, DLR and tram systems. If this investment is not forthcoming, congestion will worsen and levels of crowding on public transport systems will increase. This will lead to longer and less predictable journey times for London residents and in-commuters from the rest of the South East. These delays cause an economic cost and would reduce the attractiveness of London as a place to live and work.
27. To address the challenges of growth, a planned 70 per cent increase in rail capacity through Tube upgrades, Crossrail and Thameslink programmes is underway. This is likely to aid modal shift from private vehicles to rail but is not sufficient by itself to address London's road congestion issues.
28. A project such as the A1261 Aspen Way Decking scheme requires substantial infrastructure investment. However, despite the fact that efficient travel by road is vital for the proper economic functioning of London, and despite vehicle traffic's 36 percent mode share in London, similar levels of investment to that seen for public transport have not been made to the Capital's road network.⁵
29. As the population of London grows, congestion on the TLRN will increase. So London's growing population will continue to strain TfL's strategic road network as

⁵ Compared to 8 percent for tube/DLR, and less than 5 percent for rail. Source: Three year average data for mode share of trips originating in all London boroughs, 2011-2014, London Travel Demand Survey.

car-dependency remains a key issue in outer London. In particular, this will lead to significant increases in congestion on key strategic core roads into London, including the A1261 Aspen Way which is forecast to experience some of the highest increases, and delay at junctions and other bottlenecks as illustrated above in Figure 5.

PART C: OBJECTIVES FOR ACTION FOR IMPROVEMENT ON TLRN CORRIDORS

30. **Any proposal seeking to reduce congestion and strike a better balance between the movement and place function of a road must also comply with, and seek to meet, wider public policy objectives.**
31. These arise from two key sources, the Mayor's Transport Strategy and the Roads Task Force report 'Vision for London's Roads and Streets'.⁶
32. The Mayor's Transport Strategy (MTS) sets out six goals for transport in London:
 - Support economic development and population growth;
 - Enhance the quality of life for all Londoners;
 - Improve the safety and security of all Londoners;
 - Improve transport opportunities for all Londoners;
 - Reduce transport's contribution to climate change, and improve its resilience; and
 - Support delivery of the London 2012 Olympic Games and its legacy.
33. The Roads Task Force Vision sets out the following core objectives:
 - To enable people and vehicles to move more efficiently on London's streets and roads;
 - To transform the environment for cycling, walking and public transport; and
 - To improve the public realm and provide better and safer places for all the activities that take place on the city's streets, provide an enhanced quality of life and help to unlock development and deliver new homes.
34. The RTF vision identified that measures including fly unders, over-decking and tunnels had the potential to address the following objectives:
 - Address congestion;
 - Reduce severance;
 - Enable improvements for sustainable modes and public realm on the surface; and
 - Unlock development

⁶ Roads Task Force, July 2013
MAYOR OF LONDON



PART D: THE APPROACH TAKEN BY THE ROADS TASK FORCE TO ADDRESS TLRN CHALLENGES

35. A key recommendation of the RTF report was that the potential of major highway interventions on the TLRN such as tunnels and ‘fly unders’ should be investigated to determine the role they could play in achieving the vision for London’s roads and streets across the strategic highway network.

A process of prioritisation has been adopted, with a long list of 70 locations assessed using Multi-Criteria Analysis to identify at which locations tunnel, flyunder and decking solutions would deliver the greatest benefits

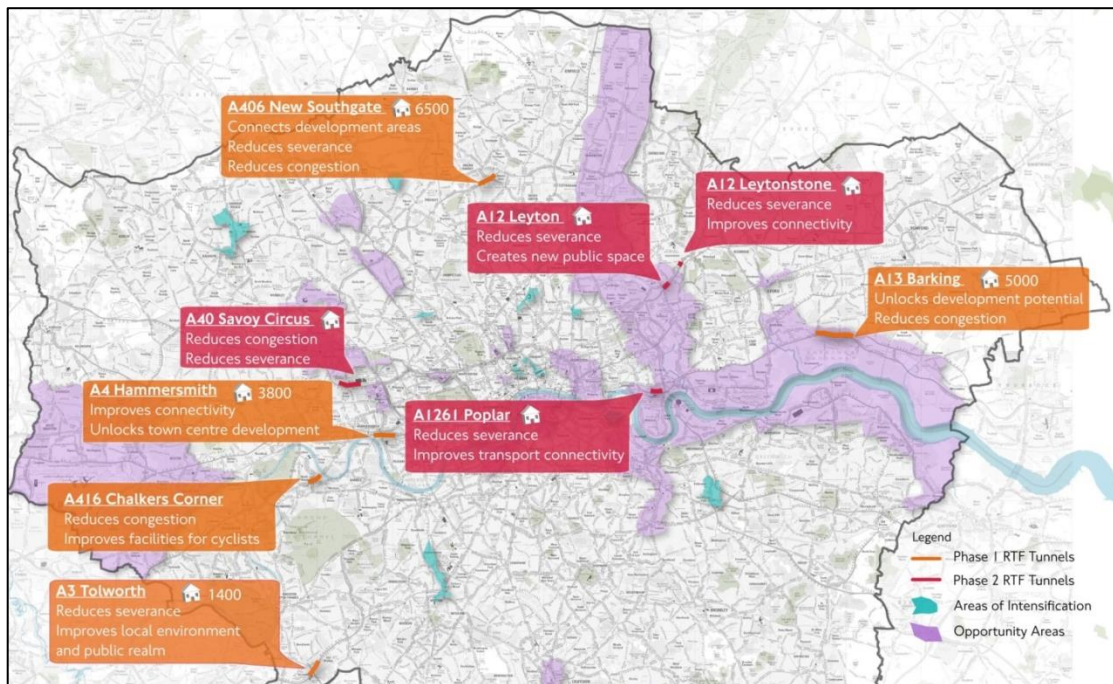
36. From an initial list of approximately 70 locations, through a Multi-Criteria Analysis (MCA) a shortlist of fifteen sites was identified. These sites were identified as having sufficient potential for initial feasibility studies. A combined score was developed from SAF⁷ and RTF appraisals. For each identified site, the following was also investigated:
- Potential intervention types;
 - Engineering feasibility;
 - Transport impact for all users including those travelling by car, foot, cycle and public transport;
 - Local and strategic environmental impacts including on visual amenity, noise and air quality;
 - Level and quality of enabled development;
 - Likely programme;
 - Route to consent; and
 - Cost of delivery

⁷ TfL Strategic Assessment Framework (SAF) is a tool that allows planners, managers and sponsors across Transport for London (TfL) to assess projects and programmes using a set of strategic criteria. SAF is used as part of the process of developing projects and programmes within TfL.



From a short list of 15 schemes, nine have been taken forward for further feasibility work. The Poplar decking scheme is one of these nine

Figure 6: The locations of the nine RTF tunnel/decking schemes



37. As part of a rolling feasibility assessment programme, five initial locations were taken forward for further assessment in 2015. These five locations are:
 - A13, Barking Riverside
 - A3, Tolworth
 - A316, Chalkers Corner
 - A4, Hammersmith
 - A406, New Southgate
38. A further four locations have been taken forward in 2015/16. These four locations are:
 - **A1261, Poplar**
 - A12, Leyton
 - A12, Leytonstone
 - A40, Savoy Circus
39. All nine schemes are shown at Figure 6 above.

PART E: THE PROBLEMS IDENTIFIED ON THE A1261 AT POPLAR

The A1261 is a major road linking east and central London, carrying heavy and strategically important traffic flow. However, it exerts a strongly negative impact on the area around it, contributing to the stark severance between Canary Wharf and Poplar

40. The A1261 forms part of the Transport for London Road Network (TLRN). Constructed in the early 1990s to support the redevelopment of London's docklands, it links central London to east London and Essex via the A13. The section between the Isle of Dogs and Poplar is known locally as A1261 Aspen Way. It has become an important link in London's strategic road network, carrying Average Annual Daily Traffic (AADT) flows of 76,000, approximately 6% of which are Heavy Goods Vehicles.
41. A1261 Aspen Way runs alongside the tracks of the Docklands Light Railway (DLR). The DLR infrastructure in this area also includes Poplar Station and Poplar Depot to the north of the tracks.
42. Combined, the A1261 Aspen Way and DLR infrastructure create a significant barrier between Poplar to the north and Canary Wharf to the south. The only way of moving between these two areas on foot or bicycle is to use the Poplar Footbridge, on the western side of Poplar station, which requires climbing up and down 50 steps, or taking two lifts.
43. Poplar and Canary Wharf are highly divided communities. Canary Wharf is one of the most important employment centres in the UK, home to many high-profile companies with a worldwide profile, and employing over 100,000 people. It is also identified as a Major Town Centre within the London Plan⁸, with a growing retail and leisure offering. From 2018, it will be home to a station on Crossrail, further improving its public transport services and stimulating further development in the area.
44. By contrast, Poplar is a low-rise, residential community that performs poorly on many socio-economic outcomes. It has seen little regeneration and has very limited retail and commercial facilities. Access from Poplar into Canary Wharf by walk and cycle is limited due to the severance caused by A1261 Aspen Way and the DLR.
45. In addition to creating severance between Poplar and Canary Wharf, the A1261 Aspen Way as a busy road inflicts considerable noise and air pollution on the area around it.
46. The A1261 Aspen Way Decking at Poplar proposals centre on the area adjacent to Poplar Docklands Light Rail (DLR) station in the London Borough of Tower Hamlets (LBTH) and comprise various options for the decking of the A1261 and DLR line, station and depot in order to better connect the area to Canary Wharf.

⁸ Mayor of London: London Plan, consolidated with changes, March 2015



PART F: OBJECTIVES FOR THE A1261 AT POPLAR AND OPTIONS IDENTIFIED

Building a deck over A1261 Aspen Way would improve local north to south connectivity, urban realm and environment

47. The A1261 Aspen Way causes stark severance between Canary Wharf and Poplar, with significantly divergent socio-economic outcomes on either side of the road. Moving from one side of the road to the other is currently extremely difficult, and this has contributed to the two areas failing to integrate, reducing the opportunities available to Poplar residents as well as Canary Wharf's potential as a Major Town Centre for east London.
48. The proposed scheme would create new routes for pedestrians and cyclists between Poplar and Canary Wharf, linking to major destinations including Canary Wharf Crossrail station and Wood Wharf. This would encourage more use of sustainable modes of transport as well as vastly improving the connectivity of the local area.
49. The scheme would also help address issues of air quality, noise and residential amenity, all of which would encourage new development and allow it to better integrate with the existing built environment in Canary Wharf and Poplar.

There is a need to improve surface connectivity without impacting upon the capacity or functionality of the A1261 corridor and DLR

50. The A1261 forms part of London's strategic network and carries high volumes of traffic between central London, London's docklands and Essex. Whilst there is a need to address existing and future problems caused by the road, it is necessary to protect the capacity and strategic network functionality of the road corridor. Failure to do so would cause significant congestion and a drop in connectivity that would reduce the redevelopment potential of Poplar and Canary Wharf.
51. The DLR lines and depot at Poplar are essential to the performance of the DLR network, and it is not possible to relocate them. This scheme offers the opportunity to house these operations under the deck while potentially offering improvements to the DLR infrastructure such as a new entrance to Poplar station. The severance caused by the DLR would thus be reduced without impacting upon its vital transport role.
52. The construction of this decking scheme provides a good solution to address the negative impacts of these transport corridors while protecting their vital strategic movement function.

Options identified

53. The three options for Poplar propose four (Option 1) or three (Options 2 and 3) decking structures over the A1261, DLR line and DLR depot developing connections between Poplar to the north and Canary Wharf to the south. The scope of the options and level of connectivity between the adjacent areas is determined by the inclusion or otherwise of the adjacent Billingsgate site which is incorporated into the Option 1 masterplan but not 2 or 3. Option 1 is therefore the preferred option.
54. The scale of the proposed decking structures at Poplar means that significant further work is needed to identify the optimal structural and construction solution. The

indicative cost estimate prepared for building the decks for the full Option 1 is £1.6bn, once optimism bias is included. The level of optimism bias applied reflects the high degree of uncertainty around the foundation solution required for the level of proposed development on this site, as well as design constraints set by TfL, including retaining the A1261 as a live roadway and the DLR through Poplar as operational during construction. Efficiencies may be realisable by a more substantial reconfiguration of TfL's road and DLR assets in this area and/or by extended closures of these facilities during construction.

PART G: HOW THE DECKING OPTION ADDRESSES THE ISSUES AND CHALLENGES

A solution has been identified that addresses the issue of severance between Poplar and Canary Wharf while retaining the vital strategic movement function of A1261 Aspen Way

55. The option recommended is Option 1 on the basis that it best improves accessibility to Poplar and maximises transport orientated development and public realm opportunities. Option 1 has the potential to support Mayoral ambitions via the proposed Opportunity Area Planning Framework for the Isle of Dogs and local aspirations to address severance and tackle social deprivation. In doing so, Option 1 minimises the funding gap relative to other options, providing an arrangement can be reached with the owners of the Billingsgate site (London Borough Tower Hamlets and the City of London (both have an interest in the site), and with London Borough Tower Hamlets in relation to retention of its business rates revenues and HM Treasury in relation to site stamp duty receipts.
56. Further issues to be considered more detailed assessment of the size of impacts on Poplar station and DLR lines, potential reconfiguration options of these assets to reduce decking construction cost, refinement of structural solutions, in particular foundation requirements, and master plans, detailed commercial assessment and engagement with stakeholders in the area, including local Government and Canary Wharf Group.
57. This scheme proposes to build a deck over a section of A1261 Aspen Way, including over the DLR tracks and depot. This deck would provide a direct route between Poplar and Canary Wharf for pedestrians and cyclists, providing a much more attractive alternative to the existing footbridge. As part of the scheme, new space for public realm improvements and new developments would be created.
58. The road layout on A1261 Aspen Way would not need to be altered in order to construct the deck; thus the strategic movement function of the road would not be affected. The solution would thus enable the negative impacts of the road to be greatly reduced while retaining the transport benefits of the road.
59. The option to provide a decked section of A1261 Aspen Way at Poplar has been shortlisted because it meets overall policy goals in the London Plan and the Mayor's Transport Strategy (MTS) while being practical to construct, environmentally beneficial and financially viable.
60. The primary purpose of the scheme is to improve the quality of the public realm and local connections by addressing the significant issue of severance between Poplar and

Canary Wharf. These environmental and connectivity improvements would help to further strengthen the vitality of Canary Wharf as a Major Centre in London, while providing an impetus for regeneration in the relatively deprived Poplar ward.

The A1261 Aspen Way decking scheme would unlock a transformational development of new housing and office space

61. By creating new land on top of the road and railway, as well as greatly increasing the viability of sites immediately adjacent to them, this scheme would unlock a potentially very large amount of development.
62. The proposed masterplan for this scheme envisages it containing more than 800,000 square metres of new development. If devoted entirely to employment, this could accommodate around 70,000 jobs. If devoted entirely to residences, almost 8,000 homes could be built. Although the split between commercial and residential development remains to be fully determined, it is expected that the development should contain significant quantities of both, creating a mixed-use neighbourhood offering a variety of opportunities and services.
63. In addition to development directly enabled by this scheme, the improved connectivity created by the deck would support the objectives of the Isle of Dogs and South Poplar Opportunity Area planning framework, which is currently under development. The scheme could therefore help to facilitate even more substantial growth across a wider area.
64. In addition to the benefits this new development would give in terms of meeting the demand for new housing and office space in London, contributions from these new developments could form a major element of the funding required to construct this scheme. This issue is discussed in depth in the Financial Case.

PART H: SCHEME FIT AGAINST STRATEGIC AND LOCAL POLICY, STRATEGIES, FRAMEWORKS AND OBJECTIVES

Overall, the A1261 decking scheme conforms to policy at all levels, helping to secure London and the UK's continued prosperity

65. Due to the role of the A1261 decking in addressing the challenges London faces, it makes a significant contribution to policy at all levels. At a National level the proposal strongly supports the intended outcomes in the DfT's priorities for the transport network. The scheme also supports London-wide and local policy – in particular in the Mayor's Spatial Development Strategy (known as the London Plan), the Mayor's Transport Strategy (MTS), and London 2050 Infrastructure Plan. It is also supportive of goals in local planning documents such as the London Borough of Tower Hamlets Core Strategy and Local Implementation Plan in addition to the Isle of Dogs and South Poplar Opportunity Area Planning Framework.

66. The key points arising from the Strategic Case can therefore be summarised as:

- The Option 1 based scheme would unlock a transformational amount of development in Canary Wharf and Poplar, making a major contribution to London's need for new homes and office space.
- The scheme would reduce the significant severance currently caused by A1261 Aspen Way, improving the local connectivity into Canary Wharf and opening opportunities for Poplar residents, who currently suffer from poor socio-economic outcomes.
- The scheme would combat the negative impacts of heavy traffic flows and congestion from A1261 Aspen Way by enclosing the traffic flow beneath the deck. This would allow for a transformation in the quality of the public realm and local environment.
- A1261 Aspen Way and the DLR are vital links in London's transport network, and it is important that their capacity and functionality be maintained. This scheme would enable their movement functions to be protected while significantly reducing their negative impacts.

The Economic Case

67. Based on Option 1, and in line with WebTAG guidance, cost-benefit analysis has been undertaken to assess the scheme's value for money. This has been undertaken using TUBA, a DfT compliant modelling appraisal tool.
68. Over the 60-year appraisal period, the decks (with development and DfT Values of Time) have a Net Present Value of £-2,644m (2010 prices), with a Benefit Cost Ratio of -1.13, representing 'poor' value for money.
69. However, these values do not take into account the substantial regeneration benefits of the scheme at a local and a London-wide level.
70. Although WebTAG guidance requires the reporting of a Benefit to Cost Ratio (BCR) this is not an appropriate metric by which to solely judge the scheme. It is important to note that the scheme has an additional purpose: to address severance, and by doing this it will unlock development potential in Poplar and Canary Wharf, enabling regeneration and the delivery of housing and commercial space.
71. Decking over the site would help to deliver significant amounts of new housing, jobs and GVA in the Isle of Dogs area.
72. The results of the additionality approach are summarised in Table 1 below.
73. In the 'do-nothing' reference case (without the deck) no homes would be delivered. The figures presented below show the benefits that could be delivered by the decks in addition to the 'do-nothing' scenario.

Table 1: Summary of additional impacts of Poplar decks (at London level)

Development and regeneration benefits of the decking option	Option 1
Net Additional homes – London level	600
Net Additional jobs (direct and indirect) – London level	10,550
GVA generated by additional jobs (direct and indirect) (£m PV)	5,050

*takes account of displacement effects

74. When deadweight, leakage and displacement effects are considered, the decks would enable delivery of 600 net additional dwellings at the London-level. When deadweight, displacement and multiplier effects are considered, the net additional employment that the decks would enable would be 10,550 jobs (direct and indirect). Alongside the indirect employment associated with this housing, this would generate a net additional GVA of £5,050m – at the London level.
75. These are significant economic benefits that would strengthen London's economy and boost tax receipts.
76. Realising this growth is dependent on the Borough of Tower Hamlets being supportive of planning policies for the Poplar area that support higher density development. These benefits are contingent on a level of housing delivery that would require higher density development at sites in the vicinity of the existing A1261, DLR line and DLR depot. However, they demonstrate potentially significant economic benefits for the London economy.

Other benefits could be quantified, such as improved quality of life, reduction in severance and improvements to the public realm

77. The scheme would also improve quality of life through an improved public realm and reduced severance and noise impacts, with additional associated economic impacts. These benefits will be quantified as part of the next stage of the appraisal process.
78. As part of further development of this business case, it is the intention to carry out a high level WebTAG compliant noise appraisal to assess the benefits of the decking scheme for local residents. There are no existing residential properties that would be affected by the decking.

The Financial Case

Redevelopment at the Poplar site will play a crucial role in funding the proposed scheme

79. TfL appointed a consortium of Mott MacDonald, Tony Meadows Associates (TMA) and Jones Lang LaSalle (JLL) to develop the decking options and estimate project

capital costs and funding potential. As part of this work JLL carried a comprehensive review of possible funding sources, in consultation with TfL, and advised on their potential scale.

80. It is estimated that the shortlisted Option 1 could facilitate delivery of 1,261 new homes and around 50,000 new jobs, owing to a large amount of office space proposed to be delivered as part of the decking scheme.
81. As part of their funding analysis JLL focused on examining both land ownership and redevelopment model and taxation mechanisms. The list of funding sources examined in detail was as follows:
- Residual land value (RLV) arising from TfL's partial ownership of development plots around the proposed scheme and RLV from 3rd party landholdings, if acquired by TfL;
 - Voluntary developer contributions;
 - Borough Community Infrastructure Levy (BCIL);
 - Incremental Business Rates (IBR);
 - Stamp Duty Land Tax (SDLT).
82. Given the early stage of the scheme, sources of funding are still indicative as no consultations with the local authorities or the central Government has yet taken place to assess the scale of their potential contribution. Figures presented below represent a maximum value that could be secured from new development using the various sources. It is clear from the analysis that a workable funding package for the decking scheme would rely heavily on the ability to extract RLV from the surrounding area redevelopment and on IBR income.

A combination of estimated RLV and IBR proceeds could cover around 95% of the scheme's capital cost excluding maintenance and financing costs

83. The identified sources of funding could produce enough funding to pay for the capital cost of the deck, assuming that all the identified funding streams materialise. Table 19 below presents the amount of funding as % of the project construction cost:

Table 2: Summary of funding sources explored

Availability	Funding Sources	£m, 2015/16
	Residual Land Value	790
	Voluntary Developer Contributions	-
	Borough CIL	20.3
	Incremental Business Rates	785
	Stamp Duty Land Tax	65.3
	Potential Maximum Funding Total	1,661
	Capital Project Cost	1,653
	Funding as % of Cost	>100%



Funding option that could make contribution, subject to borough approval and relevant central Government policies carrying on

Funding options that could make contribution, but require central Government support and/or face some implementation challenge

84. If the development does not progress or progresses at a slower rate, there will be a knock-on effect on whether/when the funding will become available and this presents a degree of risk. Further work will be carried out by the TfL Commercial Development team to assess whether the scheme's costs could be brought down and the development-related funding could be increased in order to make the project both self-funding and self-financing.
85. TfL would face an up-front project expenditure which would be repaid from a mix of the funding sources identified above. The next step in the project assessment process is to identify how much upfront financing each of the identified funding sources could support, given the levels of uncertainty associated with the development timescales and the local and central Government's support for the use of BCIL, IBR and SDLT.
86. TfL could potentially use a privately financed solution to deliver the decking project. This could take the form of the private sector taking on the responsibilities for design, construction and other risks of the project, in return for a series of payments by TfL. The risk transfer to the private sector would however come at a higher financing cost. The level of the financing cost would be dependent on the appetite of the private sector for this type of a road project.
87. Alternatively, the public sector could borrow. The rate of public sector borrowing is usually lower than the private sector's. Detailed assessment of the most appropriate financing structure will be carried out once the TfL Commercial Development finalises its assessment of the redevelopment opportunity at Poplar.

The Commercial Case

- 88. This case sets out the commercial structure, the accounting treatment and procurement approach for this scheme.
- 89. The scheme is being promoted by TfL. All potential suppliers will be required to consider the Mayor of London's Responsible Procurement Policy in their bid as part of any Invitation to Tender (ITT) for the design and build contract.

TfL has substantial experience of delivering complex highway schemes, which will be applied to the procurement, funding and financing of this scheme

- 90. TfL has significant experience in the procurement and construction of major infrastructure projects, such as Crossrail, Docklands Light Railway extensions and major station schemes such as Kings Cross St Pancras. Examples of significant highway improvements delivered by TfL include the Chiswick Bridge refurbishment and the Cycle Superhighways programme.
- 91. It is expected that the construction stage of the project would be led by TfL and where involving infrastructure owned by other stakeholders, these parts of the scheme will be delivered in partnership.

TfL can achieve efficiencies by delivering the A1261 decking scheme within a wider programme of tunnel/decking schemes and linked into a wider highway capital investment programme

- 92. TfL is undertaking and proposing a range of large capital infrastructure projects that involve procurement of skills and services that will all be highly relevant to approaches that will need to be adopted for this scheme. For example, the Cycle Superhighways, Better Junctions programme and Roads Modernisation Plan along with design and planning work associated with the planned Silvertown Tunnel and other proposed Thames river crossings has led to an increase in skills associated with large scale highway engineering and construction traffic management.
- 93. The scheme is being proposed as part of a wider programme of Roads Task Force (RTF) schemes at a range of locations throughout London. If these projects are progressed, some significant economies and efficiencies of scale could be achieved as a result of co-ordinated delivery.

TfL utilises supply chains from across the UK – ensuring the construction of the scheme could support employment outside London

- 94. Although TfL schemes take place within the Capital, the wider benefits to the UK economy are extensive, with over 60,000 jobs estimated to be supported by services TfL procures from outside of London. The construction of the scheme would add to the pipeline of capital investment that supports jobs across the UK.
- 95. The procurement strategy for this stage of the project will be refined and improved as the scheme is developed further.

The Management Case

96. The purpose of the Management Case is to assess whether a proposal is deliverable. It reviews evidence from similar projects, and sets out the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

TfL will make full use of best practice within the company and more widely from industry

97. TfL has extensive experience in developing, promoting and implementing significant infrastructure projects. This ranges from modifications to existing infrastructure (such as repairs to the A4 Hammersmith flyover, modernisation of the London Underground, extensions to Tramlink and DLR) to major schemes such as Crossrail. TfL also has demonstrable experience in delivering major road junction improvements, pedestrian and cycle schemes, and wider public realm improvements. TfL will continue to actively incorporate best practice and experience from these schemes into the development of the Poplar decking project.
98. The proposed decking of the A1261 is part of the wider Roads Task Force programme sponsored by the Managing Director of TfL Planning. There are a number of programme linkages with other schemes being taken forward as part of the RTF Key Corridor Interventions Programme, which will present opportunities to share best practice as these schemes progress.

A comprehensive and robust project management framework will be applied, helping to ensure scope, cost and benefits are controlled

99. TfL uses a number of mechanisms to improve the management of its major projects in order to help ensure the objectives and benefits of a scheme at inception are realised following implementation. TfL's project management framework, known as 'Pathway' provides consistency in approach and the tools required for planning and delivery teams, whilst retaining flexibility in its application to manage and control a project. Embedded into Pathway is a delivery assurance process using stage gates, upon which TfL utilises industry-leading external expertise to review and challenge all aspects of the project.

Rigorous assurance processes will provide close scrutiny and challenge of risk management and decision-making throughout the project

100. TfL also receives project review and assurance from the Independent Investment Programme Advisory Group (IIPAG), which report to the Mayor of London concerning TfL's Investment Programme. This includes all maintenance, renewal, upgrades and major projects (excluding Crossrail).
101. TfL has the option of establishing an Independent Peer Review Group (IPRG). This approach has been followed for other major TfL projects, so given the scale of the Poplar decking project, this could warrant a similar approach. If appropriate, an IPRG can be set up for the scheme if further development of the project is approved. Initially it could oversee the refinement of delivery sub-options and review engineering feasibility studies and scheme appraisal undertaken.
102. Stakeholder engagement has already been undertaken and there is strong support for

the scheme from the Borough of Tower Hamlets. A future programme of stakeholder engagement as the scheme progresses has been developed.

- I03. The current anticipated key milestones for the project are shown in
- I04. Table 3 below. Any changes to baseline scope, cost and schedule will be reviewed, impact assessed and approved following the change control process.

Table 3: Key project development milestones

Milestone Description	Date
Further feasibility – scheme development, modelling, construction methodology, finance and funding options	2015 -2016
Planning, Design, Approval and Procurement	2017 -2021
Construction and Testing	2021 – 2022
Operation	2022

Conclusions

There are very strong benefits of decking over the A1261 and DLR at Poplar, and TfL should continue to progress and develop this scheme

- I05. The proposed decking scheme at Poplar based on Option 1 would unlock a transformational development and unite one of London's most successful employment districts with one of its most deprived. It would encourage sustainable transport, improve the urban realm and better link communities. And it would protect the key transport infrastructure in this area, while reducing its dominance over the local landscape.
- I06. The SOBC for the decking of the A1261 and DLR at Poplar demonstrates that across the Five Case Model:
- There is a clear robust case for change for an intervention to address existing issues of severance, poor connectivity and environmental problems caused by the A1261 at Poplar. This 'strategic case' is closely related to national, London-wide and local policy objectives, with particular reference to the London Plan, the Mayor's Transport Strategy and the Roads Task Force Vision document.
 - The scheme assists in the economic regeneration of Poplar and the continued growth of Canary Wharf, and supports the delivery of additional housing and employment. It would enable a large increase in economic activity. If looked at solely in terms of the transport benefits and traditional BCR measure, the '**economic case**' suggests the scheme is poor value for money. However, this is excludes the significant wider economic and regeneration benefits that the scheme would bring about, given its focus is on regeneration and improving the urban realm.
 - Additional economic benefits may include operational benefits to the Docklands

Light Railway, which will also need to be identified and confirmed.

- The scheme is commercially viable – the ‘**commercial case**’ demonstrates that although project development is at an early stage, the report sets out the procurement, commercial structure, and proposed allocation of risk and funding.
- The scheme is not currently affordable in light of the TfL Business Plan. The total estimated cost of Option 1 is £1,653m, but the ‘financial case’ analysis sets out the project team will need to explore all the funding mechanisms available to deliver the scheme and the proposed financing arrangements.
- The proposed decking is deliverable – the ‘management case’ sets out a clear governance, process and programme for the further development of the scheme by TfL, an authority with a very successful experience and record in major project delivery.

Next Steps: It is suggested that further feasibility and scheme development work takes place in relation to the proposed scheme

107. Given the strong wider economic and regeneration case for decking over the A1261 and DLR, especially the opportunity to link some of London’s most deprived communities with the employment opportunities offered by one of the world’s greatest financial centres, TfL is proposing to continue developing the scheme beyond this Strategic Outline Business Case. This case has reported initially on the likely impacts of the scheme, and further work is now required on a number of areas to fully understand the benefits the scheme offers and the nature of the construction required, as well as the funding and financing requirement.
108. A high priority will be to define a funding a financing strategy for the scheme to ensure that funds can be raised and disbursed in a financially sustainable manner for TfL.
109. It will be necessary to explore further the air quality, noise and social/distributional impacts of this scheme in any future Outline and/ or Full Business Case. This further work will elaborate on the potential commercial case and various sensitivity tests.
110. It is of particular importance to better understand the interdependencies and synergies between this scheme and the future remodelling of the DLR depot. Further work will focus on designing a workable solution that enables the decking to proceed while optimising the operations of the depot. Attention will also need to be paid to the construction timeline and its implications for maintaining DLR operations during construction. Similar attention will be paid to how road space can be maintained on the A1261 during construction.
111. Stakeholder engagement is ongoing, and this scheme will be included in the Isle of Dogs and South Poplar Opportunity Area Planning Framework, which is planned to be consulted upon in summer 2016. This will give an opportunity to involve a wider range of stakeholders in the development of the project, helping refine the proposals to meet local objectives.

1. The Approach to the Business Case

Introduction

- 1.1. Transport for London (TfL) is proposing to deck the A1261 Aspen Way at Poplar. Figure 7 and Figure 8 below show the location and extent of the scheme respectively.
- 1.2. The scheme has been identified following the recommendations of the Roads Task Force (RTF) Report: 'Vision for London's Roads and Streets' published in 2013. The scheme is one of four schemes along key RTF corridors which form part of the second tranche of opportunities identified by the RTF to address challenges on the Transport for London Road Network (TLRN), and which have been subject to detailed feasibility work. Notwithstanding this, all schemes are at an early stage in their development stage and further, detailed design and assessment will be undertaken in due course.
- 1.3. The proposed deck would extend for over 200m from both north to south and east to west. It would extend from Poplar High Street in the north to North Dock in the south, and from Upper Bank Street in the west to Poplar Business Park in the east. The deck would be constructed above the DLR depot, DLR lines, A1261 road and the site that currently houses Billingsgate Market. The operations of the DLR lines and depot as well as the A1261 would remain as at present underneath the deck.
- 1.4. This document is the Strategic Outline Business Case (SOBC) for the project.

