



Chapter five – New homes and jobs

More people than ever want to live and work in London. By 2041, there are forecast to be about 1.3 million more people working in the capital than there are today. To meet the demands of the growing population, experts say land will need to be identified in London for the building of at least 65,000 homes every year between now and 2041.

London's growth is a sign of its success as a city at the heart of the world economy and global culture. But it also comes at a cost. Londoners are being priced out of their city by an increasingly unaffordable housing market. Many Londoners are trapped paying rents that they can barely afford for homes that do not meet their needs or aspirations. If this situation continues to worsen, London could suffer.

While growth is good for London, it must not be pursued at the expense of people's quality of life – as London becomes a bigger city, it must also become a better one, where all Londoners are able to access the benefits that this growth brings.

'Good Growth means offering people across London the benefits of walking, cycling and public transport use that have been available in some parts of London for years.'

The transport network has a crucial role to play in this. Public transport connections can make parts of London viable places to build homes and create jobs for the first time. Using the Healthy Streets Approach to plan new developments around walking and cycling for local trips, and cycling and public transport for longer ones, will help people to live active and healthy lives and the city to function effectively even as it grows.

This chapter sets out the transport principles of Good Growth and then explains in two sections how transport can be used to help deliver homes and jobs in a way that will improve quality of life by:

- a) Shaping the type of growth in London, using transport services to create high-density, mixed-use places where people can walk and cycle to local amenities, and use public transport for longer trips.
- b) Shaping the city, using transport to support and direct Good Growth, so the potential for new jobs and homes in underdeveloped parts of the city can be unlocked.

Transport and Good Growth

Applying the Healthy Streets Approach to planning transport for growth creates a set of Good Growth principles that will help London grow in a way that works for Londoners.

This will contribute to the London Plan's priorities for Good Growth, which are to build strong and inclusive communities, to make the best use of land, to create a healthy city, to deliver the homes Londoners need, to grow a good economy, and to increase London's efficiency and resilience.

Good Growth means ensuring that people living in new housing in central, inner and outer London have options other than to drive to the shops, to school or to work. It means offering people across London – existing residents and new ones – the benefits of walking, cycling and public transport use that have been available in some parts of London for years.

Applying the transport principles of Good Growth will mean that, as London grows, a greater proportion of people will live in locations that are well connected to employment and other opportunities by walking, cycling or using public transport.

The transport principles of Good Growth

- Good access to public transport
- High-density, mixed-use developments
- People choose to walk and cycle
- Car-free and car-lite places
- Inclusive, accessible design
- Carbon-free travel
- Efficient freight

Policy 21

The Mayor, through TfL and the boroughs, and working with stakeholders, will ensure that new homes and jobs in London are delivered in line with the transport principles of Good Growth for current and future Londoners by using transport to:

- a) Create high-density, mixed-use places, and
- b) Unlock growth potential in underdeveloped parts of the city.

a) Shaping the type of growth

Improving access to public transport

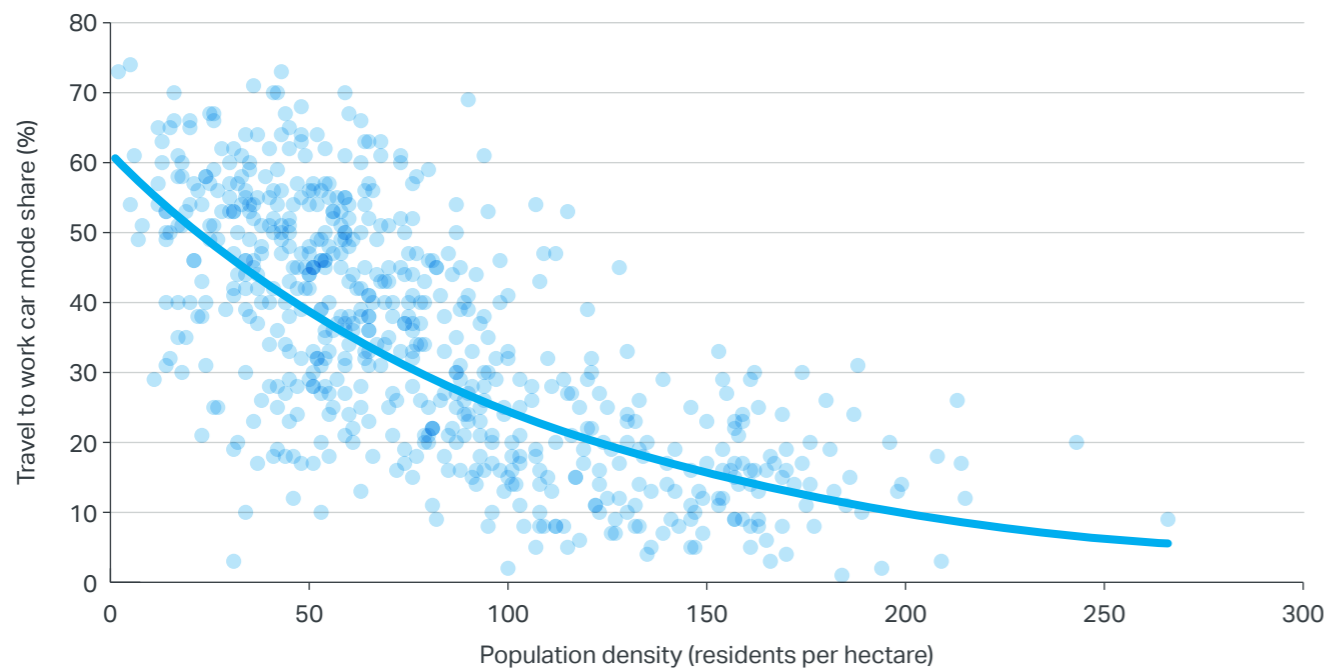
Residential, commercial and other development should encourage walking, cycling and the use of public transport and minimise the use of the car. Fundamentally, this means that development should be suitably located where there is good access to public transport.

Developing in these locations will create high-density, mixed-use places where local amenities are within walking and cycling distance, and public transport

options are available for longer trips. Using the Healthy Streets Approach to plan for this kind of active lifestyle will result in a more compact city, and also make the best use of scarce land.