Figure 7: Proposed location of decking of the A1261 at Poplar

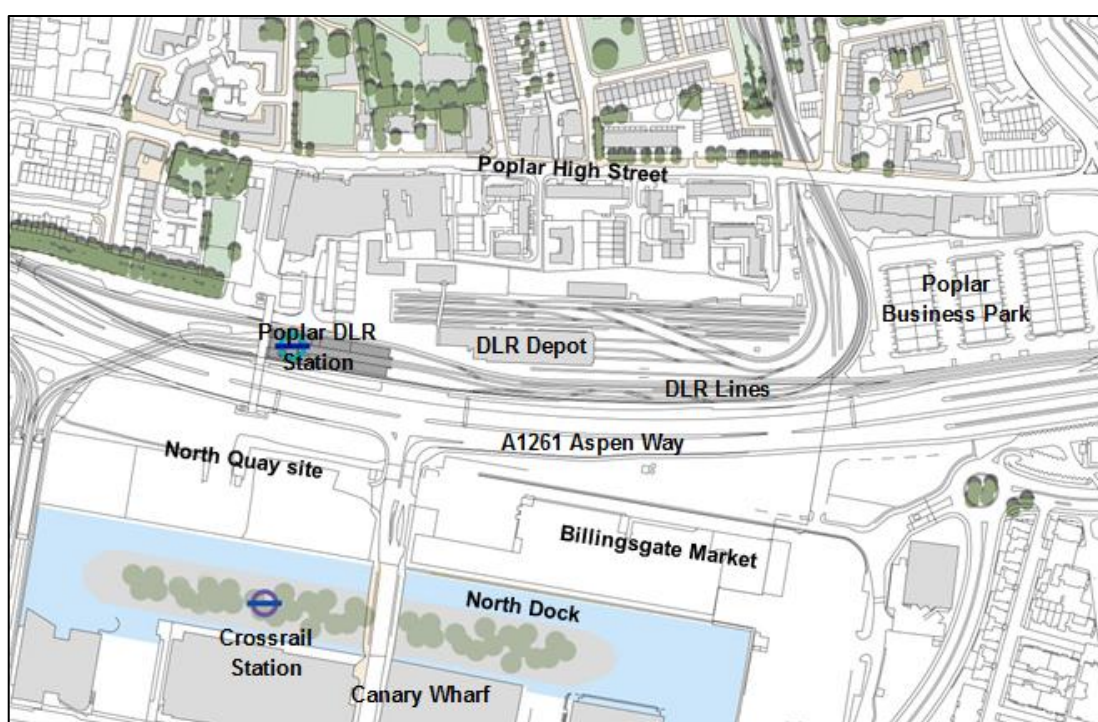
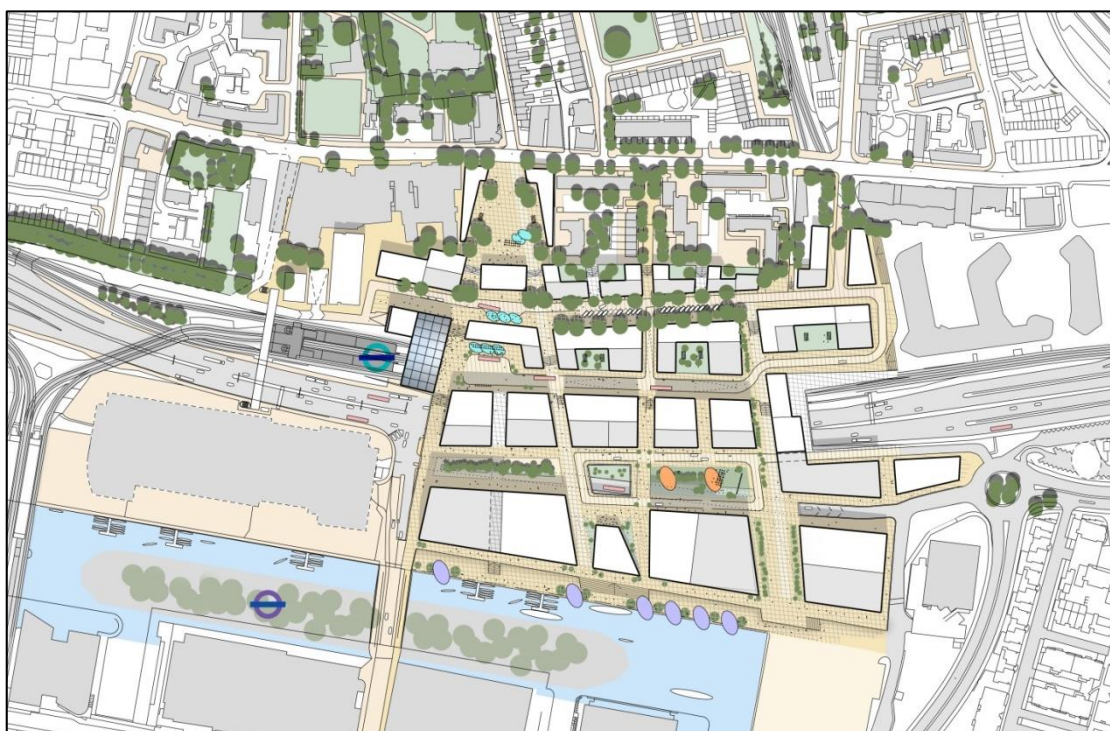


Figure 8: Proposed decking arrangements



The Five Case Model for Transport Appraisal

- 1.5. The purpose of this Strategic Outline Business Case is to provide evidence-based information in relation to investment programmes. Guidance for the preparation of Business Cases for Transport Schemes has been published by the DfT⁹. This is based on HM Treasury's advice on evidence-based decision making as set out in the Green Book¹⁰ and uses the best practice five case model approach.
- 1.6. This approach assesses whether schemes:
- are supported by a robust case for change that fits with wider public policy objectives – the '**strategic case**';
 - demonstrate value for money – the '**economic case**';
 - are commercially viable – the '**commercial case**';
 - are financially affordable – the '**financial case**'; and
 - are achievable – the '**management case**'.
- 1.7. The evidence gathered as part of the business case preparation has been prepared using the tools and guidance provided by the DfT, notably WebTAG¹¹. This approach ensures that the evidence that has been produced is robust and consistent for all the options examined in detail. This applies equally to those

⁹ See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85930/dft-transport-business-case.pdf - accessed 5 September 2014

¹⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf accessed 5 September 2014

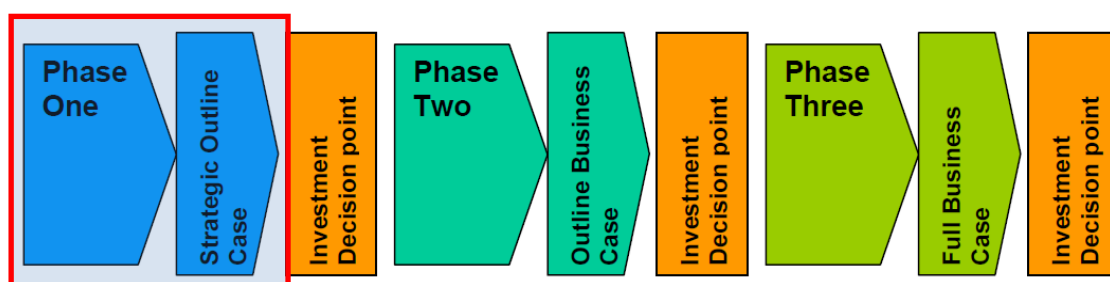
¹¹ See <https://www.gov.uk/transport-analysis-guidance-webtag> accessed 5 September 2014

options proposed for investment and those which, following assessment, are not to be developed further.

- 1.8. The latest WebTAG guidance suggests that the Economic Case should focus on appraisal of welfare impacts – so the initial BCR of the scheme (transport user benefits) and adjusted BCR (with agglomeration, move to more productive jobs) and the land value uplift. Therefore, if this scheme proceeds, to become compliant with the new draft WEI guidance, at the next stage of business case development we would move the Supplementary analysis section on additionality – the extra homes and jobs from its' current home of within the Economic Case to the Strategic Case instead.

The Decision Making Process

- 1.9. The decision making process, of which this Strategic Outline Business Case forms part, usually takes place in three phases. Each phase includes the preparation of a business case followed by an investment decision point. Each business case builds upon that previously prepared. Evidence is reviewed to ensure that it remains up to date, accurate and relevant. The current Strategic Outline Business Case is in 'Phase One' of this iterative process, with two further future stages of development to follow, as shown below.



- 1.10. The current '**Phase One**' focuses on articulating the need for the intervention and summarising the range of options developed and considered, and:
 - is used to set out the strategic fit of the project with achieving relevant national and London Mayoral and TfL policy objectives;
 - confirms the strategic fit and the case for change;
 - scopes out the initial investment/intervention proposal; and
 - provides details of the project's overall balance of benefits and costs against objectives.
- 1.11. In '**Phase Two**', which will follow from 2017 onwards, TfL will reconfirm the conclusions from Phase One and will concentrate on a more detailed assessment of the options to find the best solution, culminating in the preparation of an Outline Business Case, which will build on this Strategic Outline Business Case.
- 1.12. The final phase in the process, '**Phase Three**', will result in the production of the Full Business Case – this will accompany the consenting process.

The Role of the Mayor of London and TfL

- 1.13. This investment proposal is made by TfL acting as the body responsible for planning, organising and controlling, and in some instances operating transport within London for the Mayor, who is charged with setting the policy and strategy for transport which he has done by the publication of the Mayor's Transport Strategy (MTS).
- 1.14. TfL is responsible for operating, maintaining and improving the strategic road network (TLRN) in Greater London, including the A1261 within London. The TLRN represents 4% of London's road network, but carries 30% of all traffic in London.
- 1.15. The strategy of TfL is decided by the Mayor through the MTS. The MTS is the principal policy tool through which the Mayor exercises his responsibilities for the planning, management and development of transport in London, for both the movement of people and goods. It takes into account the policies in the London Plan and the Mayor's Economic Development Strategy (EDS). It provides the policy context for the more detailed plans of the various transport-related implementation bodies, particularly TfL and the London boroughs.
- 1.16. The legislative framework for the MTS is laid down by the GLA Act 1999 as amended by the GLA Act 2007. The GLA Act 1999 sets out the general transport duties of the Mayor and the GLA. It specifies that the transport strategy must contain policies for 'the promotion and encouragement of safe, integrated, efficient and economic transport facilities and services to, from and within Greater London', and proposals for securing the transport facilities and services needed to implement the Mayor's policies over the lifetime of the MTS, with regard to the movement of people and goods. TfL is under a duty to use its powers to facilitate and implement the policies and proposals of the MTS.

Summary of Consultation to Date

There is support for decking over A1261 Aspen Way at Poplar. This would be tested further if the project progresses

- 1.17. To date, there has been ongoing local engagement with the London Borough of Tower Hamlets (LBTH) in relation to the proposed scheme. This has consisted of two officer-level meetings as well as higher level political engagement. Further engagement with LBTH is planned following the completion of this SOBC.
- 1.18. Given that the project is still at a relatively early stage of development, the level of engagement has been proportionate to the stage at which the project has reached, and there has not been any formal public consultation. As the project develops, formal consultation will be undertaken with the public and relevant stakeholders at the earliest opportunity.
- 1.19. Notwithstanding this, the Roads Task Force (RTF) consultation in 2012¹² asked stakeholders to provide their views on the main challenges facing London's roads, and how these should be tackled. The report from this consultation revealed that key concerns shared by London boroughs, the public and other

¹² TfL (2012) Roads Task Force: Response to Consultation, November 2012.
https://consultations.tfl.gov.uk/roads/taskforce/consult_view



stakeholder organisations included quality of place, noise and air pollution, increased pressure on roads as a result of congestion, and safety concerns relating to walking and cycling.



2. The Strategic Case

- 2.1. Transport for London (TfL) is proposing a major decking scheme on the A1261 at Poplar.
- 2.2. This scheme proposes to construct a deck that would extend for over 200m from both north to south and east to west. It would extend from Poplar High Street in the north to North Dock in the south, and from Upper Bank Street in the west to Poplar Business Park in the east. The deck would be constructed above the DLR depot, DLR lines, A1261 road and the site that currently houses Billingsgate Market. The operations of the DLR lines and depot as well as the A1261 would remain as at present underneath the deck.
- 2.3. An extremely significant level of development is planned on top of this deck, which would contribute thousands of new homes alongside commercial space that could house tens of thousands of new jobs. The scheme would dramatically reduce the severance that currently exists between Poplar and Canary Wharf, uniting two currently strongly separated parts of London. This would improve socio-economic outcomes and enhance London's public realm.
- 2.4. This Strategic Case has been prepared by TfL, in consultation with the London Borough of Tower Hamlets (LBTH). It forms the first of the five cases forming the Transport Business Case. Its purpose is to set out the need for investment at this site.

Structure of the strategic case

- 2.5. This part of the Strategic Outline Business Case will:

- describe the key challenges and pressures facing London's strategic road network including the need to protect and enhance the economic efficiency of London, including south London;
- set out the findings from the Mayor's Roads Task Force's report;
- set out the objectives for how problems and issues across London's strategic road network should be addressed;
- identify the specific problems and issues that this decking project will need to address and the elements of the RTF's toolkit that will be applied in addressing the problems and issues;
- based on the problems and issues, define scheme objectives and measures of success for an intervention on the A1261 at Poplar;
- based on the option assessment, show how decking over the A1261 at Poplar would help towards solving some of these local challenges as well as those facing London as a whole, such as enabling housing growth; and
- demonstrate how the proposed decking intervention will achieve a strong fit with policy at all spatial scales.

- 2.6. The Strategic Case is structured in eight sections:

- **Part A:** Maximising the economic potential of London through supporting sustainable growth
- **Part B:** The problems identified affecting TLRN corridors
- **Part C:** Objectives for action for TLRN corridors
- **Part D:** Options for addressing the problems on the TLRN at priority locations
- **Part E:** The problems identified on the A1261 at Poplar
- **Part F:** Objectives for the A1261 at Poplar and options identified
- **Part G:** How the decking option addresses the problems
- **Part H:** Scheme fit against strategic and local policy, strategies, frameworks and objectives



PART A: MAXIMISING THE ECONOMIC POTENTIAL OF LONDON THROUGH SUPPORTING SUSTAINABLE GROWTH

Section Summary:

This section sets out the need to maximise the economic potential of London through accommodating growth in a sustainable and efficient manner and underpinning the competitiveness of London in a changing context.

London is a growing world city – which needs its transport system to function efficiently now and in the future

- London is a thriving, globally competitive economic centre that makes a significant and growing contribution to the UK economy in employment, GVA and tax revenues
- Employment levels in London are growing rapidly, helping to encourage population growth in response
- Dense cities accommodate growth most sustainably and efficiently
- London is delivering only 25,000 new homes a year, when it needs to deliver at least double this volume, resulting in worsening housing affordability
- London's growth is being constrained by a chronic shortage of housing which is driving up housing costs as a proportion of household income. To achieve housing targets existing brownfield land must be unlocked
- By investing in its road network, TfL can unlock more land for urban regeneration and contribute to meeting London's housing targets
- As London grows, the level of congestion on its strategic road network is forecast to grow, even with sustained investment in public transport capacity

Better use of road space on strategic roads is a possible means of improving quality of place and unlocking additional development, but this needs to be balanced against continued needs for movement

- A joined-up approach to planning and infrastructure investment by the GLA, TfL and boroughs will help to unlock development in areas with high regeneration and growth potential
- The road tunnel schemes being considered aim to release the potential of specific areas for housing and wider development, while maintaining the vital movement function of strategic roads, thereby helping underpin London's growth more widely
- To retain London's competitiveness, further investments in transport links and the public realm are required to facilitate delivery of more successful places and new housing in areas adversely impacted by traffic

London is a growing world city - which needs its transport system to function efficiently now and in the future

London is a thriving globally competitive economic centre that makes a significant and growing contribution to the UK Economy in employment, GVA and tax revenues

- 2.7. London is the UK's core engine of economic growth, contributing 22 per cent of total UK Gross Value Added (GVA) in 2013 and generating £56,687 GVA per worker compared to the UK average of £41,088. Evidence suggests that within large cities, greater employment density drives higher productivity through skills specialisation and clustering. These agglomeration effects help London to drive UK's international competitiveness through increasing employment densities in the Central Activities Zone (CAZ).
- 2.8. The strength of London's economy makes it a vital contributor to the UK's finances. In 2013/14, an estimated £127 billion of tax revenue was estimated to have been generated through economic activity in London, comprising an estimated 21% of total UK tax revenue. Investing to support the growth of London is essential to build strong public finances.
- 2.9. Since 1994, on average, 29,700 new jobs a year have been created within London. The city's economic growth is forecast to be 4.2 per cent in 2014 and 3 per cent each year to 2020. This is faster than the projected growth rate for the UK overall, partly driven by forecast increases in population and the size of the workforce. The latest GLA employment forecasts suggest that on average, 41,000 new jobs a year in London will be created to 2036.

Key Finding:

The London economy makes a vital contribution to the success and competitiveness of the UK, and if London succeeds, the UK as a whole benefits.

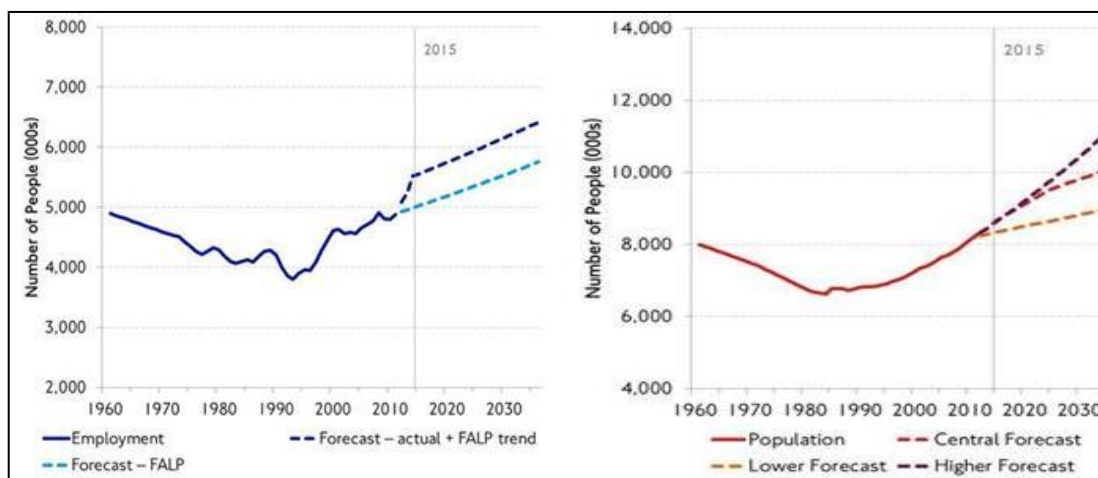
Employment levels in London are growing rapidly, helping to encourage population growth in response

- 2.10. After reversing a steady period of decline, London has been on a growth trajectory since the 1980s. These trends are shown in Figure 9.
- 2.11. Between 1991 and 2011, the number of jobs in London rose by 900,000 and over the same period, the population rose by 1.4m. The number of jobs in London is expected to grow by 1.4m between 2011 and 2036. As the left hand graph in Figure 9 above shows, a total of 650,000 of these jobs have already been created between 2012 and 2014¹³. Rapid employment growth in London has been driven by a range of factors including the UK's flexible labour markets, high skill levels and openness to Foreign Direct Investment. Employment growth has been felt most acutely within central London, where connectivity is highest.

¹³ This trend is regarded as a short term phenomenon reflecting London's resilience to economic shocks in recent years and it is expected that job growth will revert to historic trend levels going forward.

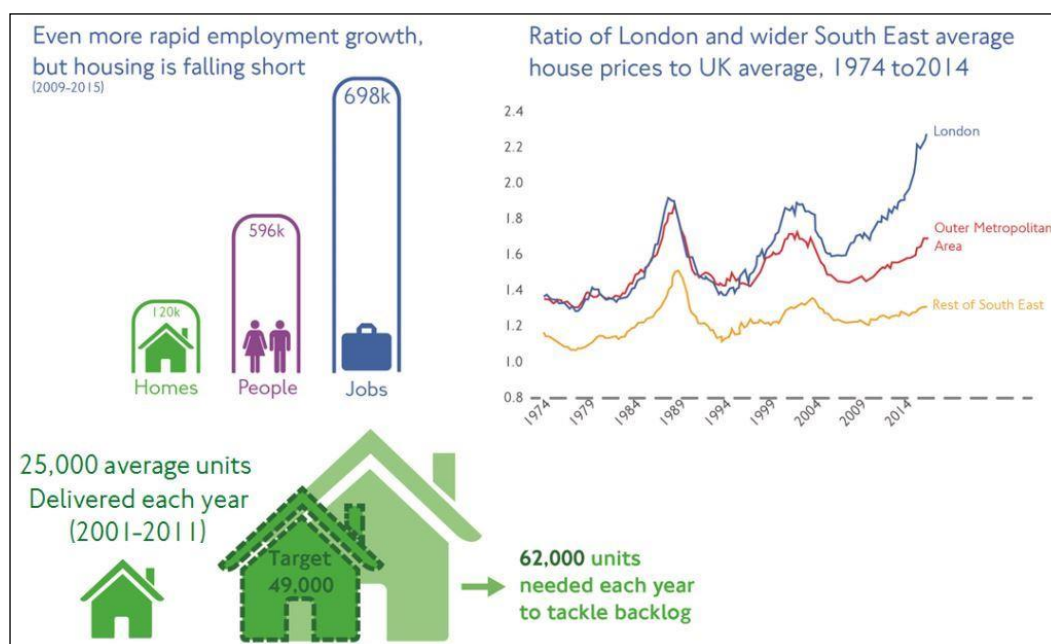


Figure 9: Historic trends and projected growth in London's employment and population to 2036



- 2.12. The UK Office for National Statistics projections expect a 23 per cent rise in London's population between 2011 and 2031 which equates to a 1.9m increase, taking the population to 10.1m¹⁴ by 2036, as shown in the right hand graph in Figure 9. The London Infrastructure Plan predicts a 37 per cent increase in population between 2011 and 2050, driving the need for an additional 1.5m additional homes and a 50 per cent increase in public transport capacity over and above what is already planned¹⁵.
- 2.13. As Figure 10 shows, London's continued economic growth and competitiveness is increasingly being threatened by a constrained supply of housing, which frustrates population growth and labour supply.

Figure 10: Summary of housing supply and affordability issues facing London



¹⁴ Further Alterations of the London Plan (ALP), Greater London authority, (2014)

¹⁵ London Infrastructure Plan 2050, Greater London authority, 2014.

<https://www.london.gov.uk/sites/default/files/LIP%202050%20update%20presentation%20March%202015.pdf>

- 2.14. This housing shortage could potentially result in a deteriorating quality of life. The sense of place and quality of life is becoming more important in supporting London's competitiveness as a world city and for London's success. London is competing on quality of its offer, not on cost. These labour supply and housing cost problems affects the decisions of businesses to invest in London and workers to live there.

Key Finding:

London's population and employment levels are growing rapidly. This is due to the clustering of economic activity, particularly within central London. London's future economic success depends on its ability to continue to accommodate population and employment growth and offer a high quality environment.

Dense cities accommodate growth most sustainably and efficiently

- 2.15. Densification reduces the capital and operating costs of infrastructure as well as increasing agglomeration benefits. Within London, there are opportunities to increase the density of housing development and there are opportunities to create new sites for development but these require co-ordinated investment.
- 2.16. London has grown sustainably through densification and efficient recycling of redundant or under-utilised land. It has successfully recycled redundant industrial land. In the period 2001 to 2010 London lost over 800 hectares of industrial land (10 per cent of its total stock) enabling this land to be recycled into other uses, predominantly residential.
- 2.17. This densification has been made possible by increases to the capacity of the public transport network, to meet increased levels of travel demand from a growing population. Alongside growth in use of rail and bus networks, recent travel trends have seen increased levels of walking and cycling. Nevertheless the road network plays a vital role in the efficient functioning of the city.

Key Finding:

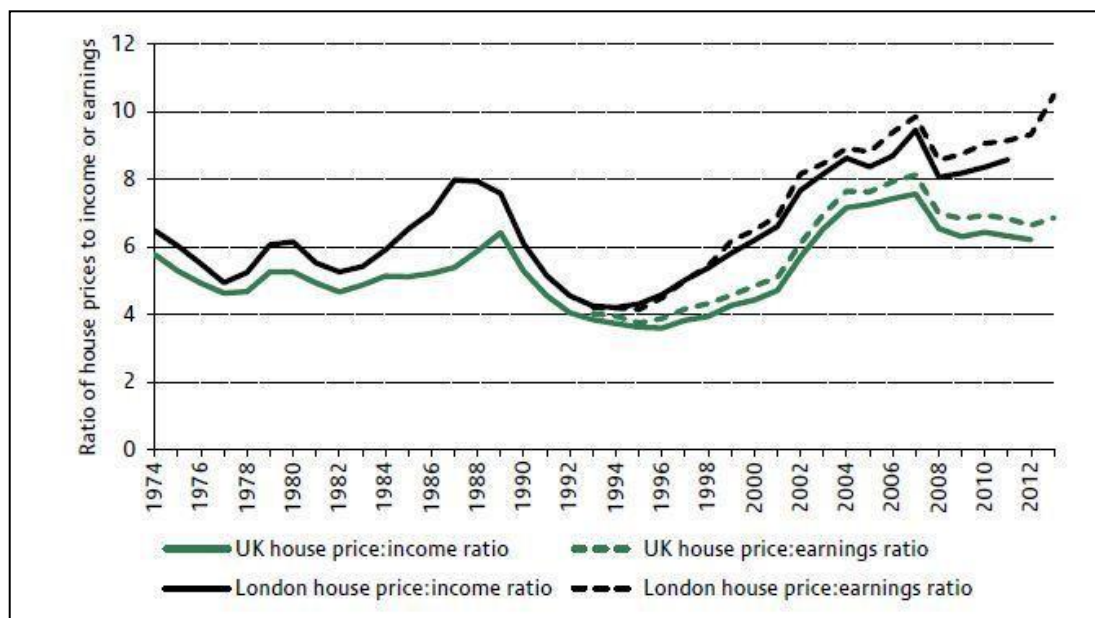
Further densification will require further investment in transport infrastructure enabling London's increasing population the opportunity to access London's jobs and simultaneously giving London's businesses access to a large pool of well qualified labour. Investment to ensure a well-functioning strategic road network will help support this growth.

London is delivering only 25,000 new homes a year, when it needs to deliver at least double this volume, resulting in worsening housing affordability

- 2.18. Housing delivery is falling well short of demand. This is leading to rapid house price and rent inflation, which is reducing affordability of housing and squeezing disposable income or leading to longer, less sustainable commuting patterns.
- 2.19. Demand for new housing is outstripping supply by a factor of three to one. Over the decade when London's population grew by more than a million, its housing stock grew by less than 300,000. At least a 47 per cent increase from current levels of delivery is now required to meet London's housing targets for 2015-2025.
- 2.20. As a result, house prices have spiralled - the average house in inner London now

costs over 13 times the average wage. Properties in some prime central London areas cost more than 30 times the average wage. This has priced many people on modest incomes out of large parts of the city. Figure 11 shows the ratio of house prices to both income and earnings for the UK and for inner London. Housing in London is significantly less affordable than in the rest of the UK.

Figure 11: House price to income and earnings ratios for the UK and London¹⁶



- 2.21. Providing sufficient housing to meet demand is essential to London's ability to attract and retain talented workers and in turn maintain the city's competitiveness. Providing sufficient – and sufficiently affordable – housing is also important if the city's communities are to remain cohesive and vibrant and avoid the problems associated with social polarisation.

London's growth is being constrained by a chronic shortage of housing which is driving up housing costs as a proportion of household income. To achieve housing targets existing brownfield land must be unlocked

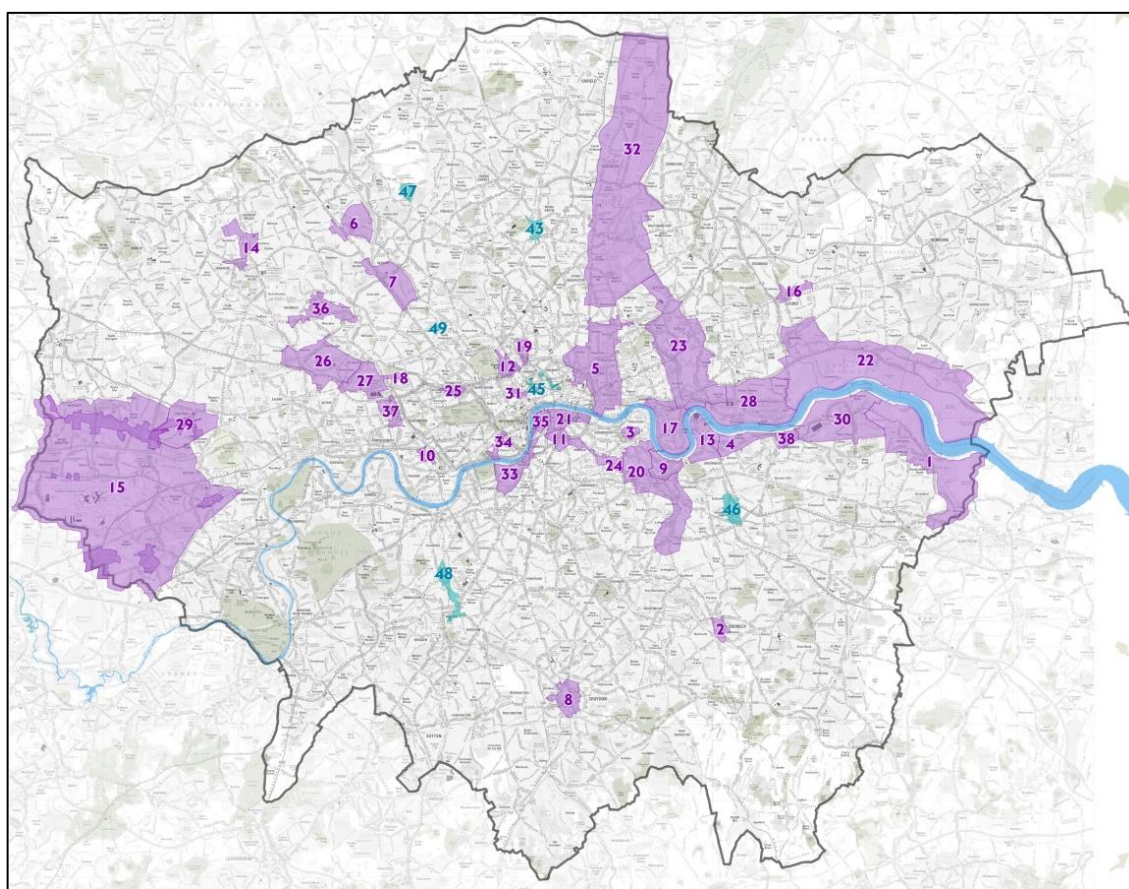
- 2.22. London has limited opportunities for accommodating large scale development. A range of suitable areas are identified in the Mayor's London Plan (March 2015), including 38 Opportunity Areas, shown in Figure 12. London's 38 Opportunity Areas represent "London's major source of brownfield land with significant capacity for new housing, commercial and other development linked to existing or potential improvements to public transport accessibility"¹⁷.
- 2.23. East London has a particularly high potential for housing developments. Isle of Dogs and South Poplar Opportunity Area is one of the most significant areas identified for housing and employment densification.

¹⁶ Source: Nationwide, Labour Force Survey, Family Expenditure Survey and Family Resources Survey

¹⁷ London opportunity areas for large-scale development

<https://www.london.gov.uk/priorities/planning/opportunity-areas>

Figure 12: London's Opportunity Areas



Opportunity Areas		Area of Intensification	
1 Bexley Riverside	11 Elephant and Castle	31 Tottenham Court Road	42 Farringdon/Smithfield
2 Bromley	12 Euston	32 Upper Lea Valley	43 Haringey Heartlands/Wood Green
3 Canada Water	13 Greenwich Peninsular	33 Vauxhall, Nine Elms & Battersea	45 Holborn
4 Charlton Riverside	14 Harrow & Wealdstone	34 Victoria	46 Kidbrooke
5 City Fringe/ Tech City	15 Heathrow	35 Waterloo	47 Mill Hill East
6 Colindale/Burnt Oak	16 Heathrow Core	36 Wembley	48 South Wimbledon/Colliers Wood
7 Cricklewood/Brent Cross	17 Isle of Dogs	37 White City	49 West Hampstead Interchange
8 Croydon	18 Kensal Canalside	38 Woolwich	
9 Deptford Creek/Greenwich Riverside	19 King's Cross - St Pancras		
10 Earls Court	20 Lewisham, Catford & New Cross		
	21 London Bridge, Borough & Bankside		
	22 London Riverside		
	23 Lower Lea Valley		
	24 Old Kent Road		
	25 Paddington		
	26 Park Royal		
	27 Old Oak Common		
	28 Royal Docks & Beckton Waterfront		
	29 Southall Hinterland		
	29 Southall Development Sites		
	30 Thamesmead & Abbey Wood		

- 2.24. If London is to meet its housing needs then it has to utilise its land as effectively as possible and be creative about assembling sites for development and identifying more usable space, as Policy 3.3E of the London Plan proposes.
- 2.25. Infrastructure schemes can play a role in creating the right incentives for developers through boosting the attractiveness of locations through provision of enhanced transport accessibility and public realm improvements.

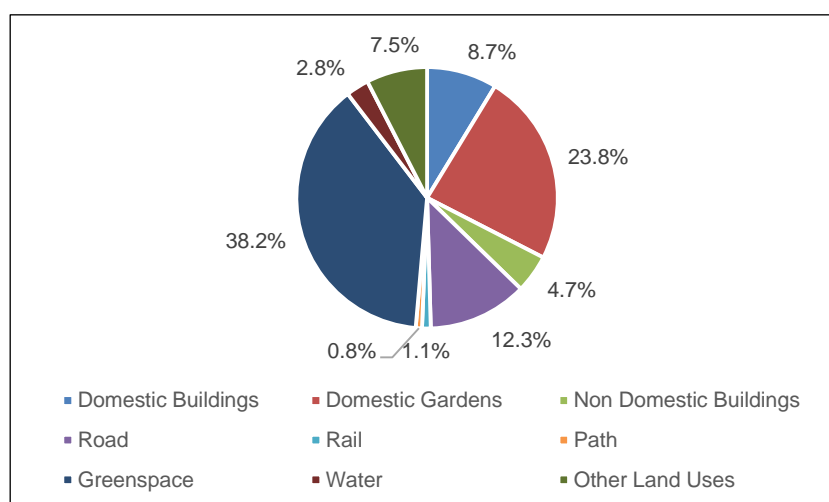
Key Finding:

There is a need to maximise the housing development potential of brownfield sites, particularly those well serviced by transport networks. Increasing the density of development in these more accessible locations is a sustainable way of accommodating London's growth.

By investing in its road network, TfL can unlock more land for urban regeneration and contribute to meeting London's housing targets

- 2.26. Figure 13 shows that in 2005, 12.3 per cent of the total area of London was taken up with roads, more than the amount of land occupied by domestic dwellings. Better use of road space is a potential source of development land that is worth exploring further. However, given the challenges of increasing congestion and the economic impacts of this, it needs to be done in such a way that also protects the function of key strategic road corridors.

Figure 13: London Area by Land Use¹⁸



Key Finding:

There is a need for innovative ways of unlocking housing potential within London's boundaries. A better use of the TLRN, balancing the sense of place and its strategic movement function, could enable higher housing densities.