People living in more densely developed places are less likely to depend on the car for their journeys, and more likely to use public transport, walking and cycling to get about. Moreover, the better people's access to public transport, the more likely they are to use it. Figure 37 shows the current relationship between population density and commuting to work by car in London.

FIGURE 37: COMMUTER CAR USE AND POPULATION DENSITY



Creating high-density, mixed-use places

Land around stations provides opportunities to create high-density, mixed-use places – new communities that are well connected to local amenities, and to jobs and locations further afield. This makes the most of past investment in public transport, and the benefits of future public transport investment can be enhanced by providing new homes (including affordable homes in a range of tenures) and jobs nearby.

There are almost 600 rail and Tube stations in London, and opportunities for development around these stations should be explored, such as converting land use from low-density uses (retail parks, storage, parking, etc) to high-density, mixed-use development. Such change can act as a catalyst for the regeneration of town centres and neighbourhoods, and play a role in revitalising high streets. Development opportunities around stations are particularly attractive for 'Build to Rent'.

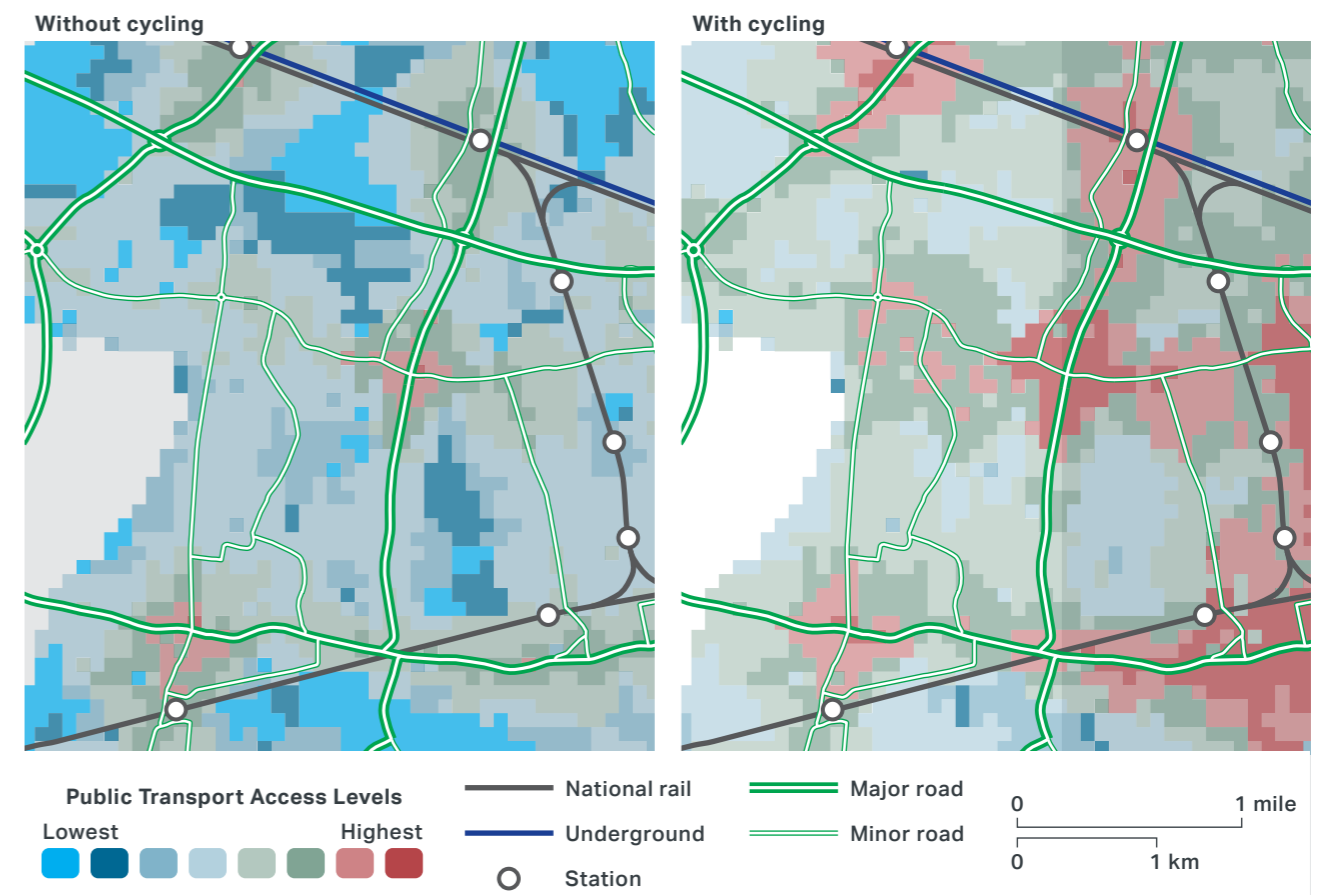
Planning policy and decisions that seek to locate high-density housing within walking distance of stations mean residents will not only be well

connected by rail or Tube to employment opportunities, but will almost always be better connected to schools, hospitals and shops by public transport, walking or cycling. Land around stations is often owned by TfL, Network Rail and other public sector landowners, and presents a good opportunity to bring forward surplus or underused land for increased housing delivery.

High-density development further from stations can be supported through improved bus and cycle links; such networks can dramatically increase the catchment area of a station, providing greater employment opportunities and reducing Londoners' dependence on cars.

Figure 38 shows standard and enhanced Public Transport Access Levels (PTALs) in a typical residential area. By extending the access distance to rail stations (including cycling as well as walking as access modes), the PTAL can be raised and more areas can be made attractive for high-density residential development. This would be accompanied by improvements to the local cycle infrastructure, such as cycle parking and segregated routes, where necessary.

FIGURE 38: INCREASE IN PUBLIC TRANSPORT ACCESS LEVELS ASSOCIATED WITH CYCLING



Proposal 79

The Mayor, through TfL and the boroughs, will seek opportunities for densification of development supported by the public transport network, in particular around public transport stations and stops. Investment in improving station environments, interchanges and local walking and cycling networks, including third-party investment in the redevelopment of surrounding lower-density sites, will act as a catalyst to create wider growth.

Embedding active travel in new development

All new developments should comprise streets and places where people choose to walk and cycle. All developers should plan to deliver improvements against the ten Healthy Streets Indicators when designing local street networks, clearly putting people before motorised vehicles. These street networks should provide for the needs of the whole community. Inclusive, accessible design that enables people of all ages and abilities to access services without relying on the car is fundamental across London, and should be planned into all developments at the outset.