As London grows, the level of congestion on its strategic road network is forecast to grow, even with sustained investment in public transport capacity

- 2.27. In 2013, road congestion cost the London economy £5.4bn, accounting for 41 per cent of costs to all of UK's large urban areas¹⁹.
- 2.28. Around two-thirds of these costs accrue from delays in Outer London where car driver/passenger share within/to/from Outer London accounts for 48 per cent of modal share compared to 10 per cent in within/to/from Central London²⁰.
- 2.29. London's growing population, as well as supporting employment growth in the CAZ will strain TfL's strategic road network as car-dependency remains a key issue in Outer London. In particular, this will lead to significant increases in congestion on key strategic arterial roads into London.

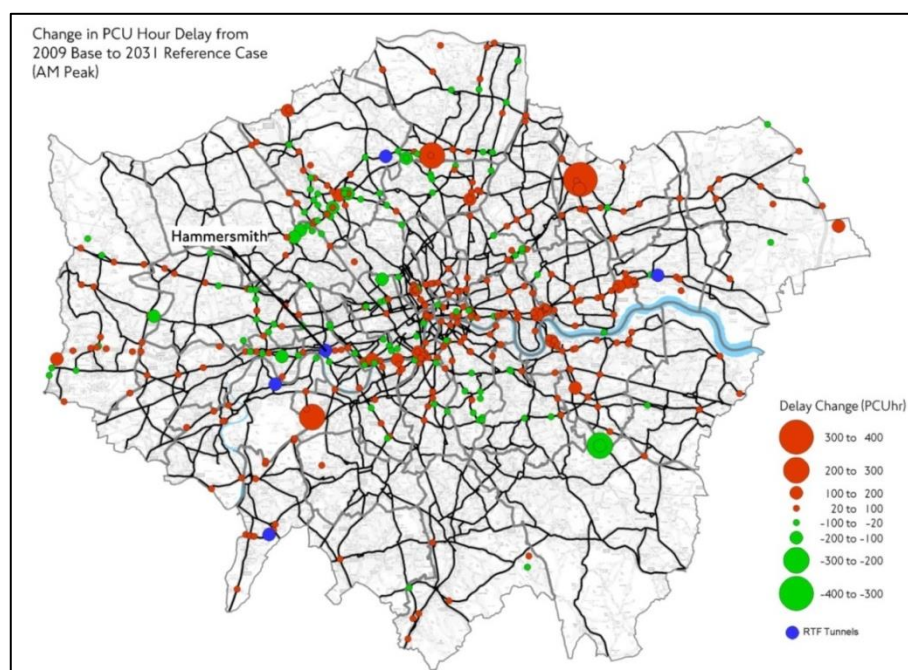
¹⁸ Source: Land Use Generalised Land Use Database 2005

¹⁹ The future economic and environmental costs of gridlock in 2030, Centre for Economics and Business Research/INRIX, July 2014 http://www.cebr.com/wp-content/uploads/2014/10/INRIX_costs-of-congestion_Cebr-report_v5_FINAL.pdf

²⁰ Based on percentage of average daily trips in three year period 2007/8 to 2009/10

- 2.30. The Government's National Infrastructure Plan 2014²¹ clearly sets out the scale of investment required for the UK's Strategic Road Network (SRN), committing £15.2bn between 2015-16 and 2020-21 to transform it – the biggest programme of investment since the 1970s with investment tripling from current levels by 2020.
- 2.31. However, the £15bn precludes any investments to improve the Transport for London Road Network (TRLN) – the Roads Task Force Vision states that at least £30bn of investment is required over the next 20 years on London's streets and roads.
- 2.32. Without significant investment, congestion and road traffic delay will grow in many areas as illustrated in Figure 14.
- 2.33. A planned 70 per cent increase in rail capacity through Tube upgrades, Crossrail and Thameslink programmes is underway. This is likely to aid modal shift from private vehicles to rail but is not sufficient by itself to address London's road congestion issues.
- 2.34. Strategic TRLN routes in London, whilst playing a strategic traffic function differ significantly from inter-urban motorway and trunk road corridors outside London. The majority pass through urban and suburban areas, with active frontages of retail, employment and residential uses. Traffic has an impact of quality of life.

Figure 14: Change in PCU hour delay, 2009 – 2031



²¹ National Infrastructure Plan 2014

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/381884/2902895_NationalInfrastructurePlan2014_acc.pdf

Key Finding:

The pressures on London's roads are growing and there is a need for a major investment programme to maintain the strategic movement function of roads such as the A1261, whilst tackling other issues which require commensurate investment such as enabling growth, and improving quality of place. The urban nature of the TRLN requires different solutions to those suitable for inter-urban corridors outside of London.

Better use of road space on strategic roads is a possible means of improving quality of place and unlocking additional development, but this needs to be balanced against continued needs for movement

- 2.35. The Mayor's 2020 Vision²² is for London to be the greatest city in the world to live, play, study, invest and do business.
- 2.36. Inevitably, this Vision requires balancing the competing spatial demands for transport infrastructure, urban realm and housing – all of which are crucial to attracting skilled labour to work in London's agglomeration clusters.
- 2.37. Whilst motorised traffic has fallen by 10 per cent in Greater London Area between 2000 and 2011, during 2014 and 2015, traffic volumes have increased. Between 2000 and 2011, congestion has risen by around 10 per cent. In central London, this is partly due to an increase in construction activities disrupting the road network. It is also due to the reallocation of road space from private traffic to public transport, cycling and walking. This reflects existing trends in modal shifts and TfL's vision for better quality public spaces and more sustainable transport.
- 2.38. However, motorised traffic remains critical to London, whether it is for deliveries, taxis, emergency services or driving commuters, further investment in roads is required to keep London moving.
- 2.39. The need for maintaining and improving traffic flows is especially relevant to the A1261 corridor – as this route plays a strategic role for vehicle trips between different areas of east London and central London as well as Canary Wharf.

Key Finding:

Land in the vicinity of TLRN corridors has the potential to help accommodate new housing development to help meet some of London's need

A joined-up approach to planning and infrastructure investment by the GLA, TfL and Boroughs will help to unlock development in areas with high regeneration and growth potential

- 2.40. Investment to enhance the attractiveness of locations both for businesses and also local residents and potential workers will stimulate regeneration of under-utilised land.
- 2.41. There is a clear role for public intervention in the form of targeted investment, enabling sites to maximise their development potential in areas of opportunity, such as in Poplar. There are co-ordination market failures that act as constraints

²² Mayor's 2020 Vision <https://www.london.gov.uk/mayor-assembly/mayor/vision-2020>



on urban sites coming forward for development even in areas where the development gains are potentially quite high.

- 2.42. A package of measures at various scales and geographies will be required to ensure that land and potential sites for development within all parts of London are used efficiently to support sustainable growth.

The road tunnel schemes being considered aim to release the potential of specific areas for housing and wider development, while maintaining the vital movement function of strategic roads, thereby helping underpin London's growth more widely

- 2.43. Road tunnels and decking schemes will do this in the following ways:
- They will ensure companies maintain access to a larger and higher quality workforce, customers and suppliers, supporting the agglomeration impacts arising from faster or more reliable journey times by road;
 - They enable development of housing and employment on under-utilised land along the road corridor which might have otherwise been constrained to a lower density; and
 - They will provide a focus for regeneration and improvements in quality of life, including urban realm improvements, which can help drive investment and jobs in otherwise struggling local economies through increased footfall or attracting new employers and residents.
- 2.44. Each tunnel or decking scheme will have a different mix or focus.
- 2.45. This is part of responding to the need to support greater growth in London, the changing role of town centres and the increasing importance of the quality of place in our city's success.

Key Finding:

Investment in decking-over, tunnelling and flyunder schemes on London's road network will help to enable regeneration and support economic growth.

To retain London's competitiveness, further investments in transport links and the public realm are required to facilitate delivery of more successful places and new housing in areas adversely impacted by traffic

- 2.46. Some of the most successful cities around the world have invested in improvements to the quality of the urban realm alongside investment in public transport capacity. Providing cover over ring roads and building tunnels helps to maintain road network functioning while reducing traffic impacts, creating new spaces for city life and delivering high quality cycle and walking infrastructure.
- 2.47. London's streets account for 80 per cent of public space in London and therefore schemes which are able to unlock spaces for living and working whilst not impeding network functioning are 'win-wins'.
- 2.48. An improved public realm delivered through reallocation of road space or capacity (as shown in Figure 8) can also reduce severance for pedestrians and cyclists. This is particularly the case for heavily congested core road corridors, where provision of public realm along the existing alignments can enable people to gain quicker and easier access to key amenities and rail/underground stations.
- 2.49. Three important dimensions to helping ensure London's continued growth and competitiveness are: expanding the capacity of its transport network, releasing more land for housing and protecting and enhancing quality of place.
- Insufficient transport capacity to access jobs and enable reliable servicing or freight access across the city would hinder employment growth and agglomeration impacts. **Decking-over, tunnelling and flyunder schemes would address congestion pinch points on and around strategic corridors into London.**
 - Housing within or close to London is becoming increasingly unaffordable for many workers. The failure to supply new volumes of housing to meet increasing demand has resulted in rapid house price and rental inflation, reducing disposable income. **Decking-over, tunnelling and flyunder schemes would release land and enable higher density developments to be brought forward.**
 - A deteriorating quality of place and quality of life for Londoners and workers could make the city comparatively a less attractive place for footloose companies to be based. **Decking-over, tunnelling and flyunder schemes would reallocate road space on the surface to pedestrians and cyclists, reduce severance and noise impacts.**

Key Finding:

Solutions which continue to support the functioning of the road network whilst reducing traffic impacts on communities around London's ring roads, gyratories and town centres and enhance conditions for pedestrians and cyclists must be found. Delivery of 'win-win' solutions is increasingly important to London's continued success.



PART B: THE PROBLEMS AFFECTING TLRN CORRIDORS IDENTIFIED

Section Summary:

- There is a close relationship between London's road network and its ability to bring forward the necessary level of housing and commercial development to support growth
- TLRN roads have a movement function and a place function – the relative importance of each function varies
- A growing city population will travel more using different modes, resulting in more congestion and crowding, and poorer air quality, reducing the overall quality of life
- Areas of outer London are currently more dependent on car-based travel for commuting to work
- Road corridors with a strong “movement” emphasis cause severance impacts that inhibit walking and cycling connectivity
- Doing nothing to improve London's road network is not an option

There is a close relationship between London's road network and its ability to bring forward the necessary level of housing and commercial development to support growth

- 2.50. As outlined earlier, London is seeing strong employment growth, and a rapidly growing population, trends that are projected to continue into the future. However, there are several challenges that could hinder London's ability to attract new talented workers, create jobs and sustain this high level of competitiveness.
- 2.51. Within London the number of homes being built has fallen short of the level of need.
- 2.52. Much of London's land is already developed. The city's Opportunity Areas (OAs), shown in Figure 12, are its largest remaining brownfield sites for potential development.
- 2.53. The scope to regenerate and develop land along busier TLRN corridors is currently severely reduced by the adverse impacts of traffic. High traffic volumes and severance, air quality and noise impacts limit the viability of development and the success of neighbourhoods.
- 2.54. If nothing is done to reduce the impact of the road corridor, then it is unlikely that development will come forward, or it will come forward only at a significantly lower density, as new properties will be harder to sell or less profitable than alternative sites.
- 2.55. If these negative impacts can be reduced through improvements to 'place' and local connectivity, then redevelopment is likely to become a more attractive and viable commercial investment proposition. However, this needs to be done without undermining the movement function or there will be wider adverse economic

impacts. Therefore investment in improving quality of place that addresses these issues can enable significant quantities of new housing to be unlocked without unduly constraining the ongoing operation of the strategic road network.

TLRN roads have a movement function and a place function – the relative importance of each function varies

- 2.56. The road network in London serves a wide range of functions. At one end of the scale, core roads and main corridors form the TLRN function as the principal routes for movement of vehicular traffic.
- 2.57. At the other end of the scale, streets with lower traffic flows often have a primary 'place' function. TfL and boroughs need to work together to find the appropriate balance between the movement and place demands on roads and streets.
- 2.58. The Roads Task Force report identifies nine typologies of road corridors or streets that reflect whether they play a strategic or local movement or place function. These nine street types are shown in the matrix in Figure 15. Traffic levels can affect the vitality of town centres and quality of place and life through creating severance, noise and air pollution.

Figure 15: The RTF street types matrix



- 2.59. Roads such as A1261 Aspen Way have a strategic movement function, which takes priority over place functions, so have a “core road” typology. These core roads are a vitally important part of London’s road network and congestion on these routes presents challenges in terms of the cost to businesses of variable and unpredictable journey times in different directions at different times of day.
- 2.60. The higher traffic volumes become, the more the quality of the public realm can be adversely affected, and the less willing people would be to use the street to meet, interact with others, to shop, enjoy food or drink or take a break.
- 2.61. In some cases, the current typology of a road or street may not reflect a borough’s place-making aspirations or be conducive to achieving proposed land use changes in an area. Heavy traffic volumes in those typologies towards the top left of Figure 15 have the effect of discouraging new residential development and lowering property prices.
- 2.62. With good planning, careful design and investment, more emphasis can be given to the place function of a particular TLRN road corridor without unduly compromising its strategic movement role. Such win-wins are increasingly important in a growing world city where the competing demands and challenges on these corridors are increasing.

Key Finding:

Tunnels, over-decking or flyunders in locations such as Poplar, whilst not addressing the issue of congestion, would maintain the strategic movement role of roads such as the A1261 while tackling other issues which require commensurate investment (such as enabling development opportunities to be maximised and improving quality of place).

A growing city population will travel more using different modes, resulting in more congestion and crowding, and poorer air quality, reducing the overall quality of life

- 2.63. A higher employment base and higher population in London will result in increased demand for travel and for freight and servicing. This will generate a need for investment to accommodate the increasingly diverse demands being placed on strategic roads – such as more bus passengers, cyclists, pedestrians and growth in freight movements to service more people.
- 2.64. To enable the city to grow London will require investment to increase the capacity and efficiency of its road-based and rail, underground, DLR and tram systems.
- 2.65. If this investment is not forthcoming, congestion will worsen and levels of crowding on public transport systems will increase. This will lead to longer and less predictable journey times for London residents and in-commuters from the rest of the South East.
- 2.66. These increases in travel times will result in longer commutes and increased risk of employees arriving late for work. A less efficient transport system will result in a more stressful and frustrating travel experience for its users. This will have an impact



on the productivity of workers. Londoners and employees' quality of life will deteriorate.

- 2.67. This will result in some choosing to relocate to areas that offer a better quality of life or skilled workers choosing to work elsewhere, which would be detrimental to overall UK productivity given the agglomeration gains of dense cities.

Key Finding:

Under-investment in transport infrastructure improvements is likely to result in a worsening quality of life and place for residents and workers in London

Road corridors with a strong 'movement' emphasis causing severance impacts that inhibit walking and cycling connectivity

- 2.68. Road corridors with a strong 'movement' function present barriers that inhibit crossing movements by cyclists and pedestrians. If there is not provision in the form of at-grade crossings or over-bridges or subways at sufficient intervals, this can act as a significant deterrent to movement by these modes.
- 2.69. These severance impacts can also reduce the willingness of nearby residents to use public transport if the walking trip to access a station or bus stop is too circuitous or unpleasant.
- 2.70. If streets on either side of a busy road are impermeable and not pedestrian and cycle friendly, and the busy road is difficult to cross, this can reduce the propensity to walk or cycle to access services or facilities by these modes.
- 2.71. If people find it more convenient to drive to access shops or services, then this can also adversely affect the vitality of district or neighbourhood shopping areas and lead to their decline.

Key Finding:

In many cases, severance effects result in households living nearby making less sustainable travel choices and having greater reliance on the private car.

Doing nothing to improve London's road network is not an option

- 2.72. London's strategic road network is relied upon by businesses, provides workers with access to employment across the city, to services and hospitals. It forms the backbone for freight and servicing movements and the bus network. It is also used extensively for business travel. To compete as a world city, London also needs to invest to improve quality of public spaces and encourage more use of sustainable travel modes, but if road space is reallocated, then this would increase the costs of congestion.
- 2.73. If insufficient investment comes forward to manage London's road capacity to cope with increased levels of, and more diverse travel demand, then levels of highway congestion will rise and bus services will become less reliable.
- 2.74. This will result in longer travel times and higher travel costs for commuters,

residents and visitors. Increased congestion, delays and longer travel times have a significant cost on London's economy.

- 2.75. The more congested and crowded the transport network becomes, the less resilient it will be in the face of planned or unplanned disruption. Longer, less comfortable and less reliable travel systems will adversely affect people's quality of life.
- 2.76. Furthermore, if the Mayor, TfL, the boroughs and other partners do not implement measures that will help to tackle the problems of poor air quality and noise from transport sources, then this will result in worsening health for Londoners. The costs of treatment of people will increase and these costs would have to be met from the public purse. Increased numbers of vehicular journeys, more buses and lorries to serve a growing city is likely to result in greater air pollution and noise, affecting the health of people who live and work next to busy road corridors.
- 2.77. If people living near these busy roads perceive a worsening in their quality of life, from congestion, longer travel times, noise, pollution and severance then some may relocate out of London, resulting in a reduced pool of skilled labour available to businesses.

Key Finding:

In an urbanised London context, there are competing demands placed on the strategic road network. There is a need to both protect the vital 'movement' role of London's strategic road network, whilst at the same time improving provision for pedestrian and cycle movements and enhancing quality of place. The delivery of tunnel and decking schemes, whilst requiring significant investment, can achieve both of these goals, providing 'win-win' outcomes.



PART C: OBJECTIVES FOR ACTION FOR IMPROVING TLRN CORRIDORS

Section Summary:

The Roads Task Force report 2013 recommends that TfL consider the delivery of major highway interventions on the TLRN, including tunnels, fly unders and over-decking.

A process of prioritisation has been adopted, with a long list of 70 locations assessed using Multi-Criteria Analysis to identify which locations tunnel, fly under and decking solutions would deliver the greatest benefits.

From a short list of 15 schemes, five have been taken forward as a first tranche of projects for further feasibility work. Further feasibility work has since commenced on other scheme proposals.

- 2.78. Any proposal seeking to strike a better balance between the movement and place function of a road must also comply with and seek to meet wider public policy objectives for the area under consideration.
- 2.79. These arise from two key sources, the Mayor's Transport Strategy and the 2013 Roads Task Force "Vision for London's Roads and Streets".
- 2.80. The Mayor's Transport Strategy (MTS) sets out six goals for transport in London:

- Support economic development and population growth;
- Enhance the quality of life for all Londoners;
- Improve the safety and security of all Londoners;
- Improve transport opportunities for all Londoners;
- Reduce transport's contribution to climate change, and improve its resilience; and
- Support delivery of the London 2012 Olympic Games and its legacy.

- 2.81. The Roads Task Force Vision sets out the following core objectives:

- To enable people and vehicles to move more effectively on London's streets and roads;
- To transform the environment for cycling, walking and public transport; and
- To improve the public realm and provide better and safer places for all the activities that take place on the city's streets, provide an enhanced quality of life and help to unlock development and deliver new homes.

- 2.82. The RTF vision identified that measures including flyunders, decking and tunnels had the potential to address these three objectives and help balance them. They can help to achieve particular priorities without undermining the other objectives.

PART D: APPROACH TAKEN BY THE ROADS TASK FORCE TO ADDRESS TLRN CHALLENGES

Section Summary:

- In 2013, the Mayor of London's independent Roads Task Force (RTF) published a report recommending the delivery of major highway interventions on the TLRN, including tunnels, flyunders and over-decking
- Since the recommendations of the Roads Task Force were published, TfL has conducted a number of strategic studies to understand opportunities for roofing over or tunnelling under existing infrastructure
- A process of prioritisation has been adopted, with a long list of 70 locations assessed using Multi-Criteria Analysis to identify at which locations tunnel, flyunder and decking solutions would deliver the greatest benefits
- From a short list of 15 schemes, nine have been taken forward for further feasibility work. The A1261 Poplar decking scheme is one of these nine.

In 2013, the Mayor of London's independent Roads Task Force (RTF) published a report recommending the delivery of major highway interventions on the TLRN, including tunnels, flyunders and over-decking

- 2.83. The Roads Task Force (RTF), comprises a diverse group of road users, developers, local authorities and other statutory highway authorities. The RTF vision is designed to tackle congestion and improve quality of life in London.
- 2.84. A key recommendation of the RTF report, published in July 2013, was that the potential of major highway interventions on the TLRN such as tunnels and 'flyunders' should be investigated to determine the role they could play in achieving the vision for London's roads and streets across the strategic highway network.
- 2.85. In particular, whether major interventions at key locations could 'relocate or provide substitute capacity for motorised traffic to unlock surface space for 'living', more sustainable modes and development – enabling different use of space above and reducing impacts such as severance and noise, while maintaining network functioning'.
- 2.86. This view built on experience from other cities around the world such as Paris, Oslo and Boston, which have undertaken these kinds of ambitious projects and have seen dramatic results.

Since the recommendations of the Roads Task Force were published, TfL has conducted a number of strategic studies to understand opportunities for roofing over or tunnelling under existing infrastructure

- 2.87. Three main types of infrastructure were considered:

- Tunnels to release land at the surface for either development, green space, improved public realm or better facilities for pedestrians, cyclists and public transport users but also relieve congestion and improve journey time reliability (where relevant)
- Flyunders to release land at the surface for either development, green space, improved public realm or better facilities for pedestrians, cyclists and public transport users but also relieve congestion and improve journey time reliability (where relevant)
- Decking of roads to provide public parks, reduce severance and the negative impacts of roads including noise and poor air quality and helping to bring forward development on neighbouring land especially where there is good existing or future public transport connectivity which can support high-density development

2.88. To identify locations where tunnels, flyunders or decking solutions would deliver strong potential benefits, a prioritisation process has been followed.

A process of prioritisation has been adopted, with a long list of 70 locations assessed using Multi-Criteria Analysis to identify at which locations tunnel, flyunder and decking solutions would deliver the greatest benefits

2.89. From an initial list of approximately 70 locations, through a Multi-Criteria Analysis (MCA) a shortlist of fifteen sites was identified. These sites were identified as having sufficient potential for initial feasibility studies. A combined score was developed from SAF23 and RTF appraisals. For each identified site, the following was also investigated:

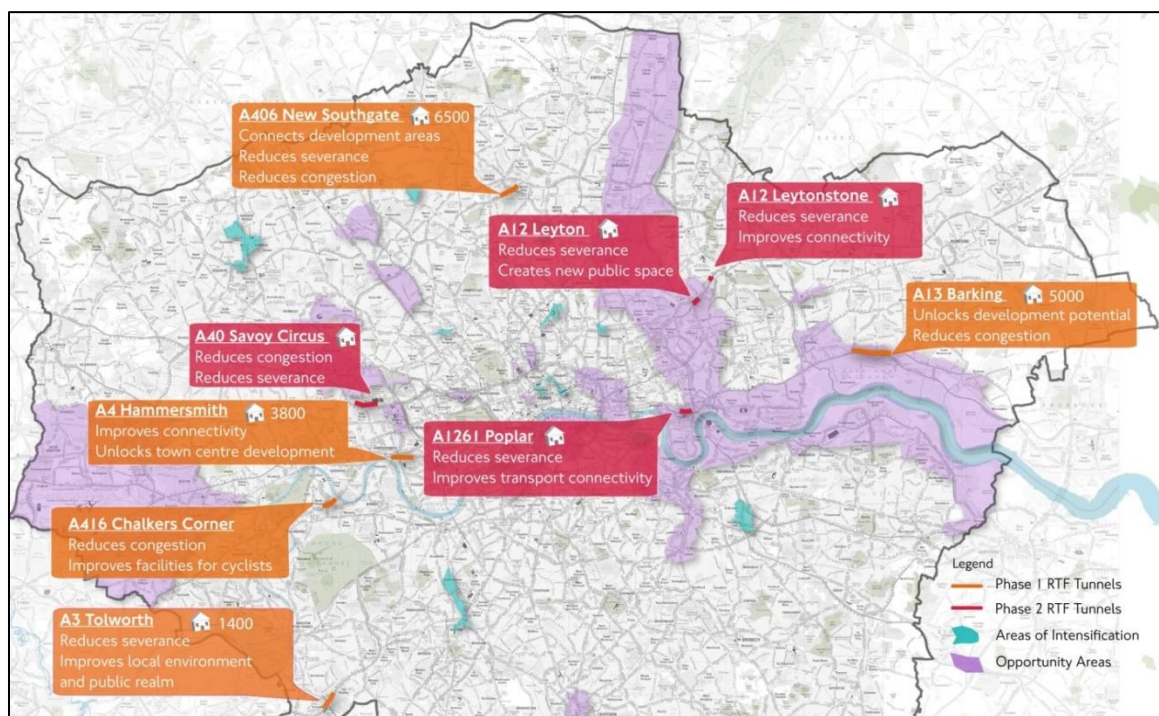
- Potential intervention types;
- Engineering feasibility;
- Transport impact for all users including those travelling by car, foot, cycle and public transport;
- Local and strategic environmental impacts including on visual amenity, noise and air quality;
- Level and quality of enabled development;
- Likely programme;
- Route to consent; and
- Cost of delivery

²³ TfL Strategic Assessment Framework (SAF) is a tool that allows planners, managers and sponsors across Transport for London (TfL) to assess projects and programmes using a set of strategic criteria. SAF is used as part of the process of developing projects and programmes within TfL.



From a short list of 15 schemes, nine have been taken forward for further feasibility work. The Poplar decking scheme is one of these nine

Figure 16: The locations of the nine RTF tunnel/decking schemes



2.90. As part of a rolling feasibility assessment programme, five initial locations were taken forward for further assessment in 2015. These five locations are:

- A13, Barking Riverside;
- A3, Tolworth;
- A316, Chalkers Corner;
- A4, Hammersmith;
- A406, New Southgate.

2.91. A further four locations have been taken forward in 2015/16. These four locations are:

- A1261, Poplar;
- A12, Leyton;
- A12, Leytonstone;
- A40, Savoy Circus.

2.92. All nine schemes are shown above at Figure 16.

PART E: THE PROBLEMS IDENTIFIED ON THE A1261 AT POPLAR

Section Summary:

The A1261 is a heavily used road connecting central London, London's docklands, east London and Essex via the A13. It forms part of London's strategic road network, connecting central London with areas to the east. It carries Average Annual Daily Traffic (AADT) flows of 76,000, of which approximately 6% are Heavy Goods Vehicles

A growing population in east London and the London Borough of Tower Hamlets requires more homes and jobs in accessible locations

- Projected population growth in LB Tower Hamlets is outstripping delivery of new homes
- Canary Wharf is a strategically important employment centre that needs more office space
- There is land available for development in Poplar and Canary Wharf, but its potential to accommodate high-density development is constrained by the negative impacts of A1261 Aspen Way

A1261 Aspen Way causes severance, visual blight, noise and air pollution, which together divide communities, harm social outcomes in Poplar, reduce the potential of Canary Wharf as a Major Centre within London and inhibit walking and cycling movements along with access to public transport

- A1261 Aspen Way causes severe severance between Canary Wharf and Poplar, contributing to sharply differing socio-economic performance in these two areas
- Canary Wharf is a Major Centre of London with the potential to play a larger role in its local community
- Air and noise pollution around A1261 Aspen Way are extremely high

The capacity and function of the existing transport infrastructure at Poplar need to be maintained

- The A1261 serves a key strategic movement function, which delivers substantial economic benefits to London and the UK
- The Docklands Light Railway infrastructure at Poplar is vital to its operations

The A1261 is a heavily used road connecting central London, London's docklands, east London and Essex via the A13. It forms part of London's strategic road network, connecting central London with areas to the east. It carries Average Annual Daily Traffic (AADT) flows of 76,000, of which approximately 6% are Heavy Goods Vehicles

- 2.93. The section of the A1261 through Poplar, known as A1261 Aspen Way, was constructed in the early 1990s to support the redevelopment of the Isle of Dogs.
- 2.94. The area through which A1261 Aspen Way runs has long been an important transport corridor, particularly since the construction of the Commercial Railway in the 1830s. Combined with the large West India Dock to the south, which was opened in 1802, the railway and docks largely divided the Isle of Dogs from Poplar to the north.
- 2.95. Leading up to and following the closure of the docks in 1980, the area around West India Dock declined enormously in importance and economic success. In order to regenerate the area, considerable investment in infrastructure was made by the London Docklands Development Corporation (LDDC). This included the construction of the Docklands Light Railway (DLR) along part of the alignment of the Commercial Railway. The DLR also built its first depot immediately north of the junction at Poplar, to provide easy access to all its routes emanating from Poplar.
- 2.96. As well as improving public transport through the construction of the DLR, the LDDC constructed new routes to link the Docklands area with central and east London. This included the Limehouse Link Tunnel to the west as well as A1261 Aspen Way, built alongside the DLR tracks at the northern end of the Isle of Dogs.
- 2.97. Since the 1980s, the area around the West India Dock, now known as Canary Wharf, has thrived to become one of the most economically successful districts in the whole of the UK, housing the headquarters of many companies, particularly in the financial services industry. Canary Wharf is now classified as a Major Town Centre in London, with the potential to soon grow into a Metropolitan Centre. Both employment and residential population in Canary Wharf have grown and are projected to continue growing rapidly for the foreseeable future.
- 2.98. The success of Canary Wharf has not been matched, however, by commensurate economic or social progress on the other side of A1261 Aspen Way. Poplar remains much as it did three decades ago, formed mainly of low-rise housing of low quality, with little commercial activity. Social outcomes are markedly lower in Poplar than they are in Canary Wharf.
- 2.99. Although A1261 Aspen Way and the DLR form vital transport corridors that support the economy of this local area and London as a whole, they present a considerable barrier to north-south movements between Poplar and Canary Wharf. The only route between these two areas currently is the footbridge at Poplar station, which can only be accessed by climbing up and down two fifty-step flights of stairs or by using two lifts. Existing conditions in the area can be seen in Figure 17.

Figure 17: Existing conditions on the A1261 and DLR at Poplar



A growing population in east London and the London Borough of Tower Hamlets requires more homes and jobs in accessible locations

Projected population growth in LB Tower Hamlets is outstripping delivery of new homes

- 2.100. In recent years, population and employment growth in the London Borough of Tower Hamlets has been significant. In 2011, Tower Hamlets had a population of 257,000 people, an increase of 27% from the 2001 population. Between 2011 and 2031, this population is projected to rise by a further 48% to 381,000 people²⁴. This makes it by far the fastest growing London borough, in both absolute and relative terms. More than 10% of the population increase in Greater London up to 2031 is expected to take place in Tower Hamlets.

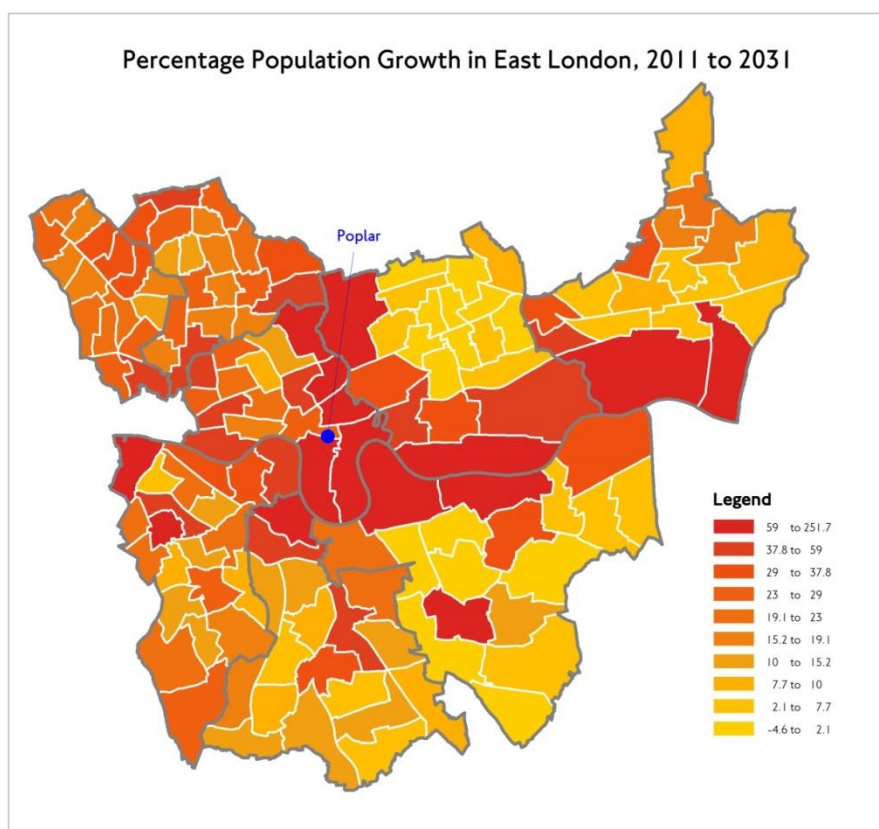
2.101.

²⁴ GLA 2014 rounded population projections 2015 – 2041 [<http://data.london.gov.uk/dataset/2014-round-population-projections/resource/89a8a483-745a-4879-9246-7b47142d3e90>]

2.102. Figure 18 shows projected population growth in the Tower Hamlets and surrounding boroughs. It can be seen that growth is particularly centred on the Isle of Dogs and Poplar.



Figure 18: Projected population change in east London, 2011 to 2031



- 2.103. Importantly, the projected population growth in this area is not matched by a similar rate of growth in home building. In the five-year period between 2009 and 2014, Tower Hamlets only once met its annual target to construct 2,885 housing units, averaging just 1471 completions per year²⁵.
- 2.104. Despite this consistent shortfall, the housing target for Tower Hamlets was substantially increased in the March 2015 Further Alterations to the London Plan, from 2,885 to 3,931 units per year, reflecting the acceleration of projected population growth in this area and London as a whole.
- 2.105. Given the shortfall in homes compared to the projected increase in population, it is essential that a significant increase in house building in Tower Hamlets takes place. Without this, significant increases in house prices can be expected as a result of demand outstripping supply, leading to increasing unaffordability and potentially wider social polarisation in the area.