Secure cycle parking and storage must be built into all new developments to enable far higher levels of cycling in the future, and to enable all residents to own a cycle.

As future developments will be planned around active, efficient and sustainable transport modes, they should also be planned to discourage car use, and car-free and car-lite places must become the first option across London.

Provision for car parking should be restricted and that which is provided should be designed to enable alternative uses in the future as car dependency decreases. In those areas of London that are more accessible and well connected by public transport, there is already a tendency towards car-free developments, especially in central London and town centres. This trend needs to continue and spread, with car-free development becoming the starting point for all development in well-served places. Where car parking is considered appropriate in new developments, provision should be made for ultra low emission vehicles.

Proposal 80

The Mayor, through TfL and the boroughs, will:

- a) Impose high expectations on developers to deliver transport solutions that will promote a shift to active, efficient and sustainable modes, reduce road congestion, improve air quality and assist in the development of attractive, healthy and active places.
- b) Restrict car parking provision within new developments, with those locations more accessible to public transport expected to be car-free. New developments should contain high levels of cycle parking and storage, and contribute to the provision of on-street cycle parking in town centres and other places of high demand.

Car and cycle parking – guiding principles

- An expectation for car-free development in London's more accessible areas, and car-lite development elsewhere
- Any residential parking spaces permitted should make provision for ultra low emission vehicles to enable carbon-free travel
- Appropriate provision of dedicated spaces for disabled drivers
- Outside the Central Activities Zone (CAZ), car clubs could be provided in lieu of private car parking
- Well-located and accessible cycle parking provision

More detail, including standards for car and cycle parking, is set out in the London Plan.

Embedding efficient freight and servicing in new development

New developments will be expected to be designed to encourage efficient, safe and low-emission delivery and servicing trips. Planning permissions should secure delivery and servicing plans that support off-peak (including night-time) deliveries.

Proposal 81

The Mayor, through TfL and the boroughs, and working with stakeholders, will embed efficient freight and servicing in new development by:

- a) Ensuring that delivery and servicing plans facilitate off-peak deliveries using quiet technology, and the use of more active, efficient and sustainable modes of delivery, including cargo cycles and electric vehicles where practicable.
- b) Ensuring that large-scale developments and area-wide plans include a local freight and servicing strategy (consisting of measures such as shared procurement for consumables, co-ordinated waste and recycling collection, timetabled deliveries, 'click and collect' for residents and flexible loading bays).
- c) Piloting ambitious plans in Opportunity Areas and around major developments such as High Speed Two to reduce the impact of freight and construction trips.

b) Shaping the city

Using transport to support and direct Good Growth

Creating high-density, mixed-use places will require transport investment to be fully aligned with the growth strategy set out in the London Plan.

The draft London Plan shows that the city's growth potential is concentrated in the CAZ and within its town centres and Opportunity Areas; there will also be growth potential from the managed intensification of suburban areas. This means maximising the capacity of the existing public transport network, extending the network to open up new areas for homes, optimising land use around stations and radically improving conditions for walking and cycling, supporting higher densities.

Each of London's areas is unique and will require tailored transport to support growth.

Central Activities Zone

Investment in the public transport system, particularly the rail network, is critical to enabling employment growth in central London. These improvements are set out in Chapter four. In addition, the vitality of central London depends on a good public realm and a healthy and clean environment, including measures to reduce traffic dominance, improve air quality and deliver far better provision for walking and cycling. This is set out in Chapter three.

Town centres

Town centres offer a range of vital services and facilities to meet Londoners' needs, as well as providing a focus for employment and leisure. By improving transport access between and within town centres, through a variety of transport modes and better conditions for walking and cycling, their role as nodes for growth can be strengthened, supporting higher development densities and greater housing capacity. Development in and immediately around town centres should be focused on public transport, walking and cycling networks, reducing car dependency and improving the local environment.

Opportunity Areas

Planning for London's growth corridors and Opportunity Areas (designated through the London Plan as areas with particular development potential) should embed best practice in Good Growth. Dedicated public transport and walking and cycling provision (such as bus rapid transit and segregated cycleways) should be at their heart, as well as good interchanges with rail and Tube for longer journeys and for those into central London. Within their growth corridor, Opportunity Areas should be well connected to each other as well as nearby town centres, schools, employment hubs and stations, including the provision of public transport options at weekends to enable car-free lifestyles.

Strategic planning for Opportunity Areas should ensure that unnecessary journeys by car are discouraged, partly through restricted parking (including mandatory car-free/car-lite developments), limited access for vehicles by time of day/ vehicle type, and very low speeds, with traffic calming measures. Providing shared access to a car club instead of private parking bays in a new development (or in an existing residential street) is just one example of how car dominance can be reduced and space freed up for other infrastructure to support active travel.

Developments within Opportunity Areas should be well designed, compact, safe, walkable neighbourhoods with good access to facilities and services from the outset. Live-work areas can reduce the need to travel, and efficient deliveries and servicing infrastructure should be integrated within the site to reduce vehicle movements.

Proposal 82

The Mayor, through TfL and the boroughs, will support growth through transport investment and planning in the Central Activities Zone, in and around town centres, in close proximity to stations and in Opportunity Areas. The Mayor expects planning frameworks in these areas to set mode share targets that are significantly more ambitious than elsewhere in London and will require boroughs and other stakeholders to demonstrate how development plans will contribute to mode shift away from car use towards walking, cycling and public transport.

Suburban London

Many parts of suburban London also have the capacity to support new development, especially where there are good connections to central London and town centres. However, it is important that the development of the suburbs is achieved in a way that is not dependent on the car. To support this, the transport network needs to reach all parts of London, using the bus network in particular to better connect areas, but also creating a public realm that encourages greater levels of walking and cycling.

To deliver new homes and jobs in suburban London, full use needs to be made of London's transport network. This means extending the public transport network in a selected number of places to support major development opportunities. But crucially, it also means getting more out of the existing network, by upgrading the quality and capacity not just of the rail network, but other modes too, including buses.