²⁵ GLA London Plan Annual Monitoring Reports
MAYOR OF LONDON

Key finding:

LB Tower Hamlets requires a substantial increase in homes. If homebuilding in this area is not substantially increased, it will likely lead to greater unaffordability and social polarisation in the area.

Canary Wharf is a strategically important employment centre that needs more office space

- 2.106. The Canary Wharf area has undergone complete transformation since the 1980s, becoming one of the major employment centres of London. The North Isle of Dogs area that includes Canary Wharf is now recognised by the Greater London Authority as the second most strategically important employment area in the city, behind only the Central Activities Zone (CAZ). Over 100,000 people are now employed in the northern part of the Isle of Dogs, and this number is projected to rise to 198,000 by 2036²⁶.
- 2.107. Accommodating this doubling of employment in the area will require a large increase in commercial floorspace available around the Canary Wharf area, while also putting severe pressure on all transport links into Canary Wharf, including local pedestrian and cycling routes as well as the DLR and road network.

There is land available for development in Poplar and Canary Wharf, but its potential to accommodate high-density development is constrained by the negative impacts of A1261 Aspen Way

- 2.108. Though considerable development has taken place in Canary Wharf in the last thirty years, there remain significant brownfield sites whose development potential has not been realised.
- 2.109. While the centre of Canary Wharf and area to the south (South Quay) have seen extensive development, the area north of Canary Wharf, particularly the North Quay site and the site currently accommodating Billingsgate Market, remain low-rise or unused. These sites lie at the fringe of the Isle of Dogs immediately adjacent to A1261 Aspen Way, and are thus less desirable sites for development than others to the south.
- 2.110. Across A1261 Aspen Way, Poplar is occupied predominantly by low-rise, mid-20th century residences. There is relatively little commercial activity. Although facilities such as an FE college are located in the area. The DLR depot is situated immediately adjacent to the DLR tracks, occupying a large site which has the potential to accommodate significant over-site development. The poor connectivity between this site and the Isle of Dogs greatly reduces the viability of such a development, however.
- 2.111. The northern sections of Canary Wharf and the southern sections of Poplar share the burden of being most affected by the severance, noise and air pollution of A1261 Aspen Way, which reduces the viability of residential or commercial development on

²⁶ Source: GLA Employment Projections: <http://data.london.gov.uk/dataset/gla-employment-projections>

these sites. It is unlikely that the full potential of these sites can be realised without a solution to the problems created by A1261 Aspen Way and the DLR infrastructure.

Key finding:

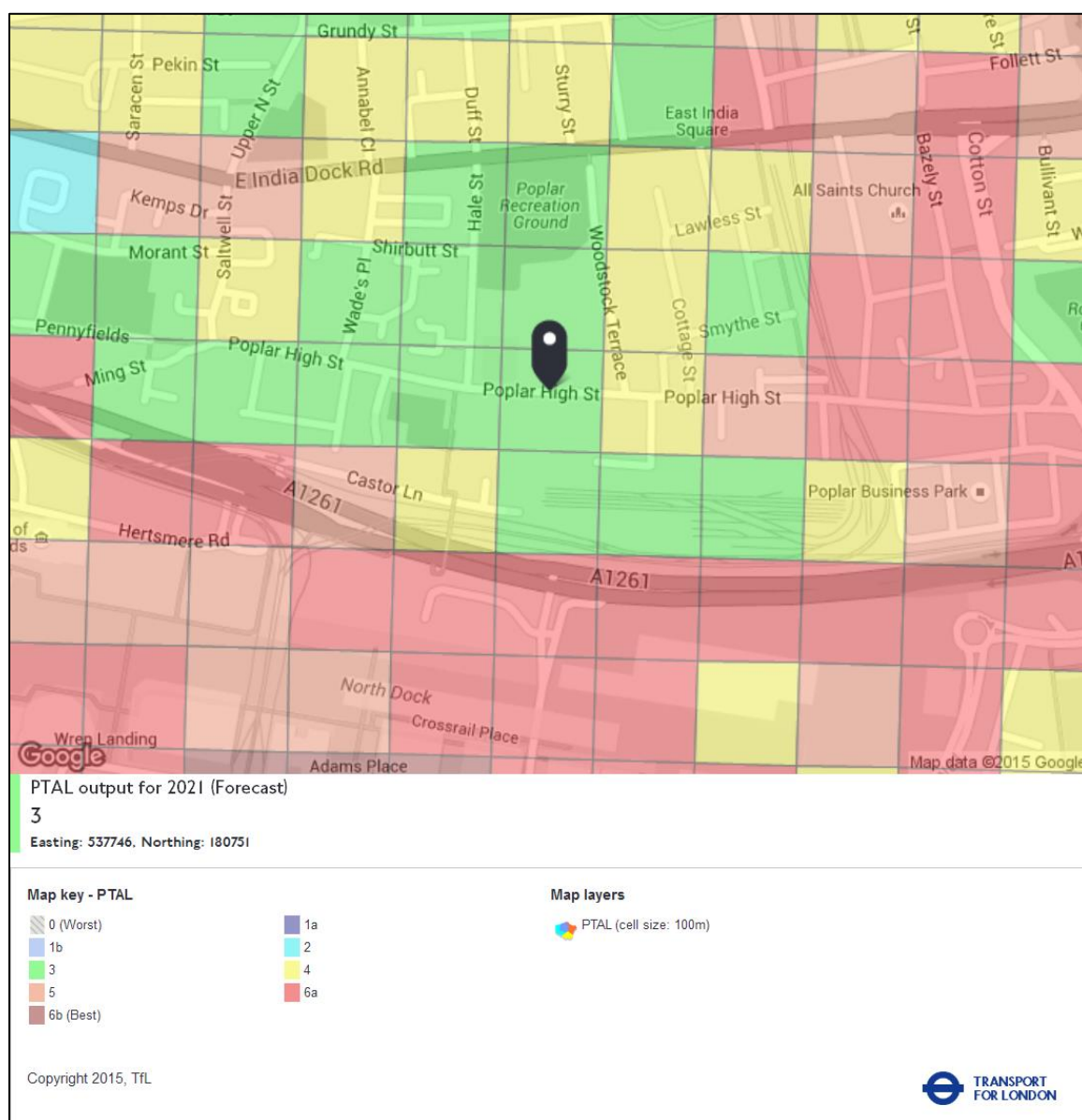
There is significant demand for new housing and office space in Canary Wharf and Poplar, but at present the opportunities that exist to provide this are constrained by the negative impact of A1261 Aspen Way and DLR infrastructure.

A1261 Aspen Way causes severance, visual blight, noise and air pollution, which together divide communities, harm social outcomes in Poplar, reduce the potential of Canary Wharf as a Major Centre within London and inhibit walking and cycling movements along with access to public transport

A1261 Aspen Way causes severe severance between Canary Wharf and Poplar, contributing to sharply differing socio-economic performance in these two areas

- 2.112. A1261 Aspen Way along with the DLR create significant physical barriers for north to south movement dividing Poplar from Canary Wharf. The additional noise, air pollution and intimidation caused by the 76,000 vehicles that pass along A1261 Aspen Way each day further discourages movement between the two areas.
- 2.113. The only route for pedestrians and cyclists across A1261 Aspen Way requires using Poplar footbridge, a high-level crossing of the road and DLR, which requires either climbing and then descending two 50-step staircases, or taking two lifts. The footbridge does not connect well to existing pedestrian routes, particularly at the southern end where pedestrians and cyclists who have crossed the footbridge must divert east or west along A1261 Aspen Way to continue their journey to the south.
- 2.114. The issue of severance between the two sides of A1261 Aspen Way will become more significant in 2018 with the opening of the new Canary Wharf Crossrail station, on the south side of A1261 Aspen Way. This will improve public transport accessibility levels (PTAL) in Canary Wharf, but will make little difference to Poplar without improved access routes to the station. Figure 19 shows predicted PTAL levels in the area in 2021, after the opening of Crossrail. It can be seen that the area south of the A1261 has excellent service from public transport, but PTAL levels suddenly drop north of A1261 Aspen Way such that Poplar receives only mediocre service from public transport, with a PTAL rating of 3 or 4.

Figure 19: PTAL levels in Poplar and Canary Wharf in 2021



2.115. The separation of Poplar from the thriving economy of Canary Wharf can be seen in passenger figures for the DLR stations in the area. Of employees around Canary Wharf who arrive by DLR, 75.5% use Canary Wharf station, while only 2.5% use Poplar station²⁷. This is despite the stations lying just 400m apart as the crow flies. This division of passengers leads to inefficient loadings on eastbound DLR trains from Bank and Tower Gateway, as passengers crowd onto Canary Wharf-bound services while those via Poplar are lightly used. Better linking Poplar into the Canary Wharf area would help to even out these passenger loadings and reduce overcrowding on services towards Canary Wharf.

²⁷ Source: Canary Wharf Travel Survey 2015

- 2.116. The stark severance between Poplar and Canary Wharf are reflected in the socio-economic outcomes achieved in the two areas, as measured by numerous indices. Table 4 shows the performance on several indices of the wards within which Poplar and Canary Wharf lie.

Table 4: Socio-economic outcomes in Poplar and Canary Wharf²⁸

Index	Poplar	Canary Wharf
Median household income (2011/12)	£14,676	£30,073
Life expectancy at birth (2009-13)	77.5 years	82.7 years
Median house price (2014)	£285,000	£450,000
Households with children who have no adults in employment (2011)	8.3%	4.8%
JSA Claimants (2014)	3.62%	2.16%

- 2.117. The severance between Canary Wharf and the rest of Tower Hamlets is also exemplified by the mismatch between jobs available in Tower Hamlets and jobs held by Tower Hamlets residents. Of all London boroughs, Tower Hamlets has the lowest percentage of jobs (8%) deemed low paid, yet 19% of its residents work in low-paid jobs²⁹. This can be attributed to the fact that the borough's major employment centre (Canary Wharf) is in some respects more accessible to those who live outside the borough and benefit from Canary Wharf's excellent public transport links, while those who want to travel by more local means of transport such as walking and cycling face major barriers accessing these well-paid jobs.

Canary Wharf is a Major Centre of London with the potential to play a larger role in its local community

- 2.118. As well as being a vital employment centre, Canary Wharf's retail provision has expanded considerably, and it is now considered a Major Centre in the London Plan. It has a large retail offer along with leisure facilities.
- 2.119. The London Plan identifies the potential for Canary Wharf's retail provision to serve a wider catchment area than it does at present. If such a broadening of its offering and catchment could be achieved, the Plan notes that Canary Wharf could develop into a Metropolitan town centre. Likewise, the Core Strategy of the London Borough of Tower Hamlets identifies an aspiration for Canary Wharf to adopt a stronger local function in addition to its role as a global financial centre.
- 2.120. At present residents of Poplar face a difficult and unpleasant journey in order to visit Canary Wharf for shopping or leisure, as they must either pay to use the DLR,

²⁸ Source: GLA Ward Atlas. Wards in LB Tower Hamlets were reorganised in 2014, creating Poplar and Canary Wharf as individual wards. Previously, Poplar was part of Limehouse ward and Canary Wharf part of Millwall ward. Data for the new ward boundaries has been used in this table except for life expectancy at birth, where data is only available for the old ward boundaries.

²⁹ Sorca: 'London's Poverty Profile 2015



traverse the Poplar footbridge and walk/cycle along A1261 Aspen Way, or drive around a busy and circuitous local road network. As such, it can be more attractive to remain in Poplar.

- 2.121. Without improved links to its surrounding neighbourhoods, it will be difficult for Canary Wharf to grow and fulfil its potential as a Metropolitan town centre for east London.
- 2.122. Canary Wharf is currently lacking in open space, with little greenery interspersed among its towers. Poplar has a number of unspoiled green spaces, including Poplar Recreation Ground, Rosefield Gardens and Castor Lane link park, however these are difficult to access from Canary Wharf due to the severance caused by A1261 Aspen Way and the DLR. While Poplar residents stand to gain from improved access to Canary Wharf's employment and retail opportunities, Canary Wharf residents stand to gain from improved access to Poplar's green space.

Air and noise pollution around A1261 Aspen Way are extremely high

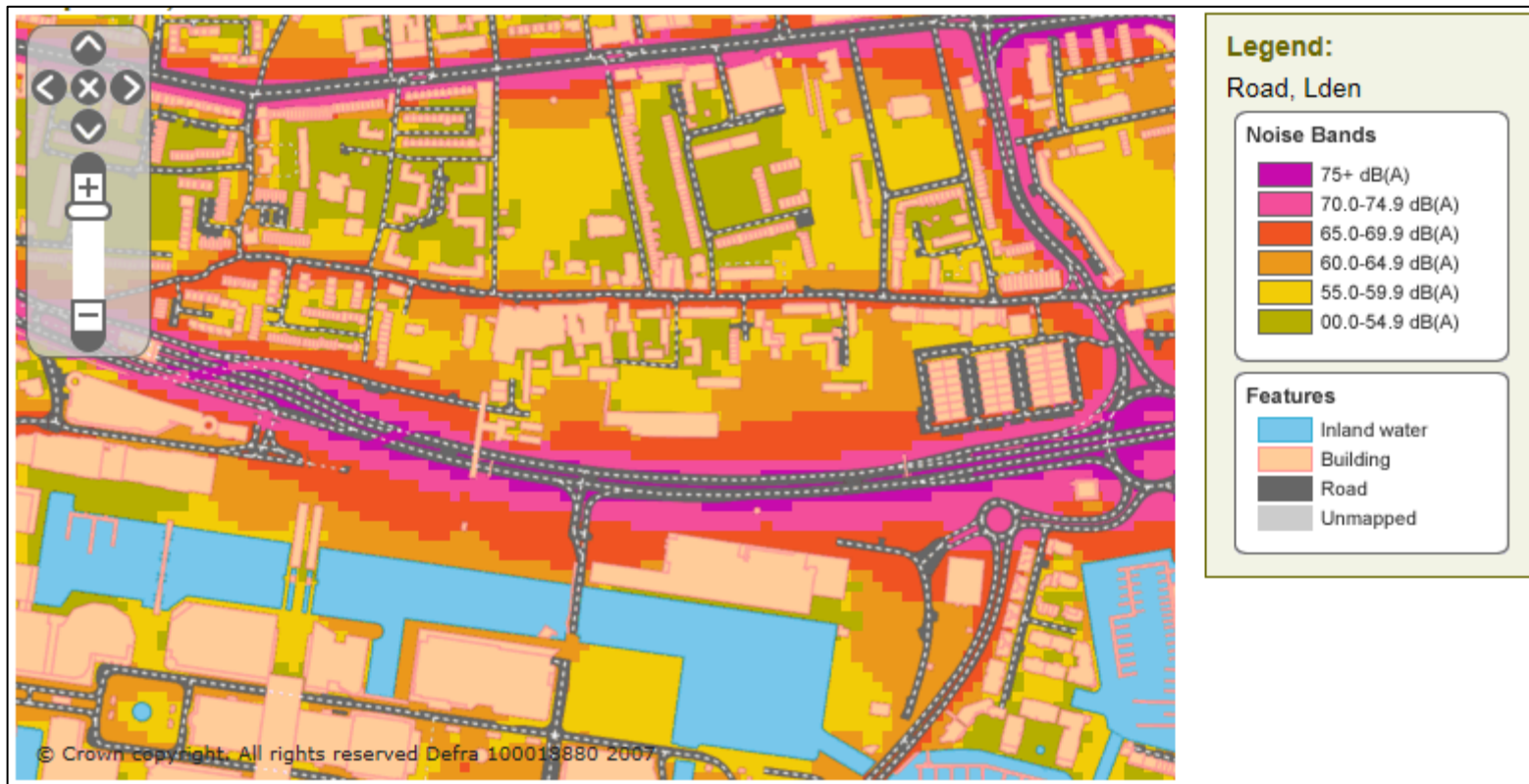
- 2.123. The physical and perceptual severance caused by A1261 Aspen Way, coupled with the noise and air pollution associated with the daily 76,000 vehicles using the road mean that quality of life for those living and travelling close to A1261 Aspen Way is negatively impacted.
- 2.124. A1261 Aspen Way reaches the highest measured daily noise level for roads of 75+ decibels (Figure 20), whilst levels of NO₂, a major air pollutant, are also high (Figure 21). It can be seen in these two figures that high levels of noise and particularly air pollution extend into the land areas either side of the road, such as the Billingsgate Market site and north towards Poplar High Street
- 2.125. These high levels of noise and air pollution create an unpleasant environment along the road and railway corridor, reducing the likelihood of further residential and business development coming forward on sites either side of the road, as few want to live or work in such an environment. The unpleasant environment also discourages pedestrian and cyclist movements on either side of A1261 Aspen Way, further contributing to the severance between Poplar and Canary Wharf.

Key finding:

Pedestrians and cyclists are negatively affected by the severance, visual blight, noise and air pollution caused by A1261 Aspen Way. The severance caused by A1261 Aspen Way limits the potential of Canary Wharf as a Major Centre in London while contributing to poor socio-economic outcomes in Poplar. This severance will become more significant following the opening of Crossrail on the south side of A1261 Aspen Way in 2018.

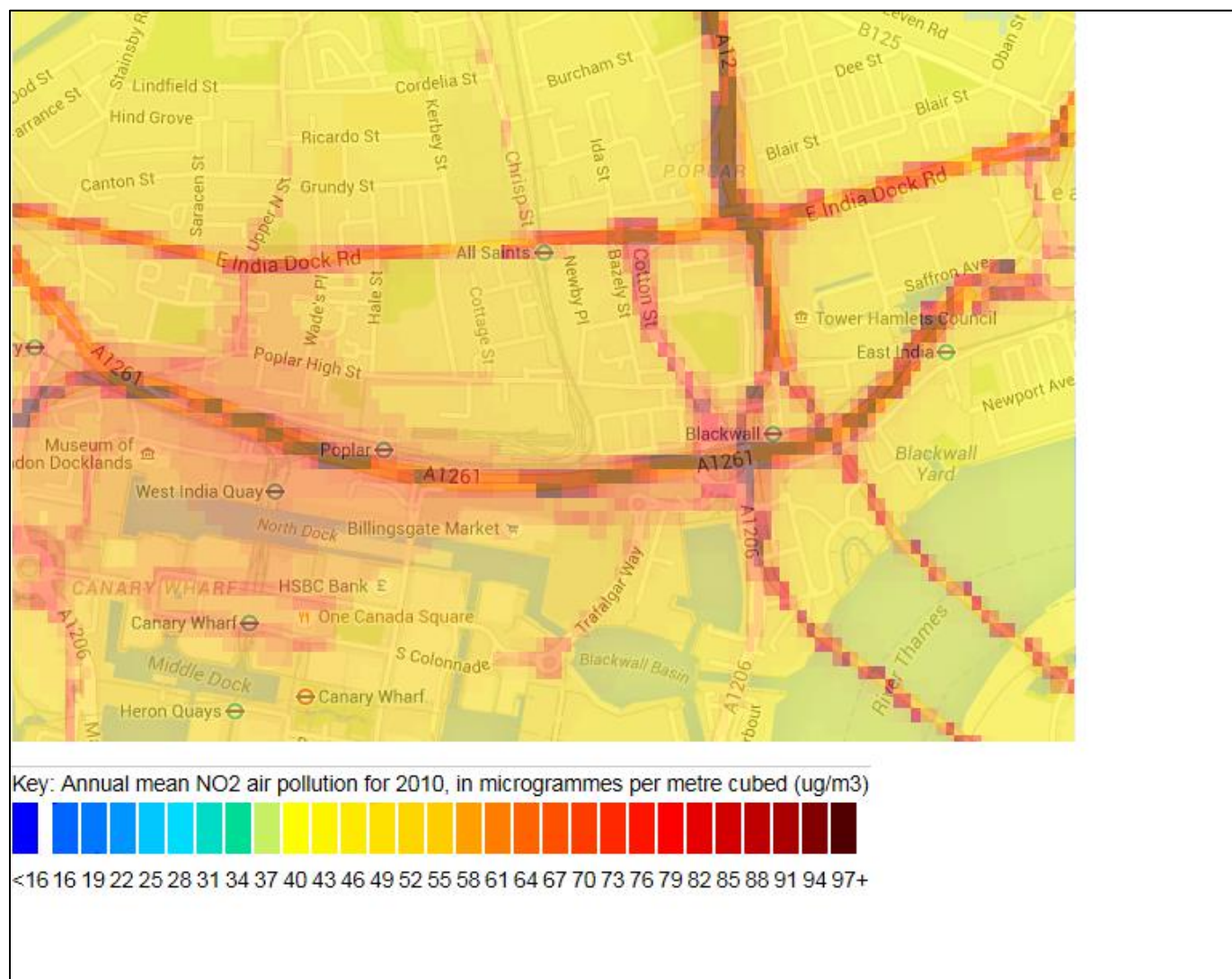
An infrastructure solution is required which enables a transformation in local connectivity between Poplar and Canary Wharf.

Figure 20: Noise levels at Poplar³⁰



³⁰ DEFRA – Noise Mapping England. <http://services.defra.gov.uk/wps/portal/noise/>

Figure 21: NO₂ levels at Poplar³¹



³¹ <http://www.cleanerairforlondon.org.uk/londons-air/air-quality-data/london-emissions-laei/laei-personalised-view>

The capacity and function of the existing transport infrastructure at Poplar needs to be maintained

- 2.126. The A1261 in Poplar is part of the Transport for London Road Network (TLRN), the strategic London road network that is the responsibility of TfL. The TLRN comprises only 4% of London's road length but carries 30% of London's traffic.
- 2.127. The A1261 is a key link in this network, connecting westwards towards central London via either the Limehouse Line Tunnel or the A13, and eastwards towards the Royal Docks, London City Airport, London Riverside and Essex via the A13 or Lower Lea Crossing. Traffic data indicates the road consistently carries Average Annual Daily Traffic (AADT) flows of 76,000, of which approximately 6% are Heavy Goods Vehicles.

The A1261 serves a key strategic movement function, which delivers substantial economic benefits to London and the UK

- 2.128. The strategic traffic flow supported along the A1261 corridor is economically important to London and the wider UK. This was demonstrated by the considerable expense that was invested in building this road and its connections just 25 years ago, including the Limehouse Link Tunnel that is regarded as the most expensive road ever build in the UK on a per unit distance basis.
- 2.129. Given the high number of vehicles using A1261 Aspen Way, any reduction in its capacity would have a significant effect on congestion both on this road and potentially on other nearby routes to which drivers may divert. This would have negative economic impacts as time is wasted in congestion, while also continuing to cause severance, noise and air quality issues beside the road. Thus, any solution to the negative effects of the A1261 on Poplar must avoid harming the traffic flow of the A1261.

The Docklands Light Railway infrastructure at Poplar is vital to its operations

- 2.130. Poplar lies at the centre of the DLR network, where key routes to/from all points of the compass converge, including Stratford to the north, the Royal Docks to the east, the Isle of Dogs and Lewisham to the south and Bank to the west.
- 2.131. Given this, Poplar was chosen to house a depot for stabling trains as well as launching the service at the beginning of each day. The DLR is supported by a second depot at Beckton; however this lies at the far eastern end of the line, and as such provides less ability to quickly launch a service that can reach all points of the network quickly. There are no realistic alternative sites in the vicinity of Poplar to which the depot could be relocated without causing unacceptable disruption.
- 2.132. The DLR plans to expand its operations considerably in the coming years, including ordering a new fleet of fixed-formation three-car trains that will require re-modelling of Poplar depot in order to accommodate. The depot will therefore have to be remodelled by the early 2020s, and this will provide an opportunity to integrate the depot with over-site development that would not at present be possible.

Key finding:

Any proposal to address the negative impacts of the A1261/DLR corridor must maintain the capacity of the current infrastructure that supports these vital transport routes.



PART F: OBJECTIVES FOR THE A1261 AT POPLAR AND OPTIONS IDENTIFIED

Section Summary:

Objectives and measures of success for an intervention on the A1261 at Poplar have been defined

The initial concept was a 'Hourglass' footbridge over the A1261

Options for achieving these objectives have been identified

- Further feasibility work identified that the best option for a decking scheme would be to extend from Poplar High Street in the north to North Dock in the south

The recommended option is a deck extending from Poplar High Street in the north to North Dock in the south, and from Poplar DLR station/Upper Bank Street in the west to Poplar Business Park in the east

There are a number of constraints which may have a bearing on the scheme

There are a number of dependencies with other work streams that would need to be integrated with the timely delivery of a decking solution at Poplar

Objectives and measures for success for the A1261 at Poplar

- 2.133. The objectives for any enhancements to the A1261 at Poplar are listed in Table 2 below. To ensure the project objectives are achieved, measures of success have been identified, and these are also included in Table 5. More specific measures and the associated monitoring strategy will be developed at a later stage.

Table 5: Objectives and measures of success for the A1261 at Poplar

Strategic challenges	Objectives for the A1261 at Poplar	Measures of success
A growing population in east London and the London Borough of Tower Hamlets requires more homes and jobs in accessible locations	Facilitate regeneration and development at Poplar and Canary Wharf including significant development of new houses and office space	Creation of up to 850,000 square metres of new development Stimulating development on development sites adjacent to the deck

Strategic challenges	Objectives for the A1261 at Poplar	Measures of success
A1261 Aspen Way causes severance, visual blight, noise and air pollution, which together divide communities, reduce social outcomes in Poplar, reduce the potential of Canary Wharf as a Major Centre and inhibit walking and cycling movements along with access to public transport	Improve the connectivity between Poplar and Canary Wharf, enhancing the quality of the urban realm and local environment	<p>Creation of new surface links between Poplar and Canary Wharf</p> <p>Provision of attractive cycling and walking routes</p> <p>Provision of high-quality new open space</p> <p>Reduced noise and air pollution around the deck above the A1261</p>
The capacity and function of the existing transport infrastructure at Poplar need to be maintained	Maintain the vital strategic movement function of the A1261 and DLR at Poplar while accomplishing the above objectives	<p>Traffic counts and measures of delay on the A1261 at Poplar</p> <p>Passenger numbers and performance measures on the DLR</p>

The options appraisal process described in Part D concluded that further feasibility investigation into decking A1261 Aspen Way at Poplar should be undertaken

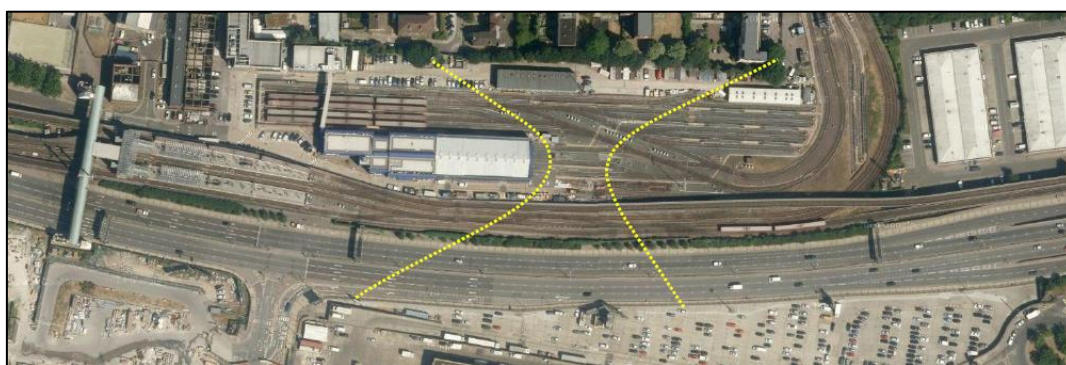
- 2.134. Having identified Poplar as a priority location for investigating the feasibility of providing a decking intervention, a number of options were considered.
- 2.135. Early feasibility work identified two possibilities for addressing the severance caused by A1261 Aspen Way:
- Decking, which would need to extend a considerable distance either side of the road to address the severance caused by the DLR and the vertical changes in levels

- An hourglass-shaped bridge across the DLR depot, lines and A1261 Aspen Way (as shown on Figure 22).

The initial concept was a Hourglass footbridge over the A1261

2.136. The initial concept comprised an hourglass shaped bridge across the A2161.

Figure 22: Potential alignment of an hourglass-shaped bridge across the DLR and A1261 Aspen Way



- 2.137. Though a bridge would be a lower-cost option that retains the potential to address the severance caused by the DLR and A1261 Aspen Way, there are a number of significant weaknesses of this as an option. Notably, it would require considerable work to be integrated into the existing urban fabric at either end, both horizontally in meeting the current street alignment and vertically in returning people down to ground level. This solution would therefore retain the same constraints faced by the current footbridge across A1261 Aspen Way, which provides a crossing but requires considerable diversion both horizontally and vertically. By contrast, a decking scheme would be integrated with the urban fabric and provide direct routes.
- 2.138. Additionally, a bridging structure would not provide new space for development, reducing the potential to meet the objective of creating new homes and office space.
- 2.139. It was concluded from this early feasibility work that a deck was the option that most effectively met the objectives for an intervention at this site, and it should be taken forward for more detailed feasibility work.

Decking options for the A1261 at Poplar

Option 1

- 2.140. The proposal includes four connected decks with one over the DLR Depot, one over the DLR line, one over the A1261 and one over the existing Billingsgate site as shown in Figure 23, Figure 24 and Figure 25. Each would be constructed at a level determined by the use function beneath with changes in gradient being connected by steps and ramps. Decking would also be built around the major structures proposed south of the A1261, although this would not be load bearing.
- 2.141. This is the “full” option in that it proposes development in an integrated precinct

all the way from Poplar High Street through to Canary Wharf, with improved connections to Wood Wharf also. However, it also, relative to options 2 and 3 has the greatest requirement for working in tandem with adjacent land owners.

Figure 23: Option 1 Masterplan

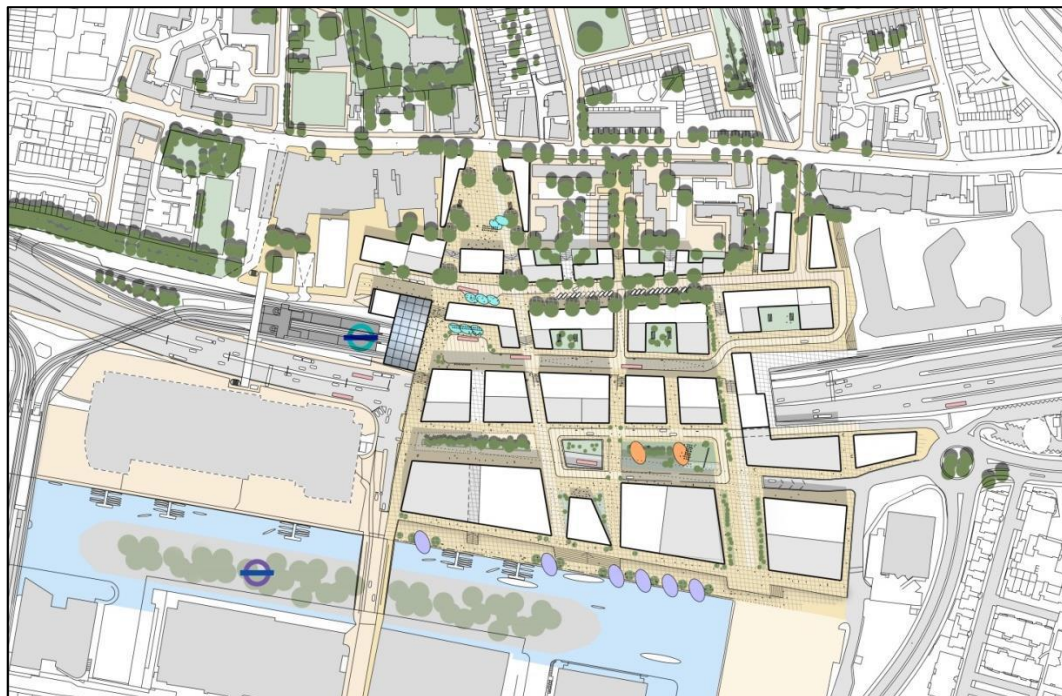


Figure 24: Poplar Option 1 Visualisation (View on Simpson's Road from Poplar High Street-Existing)

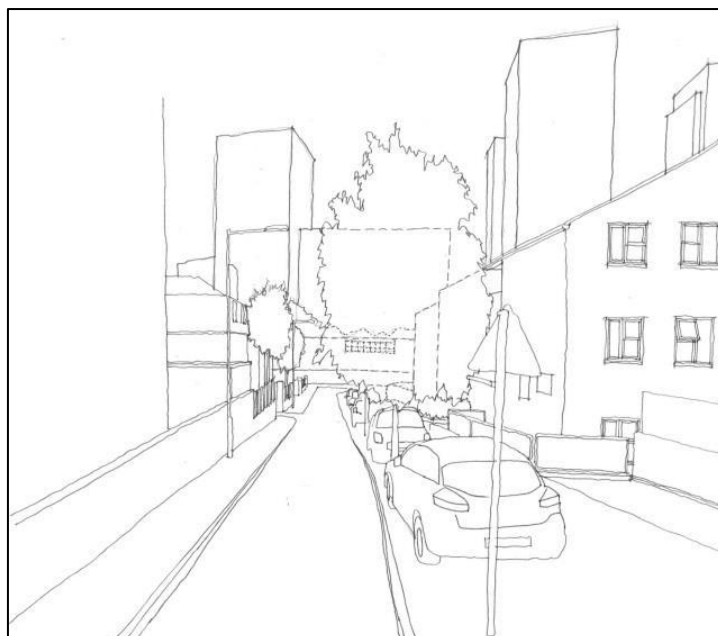


Figure 25: Poplar Option 1 Visualisation (View on Simpson's Road from Poplar High Street-Proposed)



Option 2

- 2.142. Option 2 includes three connected decks with one over the DLR Depot, one over the DLR line, and one over the A1261 as shown in Figure 26, Figure 27 and Figure 28. Each deck is built at a level specific to the clearance requirements of the function below with steps and ramps connecting the decks. The option relies less critically on the neighbouring sites being developed alongside the proposal but is designed to allow future connections to future redeveloped sites.
- 2.143. As with Option 1, the design aims to address the significant severance resulting from the A1261 and DLR line. The decks contain new pedestrian and cycle routes that are aligned on the basis that they could be extended in the future toward Wood Wharf and new development over Billingsgate Market, although without redevelopment of these adjacent sites the associated connectivity benefits are substantially reduced.
- 2.144. This option would however improve access to the established Canary Wharf development and its Crossrail station through a new “street” providing direct access from Poplar to these facilities. This route is aligned with existing routes further north and south to make it legible to the wider townscape and provide wider access benefit.
- 2.145. The proposed surface level is treated as pedestrianised streets with the buildings lining these having activity at ground level. As with Option 1, to increase coexistence with the surrounding area, the new routes extend north through the Galloway Estate (south side of Poplar High Street) and a new public square is proposed facing Old Poplar Town Hall.

Figure 26: Option 2 Masterplan

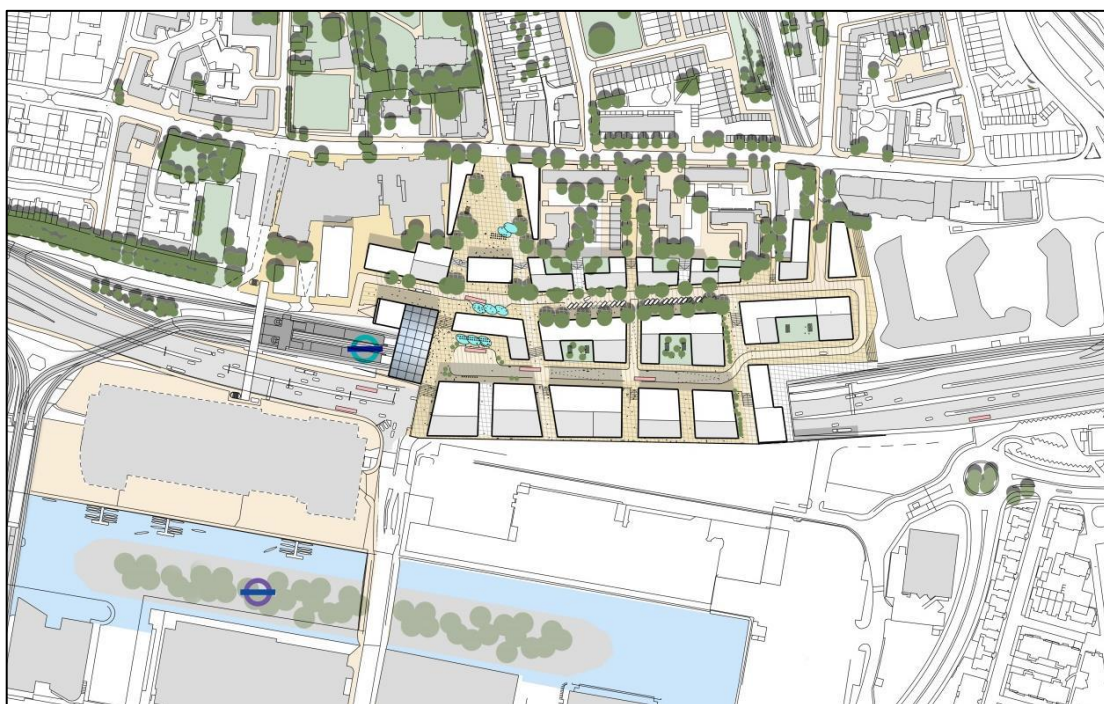


Figure 27: Option 2 Visualisation (View on Simpson's Road from Poplar High Street-Existing)

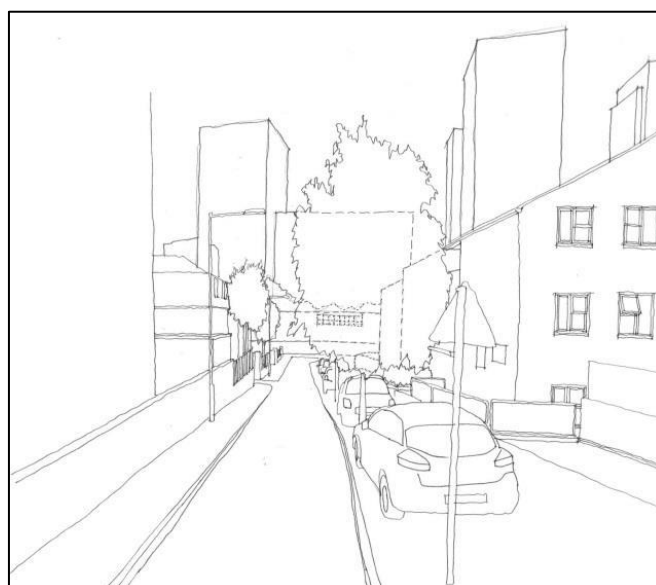


Figure 28: Option 2 Visualisation (View on Simpson's Road from Poplar High Street- Proposed)



Option 3

- 2.146. Option 3, shown in Figure 29, Figure 30 and Figure 31 is similar to Option 2 in that it again proposes three decks and does not incorporate the Billingsgate site. It therefore has similar opportunities and constraints as Option 2 in terms of the extent to which severance and connectivity to the south is addressed.

Figure 29: Option 3 Masterplan

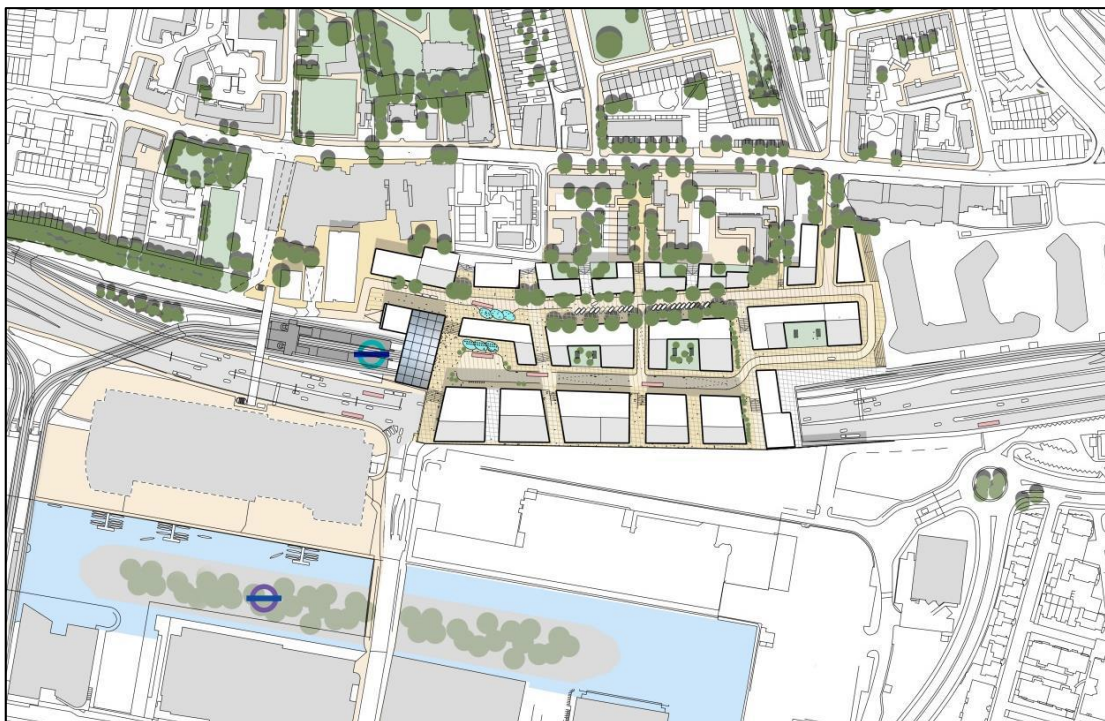


Figure 30: Option 3 Visualisation (View on Simpson's Road from Poplar High Street-Existing)



Figure 31: Option 3 Visualisation (View on Simpson's Road from Poplar High Street-Proposed)



Further feasibility work identified that the best option for a decking scheme would be to extend from Poplar High Street in the north to North Dock in the south

- 2.147. Once it had been determined that a deck would be the most beneficial intervention at this location, further options testing was undertaken to determine the best layout for the deck.
- 2.148. The three options identified, all of which involved constructing a deck stretching across A1261 Aspen Way and the DLR tracks and depot were considered. Option 1, shown in Figure 32, only included this deck over A1261 Aspen Way and the

DLR. Option 2, shown in Figure 33, extended this deck northwards to include a route to Poplar High Street through a new public square. Option 3 additionally extended the deck southwards over the Billingsgate Market site.

Figure 32: Option 1 with decking extending only over A1261 Aspen Way and DLR lines and depot

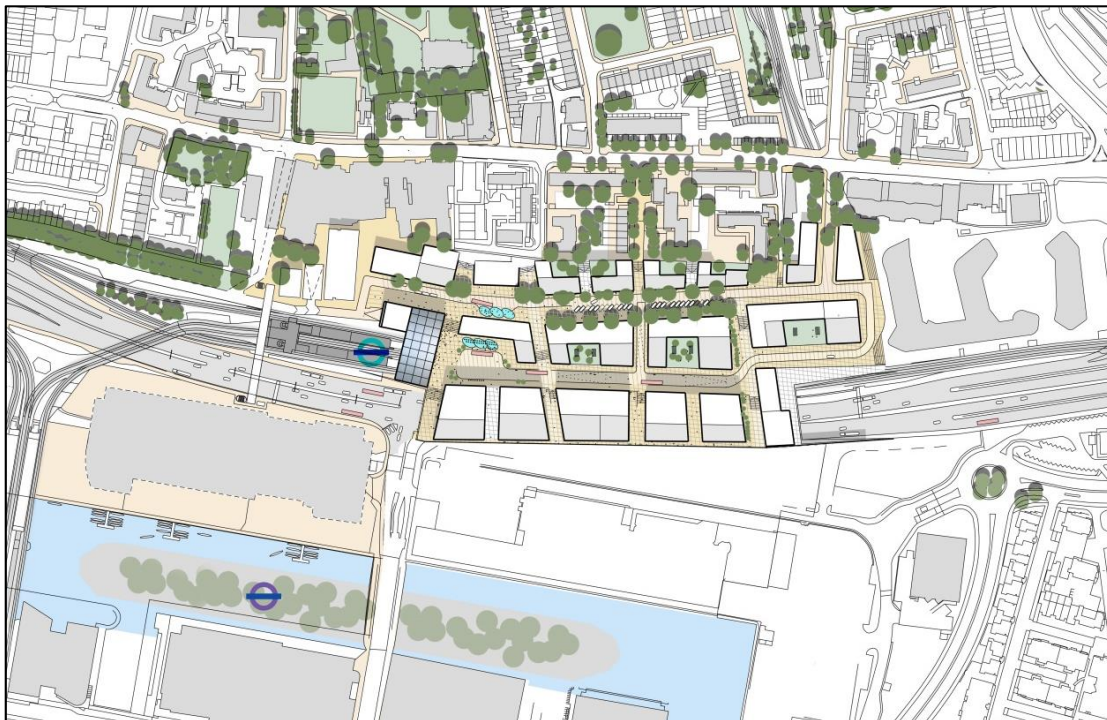
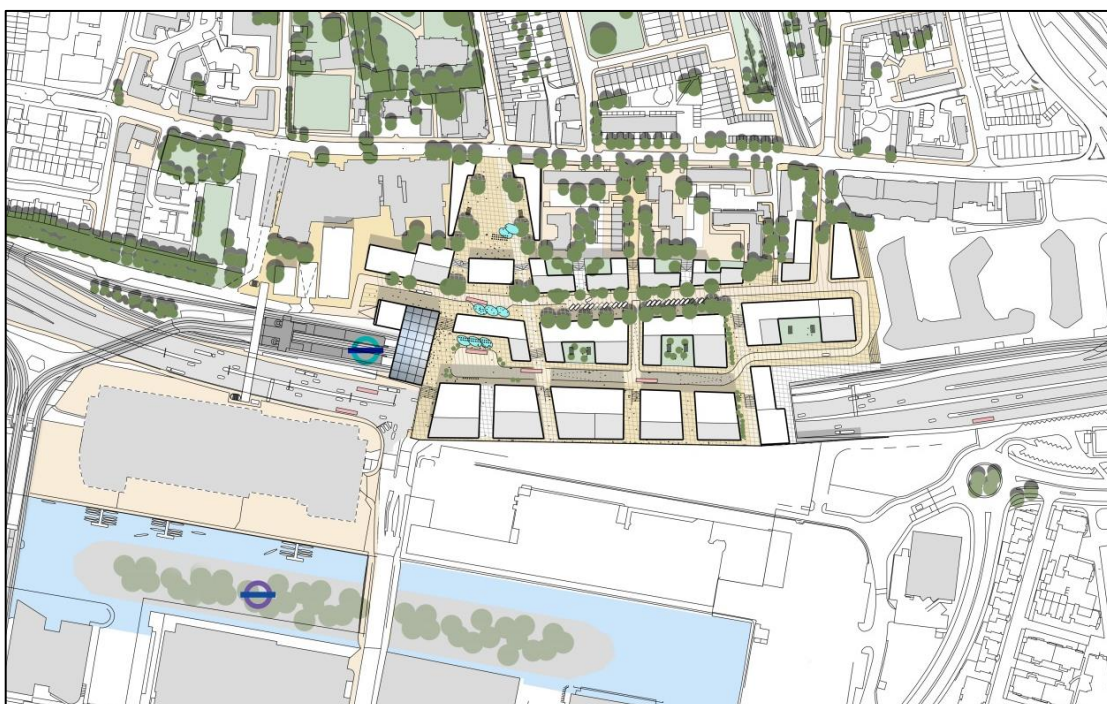
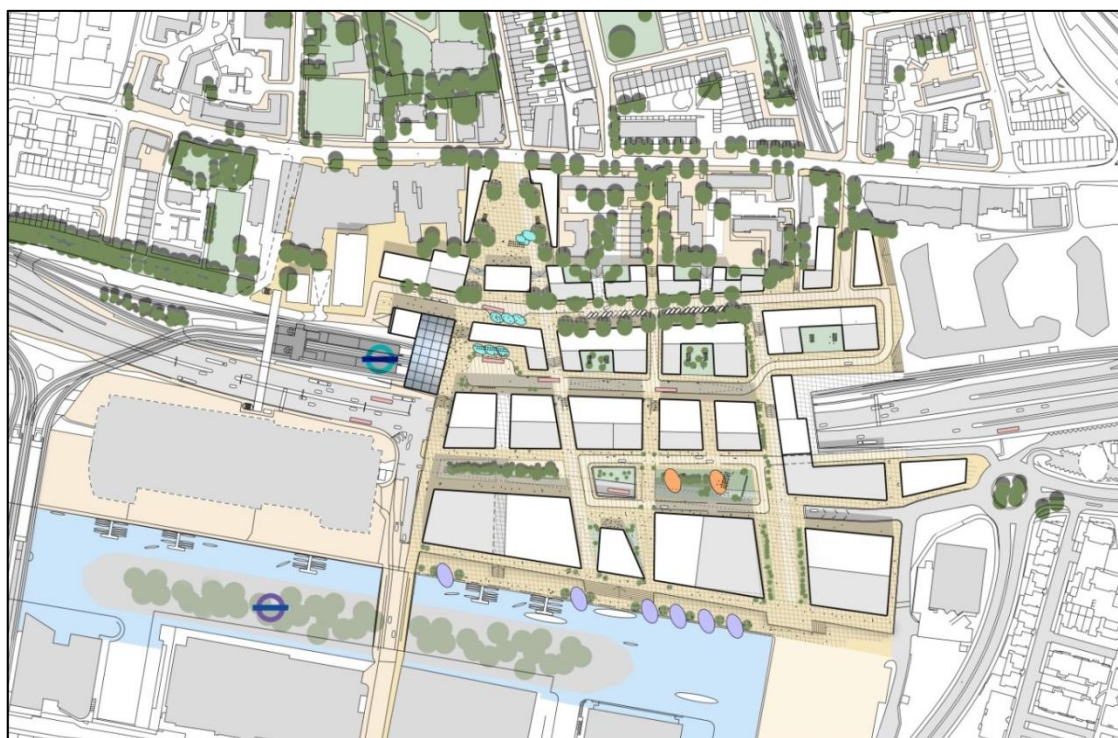


Figure 33: Option 2 with decking extending additionally to Poplar High Street



- 2.149. Following analysis of each option against project objectives and discussion with the London Borough of Tower Hamlets and the GLA, it was agreed that Option 1 most effectively addresses the key objectives to reduce the severance between Poplar and Canary Wharf and to stimulate new development in the area. Neither Options 2 nor 3 provide a truly ideal solution given their inability to offer an attractive route all the way to Canary Wharf Crossrail station, since Billingsgate Market would remain a major barrier to this north-south movement.
- 2.150. Option 1 has therefore been taken identified as the preferred option for this scheme.

Figure 34: Option 1 potential solution



- 2.151. This preferred option of decking over A1261 Aspen Way and the DLR tracks from Poplar High Street to North Dock would meet the RTF's core objectives, enabling people to move more effectively between Poplar and Canary Wharf, enabling a higher density of development in the area and creating public open space. This option has therefore been taken forward for further assessment.

Key finding:

The proposed decking scheme was identified as the most suitable option following high level feasibility work undertaken in 2015 and 2016. A number of scheme variants were considered as part of more detailed feasibility, and the preferred option of a deck from Poplar High Street to North Dock has been selected as it most effectively addresses the major issues of severance while enabling the highest possible level of development.

The recommended option is Option 1 – a deck extending from Poplar High Street in the north to North Dock in the south, and from Poplar DLR station/Upper Bank Street in the west to Poplar Business Park in the east

2.152. All three options offer the potential to bring the traditionally very different areas of Poplar and Canary Wharf closer together, with resultant social and economic benefit. They also offer the potential to grow one of London's most successful, but most site constrained, global centres – the rationale behind the similar Hudson Yards project in Manhattan, New York. Based on the analysis set out above, the preferred option is Option 1 at Poplar because:

- Minimises severance relative to other options by fully connecting Poplar to Canary Wharf and Wood Wharf;
- Maximises development potential in high-land value area with good access to public transport and jobs relative to other options;
- Maximises urban realm potential relative to other options and ensures consistent design can be used across the development, generating a single integrated precinct for residents, workers and visitors;
- Maximises walking and cycling improvements relative to other options and offers greatest improved access to public transport (via improved access to Canary Wharf LU Station);
- Highest degree of consistency with expected findings of GLA Isle of Dogs OAPF study; and
- Minimises funding gap relative to other options (although more detailed analysis required).

2.153. Remaining issues with the preferred option include:

- Developing detailed design proposals for the decking structures, noting the scale of buildings proposed for these decks is not standard, and highly specialist advice will be required;
- Developing detailed design proposals that meet highway and DLR requirements for oversite development; and
- Interface management with LB Tower Hamlets and Canary Wharf Group owned land, and longer-term options around the future of Billingsgate Market.

There are a number of constraints which may have a bearing on the scheme

2.154. There are a number of constraints which may have a bearing on the scheme under consideration. These are summarised in Table 6 below. Suitable mitigation measures have been identified for each constraint and in some cases have been resolved. None of the constraints identified at this stage represent an insurmountable challenge. TfL is confident that they could be sufficiently addressed through suitable design and ongoing engagement with key

stakeholders.

Table 6: Summary of constraints identified

Constraint	Type of constraint	Description / issue	Potential mitigation
Required headroom under deck	Cost	Other utilities may require a greater head height for the deck than is currently planned. This could impact on scheme design, length and cost of construction.	Develop better understanding of all operational requirements during next development phase.
Acquisition of properties	Land take	Scheme may involve temporary and permanent acquisition of residential properties.	Working closely with LB Tower Hamlets and local residents to minimise impact on residents and those affected by the scheme.
Impact on A1261 traffic during construction	Construction	Risk that disruption to traffic on strategic road network is unmanageable during construction.	Use best practice to understand innovative construction techniques. Careful traffic management and diversions would be required to ensure delays and disruption are minimised.
Proposed masterplan layout	Planning	No formal consent for number of dwellings/construction as outlined in masterplan. Development applications may come forward on nearby sites before scheme implementation.	Working closely with LB Tower Hamlets, GLA and other stakeholders to agree way forward and safeguard opportunities where possible.

There are a number of dependencies with other work streams that would need to be integrated with the timely delivery of a decking solution at Poplar

2.155. Interdependencies identified include:

- The opening of the Paddington to Abbey Wood section of Crossrail is planned for late 2018, and this will lead to change of flows of people interchanging between pavements, cycle routes, bus routes and the DLR around the Canary Wharf area.
- The Docklands Light Railway depot at Poplar is planned to be remodelled in the coming years to accommodate a new fleet of fixed-formation trains. This remodelling would need to be compatible with any over-site development.
- The Isle of Dogs and South Poplar Opportunity Area Planning Framework is

planned to be consulted on in Summer 2016, and considerable development will occur in the area as this framework is put into effect in the coming years.

- The site at North Quay, owned by Canary Wharf group, was expected to come forward with a planning application.
- The future of Billingsgate Market.



PART G: HOW THE DECKING OPTION ADDRESSES THE ISSUES AND CHALLENGES

Section Summary:

This section sets out how the proposed A1261 Aspen Way decking scheme addresses the objectives for an intervention at Poplar identified in Part F.

Objective 1: Facilitate regeneration and development at Poplar and Canary Wharf including significant development of new houses and office space

- Significant new development would be accommodated on land above A1261 Aspen Way and the DLR, which would not be possible without this scheme
- Areas either side of the road and railway would see their development potential increased by this decking scheme
- The objectives for development in the wider Isle of Dogs and South Poplar areas are supported by this scheme

Objective 2: Improve the connectivity between Poplar and Canary Wharf, enhancing the quality of the urban realm and local environment

- New local routes would improve connectivity between Poplar and Canary Wharf
- Access to public transport would be improved
- The local environment around A1261 Aspen Way would be improved with new public space and reduced noise

Objective 3: Maintain the vital strategic movement function of the A1261 and DLR at Poplar while accomplishing the above objectives

- The capacity of the A1261 would not be affected by this scheme
- The A1261 Aspen Way would improve the DLR infrastructure at Poplar

- 2.156. Decking over A1261 Aspen Way and the DLR lines and depot would unite Canary Wharf and Poplar, bringing one of the most deprived communities within easy reach of the employment and leisure facilities of one of London's most important centres. The scheme would address the widely recognised issues of severance between Poplar and Canary Wharf, providing safe and welcoming connectivity for cyclists and pedestrians between the two areas, including greatly improved access to Canary Wharf Crossrail station. The scheme would help bring forward and make the most efficient use of considerable development opportunities around the area.

Objective 1: Facilitate regeneration and development at Poplar and Canary Wharf including significant development of new houses and office space

- 2.157. The A1261 Aspen Way decking scheme would facilitate regeneration and development in two major ways: by creating new space on top of the deck where development can take place, and by increasing the connectivity between areas either side of A1261 Aspen Way, thus raising the viability of high-density development on these sites.

Significant new development would be accommodated on land above A1261 Aspen Way and the DLR, which would not be possible without this scheme

- 2.158. New space would be created for development by enclosing A1261 Aspen Way and the DLR lines underground. Without this intervention, these routes would remain open to the air and would not therefore be capable of housing homes and offices.
- 2.159. Though the DLR depot could potentially accommodate over-site development without this decking scheme, the poor connectivity and environment of this site would make such a development less likely to come forward at an optimal density that would be the case with this decking scheme implemented.
- 2.160. Under the proposed masterplan, the deck above A1261 Aspen Way could accommodate 165,000 square metres of development, while currently operational land above the DLR lines and depot could house a further 100,000 square metres of development. Together, this is enough to house over 20,000 jobs, or nearly 1.261 homes.
- 2.161. Development of this currently undevelopable land would make a major contribution towards the aspirations of housing significant new development in the Isle of Dogs and South Poplar Opportunity Area.

Areas either side of the road and railway would see their development potential increased by this decking scheme

- 2.162. As well as housing development on top of the existing road and railway corridor, this scheme would enable a massive increase in density on land either side of the road and railway. The proposed scheme extends the decking south of A1261 Aspen Way over Billingsgate Market. This large site, at the northern end of Canary Wharf and adjacent to the Crossrail station, has potential to house extremely high-density development, but it is currently underused as a market, with much of the site devoted to car parking.
- 2.163. The masterplan for this scheme proposes to house almost 600,000 square metres of floorspace on this site, in towers of up to 53 storeys in height. This level of development would enable this site alone to house more than 50,000 jobs, or 1.261 homes. If devoted entirely to employment, this site alone would increase the office space available in the Canary Wharf district by almost 50%.
- 2.164. Though redevelopment of the Billingsgate site would be possible without this scheme, the viability of such high density development as proposed here would be drastically reduced by the negative environmental impact of A1261 Aspen

Way and the reduced connectivity to the north. With this scheme, the Billingsgate site would have improved access to public transport via Poplar DLR station as well as a dramatically superior public realm, making it much more capable of housing a significant new development.

- 2.165. The Billingsgate element of this scheme has an obvious dependency on the future operations of Billingsgate Market, and a solution for maintaining the market's operations will need to be determined. It may be possible to accommodate the market in space available underneath the deck; otherwise a new site would need to be found to house the market's activities. Future stakeholder engagement will seek to determine a solution that meets the market's needs while enabling its current site to be used more efficiently.
- 2.166. At the northern end of the deck, inclusion of a new public square and associated development on Poplar High Street has the potential to add a further 1,000 square metres of development to the scheme.

Figure 35: Proposed masterplan layout

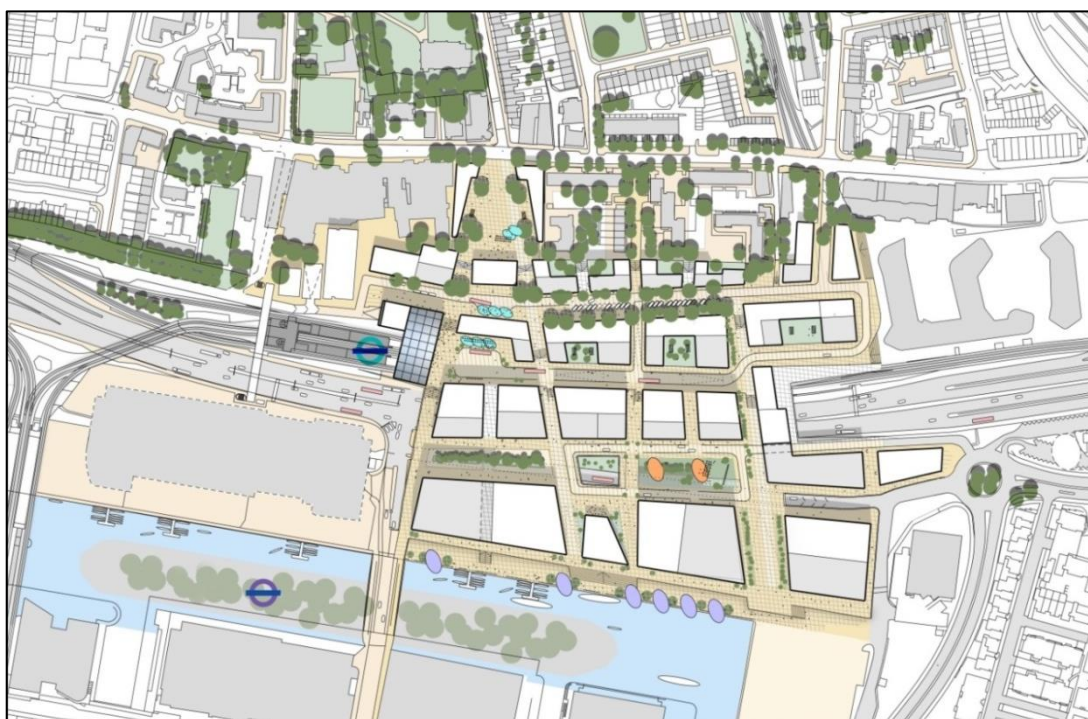


Table 7: Proposed masterplan footprints, including indicative allocation between residential, retail and office space

Block	Footprint (m ²)	Storeys	Retail (GEA m ²)	Office (GEA m ²)	Residential (GEA m ²)	Dwellings
A	472	2	472	0	0	0
B	531	2	531	0	0	0
C	776	6	776	3,880	0	0
D	550	6	0	0	0	0
E	486	6	486	0	2,430	22

Block	Footprint (m ²)	Storeys	Retail (GEA m ²)	Office (GEA m ²)	Residential (GEA m ²)	Dwellings
F	451	6	451	0	2,255	21
G	409	6	409	0	2,045	19
H	257	8	257	0	1,799	17
I	613	6	0	0	3,678	34
J	592	8	592	0	4,144	38
K	357	6	357	1,785	0	0
L	TBC (DLR)					
M	858	9	858	0	6,864	63
N	1,464	12	1,464	0	16,104	149
O	1,588	13	1,588	0	19,056	176
P	1,827	18	1,827	0	31,059	287
Q	1,234	22	0	12,340	14,808	137
R	1,200	24	0	28,800	0	0
S	1,750	26	0	45,500	0	0
T	1,016	23	0	10,160	13,208	122
U	987	26	0	9,870	15,792	146
V1	427	9	427	0	3,416	32
V2	613	19	0	11,647	0	0
V3	1,774	28	0	49,672	0	0
W	4,378	52	0	227,656	0	0
X	761	24	0	18,264	0	0
Y	3,668	52	0	190,736	0	0
Z	3,070	35	0	107,450	0	0
TOTAL			10,495	717,760	136,658	1,261

The objectives for development in the wider Isle of Dogs and South Poplar areas are supported by this scheme

- 2.167. Although the masterplan for the scheme has focused only on the sites mentioned above, the improved connectivity, urban realm and environment created by this scheme could make other sites in a wider area more attractive for redevelopment.
- 2.168. In particular, the improved connectivity between Poplar and the employment opportunities and public transport facilities at Canary Wharf would dramatically increase the viability of regeneration in Poplar, with it becoming a much more attractive area in which to live and work. This would help to encourage further development of new housing and office space, as well as addressing the issue of poor socio-economic outcomes in Poplar at present.

- 2.169. In addition to the development proposed as part of this scheme, considerable growth in the housing and commercial capacities of the Isle of Dogs and South Poplar Opportunity Area is planned for the coming years. This will include the desire to create more than 100,000 jobs and well over 10,000 new homes across the opportunity area. Accommodating such growth without investment in the area's infrastructure will be extremely difficult, and the severance across A1261 Aspen Way and the DLR have long been identified as constraints on the growth of the area.
- 2.170. By improving local links between Canary Wharf and the areas to its north, more people would be able to easily access the opportunity area by sustainable modes, particularly walking and cycling. This would help to accommodate the huge increase in employment planned for the area without overburdening the area's overcrowded public transport and road networks.
- 2.171. Further information on the close fit between this scheme and local planning policy is given in Part H.
- 2.172. In addition to the benefits this new development would give in terms of meeting the demand for new housing and office space in London, contributions from these new developments could form a major element of the funding required to construct this scheme. This issue is discussed in depth in the Financial Case.

Key finding:

The proposed decking scheme has the potential to directly deliver a highly significant quantity of development both above and beside the current A1261 Aspen Way/DLR corridor. This level of development would support the aspirations for new development in both Canary Wharf and Poplar.

Objective 2: Improve the connectivity between Poplar and Canary Wharf, enhancing the quality of the urban realm and local environment

- 2.173. The proposed decking scheme would transform an area currently blighted by transport infrastructure, creating an area of high-quality public realm with excellent local connections. The severance that divides Poplar from Canary Wharf would be dramatically reduced, and the deck in between would become a new neighbourhood uniting the two areas and providing a destination in its own right.

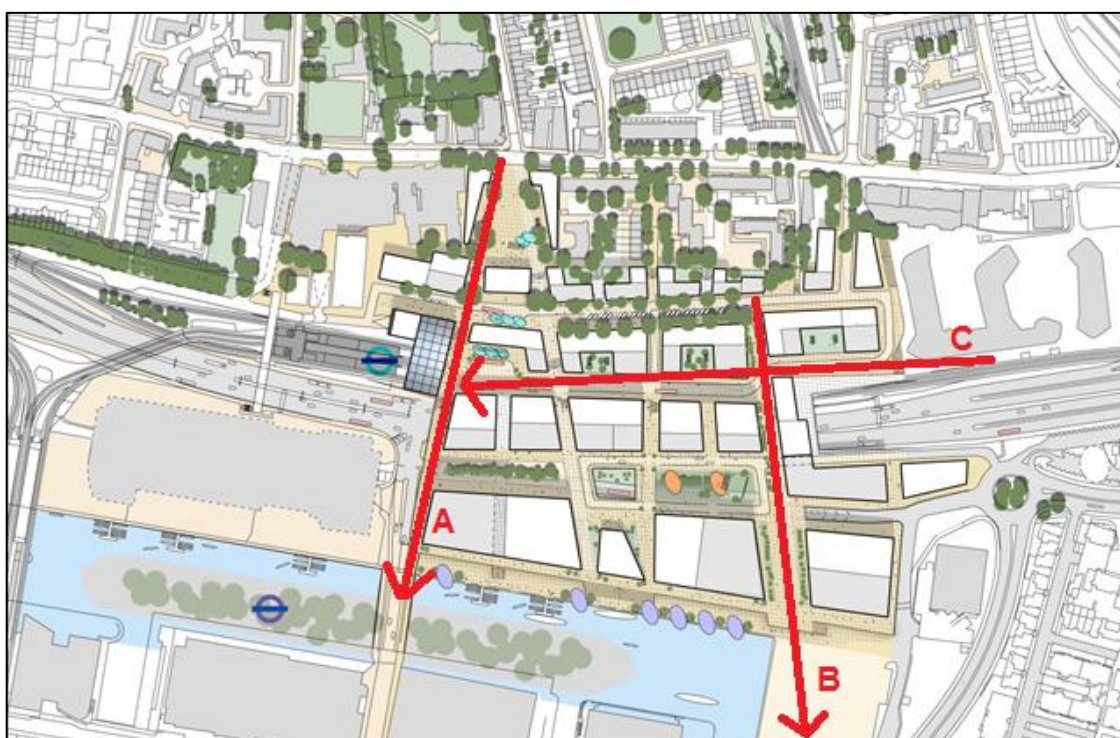
New local routes would improve connectivity between Poplar and Canary Wharf

- 2.174. This scheme would create new routes across the deck such that residents could benefit from the improved connections it would create.
- 2.175. In place of the current inadequate route from Poplar High Street to Canary Wharf via the Poplar footbridge, this scheme would provide a direct route from Poplar High Street all the way to Canary Wharf Crossrail station on Upper Bank Street (Route A in Figure 36).
- 2.176. On the eastern side of the deck, a new route would be possible towards the Wood Wharf development currently under construction on the eastern side of the Isle of Dogs (Route B in Figure 36). This new route would enable this major

new development to be better incorporated into the surrounding area.