Many town centres in outer London offer opportunities for high-density, mixed-use redevelopment that can improve the town centre offer for Londoners living in the suburbs. The Healthy Streets Approach should be applied in places such as Romford, Hounslow, Sutton and Wood Green, for example, as developments come forward to maximise the potential for improved public realm and quality of life for everyone living in, visiting or working in them. Town centre catchments can grow through improved conditions for walking and cycling, as well as enhanced bus services and priority, which will significantly improve suburban Londoners' access to employment and leisure opportunities, and contribute to regeneration in outer London.

Wider South East

Transport can play an important role in strengthening links between London and areas beyond the GLA boundary, including supporting growth. In planning London's transport, it is important that opportunities for creating new homes and jobs in other parts of the Wider South East are considered, working with willing partners to support development along the strategic corridors that continue outwards from London's growth corridors shown in Figure 35.

Unlocking growth potential through new rail links

Crossrail 2

In addition to relieving some of the most severe crowding on the transport system, Crossrail 2 will unlock the potential for homes and jobs on a region-wide scale. Crossrail 2 will deliver substantial benefits to the wider economy and is a scheme of national significance. The new railway could provide the infrastructure needed to support 200,000 new homes and 200,000 new jobs, and it will also enable growth further afield by releasing capacity on some of the most congested national rail lines into London. The overall case for Crossrail 2 is summarised in Chapter four.

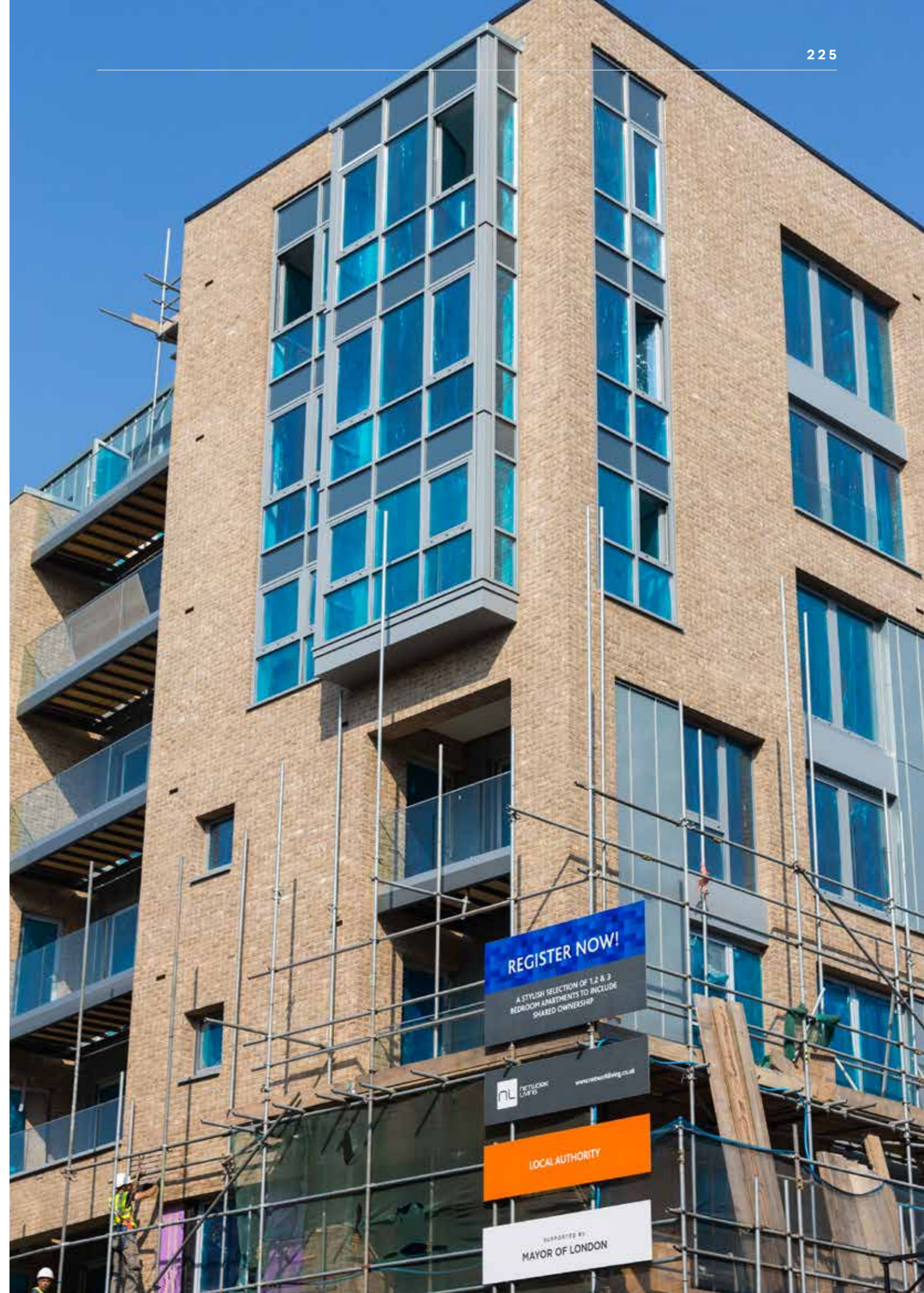
Proposal 83

The Mayor, through TfL and the boroughs, will seek to ensure that full advantage is taken of the opportunity presented by Crossrail 2 to maximise housing delivery and the creation of healthy new places that are fully integrated with their surroundings.

Increasing the capacity of the West Anglia Main Line and new bus services will support development of parts of the Lee Valley and beyond as part of a package of improvements with Crossrail 2. A phased approach can be taken, starting with a new Stratford to Angel Road service, followed by increased capacity ('four tracking') to Broxbourne. The Mayor is therefore undertaking a refresh of the planning framework for the wider Lee Valley which will consider whether strategic industrial land can be reconfigured (without net loss of industrial floor-space) in order to capture the housing potential of committed and potential transport improvements.

Proposal 84

The Mayor, through TfL and the relevant boroughs, will seek to encourage Network Rail to proceed with enhancements to the West Anglia Main Line to help create and support new homes and jobs in the Lee Valley.