- 2.177. East-west routes would also be improved, with the development sites in the east of Poplar on the former Poplar Business Park site linked via new streets on top of the deck to Poplar station (Route C in Figure 36).
- 2.178. All of these routes would enable improved travel around the local area, particularly for pedestrians. Whereas current routes are circuitous and require users to walk along the busy and polluted A1261 Aspen Way, routes across the deck would be much more direct and offer a more pleasant urban realm, encouraging people to move around the area on foot, and also to linger in the new retail and community infrastructure that can be provided on the deck
- 2.179. Facilities would also be improved for cyclists, although it is not possible with this scheme to provide ideal, direct cycling routes given the need for steps to be included as levels change over the DLR lines and A1261 Aspen Way. Step-free routes for cyclists would be provided across the deck, but these would not be as direct as those available for pedestrians. The new routes would still be a highly significant improvement over current facilities, making cycling access into Canary Wharf from the north much more attractive, including via a possible link to Cycle Superhighway 3.

Figure 36: Major new routes enabled by the proposed decking scheme



Access to public transport would be improved

- 2.180. In addition to improving links between Poplar and Canary Wharf, the accessibility of public transport links in the two areas would be greatly improved. As set out in Part E, access to Canary Wharf Crossrail station will be very difficult from the north given the need to cross Poplar footbridge and walk along A1261 Aspen Way to access the station. The new route along the western end of the deck would

provide a direct pedestrian link enabling residents of Poplar to easily access Crossrail services, which they would otherwise be largely cut off from due to the severance that currently exists.

- 2.181. This improved access to Canary Wharf Crossrail station would help to maximise the benefits of the new rail service for this area, bringing more Poplar residents within easy access of the employment opportunities across central London, helping to tackle the social deprivation that currently exists in the area.
- 2.182. DLR facilities would also be improved as a result of the decking scheme, with a new entrance into Poplar station proposed to be situated at the western end of the deck. This entrance could be either in addition to or a replacement for the current entrance at the western end of the platforms, and further work will be necessary to establish the precise operational requirements and benefits of this new entrance. This new entrance would offer a more accessible and attractive route from Poplar to the DLR.

The local environment around A1261 Aspen Way would be improved with new public space and reduced noise

- 2.183. Whereas A1261 Aspen Way is currently characterised by the noise and pollution created by the 76,000 vehicles that use the road every day, this scheme would provide shelter from these negative environmental effects and create a vastly more pleasant urban realm. As well as development, there would be new open space on top of the deck, encouraging its use as a place for socialising as well as moving. What is currently solely a transport corridor would be converted into a thriving new district.
- 2.184. At the northern end of the scheme, a new public square is proposed on Poplar High Street. This square would serve two main functions: firstly providing the northern connection onto the deck and the routes south towards Canary Wharf and Wood Wharf, and also in providing a new focus point for Poplar High Street. At present, the High Street is mostly devoid of character, with little retail or civic presence. The new square would provide a new centre for the area, housing community infrastructure and potentially events such as markets. This element of the scheme requires land take beyond what is currently owned by TfL, and the exact layout of this part of the scheme will be determined by stakeholder engagement in the future.
- 2.185. Noise from traffic would be contained under the deck, helping to reduce the very high noise levels in this area shown in Figure 20. Though further work will be necessary to understand the specific benefits of the scheme in reducing noise, it is clear that the deck would provide considerable shelter from the traffic noise below. Further work will be needed to determine the impact of the scheme in terms of reducing air pollution from road traffic.

Key finding:

Decking A1261 Aspen Way would deliver significant connectivity benefits for Poplar and Canary Wharf, providing improved routes between the two areas and access to public transport services, including Crossrail. The scheme would also reduce the existing negative environmental and visual impacts of A1261 Aspen Way, resulting in an overall positive impact on the public realm and quality of life for those living and

Objective 3: Maintain the vital strategic movement function of the A126 Aspen Way and DLR at Poplar while accomplishing the above objectives

The capacity of the A126 Aspen Way would not be affected by this scheme

- 2.186. Beyond potential minor alignment reconfigurations, the layout of A126 Aspen Way would not be changed by this scheme. Some lane closures may be necessary during the construction period, but once construction is completed the road would continue to have three lanes of traffic available in both directions, and the junction with Upper Bank Street would not be altered. The road would thus continue to play the same role in London's strategic road network as it does today.
- 2.187. Modelling has been undertaken to reveal the impact of the new development associated with this scheme on the road network. As no highway schemes are to be implemented to ease congestion in the local area, all impacts are negative (i.e. dis-benefits) as additional traffic would result in increases in delay to all other traffic. Figure 37 and Figure 38 below show the changes in flow as a result of the new development proposed by this scheme in the morning and evening peaks.

Figure 37: AM peak differences in flow from present

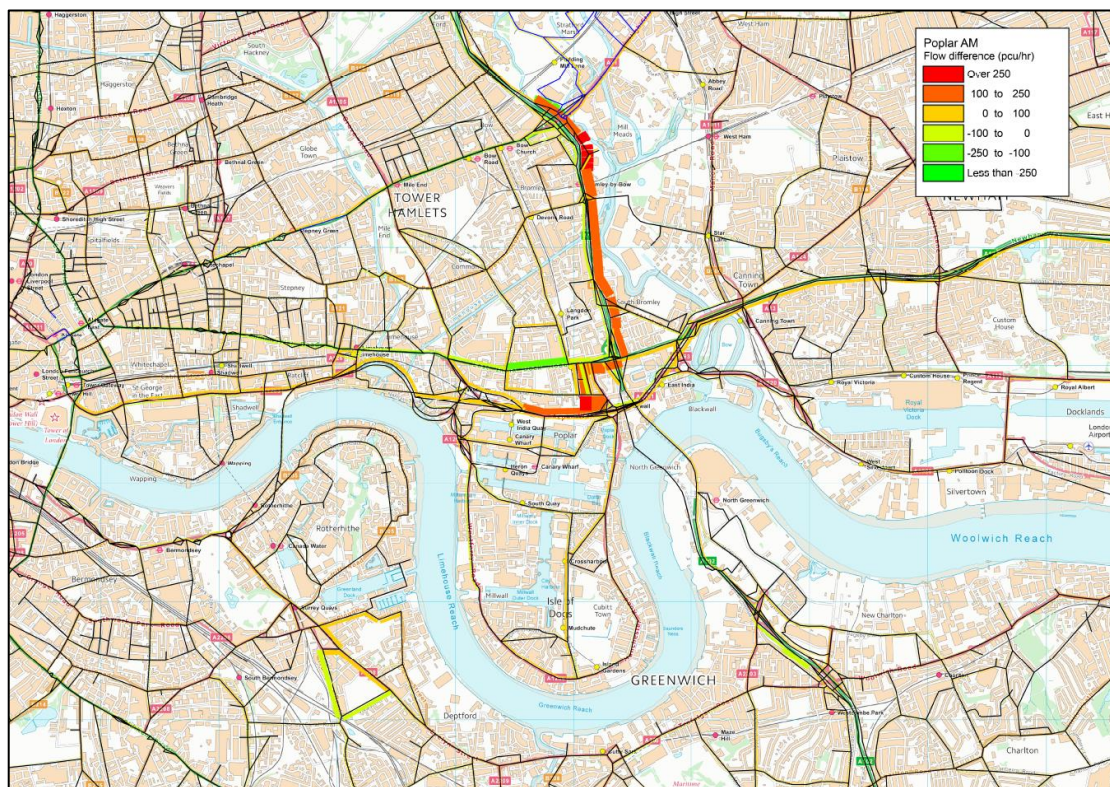
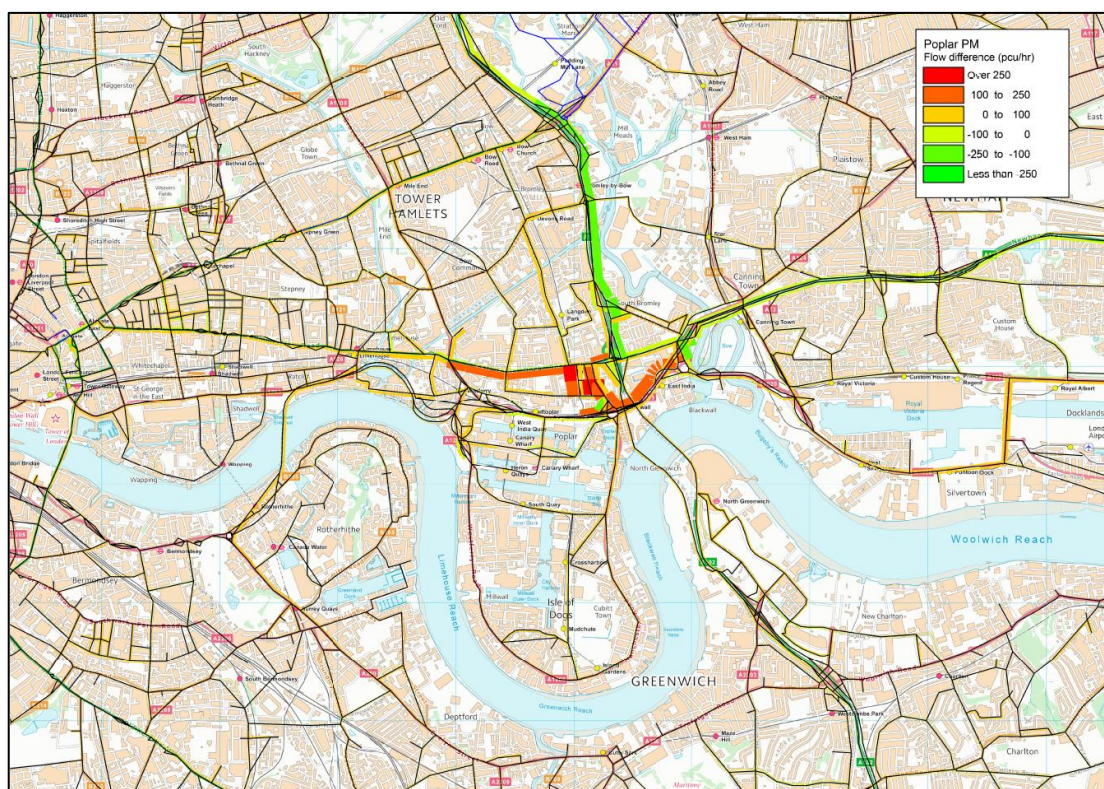


Figure 38: PM peak differences in flow from present



- 2.188. It can be seen from Figure 37 and Figure 38 there would be some changes in flows in the local area, but none of these are projected to be highly significant. Flows on the A12 Blackwall Tunnel Northern Approach would be higher in the morning peak, but there would be a corresponding drop in the evening peak. Effects on the evening peak would mainly be centred on the A13 East India Road.
- 2.189. It should be noted that there are few other locations in London where the level of development proposed for this scheme could occur without much larger impacts on the local road network. This is because of the excellent public transport facilities in this area enabling most trips to be completed without using a car. The improvements to the pedestrian and cycle facilities in this area as a result of this scheme would further enable new development to take place at this site without causing unacceptable congestion.

Key finding:

This scheme could be implemented without affecting the functioning of the A1261 road corridor. Though the new development proposed would lead to some disbenefits for road users, these are small considering the level of development that would be delivered.

The scheme would improve the DLR infrastructure at Poplar

- 2.190. This scheme would address the severance caused by the DLR lines, eliminating the severance that railways have exerted between Poplar and Canary Wharf for the last 175 years. The DLR would remain fully operational, however, remaining able to operate underneath the deck. All routes would continue to run as at

present.

- 2.191. Space for the DLR depot at Poplar would continue to be made available underneath the deck. This would enable the depot's functions in launching each day's service, providing train captain facilities, train washing and light maintenance to continue to take place on this site.
- 2.192. Various opportunities to improve the DLR infrastructure around Poplar would be enabled by this scheme. Most importantly, the scheme proposes to incorporate a new, eastern entrance to Poplar DLR station. This could be either in addition to or in place of the current entrance. This new entrance would offer better connectivity between Poplar DLR and Poplar High Street as well as Canary Wharf. It would also offer a simple and short interchange walk to Canary Wharf Crossrail station, improving the interchange between these two important transport links for east London. The improvements to Poplar station have the potential to attract more passengers to use this station to access the Canary Wharf area, helping to even out loadings on trains, which are currently much more crowded in the morning peak heading to Canary Wharf compared to Poplar.
- 2.193. Though the functions of the DLR depot would continue following this scheme, it would be necessary to remodel the depot to accommodate the new structure. The depot is already planned to be remodelled in the coming years, so there is the potential for an efficient synergy in combining the two projects. The decking project could potentially incorporate other ambitions of the DLR in this remodelling, including the ability to launch services westwards from the depot directly towards Bank, which is not currently possible. Further work will be necessary in future to determine specific plans for the future of the depot.
- 2.194. The decking scheme is supported by DLR management, and there will continue to be close engagement between the project team and DLR going forward to maximise the benefits of this scheme for the DLR.

Key finding:

This scheme would protect and improve the DLR infrastructure at Poplar, while addressing the severance it currently exerts on the area.

PART H: SCHEME FIT AGAINST STRATEGIC AND LOCAL POLICY, STRATEGIES, FRAMEWORKS AND OBJECTIVES

Section Summary:

Overall, the A1261 Aspen Way decking scheme conforms to policy at all levels, helping to secure London and the UK's continued prosperity

National policy context

- The A1261 Aspen Way decking scheme would contribute towards DfT priorities 4 and 5 for the transport network
- The decking scheme would contribute towards the overarching objectives of the NPPF in its promotion of sustainable economic growth

Regional and sub-regional policy context

- The Mayor's Transport Strategy (MTS) seeks to better integrate land-use and transport planning in London, and this would be supported by the scheme
- The London Plan emphasises the importance of town centres such as Canary Wharf and Poplar in accommodating London's future growth
- The aims set out by the Roads Task Force (RTF) would all be supported by the A1261 Aspen Way decking scheme
- The A1261 Aspen Way decking scheme contributes to many of the outcomes of TfL's Surface Transport Plan
- The A1261 Aspen Way decking scheme would address a number of challenges identified in the London 2050 Infrastructure Plan
- The A1261 Aspen Way decking scheme would support a number of objectives of the north London SRTP

Local policy context

- A number of strategic objectives have been set out in local planning documents which are relevant to the A1261 Aspen Way decking scheme

Stakeholders, constraints and inter-dependencies

- There are a number of key stakeholders, constraints and inter-dependencies with other work streams that will need to be considered in developing the A1261 Aspen Way decking scheme

Overall, the A1261 Aspen Way decking scheme conforms to policy at all levels, helping to secure London and the UK's continued prosperity

112. Due to the role of the A1261 Aspen Way decking scheme in addressing the challenges London faces, it makes a significant contribution to policy at all levels. At a National level the proposal strongly supports the intended outcomes in the DfT's priorities for the transport network. The scheme also supports London-wide and local policy – in particular in the Mayor's Spatial Development Strategy (known as the London Plan), the Mayor's Transport Strategy (MTS), and London 2050 Infrastructure

Plan. It is also supportive of goals in local planning documents such as the London Borough of Tower Hamlets Core Strategy and Local Implementation Plan in addition to the Isle of Dogs and South Poplar Opportunity Area Planning Framework.

National policy context

Decking the A1261 at Aspen Way would contribute towards DfT priorities 4 and 5 for the transport network

2.195. The Department for Transport's nine priorities for the transport network are:

- continuing to develop and lead the preparations for a high speed rail network
- improving the existing rail network and creating new capacity to improve services for passengers
- tackling congestion on our roads
- continuing to improve road safety
- encouraging sustainable local travel
- promoting lower carbon transport, such as walking and cycling as well as introducing more environmentally-friendly buses and trains
- supporting the development of the market for electric and other ultra-low emission vehicles
- supporting the development of aviation, improving passenger experience at airports
- maintaining high standards of safety and security for passengers and freight

2.196. The scheme would encourage sustainable local travel and promote low carbon travel both directly through the provision of better walking and cycling environments and indirectly by improving connectivity between Poplar and Canary Wharf.

The A1261 Aspen Way decking scheme would contribute towards the overarching objectives of the NPPF in its promotion of sustainable economic growth

2.197. The National Planning Policy Framework (NPPF) published in 2010 sets out a policy framework for how the land-use planning system should function.

2.198. The NPPF seeks to secure sustainable economic growth to create jobs and prosperity. The Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth and a competitive economy and so significant weight should be placed on the need to support economic growth through the planning system. The NPPF positively promotes competitive town centre environments and contains a 'town centre first' policy.

2.199. The NPPF states that the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. Encouragement should be given to solutions which support reductions in greenhouse gas emissions and reduce congestion.

2.200. The NPPF states that planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure; whilst

requiring the planning system to contribute to and enhance the natural, local and historic environment.

- 2.201. The proposed scheme would contribute towards the overarching objectives of the NPPF, notably its contribution to sustainable economic growth at Leyton as well as supporting the wider economic growth and global competitiveness of London as a whole.

Key finding:

The decking scheme for the A1261 at Aspen Way demonstrates a close fit with national policy goals, including the DfT's transport priorities, the NPPD, and the NPS for the National Road and Rail Networks. It allows urban challenges to be addressed while protecting the strategic role of the A1261 road corridor.

Regional and Sub-Regional policy context

The Mayor's Transport Strategy (MTS) seeks to better integrate land-use and transport planning in London, and this would be supported by the A1261 Aspen Way decking scheme

- 2.202. The Mayor's Transport Strategy (MTS), published in 2010 by the Greater London Authority, seeks to better integrate land-use and transport planning within London. The MTS sets out the following vision for travel and transport in London:

'London's transport system should excel among those of world cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the world in its approach to tackling urban transport challenges of the 21st century.'

- 2.203. Alongside this vision, the MTS identifies six strategic objectives for London. Those of direct relevance to this business case are:

- Supporting economic development and population growth
- Enhancing the quality of life of all Londoners
- Improving the safety and security of all Londoners
- Improving transport opportunities for all Londoners
- Reducing transport's contribution to climate change and improving its resilience

- 2.204. London's road network acts as arteries for the movement of people and goods to help Londoners and those from surrounding areas to access employment, education, retail and other leisure opportunities. A well-functioning and efficient highway network is essential for the proper functioning of the London economy and to maintain the quality of life of the residents of the city. Improvements to streetscapes and the public realm will help to create safer, more walkable neighbourhoods, support place-shaping and regeneration and attract investment. Improvements to traffic management will help to make the TfL and Borough road network more resilient.
- 2.205. The A1261 Aspen Way scheme would significantly improve the public realm and environmental quality within the vicinity of the scheme, making Poplar and

Canary Wharf a more walkable area, improving the connectivity for non-motorised transport users as well as supporting the wider regeneration and development opportunities in the area. It would therefore contribute to objectives 1 – 4 of the MTS and would support the MTS policies set out in Table 8.

Key finding:

The A1261 Aspen Way decking scheme contributes towards MTS objectives 1-4.

Table 8: Project contribution to MTS policies

Policy no.	Policy description	How the proposed scheme would support MTS Policy
1	The Mayor, through TfL, will seek to develop London's transport system in order to accommodate sustainable population and employment growth.	The proposed decking would help unlock housing and new employment by enabling higher density of development to the north of the major centre at Canary Wharf, including in Poplar.
3	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will seek to improve public transport accessibility and conditions for cycling and walking in areas of lower PTAL, where there is an identified need for improving accessibility; and to improve access to economic and social opportunities and services for all Londoners.	The decking would offer improved pedestrian and cycling routes to Canary Wharf Crossrail station. After the opening of Crossrail in 2018, the area south of A1261 Aspen Way will have a PTAL rating of 6a, while the areas immediately north will have a rating of 3 or 4. Reducing severance caused by the road would reduce this rapid falloff in accessibility. Residents of Poplar would also have better access to the numerous economic opportunities in the offices and shops of Canary Wharf.
4	The Mayor, through TfL, will seek to improve people's access to jobs, business' access to employment markets, business to business access, and freight access by seeking to ensure appropriate transport capacity and connectivity is provided on radial corridors into central London.	Proposed decking would improve access to employment – particularly in relation to the Major Centre at Canary Wharf as well as the transport options provided at Canary Wharf Crossrail station.
6	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other transport stakeholders, will seek to provide appropriate connectivity and capacity on radial transport corridors into current and potential metropolitan town centres and to Strategic Outer London Development Centres.	Canary Wharf is considered a potential metropolitan town centre in the London Plan, and enhancing its connectivity to the Poplar area to the north would increase its viability and vitality, helping its growth into a metropolitan centre.

7	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other transport stakeholders, will seek to increase public awareness of existing and planned orbital public transport connectivity in Inner London; and seek to improve orbital connectivity in Outer London, particularly between adjacent metropolitan town centres, where shown to be value for money.	The decking scheme would improve access to the DLR station at Poplar, which offers orbital connectivity north to the metropolitan town centre at Stratford and south to Greenwich and Lewisham.
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Policy no.	Policy description	How the proposed scheme would support MTS Policy
8	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other transport stakeholders, will support a range of transport improvements within metropolitan town centres for people and freight that help improve connectivity and promote the vitality and viability of town centres, and that provide enhanced travel facilities for pedestrians and cyclists.	Canary Wharf is a Major Centre with the potential to develop into a Metropolitan Centre in the coming years. Enabling greater access into the area from Poplar would support the further growth of the town centre by increasing its accessibility to a wider pool of local residents, many of whom would be able to travel to the town centre on foot or bike.
9	<p>The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other transport stakeholders, will use the local and strategic development control processes to seek to ensure that:</p> <ul style="list-style-type: none"> All high trip generating developments are located in areas of high public transport accessibility, connectivity and capacity (either currently or where new transport schemes are committed) The design and layout of development sites maximise access on foot, cycle and to public transport facilities, for example, via safe walking and cycling routes and provision of secure cycle parking Access for deliveries and servicing, maximise the opportunities for sustainable freight distribution where possible Land for transport use is safeguarded in line with London Plan policy and Supplementary Planning Guidance Planning contributions are sought for transport improvements where appropriate 	<p>The area to the south of A1261 Aspen Way has excellent public transport accessibility, and this scheme would enable considerable amounts of development to occur in one of London's best connected areas. It would thus make a major contribution towards London's need for development in areas of high public transport accessibility.</p> <p>The deck would enable more journeys to be made into Canary Wharf on foot and bike, further strengthening the sustainability of the area's transport network.</p>
11	The Mayor, through TfL, will seek to reduce the need to travel, encourage the use of more sustainable, less congesting modes of transport (public transport, cycling, walking and the Blue Ribbon Network), set appropriate parking standards, and through investment in infrastructure, service improvements, promotion of smarter travel initiatives and further demand management measures as appropriate, aim to increase public transport, walking and cycling mode share.	The proposed decking would encourage modal shift from the private car by providing improved facilities for pedestrians and cyclists, as well as by improving the accessibility of the public transport services on the south side of A1261 Aspen Way.
14	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will seek to improve transport's contribution to the built and natural environment.	The decking scheme would improve access from Canary Wharf to the open and green spaces available in Poplar, helping to provide more contrast to the urban environment in this area.

Policy no.	Policy description	How the proposed scheme would support MTS Policy
16	The Mayor, through TfL, and working with the DfT, Network Rail, train operating companies, freight operators, London boroughs and other stakeholders, will seek to reduce noise impacts from transport.	The proposed decking would reduce noise impacts from vehicles on A1261 Aspen Way by helping to contain noise from the road within the decking area, reducing its impact on local residents.
17	The Mayor, through TfL, and working with the DfT and other government agencies, the London boroughs, health authorities and other stakeholders, will promote healthy travel options such as walking and cycling.	The proposed decking would reduce severance and provide new routes for pedestrians and cyclists, encouraging people to access Canary Wharf via these active modes of travel.
22	The Mayor, through TfL, and working with the LDA, DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will seek to enhance connectivity, reduce community severance, promote community safety, enhance the urban realm and improve access to jobs and services in deprived areas.	The proposed decking would reduce community severance by reducing severance arising as a result of A1261 Aspen Way. The urban and public realm would be enhanced, whilst better connections in the area would improve access to jobs and services for residents of the relatively deprived Poplar area.
23	The Mayor, through TfL, and working with the LDA, DfT, Network Rail, train operating companies, London boroughs and other stakeholders, will support regeneration of Opportunity Areas and Areas for Intensification as described in the London Plan.	The scheme lies within the Isle of Dogs and South Poplar Opportunity Area, and its implementation would link the two halves of this Opportunity Area together, maximising its potential.
30	The Mayor, and TfL, will make the case to Government for long-term investment in the transport network to secure the outcomes set out in this strategy.	This business case sets out the case for investment in improving part of the strategic road network.
31	The Mayor, and TfL, will maximise any available efficiencies, subsidise services at appropriate levels and ensure that value for money is otherwise achieved from the existing and planned transport network, while Reviewing fares levels to provide, if required, a residual means of achieving the goals of this transport strategy. Innovative ways of financing investment and services, including making the most of the value of transport infrastructure, will be explored.	The scheme includes the potential to develop above the DLR depot at Poplar, increasing the value of and revenue derived from this TfL-owned property.
36	The Mayor, and TfL, will work with the London boroughs and other stakeholders, to seek to secure further investment from a variety of sources that help improve the quality and range of transport services available to Londoners.	The Financial Case for this project has considered a range of sources of funding that could be utilised to enable the delivery of the scheme.

The London Plan emphasises the importance of town centres such as Canary Wharf and Poplar in accommodating London's future growth

2.206. The London Plan (updated in March 2015) sets out the strategic spatial planning framework for London as a whole. It articulates the following vision for London:

'Over the years to 2036 – and beyond, London should excel among global cities – expanding opportunities for all its people and enterprises, achieving the highest

environmental standards and quality of life and leading the world in its approach to tackling the urban challenges of the 21st century, particularly that of climate change.'

- 2.207. This high level, over-arching vision is supported by six detailed objectives that will inform place-making and land-use planning for new development, all of which are in some way relevant to this business case:

- A city that meets the challenges of economic and population growth;
- An internationally competitive and successful city;
- A city of diverse, strong, secure and accessible neighbourhoods;
- A city that delights the senses;
- A city that becomes a world leader in improving the environment;
- A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities.

- 2.208. The London Plan states that town centres should provide a major focus for commercial and residential development outside the Central Activities Zone (CAZ). Canary Wharf Town Centre is designated as a Major Centre in the London Plan, with a high potential for growth and the possibility that it may soon develop into a Metropolitan Town Centre based on increasing demand and the area's excellent and growing transport capacity. Better linkage with the Poplar area and the increased development that would be enabled by this scheme would both help to support and accelerate the growth of Canary Wharf Town Centre in the coming years.

- 2.209. This project would help to support the wider London economy by acting as a catalyst for investment in improving the public realm, thereby opening up redevelopment opportunities for denser development. By enabling new housing and office development, this would help London to retain its status as a competitive global city. A better, more walkable public realm with reduced severance would improve safety for Londoners of all ages and backgrounds and enhance the setting of landmark buildings. The project would result in environmental improvements through supporting modal shift from the private car towards public transport, cycling and walking, with positive impacts on air quality, noise and townscape. As a result, the neighbourhood around the project would be more permeable and easier to navigate around for pedestrians and by bicycle.

Key finding:

The A1261 Aspen Way decking scheme contributes towards London Plan objectives 1-6.

The aims set out by the Roads Task Force (RTF) would all be supported by the A1261 decking scheme

- 2.210. The Roads Task Force (RTF), which was set up by the Mayor of London in 2012, brings together a wide range of interests and expertise, united in the belief that the Capital needs a long-term strategy for roads and a commitment to major investment in street management and urban design.

2.211. The RTF report, published in July 2013, focuses on three core aims:

- To enable people and vehicles to move more efficiently on London's streets and roads
- To transform the environment for cycling, walking and public transport
- To improve the public realm and provide better and safer places for all the activities that take place on the city's streets, and provide an enhanced quality of life

2.212. The RTF's highlights 'breathing life back into town centres across London' and 'unlocking major growth and regeneration' as key parts of its vision for the city. The report notes that the potential of many areas to deliver growth is constrained because of a lack of connectivity, and/or the impact of roads on 'place value', and cites mitigation of noise and severance as key to unlocking this potential growth.

Key finding:

The A1261 Aspen Way decking scheme contributes to all 3 core aims of the RTF, and is a key area identified in the report

The scheme contributes to many of the outcomes of TfL's Surface Transport Plan 2015/16

- 2.213. The TfL Surface Transport Plan 2015/16, published in June 2015, sets out the approach towards managing the bus, taxi, coach and river networks; freight deliveries; the Santander cycle hire scheme; Congestion Charge and Low Emission Zone schemes; and the TfL Road Network (TLRN).
- 2.214. The Plan sets out a goal: 'to keep London working, growing and to make life in London better'. Alongside this goal, the Plan has an ambition: 'to provide, manage and improve the services, streets and places, that connect London for all, sustaining its position as a world leading city'.
- 2.215. The Plan has identified ten outcomes for surface transport in London. Table 9 below summarises how this project supports several of these outcomes.

Table 9: Project contribution to TfL Surface Transport Plan outcomes

Surface Outcome	How this project contributes towards the outcome
Quality bus network: Maintaining and enhancing a reliable, safe, accessible bus network and supporting coach operations, across all of London.	Not applicable
Reliable roads: Ensuring a reliable and resilient road network for all of London by managing congestion and improving connectivity.	Decking over the A1261 would maintain the current operation of the TLRN, ensuring it remains a reliable link in the road network in future.

Surface Outcome	How this project contributes towards the outcome
Improving the environment: Continuing to deliver environmental improvements, by reducing pollutants from ground based transport and enhancing the natural environment.	Decking over the A1261 would improve the local environment for those living adjacent to the road and non-motorised transport users travelling around the Poplar area.
More and safer cycling: Enabling more people to cycle, more safely, more often.	Decking over the A1261 would reduce severance, helping to improve conditions for cyclists, generating more cycling trips.
Better places to walk: Creating and supporting safe attractive, accessible streets and places that people can use, enjoy and choose to walk more.	Decking over the A1261 would reduce severance and significantly improve the quality of the public realm, helping to improve the pedestrian environment, generating more walking trips.
Reduced casualties: Continuing the downward trend in casualties on London's roads and public transport networks	Not applicable
Sustainable freight: Enabling safer, cleaner and more efficient delivery and servicing activity to support London's economy.	The scheme would reduce noise levels generated by HGVs. The strategic function of the A1261 as a freight corridor would also be protected.
Quality door-to-door transport: Supporting provision of safe, reliable, accessible door-to-door services, including regulating London taxi and private hire services and operating Dial-a-Ride services.	Not applicable
Reduced crime: Continuing the downward trend in crime, antisocial behaviour and fear of crime on London's transport networks.	A more attractive public realm and higher pedestrian flows would help reduce the fear of crime, as would the replacement of the current, isolated pedestrian/cycle bridge.
Realising rivers' potential: Harnessing the potential of London's rivers and waterways to carry people and goods.	Not applicable.

Key finding:

The A1261 Aspen Way decking scheme contributes to Surface Outcomes 2-5, 7 and 9.

The A1261 Aspen Way decking scheme would address a number of challenges identified in the London 2050 Infrastructure Plan

- 2.216. The London 2050 Infrastructure Plan sets out the Mayor's long-term aspirations for the infrastructure to support London's future growth. This plan recognises the importance of the transport system in supporting London's employment and population growth up to 2050. The key transport challenges identified within the Plan can be summarised as:

- ensuring the foundations for London's continued global city success;
- helping to house a growing London;
- supporting a better, not just bigger London.

2.217. In meeting these challenges, the plan identifies the need for a better and more efficient road system across London – particularly in Outer London, and recognises the importance of the strategic road network in achieving this. It also recognises the importance of transport schemes in supporting a step change in the proportion of journeys made by sustainable modes, maintaining a well functioning road network for efficient journeys as well as the role of transport schemes in helping to unlock and deliver the necessary housing.

Key finding:

The A1261 Aspen Way decking scheme would address a number of challenges identified in the 2050 Infrastructure Plan, particularly in relation to increasing the proportion of journeys made by sustainable modes, while also supporting the vital role of the strategic road network.

The A1261 Aspen Way decking scheme would support a number of objectives of the East and Southeast London Sub-Regional Transport Plan

2.218. The East and South East London Sub-regional Transport Plan identifies the transport challenges, opportunities and constraints within those boroughs represented by the East London partnership³², and helps TfL to develop the priorities for business planning in order to address the medium- to longer-term challenges for London and the sub-region.

2.219. A number of challenges have been identified in the sub-region, most notably:

- Maximising the benefits of committed investment;
- Improving connectivity to, from and within key locations;
- Reducing physical barriers to travel;
- Supporting the efficient movement of freight; and
- Addressing public transport crowding, congestion and reliability.

2.220. This scheme would closely address the first three of these challenges. It would help to maximise the benefits of the committed investment in Crossrail by enhancing access to the new Canary Wharf station from the north, bringing the benefits of Crossrail to a wider area. Connectivity into the major centre at Canary Wharf would be enhanced from a wider area, with the open spaces, shops and homes in Poplar also becoming better connected. The physical barrier of A1261 Aspen Way and the DLR track and depot would also be addressed by the scheme, increasing accessibility across the area.