Bakerloo line extension

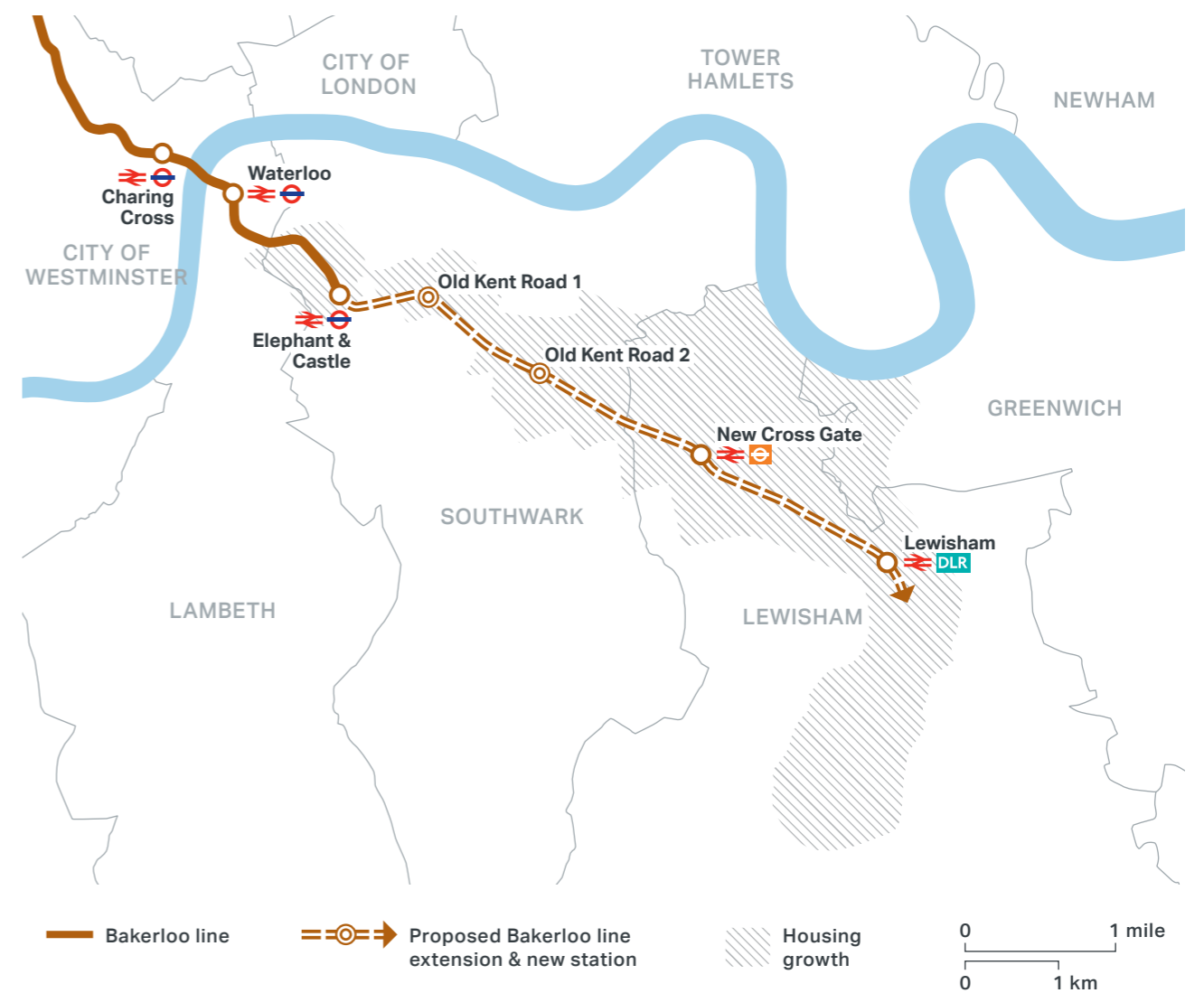
The Mayor has consulted on options for an extension of the Bakerloo line to improve public transport connectivity and capacity between south east London and central London, as shown by Figure 39. In addition to the transport benefits it delivers, the Bakerloo line extension could also enable more than 25,000 new homes and 5,000 jobs to be accommodated in the Old Kent Road and the Lewisham, Catford and New Cross Opportunity Areas. With the Bakerloo line extension, the Old Kent Road Opportunity Area provides a unique opportunity to create a high-density, mixed-used place near the CAZ. A new type of development can be created that supports significant levels of both employment and housing in an urban setting that could act as an example for other parts of inner London. This kind of development can ensure

that the right balance is achieved between much-needed housing, and jobs. A potential phase 2 extension could offer high-capacity, high-frequency services that would enable more growth beyond Lewisham.

Proposal 85

The Mayor, through TfL, the relevant boroughs and Network Rail, will seek to extend the Bakerloo line to Lewisham and beyond in order to improve public transport connectivity in this part of London and enable the provision of new homes and jobs. The extension will be designed to facilitate the creation of an attractive, dense area in inner London, with active, efficient and sustainable travel behaviours and a mix of uses.

FIGURE 39: PROPOSED BAKERLOO LINE EXTENSION



Elizabeth line extension

Land to enable an extension of the Elizabeth line was safeguarded as part of the Crossrail Bill. An extension, shown in Figure 40, could support the 55,000 new homes and 50,000 new jobs planned along the route in Bexley and north Kent¹. To achieve this, services on the existing rail network would also need to

be improved. As well as providing vital support for growth plans in Kent, the Elizabeth line extension could link to High Speed 1 at Ebbsfleet and boost rail connectivity throughout the Wider South East. It should therefore be taken forward by Government as a scheme of regional and national importance.

FIGURE 40: POTENTIAL ELIZABETH LINE EXTENSION



¹ The method of estimating the number of homes and jobs supported by an extension to the Elizabeth line is different to that used for other schemes, so numbers should not be directly compared

Proposal 86

The Mayor, through TfL and relevant boroughs, will support a Government-led extension of the Elizabeth line eastwards from Abbey Wood to provide up to 12 trains per hour, enabling Good Growth in the Thames Gateway corridor within and beyond London.

New stations

TfL will work with boroughs and developers to identify places along the existing transport network that could be developed more intensively if new stations were to be built. This is already being done at Beam Park in east London, and opportunities for additional stations are currently being assessed at many sites including Old Oak.

Proposal 87

The Mayor, through TfL and the boroughs, will make the most of the transport network in London by identifying opportunities for new rail stations that will unlock the potential for significant numbers of homes and jobs to be created.