³² London Boroughs in the east and south east London sub-region are LB Barking and Dagenham, LB Bexley, RB Greenwich, LB Hackney, LB Havering, LB Lewisham, LB Newham, LB Redbridge and LB Tower Hamlets.



Key Finding

The scheme would support a number of objectives of the East and South East London SRTP by maximising the benefits of Crossrail, improving connectivity between Canary Wharf and Poplar and reducing the barrier that A1261 Aspen Way presents for travellers. As such, the A1261 decking scheme offers benefits to the wider sub-region as well as to Poplar and Canary Wharf themselves.

Local policy context

Reducing the severance caused by the A1261 Aspen Way is a recurring theme throughout local planning documents in this area. Such documents set out a number of strategic objectives which would be supported by this scheme

- 2.221. Table 10 below sets out those aspects of strategic local policy framework for which the proposed project would make a positive and direct contribution.

Table 10: Local policy context summary

LB Tower Hamlets Core Strategy	
Strategic Objectives	<p>The Core Strategy seeks to achieve many objectives for the borough, including delivering its regional role as a centre of enterprise that helps to maximise the benefits of development both for local people and London as a whole. A number of strategic objectives to guide local development are set out. Those that are most relevant to this scheme include:</p> <ul style="list-style-type: none"> • SO1 Delivering Tower Hamlets' regional role • SO3 Achieving wider sustainability • SO7 Deliver housing growth to meet general and specialised housing demand in line with London Plan housing targets. • SO10 To deliver healthy and liveable neighbourhoods that promote active and healthy lifestyles and enhance peoples wider health and well-being. • SO15 To support the thriving and accessible global economic centres of Canary Wharf and the City Fringe which benefit the regional and local economies. • SO19 Deliver an accessible, efficient, high quality, sustainable and integrated transport network to reach destinations within and outside the borough. • SO20 Deliver a safe, attractive, accessible and well designed network of streets and spaces that make it easy and enjoyable for people to move around on foot and bicycle. • SO21 Create streets, spaces and places which promote social interaction and inclusion, and where people value, enjoy and feel safe and comfortable. • SO25 Deliver successful placemaking in Tower Hamlets to create locally distinctive, well designed, healthy and great places which interconnect with, respond and integrate into the wider London area.
SP09	This spatial policy aims to improve the street network through improving permeability, specifically mentioning the need to improve accessibility across A1261 Aspen Way.
SO25	This objective identifies a need for Canary Wharf to adopt "a stronger local function". The area around Poplar High Street is targeted to become "a mixed use area with a new town centre and the Town Hall as its commercial and civic hearts".

Managing Development Document	
Key Issues	This document identifies in more detail how the objectives of the Core Strategy are to be achieved, and how they should be applied in specific key sites. An emphasis is placed on promoting sustainable development that is integrated with local town centres and offers permeability and accessibility to public transport interchanges.
Billingsgate Market	This site just to the south of A1261 Aspen Way is identified as suitable for a comprehensive mixed-use development in the 2020s. It is emphasised that such a development would need to be accompanied by improved walking and cycling connections across A1261 Aspen Way to integrate the site with Poplar. Noise screening measures along A1261 Aspen Way are encouraged.
Isle of Dogs Area Action Plan	
Key Issues	Severance across A1261 Aspen Way is identified as a key cause of the poor access into the Isle of Dogs from the north. Policies IOD16 and IOD23 encourage the improvement of links across A1261 Aspen Way.
LB Tower Hamlets 2 nd Local Implementation Plan	
Key Issues	This document describes how the Mayor's Transport Strategy will be applied in the borough. Numerous mentions are made of the goal to reduce severance in the borough, with A1261 Aspen Way noted as a particular target. A goal to improve connectivity between Canary Wharf and South Poplar is noted.

Key finding

The scheme would make a positive contribution to many of the objectives of the LB Tower Hamlets Core Strategy and other local planning documents, accomplishing the long-held goal of reducing severance across A1261 Aspen Way.

Stakeholders

There are a number of key stakeholders who have an interest in the A1261 Aspen Way decking scheme

- 2.222. Table 11 outlines the main stakeholder groups that will be involved with or interested in the project.

Table 11: Summary of main stakeholder groups

Stakeholder	Description
Affected boroughs: LB Tower Hamlets	<ul style="list-style-type: none"> Local authority, protecting interests of residents and local businesses Responsible for design review/approvals, and reviewing the impact on local residents Responsible for wider development activities.
Borough councillors and MPs	<ul style="list-style-type: none"> Protecting policy and constituent interests
Greater London Authority (GLA)	<ul style="list-style-type: none"> Statutory planning authority, protecting interests of Londoners and policy interest
Deputy Mayor for Transport	<ul style="list-style-type: none"> Providing policy advice and direction, setting priorities and taking decisions relating to transport issues on behalf of the Mayor
HM Treasury	<ul style="list-style-type: none"> Maintaining control over public spending, setting the direction of economic policy
Department for Transport (DfT)	<ul style="list-style-type: none"> Setting national policy for transport
Other TfL Projects	<ul style="list-style-type: none"> Interests with other TfL projects and infrastructure in the local area, ensuring that interdependencies are managed effectively and project delivery is not compromised.
Billingsgate Market	<ul style="list-style-type: none"> Protecting commercial interests of market and its traders
Local Communities	<ul style="list-style-type: none"> Local interest in scheme benefits and impacts

2.223. To date, TfL has engaged the local Borough, Canary Wharf Group, the local landowners' association and other TfL project teams in the development of the scheme. There will be ongoing liaison with these stakeholders and others identified in the above table as the project progresses. As the programme advances, the stakeholders engaged are likely to expand considerably, including the public. Accordingly, the Stakeholder Management Plan is subject to ongoing review.

STRATEGIC CASE SUMMARY

2.224. The key points arising from the Strategic Case can be summarised as:

- London is a key driver of the UK's economic growth. Its success benefits the UK as a whole, but this cannot be taken for granted.
- Central London's future employment growth depends on having an increased labour supply, but the city faces significant housing and space pressures, exacerbated by a growing population.
- London must unlock more development opportunities to support delivery of new housing and jobs.
- There has been extensive recent investment in rail public transport, but similar levels of investment have not been made to the road network in London.
- The A1261 Aspen Way decking scheme based on Option 1 can support the delivery of additional homes and office space by supporting the regeneration and growth of Poplar and Canary Wharf.
- The A1261 Aspen Way scheme would unlock growth by tackling the problems of poor connectivity, urban realm and environment which currently negatively affect quality of life.
- There is support for the A1261 Aspen Way decking scheme, and the scheme conforms to policy at all levels, helping to secure London and the UK's continued prosperity.



3. The Economic Case

Section summary:

This section outlines the economic analysis regarding the decking scheme. In line with WebTAG guidance, cost-benefit analysis has been undertaken to assess the scheme's value for money in transport terms. This has been carried out with TUBA, a DfT modelling appraisal tool.

Over the 60 year appraisal period using DfT's London Value of Time (VoT), the net present value (NPV) of the decking scheme is estimated at £-2644m³³ with a Benefit Cost Ratio (BCR) of -1.13. Based on these values of time, the scheme would represent "poor" value for money.

However this doesn't account for the wider regeneration and strategic benefits that this development would unlock for London. The BCR is therefore not sufficient on its own to judge the merits of the scheme.

Option appraised

- 3.1. The A1261 is a major road linking east and central London, carrying heavy and strategically important traffic flow. However, it exerts a strongly negative impact on the area around it, contributing to the stark severance between Canary Wharf and Poplar.
- 3.2. The construction of a series of decks addresses these issues by protecting the capacity of the A1216 while also unlocking the potential of the area.
- 3.3. Option 1 – the preferred option – will provide four connected decks: one over the DLR depot, one over the DLR line, one over the A1261 Aspen Way and one over the existing Billingsgate site. This will help to connect Canary Wharf to Poplar, reducing the north to south severance caused by the A1261 Aspen Way and DLR infrastructure.
- 3.4. By creating new open space, improving connectivity and addressing problems with the local environment, decking over the A1216 would greatly increase the viability of high-density residential development.
- 3.5. Development on new land created by this scheme could accommodate up to 1,263 new homes, making a significant contribution to the need for new homes in the area.
- 3.6. The proposed scheme would create new routes for pedestrians and cyclists between Poplar and Canary Wharf, linking to major destinations including Canary Wharf Crossrail station and Wood Wharf.
- 3.7. The scheme would also help address issues of air quality, noise and residential amenity, all of which would encourage new development and allow it to better integrate with the existing built environment.

³³Costs excluded; Land take and any associated CPO costs or other costs involved in gaining vacant possession above a high level estimate of £50m, significant temporary works necessary for more advanced traffic management, premium construction working hours of any type. And surface highways, public realm or development works enabled but not essential to the schemes, capital and operating costs associated, any costs associated with redevelopment of Poplar station



Modelling Approach and Assumptions

- 3.8. A cost-benefit analysis has been undertaken to assess the scheme's value for money. That is, the monetised benefits are weighed against the costs of the scheme to form a Benefit to Cost ratio which quantifies the benefit received to the economy for every £1 invested in the scheme.
- 3.9. TUBA is a DfT modelling appraisal tool used to compute an appraisal of road transport schemes. Comparing the base (or do nothing scenario) to the scheme, TUBA assesses the difference in costs and travel time by journey purpose as well as change in fuel costs and CO2 emissions. The demand matrices used for this analysis are consistent with the LTS forecasts of transport growth, which assumes zero percentage growth in traffic.
- 3.10. WebTAG also outlines approaches to the social and environmental aspects of an appraisal. This includes aspects such as severance, journey quality noise and air quality. This economic analysis focuses on severance as this impact is deemed to be the most important.

TUBA Analysis

- 3.11. This section explores both road user and non-road user benefits in terms of travel time savings. TUBA is the main economic appraisal software for transport schemes. It is compliant with DfT's WebTAG by implementing a willingness-to-pay approach to economic appraisal for multi-modal schemes with a fixed or variable demand. The TUBA analysis does not take into consideration the wider, non-transport related benefits of the scheme. The BCR resulting from the analysis does not reflect housing delivery or commercial development benefits, which are the scheme's primary objectives.
- 3.12. Assumptions for the Poplar decking scheme are as follows:
- Scheme opening year: 2021
 - 60 year appraisal period
 - Model years: 2021 and 2031
 - Modelled periods: AM, IP and PM peaks
 - Price base and base year for discounting: 2010
 - Discount rate 3.5% for 30 years from current year, then 3% thereafter
 - 2031 LoHAM model input twice into TUBA; as 2021 and 2031
 - Road demand growth: 0% in line with TfL LTS low-car scenario
- 3.13. Franklin + Andrews calculated a preliminary estimate of the costs. These include: allowance for contractor preliminaries, contractor overheads and profit, design costs, client costs and London Underground approvals and possession, utilities and optimism bias.
- 3.14. Results of the TUBA analysis are shown in Table 12.

Table 12: TUBA headline results of Poplar decking scheme

	2010 prices and values (£'000s)
	DfT VoT
Economic Efficiency: Consumer Users (Commuting)	£-22,997
Economic Efficiency: Consumer Users (Other)	£-80,174
Economic Efficiency: Business Users and Providers	£-1,327,179
Wider Public Finances (Indirect Taxation Revenues)	£49,013
Present Value Benefits (PVB) ³⁴	£-1,400,702
Present Value Costs (PVC)	£1,243,352
Net Present Value (NPV)	£-2,644,054
Benefit Cost Ratio (BCR)	-1.13

- 3.15. The Present value of benefits (PVB) is estimated to be £-1,400m in 2010 prices and the Present value costs (PVC) is expected to be £1,243m. These have been calculated based on the DfT WebTAG Values of Time (VoT).
- 3.16. A BCR of one to one (1:1) shows a project 'break-even' point where for every £1 invested in the scheme, there are £1 benefits received from the scheme. Therefore any BCR above unity shows value for money in terms of receiving higher benefit for every £1 of invested cost. This BCR excludes wider benefits such as the addition of up to 1,263 new homes and 728,255 of commercial floorspace, which are the primary goals of the scheme. Therefore the scheme should not be judged on the BCR alone.
- 3.17. Table 12 shows a BCR of -1.13 (using DfT VoT) which suggests that the scheme is "poor" value for money.
- 3.18. Table 13 shows the distribution of time savings by distance travelled and user class with the highest percentage band of time savings in the 1-5km category (28%).

³⁴ Greenhouse gas emission benefits and costs have been excluded from the PVB as WEBTAG Unit A3. Environmental Impact Appraisal requires that all 8760 hours of the year are represented in the analysis. The traffic modelling undertaken models a one hour time slice in each of the AM, IP and PM weekday peak periods.



Table 13: Distribution of time savings by distance travelled and user class

	Time benefits £'000s							
	<1km	1-5km	5-10km	10-15km	15-20km	20-50km	50-100km	>100km
Car- business	-189	-5191	-4203	-2231	-1456	-2837	-143	-422
Car – commuting	-2	-94	-108	-55	-33	-67	-45	-21
Car – other	-8	-366	-433	-213	-112	-218	-129	-68
LGV	-10	-1291	-1484	-864	-433	-839	-228	-125
OGV	-2	-336	-380	-206	-183	-202	-64	-24
Total	-211	-7278	-6608	-3569	-2217	-4163	-1709	-660
Percentage of total	1%	28%	25%	14%	8%	16%	6%	2%

- 3.19. The Present Value of Benefits relating to the provision of the Poplar decking scheme is £-1,400m.
- 3.20. The majority of benefits relate to trips between 1 and 5 km. The resulting BCR is -1.13 which is 'poor' value for money according to DfT VfM Assessment criteria. However, this BCR does not include the regeneration and wider impacts of changes in land use and mixed use development brought forward by the scheme. Indeed these positive impacts and objectives of the scheme 'count against' it in this traditional transport user benefits approach to appraisal.

Table 14: Appraisal summary table

Appraisal Summary Table		Date produced:		06/06/2016		Contact:			
Name of scheme:		A1261 Poplar decking scheme					Name		
Description of scheme:		Option 1 – the preferred option – will provide four connected decks: one over the DLR depot, one over the DLR line, one over the A1261 and one over the existing Billingsgate site. This will help to connect Canary Wharf to Poplar, reducing the severance caused by the A1216					Organisation	TfL	
							Role	Promoter/Official	
Impacts		Summary of key impacts		Assessment					
				Quantitative			Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	There will likely be an increase to traffic flow in the AM and PM peak periods relative to the reference case as the development will generate additional trips	Value of journey time changes(£)		- 1,224,574,000		Large adverse	- 1,224,574,000	
			Net journey time changes (£)						
			0 to 2min	2 to 5min	> 5min				
			- 1,073,761,000	- 12,524,000	- 138,289,000				
	Reliability impact on Business users	The increase in traffic - with no highway scheme implemented to mitigate this - is likely to reduce reliability for road users in the area				Moderate adverse	N/A		
Regeneration	The decking scheme will release land for development, helping to support regeneration of the area north of Canary Wharf and the growth ambitious in the emerging Isle of Dogs OAPF.	This land will enable 600 net additional homes and 10,548 jobs which will generate £5.1 billion in GVA			Large beneficial	N/A			
Wider Impacts	The decking scheme will enable the delivery of additional homes and employment, which will help to address London's acute housing need. The existing DLR station and new Crossrail station at Canary Wharf (opening in late 2019) will both provide excellent connectivity to central London.				Large beneficial	N/A			
Environmental	Noise	A noise assessment has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed.				Not applicable as no assessment has been carried out at this stage	N/A		
	Air Quality	An air quality assessment has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage, then one of development then one will be needed.				Not applicable as no assessment has been carried out at this stage	N/A		
	Greenhouse gases	An assessment on the effects on greenhouse gases has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed.	Change in non-traded carbon over 60y (CO2e)			Not applicable as no assessment has been carried out at this stage	N/A		
			Change in traded carbon over 60y (CO2e)						
	Landscape	An assessment of the effects on the Landscape has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed				Not applicable as no assessment has been carried out at this stage	N/A		
	Townscape	An assessment of the effects on the Townscape has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed. The decking scheme will enable development and public realm improvements which would be expected to improve the quality of the townscape.				Not applicable as no assessment has been carried out at this stage	N/A		
	Historic Environment	An assessment of the effects on the historic environment has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed				Not applicable as no assessment has been carried out at this stage	N/A		
	Biodiversity	An assessment of the effects on biodiversity has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed.				Not applicable as no assessment has been carried out at this stage	N/A		
Water Environment	An assessment of the effects on the water environment has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed.				Not applicable as no assessment has been carried out at this stage	N/A			
Social	Commuting and Other users	The increase in traffic flow in the AM and PM peak period means that commuters and other users will be negatively affected. They are likely to experience longer journeys	Value of journey time changes(£)		- 98,330,000		Large adverse	- 98,330,000	
			Net journey time changes (£)						
			0 to 2min	2 to 5min	> 5min				
			- 88,730,000.00	941,000.00	- 10,541,000.00				
	Reliability impact on Commuting and Other	The increase in traffic is likely to reduce reliability for road users in the area				Moderate adverse	N/A		
	Physical activity	An assessment of the effects on Physical activity has not been carried out at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed.				Not applicable as no assessment has been carried out at this stage	N/A		
	Journey quality	The increase in traffic is likely to reduce journey quality				Slight adverse	N/A		
	Accidents	An assessment on the effects on accidents has not been undertake at this stage of the assessment. If the scheme is progressed to the next stage of development then one will be needed				Not applicable as no assessment has been carried out at this stage	N/A		
	Security	The decking will provide a more direct walking route between Poplar and Canary Wharf, removing the need to negotiate stairs to/from the footbridge and walk beneath DLR viaducts - which should improve perceptions of personal security.				Slight beneficial	N/A		
	Access to services	The scheme will provide a more direct pedestrian route between Poplar with Canary Wharf, making it easier to access services.				Moderate beneficial	N/A		
Affordability	This scheme is not expected to have affordability impacts				Neutral	N/A			
Severance	The decking scheme will provide a direct and more attractive alternative to the current overbridge and surface route beneath the DLR viaducts for pedestrians from Poplar seeking to access retail opportunities or the Crossrail station at Canary Wharf				Large beneficial	N/A			
Option and non-use values	This scheme is not expected to have option & non-use value impacts				Neutral	N/A			
Public Accounts	Cost to Broad Transport Budget						1,243,350		
	Indirect Tax Revenues						49,010		



Supplementary Analysis – Net Additional Homes, Jobs and GVA unlocked

Purpose of this Section:

This section sets out the methodology and results of an approach which has been developed by TfL to assess the value of the additional jobs and houses that would be unlocked by the decking scheme at Poplar station.

- 3.21. This section presents an overview of the additionality approach and its results. In order to maintain clarity, technical details are omitted here.

This approach has been developed to address a number of recommendations made in the TIEP report

- 3.22. This approach has been developed in light of emerging research, advice and discussion on the economic impacts of transport schemes, and in particular to fulfil some of the recommendations of the “Transport investment and economic performance” (TIEP)³⁵ report, commissioned by the Department for Transport (DfT) and published in October 2014.
- 3.23. The authors of the TIEP report sought to examine the “impacts of transport investments on economic performance with a view to informing the appraisal techniques that are used in project selection³⁶.” Their final recommendations informed revisions of the DfT WebTAG appraisal guidelines on Wider Impacts and Dependent Development (Tag Units A2.1 and A2.3) were released in September 2016³⁷.
- 3.24. TfL has developed this approach to specifically address 3 of the 7 recommendations of the TIEP report³⁸:

- 1) Appraisal of larger projects should direct more attention to impacts on private sector investment decisions and associated changes in employment and economic activity.
- 2) Land-use change (and more general changes in the level and spatial distribution of private investment) should be estimated and reported in a wider range of projects.
- 3) In some circumstances it will be appropriate to produce estimates for a range of different scenarios concerning private sector responses and related government policies.

The approach to calculation of net additional homes and jobs and GVA impacts is in line with Government guidance

- 3.25. As a framework, this approach follows published guidance³⁹ from the Homes and Communities Agency (HCA), and is consistent with both the HM Treasury ‘Green

³⁵ ‘Transport investment and economic performance’, Venables, Laird & Overman (2014). URL:

<https://www.gov.uk/government/publications/transport-investment-and-economic-performance-tiep-report>

³⁶ Ibid, p. 9

³⁷ As outlined in ‘Understanding and valuing the impacts of transport investment: progress report (Dec 2014)’, Department for Transport (2014). URL:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389960/understanding-and-valuing-the-impacts-of-transport-investment-progress-report-2014.pdf

³⁸ Venables et al. (2014): pp. 62-63

³⁹ ‘Additionality Guide’ 4th ed., Homes and Communities Agency (2014). URL:

https://cfg.homesandcommunities.co.uk/sites/default/files/aboutus/additionality_guide_2014_full.pdf



Book'⁴⁰ and the '3Rs'⁴¹ guidance published by the Department for Communities and Local Government (DCLG). In addition, Professor Peter Tyler, lead author of research into additionality for DCLG⁴² and the Department of Business, Innovation and Skills (BIS)⁴³, has advised TfL throughout the development process.

- 3.26. **Additionality** is defined as “the net changes that are brought about over and above what would take place anyway⁴⁴.”
- 3.27. This approach has been developed to estimate:
- **Jobs** – the number of additional jobs unlocked by the scheme
 - **Homes** – the number of additional homes unlocked by the scheme
 - **GVA** – the value of the additional jobs unlocked by the scheme, in Gross Value Added (GVA) to London
- 3.28. It is important to note that the estimates presented in this section are assessments of additional impact at the regional (London) level. They represent the additional impact of the scheme across London; although it is important to consider possible scheme impacts outside London, they have not been included in the additionality results.
- 3.29. The key components of the methodology include the following:

Direct effects – an estimate of the overall impact of implementing a scheme, including immediate, consequential, and induced effects

Leakage effects – an estimate of the effects on those outside of the target area. These should be deducted from the direct effects at the assumed proportion of leakage for each case.

Displacement effects – an estimate of those impacts that are transferred from elsewhere within the target area. These should be deducted from the direct effects at the assumed proportion of displacement for each case.

Multiplier effects – activity associated with additional local income, local supplier purchases and longer term development, such as through supply chains and expenditure on other activity. These need to be added to the direct effects.

- 3.30. For the Poplar decking scheme, the following options were assessed for additional impact:

⁴⁰ 'The Green Book: appraisal and evaluation in central government', HM Treasury (2003, updated 2013). URL: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

⁴¹ 'Assessing the impacts of spatial interventions: regeneration, renewal and regional development', Office of the Deputy Prime Minister (2004). URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191509/Regeneration_renewal_and_regional_development.pdf

⁴² 'Valuing the benefits of regeneration', Tyler et al. (2010). URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6382/1795633.pdf

⁴³ 'Research to improve the assessment of additionality', Tyler et al. (2009). URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/191512/Research_to_improve_the_assessment_of_additionality.pdf

⁴⁴ HCA (2014): p. 3

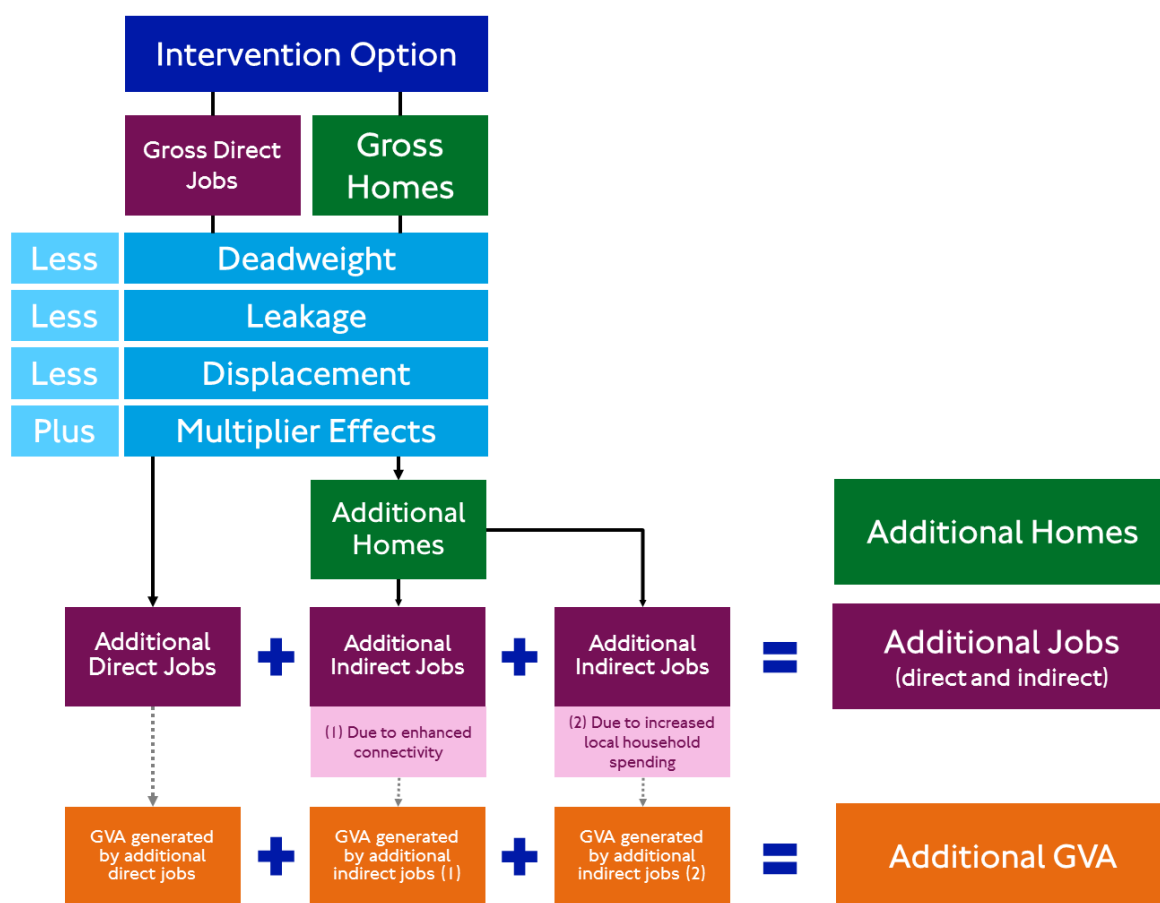


- **Reference case (or ‘deadweight’)** - development consistent with Local plans – no decking scheme
 - **Intervention Case (Option 1)** – Four connected decks: one over the DLR depot, one over the DLR line, one over the A1261 and one over the existing Billingsgate site.
- 3.31. These intervention options assume a scheme opening year of 2030.
- 3.32. The employment impacts of a scheme are the sum of direct and indirect effects. Indirect employment effects, a product of the additional housing unlocked by the scheme, can be identified through two separate effects:
- **Enhanced connectivity**
In areas where there is a relatively high demand for housing – e.g. most of London – the lack of new housing constrains the ability to generate higher employment densities than currently available. Therefore additional housing unlocked by a transport scheme provides dynamic benefits by enabling households to relocate closer to employment centres, or to enhanced transport links to access jobs. In line with research undertaken for DCLG⁴⁵, it is assumed that 25% of additional housing generates additional indirect employment. For London, this is probably a conservative assumption.
 - **Increased local household spending**
Additional housing generates indirect jobs as a result of new households’ spending on community, leisure and retail services in the local economy. A GLA Economics working paper⁴⁶ suggests that in areas of poor transport connectivity 171 jobs are created for every 1,000 additional homes provided.
- 3.33. The value of the additional jobs unlocked by the scheme is assessed individually for each type of employment effect:
- GVA generated by additional direct jobs
 - GVA generated by additional indirect jobs sustained by additional housing (due to enhanced connectivity)
 - GVA generated by additional indirect jobs sustained by additional housing (due to increased local household spending)
- 3.34. The overall methodology of the approach is summarised in Figure 39.

⁴⁵ Tyler et al. (2010)

⁴⁶ More residents, more jobs? 2015 update The relationship between population, employment and accessibility in London - <https://www.london.gov.uk/sites/default/files/working-paper-71.pdf>

Figure 39: Summary of TfL Additionality Approach



The Poplar decking scheme would help to deliver significant volumes of new housing, jobs and GVA around the Isle of Dogs.

- 3.35. The results of the additionality approach, presented for each assessed intervention option, are summarised in Table 15, below:

Table 15: Summary of additional impacts of the Poplar decking scheme (at London level)

Development and regeneration benefits of the decking option	Option 1
Net Additional homes – London level (based on 50% displacement)	600
Net Additional jobs (direct and indirect) – London level	10,550
GVA generated by additional jobs (direct and indirect) (£m PV)	5,050

- 3.36. As indicated in Table 15, the Poplar decking scheme could support the delivery of up to 600 net additional new homes, and new office floorspace and other employment floorspace which would support up to 10,550 net additional new

jobs (direct and indirect). This new employment would generate an additional GVA for the London economy of up to £5.1 billion – significantly greater than the cost of Option 1 – £1.24 billion.

- 3.37. However, given that housing market constraints in London are very different to other parts of the UK, following the additionality guidance and assuming that 50% of housing displaces housing delivery elsewhere is a conservative assumption. This is not reflective of reality in the London context. It could reasonably be argued that 1,200 new housing units that would be enabled in Popular and Canary Wharf are genuinely net additional.
- 3.38. Realising these benefits is contingent on flexible planning policies that would support higher density development at sites in the vicinity of the existing A1261, DLR line and DLR depot. However, they demonstrate potentially massive economic benefits for both the local area – the borough of Tower Hamlets – and for the London economy.

Public realm

- 3.39. The core aims of the Road Task Force (RTF) include improving the quality of the city's public realm and transforming the environment for cycling, walking and public transport. In recent years, exciting new places for city life have been created that deliver high quality cycling networks and re-imagined streets with a safer, cleaner and greener walking environment. Public realm investments can enhance connectivity, attract more tourism and reduce severance amongst communities. Making cities more walkable reduces reliance on car, contributes to better health and stimulates more spending in district town centres. It is also an increasingly important strategic factor determining the competitiveness of cities.

TfL is able to apply a robust approach to quantifying the value of urban realm improvements.

- 3.40. The monetary benefits of better open spaces for walking and cycling can be uncovered by analysing the traded prices of goods linked to public realm improvements (e.g. house prices, retail rents or Gross Value Added) or undertaking stated preference-based surveys which uncover the willingness to pay of non-traded goods (e.g. the value of better experiences on streets and in places).
- 3.41. Table 16 illustrates some of the potential mechanisms through which better quality public realm is realised.

Table 16: Mechanisms that capture benefits realization of public realm improvements

Benefit	Valuation technique
Tourism, retail activity and inward investment	Higher tourism footfall, retail spending and inward investment in town centre
Walk/cycling time savings from improved local connectivity	Pedestrian time savings gained from reduced severance and increased permeability of surroundings
Health-related productivity benefits through reduced absenteeism	Valuation of net GVA gained through reduced absenteeism
Residential property prices and retail rents	Boost in prices observed in residential and commercial property markets

Benefit	Valuation technique
Reduced accidents and crime	Gain in welfare, economic output and decrease in medical, healthcare costs
Modal shift from car to public transport/cycling and walking	Reduction in fuel consumption, CO2 emissions and improved air quality from shift from private car to other modes
Noise reduction	Gain in social benefit modelled through revealed preferences techniques drawing on house price data
User experience	Gain in social benefit modelled through willingness-to-pay surveys for higher quality public realm

- 3.42. It is important to note that double-counting could arise if each of these benefits were added together. For example, a boost to house prices due to provision of quieter, safer open space would also partly capture the social benefits uncovered by a noise or accident assessment. A distinction can be made between aspects of better public space which result in a welfare gain as captured by time savings, higher house prices, enhanced user experience) and those which result in changes in economic output (higher investment and productivity).

Further work using the TfL Valuing Urban Realm Toolkit as a basis for quantification of public realm enhancements will be carried out as this business case is developed.

- 3.43. It is proposed that future phases of work will quantify the benefits of greater quality public realm through use of the Valuing Urban Realm Toolkit (VURT)⁴⁷ developed by TfL. This tool provides objective, evidence-based monetization techniques for less tangible benefits of better streets and spaces. The outputs of the VUR toolkit are as follows:
- User Benefits (the values people say they give to changes in urban realm quality)
 - Property benefits (increases in residential prices and retail rents)
- 3.44. The VURT derives monetized urban realm value of a scheme using the Pedestrian Environment Review System (PERS) which assesses the quality of the existing and proposed streetscape through a seven-point quality scale from -3 to +3. Research has been undertaken to derive robust 'Willingness-to-Pay' values for every minute spent in the urban environment for different levels of streetscape quality, as measured using PERS. Similar research has been undertaken to derive the impacts of a change in quality of streetscape on residential property prices and retail rents. However, the two measures should be reported separately as there would be 'double-counting' as enhanced experiences for local residents could also filter through into higher house prices and retail rents.
- 3.45. The VURT toolkit methodology follows a two-stage approach:
- 1) **Pedestrian counts:** an initial day long count of pedestrian activity in the scheme area is undertaken to determine the peak period taken forward for analysis. Further PERS assessments and pedestrian activity counts are undertaken at a more local level to acknowledge the diverse character of streetscapes and

⁴⁷ TfL's Business Case Development Manual now recognises the VURT toolkit as the approved means of producing values for the User Experience of Public Realm

footways within schemes. Counts are obtained for people walking and staying in public places (e.g. public seating, café tables etc.).

2) Baseline and forecast PERS assessment: the forecast scenario will have to be understood in sufficient level of detail to enable changes in certain dimensions to be accurately measured and for there to be clarity about, for example, the proposed location of street furniture, crossing points, light etc. Realistic scheme visualizations will also enable a rational assessment of some of the less tangible scheme attributes such as Personal Security and Quality of Environment.

- 3.46. The forecast scenario requires an assessment of the likely number of people using the urban environment under the scheme. TfL's London Walkability Model can be utilized as a tool to forecast changes in pedestrian density as a result of reduced severance.

TfL's Better Junctions and Cycle Superhighways Study has shown there to be significant benefits of improving public realm

- 3.47. For example, an East-West 'Bike Crossrail' for a sample section of Victoria Embankment between Northumberland Avenue and Savoy Street/Place was shown to generate £1.1m- £1.9m of user experience benefits over the lifetime of the scheme.
- 3.48. Table 17 illustrates the magnitude of social benefits that can be achieved from schemes which have similar public realm improvements.

Table 17: Better Junctions and Cycle superhighways VUR modelled user experience benefits

Scheme	Present Value of User benefits (£m)
Victoria Embankment East-West 'Bike Crossrail'	1.1-1.9
Old Street Superhighway City Hub	7.0-26.5
Ludgate Circus North-South 'Bike Crossrail'	0.3-0.5

- 3.49. The above estimates illustrate the scale of user experience benefits as modelled by the VUR toolkit – the change in PERS attributes and the predicted volume of pedestrian activity over the lifetime of the scheme are the underlying drivers for the calculations.

A more detailed assessment of the urban realm benefits is expected to be undertaken should the scheme progress to the next stage of development

- 3.50. Understanding the relative values of different PERS attributes can help direct design development in latter stages of the scheme. The Willingness-to-Pay values for different attributes are a reflection of the benefits that people appreciate, it is reasonable to focus on improving attributes that people value more highly than others.
- 3.51. The benefits of quality public realm can be monitored against policy objectives

over the longer term, for example through performance indicators such as crime/accident statistics, London Travel Demand Survey (LTDS), town centre performance indicators, permanent pedestrian counter installations.

The Poplar decking scheme would deliver a range of public realm benefits

- 3.52. Canary Wharf to the south of the A1261 is a densely built-up area where there are large business/commercial uses with significant volumes of office floorspace. New residential developments are underway. Poplar, to the north of the DLR lines and depot primarily contains residential land uses with some retail units. Tower Hamlets College is north of the DLR station.
- 3.53. A key goal of the decking masterplan is the opportunity to provide a high quality landscaped, pedestrian link connecting Poplar High Street to Canary Wharf.
- 3.54. As this business case is developed further, an assessment will be made of the volumes of pedestrians who are likely to benefit from improved north-south connectivity between Poplar and Canary Wharf.
- 3.55. Currently the poor quality environment does not offer an attractive option for north to south movements and may result in concerns over personal security for pedestrians.

Figure 40: Difficult north-south pedestrian route from Poplar High Street to Canary Wharf – from Poplar High Street looking south towards Poplar DLR station (left) and aerial view showing Billingsgate, A1261 and DLR depot between the two locations



Key Finding:

The Poplar decking scheme would deliver significant public realm benefits for the area through reduced severance and investment in the new north-south corridor.

Table 18: PERS attributes affected by the scheme

Link	Description	Scheme impact
Effective Width	The space available for pedestrian movement	Provision of a new N-S pedestrian link through the decked section would allow for creation of pedestrian streets and downgraded roads
Permeability	Extent to which pedestrians can make their own informal movements rather than rely on designated crossings	Eliminating the need to use designated crossings and subways provides freer pedestrian movements
Legibility	Way in which the pedestrian environments' built form may assist the user to navigate them within the space	A clearer path linking Poplar with Canary Wharf
Personal security	Environmental features that relate to individual pedestrians' vulnerability to, or fear of, crime	Creates a safer environment to cross the A1261 and DLR lines compared to existing pedestrian routes
Surface quality	Poor surfaces can create trip hazards, reduce comfort and cause route severance for the mobility-impaired	Investment and maintenance regime would directly improve surface quality
User conflict	Hazards to pedestrians as a result of making conflicting movements with other users (e.g. cyclists, road users)	N/A
Quality of Environment	The general ambience of the streetscape	Introduction of pedestrian links and north-south boulevard provide high quality access routes whilst decking over of A1261 would mitigate noise and severance issues
Space	Description	Scheme impact
Sense of place	The aesthetics and quality of the environment	The scheme improves the sense of place on new north-south boulevard corridor
Opportunity for activity	A public space can have many functions and can provide a facility for a variety of needs	Decking over of A1261 and DLR infrastructure would provide opportunities to deliver new public spaces

Severance

The DLR depot and DLR rail lines and the A1261 Aspen Way create severance between Poplar and Canary Wharf.

- 3.56. Severance is defined in WebTAG unit A4.1 Section 5 as 'the separation of residents from facilities and services they use within their community caused by substantial changes in transport infrastructure or by changes in traffic flows'. Severance is an issue where traffic flows impede pedestrian movement or when infrastructure presents a physical barrier to movement.
- 3.57. Although it is not impossible for pedestrians to walk from Poplar High Street to Canary Wharf, the current pedestrian routes are circuitous and some do not have good levels of natural surveillance. Physical severance is caused by the DLR depot, DLR rail lines and the A1261 which together act to impede north-south pedestrian movements.
- 3.58. There is an overbridge for pedestrians over the DLR station and the A1261, but then pedestrians need to walk along the A1261 Aspen Way and along a footway under DLR viaducts (shown in Figure 41).

- 3.59. The cramped feel of this may affect perceptions of personal security and deter its use.

Figure 41: The pedestrian route from Poplar DLR station towards Canary Wharf (left) Footbridge across A1261 Aspen Way & (right) footway beneath DLR viaducts towards West India Quay and Canary Wharf



Residents in the area north of the decking would benefit from reduced severance.

- 1.1 The decking scheme aims to provide a legible and direct alternative to the overbridge and surface route beneath the DLR viaducts for pedestrians from Poplar seeking to access retail opportunities or the Crossrail station at Canary Wharf.
- 1.2 Based on this evidence and scheme outlines it is therefore assessed that this scheme would bring positive benefits in terms of severance to the local area.

Key Finding:

The decking scheme would reduce severance impacts for current residents living in the Poplar area north of the DLR station and depot.

ECONOMIC CASE SUMMARY

- 3.60. The key points arising from the Financial Case can therefore be summarised as:

- The scheme has a benefit to cost ratio of -1.13:1 suggesting poor value for money based on TUBA benefits alone, but the scheme would unlock a net 600 additional new homes (assuming 50% displacement and 10,550 net additional jobs).
- The Financial Case below sets out how a funding package could be put together to meet the scheme costs.

4. The Financial Case

Section summary:

The Financial Case sets out the project construction and ongoing operating costs, together with sources of possible financing and funding.

Funding

Redevelopment at the Poplar site will play a crucial role in funding the proposed scheme

- 4.1. TfL appointed a consortium of Mott MacDonald, Tony Meadows Associates (TMA) and Jones Lang LaSalle (JLL) to develop the decking options and estimate project capital costs and funding potential. As part of this work JLL carried a comprehensive review of possible funding sources, in consultation with TfL, and advised on their potential scale.
- 4.2. It is estimated that the shortlisted Option 1 could facilitate delivery of 1,261 new homes and around 50,000 new jobs, owing to a large amount of office space proposed to be delivered as part of the decking scheme.
- 4.3. As part of their funding analysis JLL focused on examining both land ownership and redevelopment model and taxation mechanisms. The list of funding sources examined in detail was as follows:
 - Residual land value (RLV) arising from TfL's partial ownership of development plots around the proposed scheme and RLV from 3rd party landholdings, if acquired by TfL;
 - Voluntary developer contributions;
 - Borough Community Infrastructure Levy (BCIL);
 - Incremental Business Rates (IBR);
 - Stamp Duty Land Tax (SDLT).
- 4.4. Given the early stage of the scheme, sources of funding are still indicative as no consultations with the local authorities or the central Government has yet taken place to assess the scale of their potential contribution. Figures presented below represent a maximum value that could be secured from new development using the various sources. It is clear from the analysis that a workable funding package for the decking scheme would rely heavily on the ability to extract RLV from the surrounding area redevelopment and on IBR income.

Residual Land Value (RLV)

- 4.5. One of the possible funding sources could come from the sale of TfL land unlocked for redevelopment as a result of the deck construction. TfL already owns the Poplar DLR depot site and could either sell it to private sector developer or develop jointly with a private sector partner to earn long-term profits.
- 4.6. The proposed decking structure would span across a number of sites that are currently in both TfL's and third parties' ownership. JLL's proposal is for TfL to

acquire the third party land and realise value on resale, following the infrastructure investment. JLL estimate that the land acquisition cost would be less than the potential RLV that can be extracted from the 3rd party sites.

Voluntary Developer Contributions

- 4.7. Private landowners and developers may be willing to make a voluntary contribution to the decking scheme if they perceive that the scheme would add significant value to their land and/or development and if they believe that their contribution would be a deciding factor in whether the scheme proceeds or not.
- 4.8. It is not however anticipated that the decking scheme would provide significant enhancement to the value of the neighbouring developments and a voluntary contribution, if forthcoming at all, is likely to be insignificant.

Borough Community Infrastructure Levy (BCIL)

- 4.9. The purpose of a BCIL is to fund strategic local infrastructure. The decision on whether to direct BCIL to this project will be taken by the local authority. The size of the funding contribution would be influenced by the perception of the importance of the decking scheme and by other local infrastructure funding requirements in the area. BCIL figures presented in the table below represent total BCIL that would be chargeable on the new development under the current BCIL rates. In reality, borough contribution is likely to be smaller, given other calls on the BCIL revenues.

Incremental Business Rates (IBR)

- 4.10. Given that the scheme could help unlock significant commercial development, IBR is a funding option worth exploring. Control over business rates is being devolved to local authorities, i.e. the boroughs and the Mayor of London. At present, 50% of business rates can be retained locally. By the end of the current Parliament (by 2020) the proportion will go up to 100%. The analysis of potential IBR assumed that 50% of the retained business rates from new commercial development could go towards the decking scheme. This would need to be tested with both the borough and the Mayor of London.

Stamp Duty Land Tax (SDLT)

- 4.11. SDLT is currently payable on the purchase of property above £125,000. This is a national tax and there are no current plans of devolving it to local authorities. If the stamp duty revenue within designated zones or corridors was devolved, or an equivalent earnback arrangement created, then this could provide a potential funding source for infrastructure projects, which could include the decking scheme at Poplar.
- 4.12. It is worth noting that financing against stamp duty would be difficult, given the uncertain nature of property sales transactions. A direct Government contribution, reflective of the size of the stamp duty receipts the new development could yield over time, would be more desirable. Utilisation of SDLT for transport projects funding requires Government support and may face implementation challenges.

A combination of estimated RLV and IBR proceeds could cover around 95% of the scheme's capital cost excluding maintenance and financing costs

- 4.13. The identified sources of funding could produce enough funding to pay for the capital cost of the deck, assuming that all the identified funding streams materialise. Table 19 below presents the amount of funding as % of the project construction cost:

Table 19: Summary of funding sources explored

Availability	Funding Sources	£m, 2015/16
	Residual Land Value	790
	Voluntary Developer Contributions	-
	Borough CIL	20.3
	Incremental Business Rates	785
	Stamp Duty Land Tax	65.3
	Potential Maximum Funding Total	1,661
	Capital Project Cost	1,653
	Funding as % of Cost	>100%



Funding option that could make contribution, subject to borough approval and relevant central Government policies carrying on

Funding options that could make contribution, but require central Government support and/or face some implementation challenge

- 4.14. If the development does not progress or progresses at a slower rate, there will be a knock-on effect on whether/when the funding will become available and this presents a degree of risk. Further work will be carried out by the TfL Commercial Development team to assess whether the scheme's costs could be brought down and the development-related funding could be increased in order to make the project both self-funding and self-financing.

Financing

- 4.15. TfL would face an up-front project expenditure which would be repaid from a mix of the funding sources identified above. The next step in the project assessment process is to identify how much upfront financing each of the identified funding sources could support, given the levels of uncertainty associated with the development timescales and the local and central Government's support for the use of BCIL, IBR and SDLT.
- 4.16. TfL could potentially use a privately financed solution to deliver the decking project. This could take the form of the private sector taking on the responsibilities for design, construction and other risks of the project, in return for a series of payments by TfL. The risk transfer to the private sector would

however come at a higher financing cost. The level of the financing cost would be dependent on the appetite of the private sector for this type of a road project.

- 4.17. Alternatively, the public sector could borrow. The rate of public sector borrowing is usually lower than the private sector's. Detailed assessment of the most appropriate financing structure will be carried out once the TfL Commercial Development finalises its assessment of the redevelopment opportunity at Poplar.

FINANCIAL CASE SUMMARY

- 4.18. The key points arising from the Financial Case can therefore be summarised as:

The key points arising from the Financial Case can therefore be summarised as:

- Cost estimates suggest the Poplar decking project's capital cost is around £1.65bn (2015/16 prices)
- The identified funding sources could cover the capital cost of the project, but this does not take into account the ongoing maintenance costs of the project post-construction and the financing costs.
- TfL Commercial Development will carry out further analysis of the potential redevelopment at the Poplar site with a view of both reducing the scheme costs and increasing the redevelopment income. Project financing will be considered in more detail once the internal analysis of the redevelopment potential and scheme design are completed

5. The Commercial Case

Section summary:

The Commercial Case provides details on the commercial structure, procurement approach, and accounting implications of the project.

TfL will apply its substantial experience of delivering complex highway projects to the procurement, funding and financing of the Poplar decking scheme. TfL will also achieve efficiencies by delivering the Poplar scheme within a wider programme of decking/tunnel projects. The project would support many jobs outside of London.

Procurement Strategy and Sourcing Options

- 5.1. The scheme is being promoted by TfL and will be developed through close working with the Borough of Tower Hamlets which is closely engaged with the project.
- 5.2. TfL is responsible for the Transport for London Road Network (TLRN), which the A1261 is part of. Changes to this key part of the road network could have an impact on the surrounding road network for which the local borough is the Highway Authority.
- 5.3. It is expected that the construction stage of the project would be led by TfL and, where involving infrastructure owned by other parties, such as the Borough of Tower Hamlets, will be delivered in partnership with these other organisations.

TfL has substantial experience of delivery of complex highway projects, which will be applied to the procurement, funding and financing of the Poplar decking scheme

- 5.4. TfL is an experienced organisation, with a successful track record on procuring and managing highways improvement works (such as the recent completion of life extension works to the Hammersmith fly-over, the Cycle Superhighways programme, and the Chiswick Bridge refurbishment).
- 5.5. The procurement and construction of major infrastructure projects is also an area TfL has extensive experience in, with sub-surface construction works having been undertaken across a multitude of projects in constrained and heavily populated areas of London, such as Crossrail, DLR extensions, major station schemes such as King's Cross St Pancras and Green Park. All potential suppliers will be required to consider the Mayor of London's Responsible Procurement Policy in their bid as part of any Invitation to Tender (ITT) for the design and build contract.

TfL can achieve efficiencies by delivering the Poplar scheme within a wider programme of decking/tunnel projects and linked into a wider highway capital investment programme

- 5.6. TfL is undertaking and proposing a range of large capital infrastructure projects that involve procurement of skills and services that will all be highly relevant to the A3 decking. For example, the Cycle Superhighways and Better Junctions programmes have led to an increase in skills associated with large-scale highway

engineering and construction traffic management.

- 5.7. The A1261 Poplar decking is being proposed as part of a wider programme of Roads Task Force (RTF) tunnels and decking at a range of locations throughout London, arising from the 2013 recommendations published by the RTF. If these projects are progressed, some significant economies and efficiencies could be achieved through co-ordination of delivery with the decking at Poplar.
- 5.8. TfL will also seek to incorporate best practice from Highways England's own highways works and approaches to procurement given the larger volume of capital infrastructure works the agency undertakes across the country.

In addition to internal staff, consultancy support will be required to support future scheme development and consents process

- 5.9. It is anticipated that consultancy support will be required in the following areas:
 - Legal
 - Environmental Impact Assessment
 - Engineering
 - Transport Planning
 - Planning and Socio Economics
 - Architecture and Urban Design
 - Cost Estimating
 - Property Surveyors/Land referencing

Construction and Operations

- 5.10. As the scheme progresses and further details concerning the design of the deck are determined, a procurement strategy will be developed which can incorporate the necessary design aspects, the operation and management approach, and the funding and financing approach to the scheme given the potential sources of funding as covered in the Financial Case. The risks associated with each element will be a consideration in the approach taken to procuring both construction and maintenance work on the deck.
- 5.11. Dependent on the form of contract, an assessment of the likely accounting treatment of any commercial structure under ESA95/10 would need to be undertaken to determine whether the project is likely to be treated as "off budget" and therefore whether liabilities would score towards TfL's borrowing.

Methods for the mitigation of construction impacts will be investigated

- 5.12. TfL has extensive experience of developing and delivering Traffic Management Plans. As part of the TLRN, the A1261 will continue to ultimately be managed by TfL, acting as the client on any subsequent procurement of operations and maintenance contracts that could be let.
- 5.13. Further consideration will need to be given to the management of the new open space created by this scheme, the day to day management of which could be passed to the Borough of Tower Hamlets, but with maintenance privileges for the

underground section of the A1261 to be retained.

- 5.14. An EU-compliant procurement route following the Competitive Dialogue procedure, under the Public Contracts Regulations 2006, can be adopted to enable TfL to obtain certainty that the Contractor is capable of developing a compliant design.
- 5.15. Throughout a procurement process for both construction and operations / maintenance, TfL would undertake bi-lateral discussions with selected Contractors to seek views on the proposed procurement route, contract form and risk allocation. In addition, legal resource would be procured to provide commercial advice and contract drafting support, whilst Insurance advice would enable determination of the most cost-effective means of insuring risk during construction and operations.
- 5.16. As a public body, TfL has to meet the requirements of the Mayor of London's Responsible Procurement Policy consisting of the following themes:
- Environmental Sustainability
 - Supplier Diversity
 - Community Benefits
 - Skills and Employment
 - Sustainable Freight
 - Fair Employment
 - Ethical Sourcing
- 5.17. In compliance with the Mayor's responsible procurement policy, all potential suppliers will be asked to consider these elements in their bid as part of the Invitation to Tender (ITT) for any future project support or the design and build contract. Each appointed consultant or contractor will be subject to a supplier performance plan.

TfL utilises supply chains from across the UK – work on this scheme would support jobs outside of London

- 5.18. Although TfL undertakes procurement for projects implemented in the capital, the wider benefits to the UK are extensive, with over 60,000 jobs estimated to be supported by services TfL procures from outside of London. The construction of the Poplar deck would add to the pipeline of capital investment that supports jobs across the UK.
- 5.19. The procurement strategy for this stage of the project will be refined and improved as the scheme is further developed.

COMMERCIAL CASE SUMMARY

- 5.20. The key points arising from the Financial Case can therefore be summarised as:

- TfL has substantial experience of delivery of complex highway projects, which will be applied to the procurement, funding and financing of the Poplar deck
- TfL can achieve efficiencies by delivering this scheme within a wider programme of decking and tunnel projects and linked into a wider highway capital investment programme
- TfL utilises supply chains from across the UK – work for this scheme would support many jobs outside of London



6. The Management Case

Section summary:

The purpose of the Management Case is to assess whether a proposal is deliverable. It reviews evidence from similar projects, sets out the project planning, governance structure, risk management, communications and stakeholder management, benefits realisation and assurance.

Evidence of similar projects

TfL will make full use of best practice within the company and from industry

- 6.1. TfL has extensive experience in developing, promoting and implementing significant infrastructure projects and securing necessary consents required.
- 6.2. This ranges from modifications to existing infrastructure (such as repairs to the A4 Hammersmith flyover, modernisation of the London Underground, extensions to Tramlink and DLR) to major schemes such as Crossrail. TfL also has demonstrable experience in delivering major road junction improvements, pedestrian and cycle schemes, and wider public realm improvements. These projects share similarities to the A1261 Poplar decking scheme, involving processes and aspects of design and construction which would be faced by this scheme. TfL will continue to actively incorporate best practice and experience from these schemes into the development of this project.
- 6.3. With a range of highway and public realm improvements identified within the current Business Plan, this experience will have been furthered by the time consent stage for this project is reached and will be transferrable to this scheme. If necessary, additional support and advice from experienced promoters of major highway schemes and operators of similar projects can be sought. This could include for example Highways England and other urban transport agencies.
- 6.4. The Poplar decking project is part of the wider Roads Task Force programme sponsored by the Managing Director of TfL Planning. There are a number of programme linkages with other schemes being taken forward as part of the RTF Key Corridor Interventions Programme, which will present opportunities to share best practice as these schemes progress.

Key project assumptions

- 6.5. It is currently assumed that sufficient funding is available to support the planning and development stages of the project up to securing the necessary powers. TfL does not have a budget for the main design and build costs, but there are a number of potential funding sources. Further work is ongoing to identify the optimal funding solution for the scheme.
- 6.6. It is assumed that the land for the proposed route can be acquired through the Planning and Compulsory Purchase Act (2004).

Project risk

- 6.7. As the scheme is further developed, more detailed plans will be developed and will be subject to further assurance and project controls, including a Quantified Risk Assessment to further improve forecast costs and the economic appraisal.
- 6.8. At this early stage of design, some aspects carry a high risk and hence the optimism bias of 66% for a non-standard civil engineering project has been applied. A quantified risk assessment (QRA) will be undertaken should the scheme be progressed, in order to provide more certainty on costs. Following submission of this business case, TfL will liaise with the Treasury / DfT to update the forecast costs following the completion of the QRA, and to agree a new working assumption on the level of optimism bias to continue to apply in future scheme appraisal.

In general, TfL considers the scheme relatively standard given the company's extensive experience

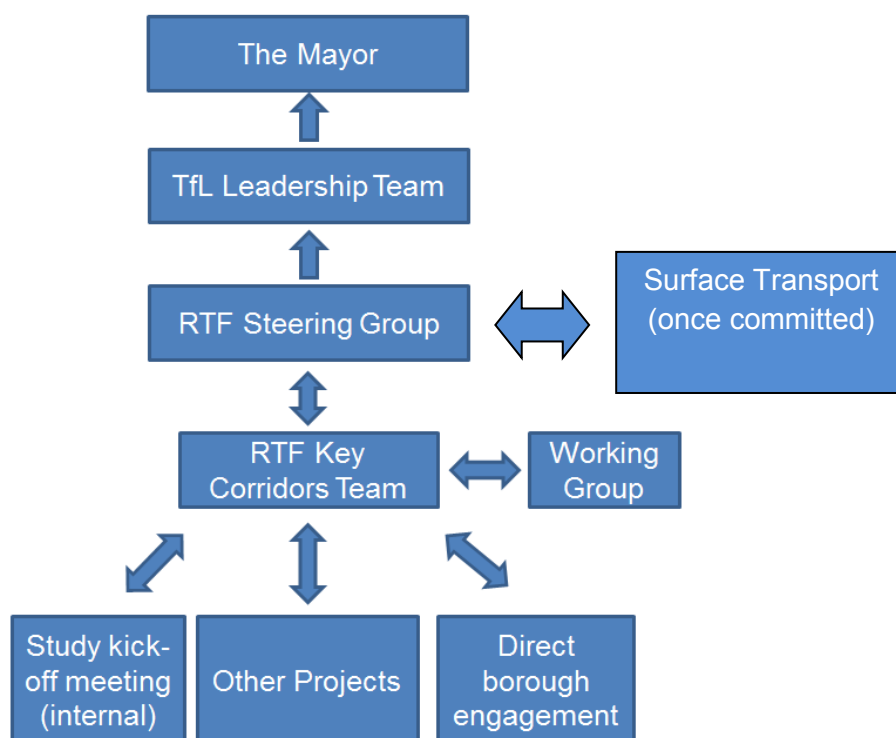
- 6.9. This experience includes planning, procuring and constructing large-scale infrastructure projects, such as the Cycle Superhighways, the Northern line extension and Crossrail. The design and construction of these schemes has provided a wealth of contemporary and relevant comparators against which to benchmark, helping to guide proposed construction approaches for this scheme.

Governance, organisational structure and roles

Internal governance

- 6.10. Decking of the A1261 at Poplar is part of the Roads Task Force Key Corridor Intervention Programme (Figure 42). The programme is overseen by the RTF Steering Group, which is made up of representatives from across the organisation and the TfL Leadership Team. Once the scheme is finalised and becomes committed, responsibility for its delivery will be overseen by TfL Surface Transport.
- 6.11. As part of future scheme development, an Independent Peer Review Group (IPRG) may be established to provide independent expert scrutiny of the Poplar project. An IPRG would remain in place to undertake reviews on technical and engineering matters at key stages during the design, procurement and delivery of the project.

Figure 42: RTF internal governance structure



Programme/Project Plan

6.12. Some key future milestones for the project are shown in Table 20 below.

Table 20: Key project development milestones

Milestone Description	Date
Further feasibility – scheme development, modelling, construction methodology, finance and funding options	2015 -2016
Planning, Design, Approval and Procurement	2017 -2021
Construction and Testing	2021 – 2022
Operation	2022

Assurance and approvals plan

A comprehensive and robust project management framework will be applied, helping to ensure scope, cost and benefits are controlled

- 6.13. The assurance and approvals process will follow TfL’s established project assurance procedures which include assurance at three levels: internal, Programme Management Office (PMO) and external.
- 6.14. TfL uses a number of mechanisms to improve the management of its major projects in order to help ensure the objectives and benefits of a scheme at

inception are realised following implementation. TfL's project management framework, known as 'Pathway', provides consistency in approach and the tools required for planning and delivery teams, whilst retaining flexibility in its application to manage and control a project. Embedded into Pathway is a delivery assurance process using stage gates, upon which TfL utilises industry-leading external expertise to review and challenge all aspects of the project.

- 6.15. The number and timing of the stage gates are established by the delivery organisation, based on guidance in Pathway, and informed by a characterisation tool that considers such things as scale, complexity, novelty, project team experience and the strategic importance of the project. A number of Products are required to be completed to provide evidence at the stage gate that the project is fit to proceed to the next stage.
- 6.16. Products are outputs that are signed off by authorised individuals, and include such documents as project execution plans, risk management plans, project estimates and design compliance certificates
- 6.17. Underlying these stage gates are a number of assurance activities conducted by both TfL and the suppliers and include activities such as design reviews, safety assessments, risk reviews, commercial assessments, estimate validation, material testing, site inspections and product testing.

Rigorous assurance processes will provide close scrutiny and challenge of risk management and decision-making throughout the project

- 6.18. The PMO is part of TfL but is not accountable for delivery. These reviews are typically Integrated Assurance Reviews (IAR), staffed by a combination of PMO staff, consultant external experts (EE) or peer groups from outside the delivery organisation.
- 6.19. The EEs are selected on the basis of their relevant experience and suitability to the project under review. Each review is covered by a Terms of Reference that sets the scope and the brief to the EE, who is procured from a TfL consultancy framework. The Terms of Reference is based on the Pathway IAR Lines of Enquiry, aimed at generating a comprehensive review. Each Line of Enquiry includes up to 20 detailed challenges, devised to match the maturity of the project at its particular point in its lifecycle.
- 6.20. The Lines of Enquiry were developed as part of the Corporate Gateway Approval Process (CGAP) in 2008, following a comprehensive benchmarking process that assessed the assurance regimes in other organisations and the Office of 3 Government Commerce who produced gateway processes and guidance (now part of the Cabinet Office). Some additions have been made since 2008, including more explicit challenges covering cost benchmarking following consultation with IIPAG.
- 6.21. The IAR report is considered by appropriate bodies prior to seeking authorisation. For projects over £50m the Finance and Policy Committee and Board are informed of the assurance reviews carried out.
- 6.22. IARs are conducted at key stages of the project:

- initiation;
 - option selection;
 - pre-tender;
 - contract award;
 - project close out;
 - benefits delivery; and
 - annual review (where no other IAR would happen within 12 months).
- 6.23. TfL also receives project review and assurance from the Independent Investment Programme Advisory Group (IIPAG), which report to the Mayor of London concerning TfL's Investment Programme. This includes all maintenance, renewal, upgrades and major projects (excluding Crossrail).
- 6.24. The involvement of the IIPAG is determined on both a risk based approach and a project value threshold. The IIPAG reviews are normally commissioned on projects with a value of £50m or more. The IAR process is as detailed above and the IIPAG then attends the Gate Review Meeting once the EE Interim Report has been produced. The IIPAG then produces its own reports, which are submitted at the relevant approval meetings alongside the PMO Report, based on its review of the IAR material and discussions at the final Gate Review Meeting.
- 6.25. TfL has the option of establishing an Independent Peer Review Group (IPRG). This approach has been followed for other major TfL projects, so given the scale of the Poplar decking project, this could warrant a similar approach. If appropriate, an IPRG can be set up for the scheme if further development of the project is approved. Initially it could oversee the refinement of delivery sub-options and review engineering feasibility studies and scheme appraisal undertaken.

Communications and stakeholder management

- 6.26. The RTF Key Corridors Team is responsible for keeping internal and external stakeholders appropriately engaged and informed. In accordance, formal, minuted meetings with set agendas and actions have been arranged with all stakeholders. There are a number of internal working groups and external stakeholder meetings are held on a regular basis.

A Stakeholder Management Plan has been prepared for the project

- 6.27. This Stakeholder Management Plan provides a brief on the objectives of the stakeholder engagement, target audience and methodology. This plan is under ongoing review and will be updated and refined as necessary.
- 6.28. Stakeholder engagement has already been undertaken and there is strong support for the scheme from the Borough of Tower Hamlets. A future programme of stakeholder engagement as the scheme progresses has been developed.
- 6.29. The external stakeholders identified are summarised below:
- Boroughs
 - Political Stakeholders

- Statutory Stakeholders
- Local Communities
- Canary Wharf Group

Programme and project reporting

TfL will develop programme controls supported by robust reporting processes

- 6.30. These will align with the Project governance framework, integrating key stakeholder requirements, facilitating continuous monitoring, and incorporating accurate performance measurement. The purpose is to provide accurate project information in a timely way to ensure well informed decisions are made and appropriate action is taken.
- 6.31. The project management model will be designed to deliver a robust reporting regime, including:
- Governance meetings which form part of the reporting process as the forum where performance issues are raised, possible mitigation is discussed and key decisions required are made; and
 - Project reporting requirements will be fully defined, together with content requirements, target audience and timing.

MANAGEMENT CASE SUMMARY

- 6.32. The key points arising from the Financial Case can therefore be summarised as:

- TfL will make full use of best practice within the company and from industry
- A comprehensive and robust project management framework will be applied, helping to ensure scope, cost and benefits are controlled
- Rigorous assurance processes will provide close scrutiny and challenge of risk management and decision-making throughout the project

7. Conclusions

There are very strong benefits of decking over the A1261 and DLR at Poplar, and TfL should continue to progress and develop this scheme

- 7.1. The proposed decking scheme at Poplar based on Preferred option 1 would unlock a transformational development and unite one of London's most successful employment districts with one of its most deprived. It would encourage sustainable transport, improve the urban realm and better link communities. And it would protect the key transport infrastructure in this area, while reducing its dominance over the local landscape.
- 7.2. The SOBC for the decking of the A1261 and DLR at Poplar demonstrates that across the Five Case Model:
 - There is a clear robust case for change for an intervention to address existing issues of severance, poor connectivity and environmental problems caused by the A1261 at Poplar. This '**strategic case**' is closely related to national, London-wide and local policy objectives, with particular reference to the London Plan, the Mayor's Transport Strategy and the Roads Task Force Vision document.
 - The scheme assists in the economic regeneration of Poplar and the continued growth of Canary Wharf, and supports the delivery of additional housing and employment. It would enable a large increase in economic activity. If looked at solely in terms of the transport benefits and traditional BCR measure, the '**economic case**' suggests the scheme is poor value for money. However, this excludes the wider economic and regeneration benefits that the scheme would bring about, given its focus is on regeneration and improving the urban realm.
 - Additional economic benefits may include operational benefits to the Docklands Light Railway, which will also need to be identified and confirmed.
 - The scheme is commercially viable – the '**commercial case**' demonstrates that although project development is at an early stage, the report sets out the procurement, commercial structure, and proposed allocation of risk and funding.
 - The scheme is not currently affordable, in light of the TfL Business Plan. The total estimated cost of Option 1 is £1,653m. In the '**financial case**' analysis it was set out the project team will need to explore all the funding mechanisms available to deliver the scheme and the proposed financing arrangements.
 - The proposed decking is deliverable – the '**management case**' sets out a clear governance, process and programme for the further development of the scheme by TfL, an authority with a very successful experience and record in major project delivery.

Next Steps: It is suggested that further feasibility and scheme development work takes place in relation to the proposed scheme

- 7.3. Given the strong wider economic and regeneration case for decking over the A1261 and DLR, especially the opportunity to link some of London's most

deprived communities with the employment opportunities offered by one of the world's greatest financial centres, TfL is proposing to continue developing the scheme beyond this Strategic Outline Business Case. This case has reported initially on the likely impacts of the scheme, and further work is now required on a number of areas to fully understand the benefits the scheme offers and the nature of the construction required, as well as the funding and financing requirement.

- 7.4. A high priority will be to define a funding and financing strategy for the scheme to ensure that funds can be raised and disbursed in a financially sustainable manner for TfL.
- 7.5. It will be necessary to explore further the air quality, noise and social/distributional impacts of this scheme in any future Outline and/ or Full Business Case. This further work will elaborate on the potential commercial case and various sensitivity tests.
- 7.6. It is of particular importance to better understand the interdependencies and synergies between this scheme and the future remodelling of the DLR depot. Further work will focus on designing a workable solution that enables the decking to proceed while optimising the operations of the depot. Attention will also be paid to the construction timeline and its implications for maintaining DLR operations during construction. Similar attention will be paid to how road space can be maintained on the A1261 during construction.
- 7.7. Stakeholder engagement is ongoing, and this scheme will be included in the Isle of Dogs and South Poplar Opportunity Area Planning Framework, which is planned to be consulted upon in summer 2016. This will give an opportunity to involve a wider range of stakeholders in the development of the project, helping refine the proposals to meet local objectives.