Other schemes supporting Good Growth

In addition to those included in this chapter, many of the schemes outlined in Chapter four will also support Good Growth in London, for example improved tram services in south London and national rail upgrades such as providing longer trains on services from Fenchurch Street. Additionally, other projects that are nearing completion (such as the Elizabeth line and the Thameslink upgrade) are already demonstrating how important transport investment is in boosting growth.

Unlocking growth potential through improved rail services

Opportunities from London suburban metro

In recent years, areas around TfL stations have developed twice as quickly as elsewhere. This is because services from these stations provide higher frequencies and better connections to other parts of London.

There are particular opportunities to transform service quality and frequency on the national rail network (see London suburban metro proposal in Chapter four). This can act as a catalyst to regenerate existing neighbourhoods, and enable town centre residential intensification and other new development. Through working with boroughs to align planning policy and investment in the London suburban metro network, there is potential to facilitate higher densities in sustainable locations around stations in south London.

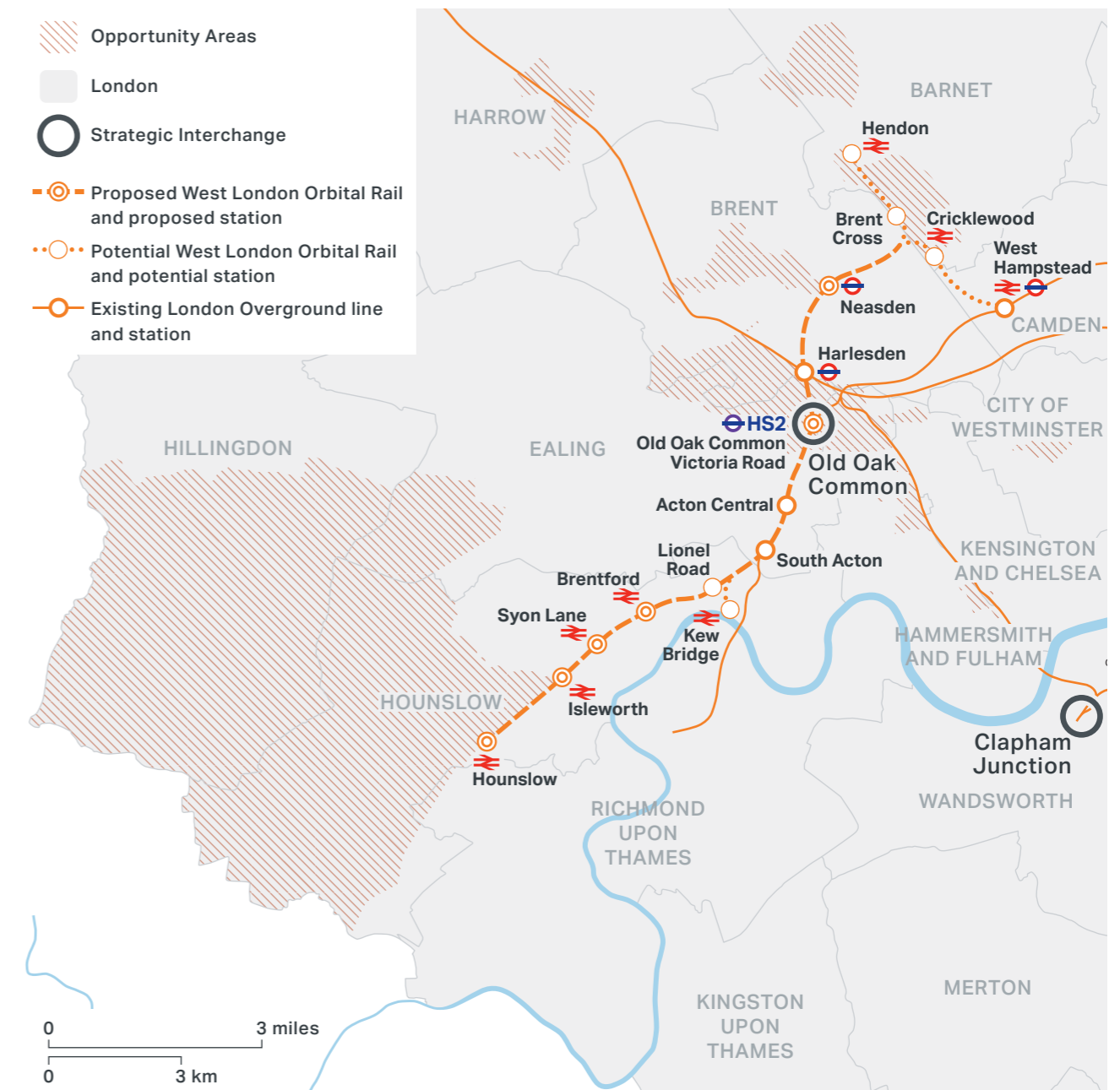
Opportunities from London Overground improvements

The London Overground network serves several Opportunity Areas across the capital and can therefore be a catalyst for growth. Most Londoners want to move around London – rather than in and out of the centre – every day, and the London Overground supports this type of travel. London Overground train service improvements are therefore needed to support new jobs and housing throughout inner London and parts of outer London. In particular, there is an opportunity to improve ‘orbital’ connections to Old Oak and across west London, between Hounslow and Brent Cross – Cricklewood via the Dudding Hill line. This new West London Orbital line could potentially support the delivery of an additional 20,000 homes, as well as employment growth in west London.

Proposal 88

The Mayor, through TfL, the West London Alliance boroughs and Network Rail, will work towards the delivery of a new London Overground ‘West London Orbital’ line connecting Hounslow with Cricklewood and Hendon via Old Oak, Neasden and Brent Cross.

FIGURE 41: PROPOSED WEST LONDON ORBITAL RAIL



Unlocking growth potential through tram network extensions

Extensions of the tram network will be considered where they enable the provision of new homes and jobs in line with Good Growth principles, are supported by Local Plans and can be funded primarily through locally derived sources.

An extension to Sutton, shown in Figure 42, is the first to be considered in this context and further extensions will be considered where they are consistent with this approach. The Sutton extension will be built on a north-south corridor from Sutton town centre, with a connection to the existing tram network and to the wider public transport network at the extension's northern terminus.

It is expected to enable the provision of more than 10,000 new homes as well as new jobs in the area, following the principles of Good Growth. Sutton town centre is a focus for many of these new homes. The tram extension would also increase the number of jobs accessible to local residents by providing faster, more frequent connections to centres of employment.

The extension will be delivered in line with the Healthy Streets Approach and Vision Zero policies, providing better

walking and cycle environments, and enhancing the attractiveness of the area for new developments.

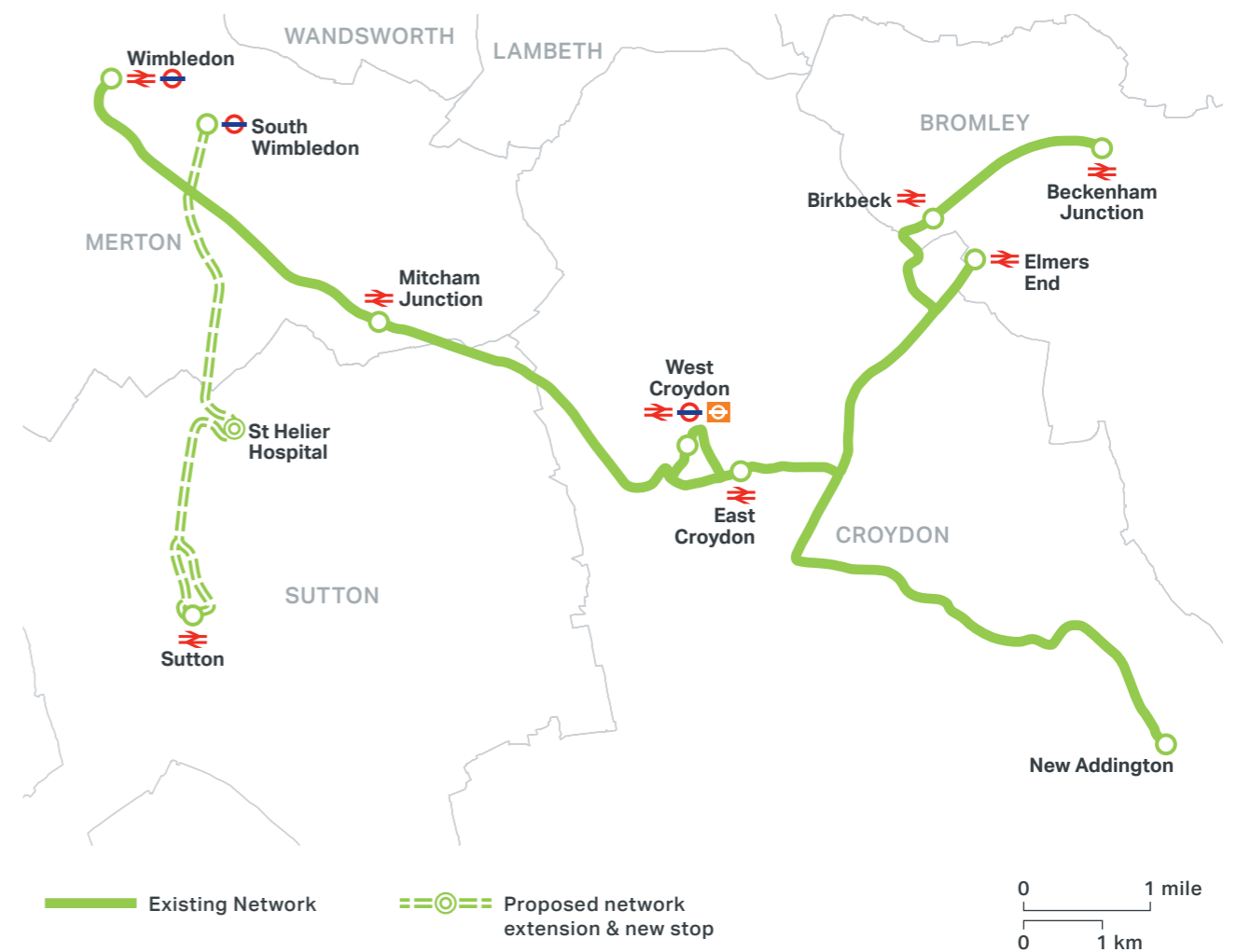
In the longer term, a further extension beyond Sutton town centre to the planned London Cancer Hub at Belmont, which may accommodate up to 10,000 new jobs, will also be considered to support the full development of the site. Trams could also run direct from Sutton to Wimbledon, linking to Crossrail 2 and delivering a wider improvement in connectivity in south west London.

Proposal 89

The Mayor, through TfL and the boroughs, will use the tram network to enable Good Growth by:

- a) Considering opportunities to extend the network where they would enable the provision of new homes and jobs, are supported by Local Plans and can be funded primarily through locally derived sources, and
- b) Exploring opportunities, with the London Boroughs of Sutton and Merton, for an extension to Sutton and potentially beyond, including exploring innovative funding mechanisms.

FIGURE 42: TRAM NETWORK WITH INDICATIVE EXTENSION TO SUTTON





Unlocking growth potential through improved bus services

Increasing public transport connectivity across London

Improvements to London's bus network since 2000 have greatly improved connectivity for many parts of London and as a result have supported population growth across the city. Without this widespread uplift in access to public transport, housing densities would have been lower at many developments. Equally, if London is to deliver enough homes to meet demand, the intensification of existing suburban residential land will have to play a role in growth. The bus network, therefore, is one of the greatest enablers of development potential. This is particularly true for locations away from the immediate catchment area of rail and Tube stations.

Proposal 90

The Mayor, through TfL and working with the boroughs, will complement major transport infrastructure investment with improvements to local bus services, bus priority and bus infrastructure in order to enable high-density development over a larger area and thus spread the benefits of the infrastructure investment further.

Bus transit

New types of services, including high-quality bus transit, can unlock new areas for development (enabling housing densities akin to those associated with light rail). Bus transit services generally consist of enhanced vehicles and infrastructure, for example high-capacity buses running on dedicated carriageways, but can also take the form of continuous bus priority.

A major benefit of bus transit is that, by providing fast, reliable, sustainable bus connections from the outset, it can kick-start housing development ahead of investment in rail links to serve the area. This may require a different approach to planning less well-connected areas to provide investors with the confidence that other forms of public transport will be available in future.

Proposal 91

The Mayor, through TfL and the boroughs, will pilot bus transit networks in outer London Opportunity Areas with the aim of bringing forward development, either ahead of rail investment or to support growth in places without planned rail access. Consideration will be given to pilots at locations including Bexley/Greenwich, Enfield, Havering and Hounslow.

New bus connections

More diffuse growth can be supported by smaller improvements to the existing network, including providing new routes or enhancing or extending bus priority, coupled with improvements for walking and cycling. For example, the benefits of the Silvertown Tunnel will be maximised through the delivery of new cross-river bus services, which will increase the potential to deliver new housing and improve access to jobs.

New demand-responsive bus services

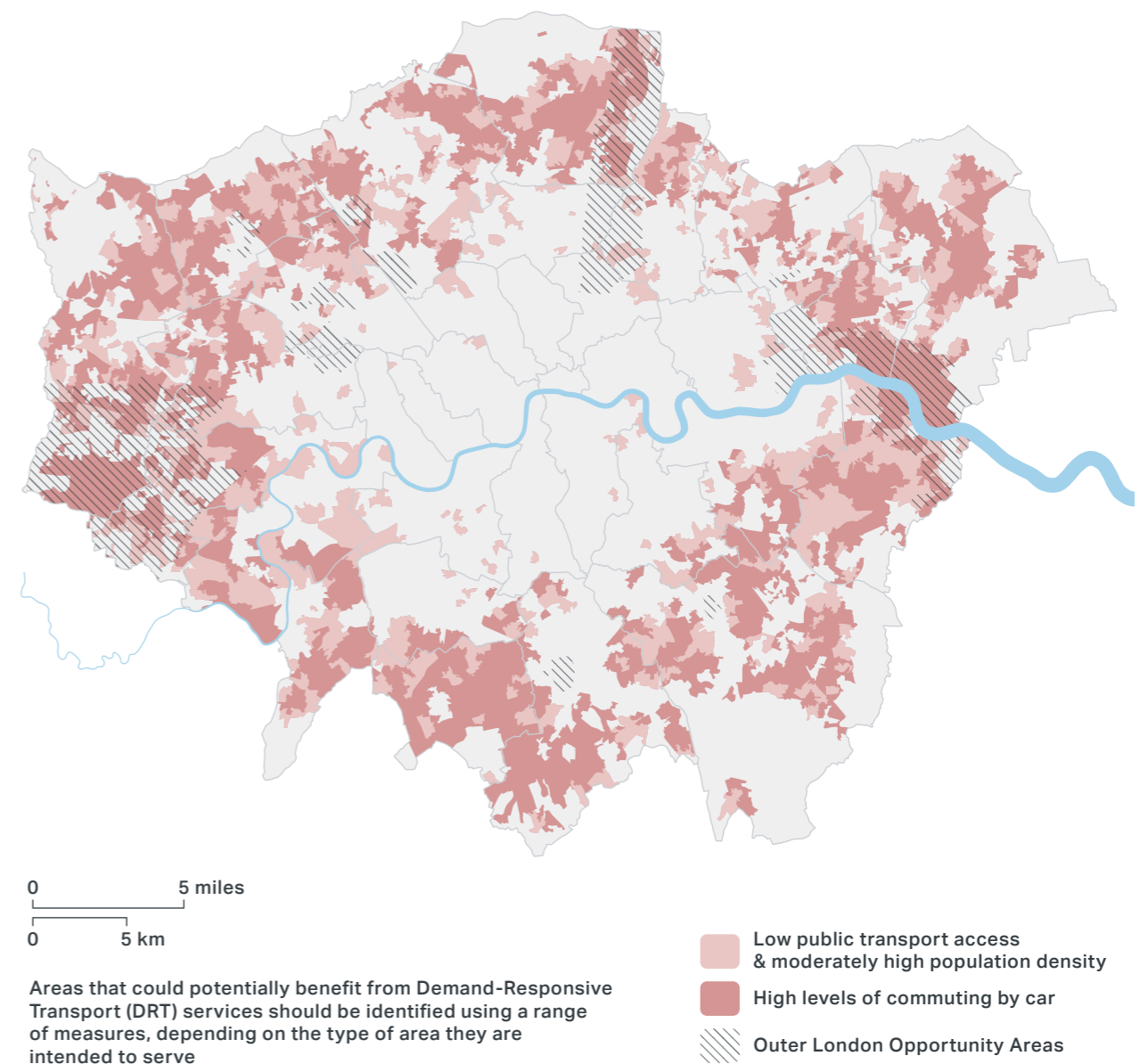
It will be important to explore new 'mobility' models (described in more detail in Chapter six) that enable wider growth, for example demand-responsive services. This should be focused in outer London, where more 'conventional' forms of public transport are less economically viable and car dependency is higher. These areas, shown in Figure 43, often have relatively low PTALs. About one third of Londoners live in areas with the lowest (0, 1a and 1b) PTALs.

In such areas, new services could offer the potential to reduce car ownership, cater for more diverse trip patterns and respond to changing lifestyles. Coupled with reduced car parking provision, this could support denser development in areas where it has traditionally been more difficult to provide more frequent public transport. In conjunction with measures to promote cycling and walking, demand-responsive services should deliver overall benefits for health and the environment. The flexible nature of these services could also support early transport provision in new areas of development, ahead of permanent infrastructure/fixed routes.

Proposal 92

The Mayor, through TfL and the boroughs, will explore the role for demand-responsive bus services to enable Good Growth, particularly in otherwise difficult-to-serve areas of outer London.

FIGURE 43: AREAS THAT COULD BENEFIT FROM DEMAND-RESPONSIVE TRANSPORT SERVICES



Unlocking growth potential through improved cross-river connectivity

A key means of improving the efficiency of the transport network and unlocking growth potential is to eliminate physical barriers to movement. The Thames can in places present a barrier to easy movement, and therefore new river crossings would connect the communities on either side of it.

Throughout London, increasing the number and capacity of public transport links across the Thames will help to bring people together and improve access to employment opportunities. The Elizabeth line will provide a new cross-river link from south east London, and Crossrail 2 will create new links between south west London and central London.

A Docklands Light Railway (DLR) extension to Thamesmead would support the development of thousands of new homes in Newham, Greenwich and Bexley, and could be delivered within ten years; other options being explored include the potential for an extension of the London Overground from Barking Riverside, which would enable orbital rail trips in outer London.

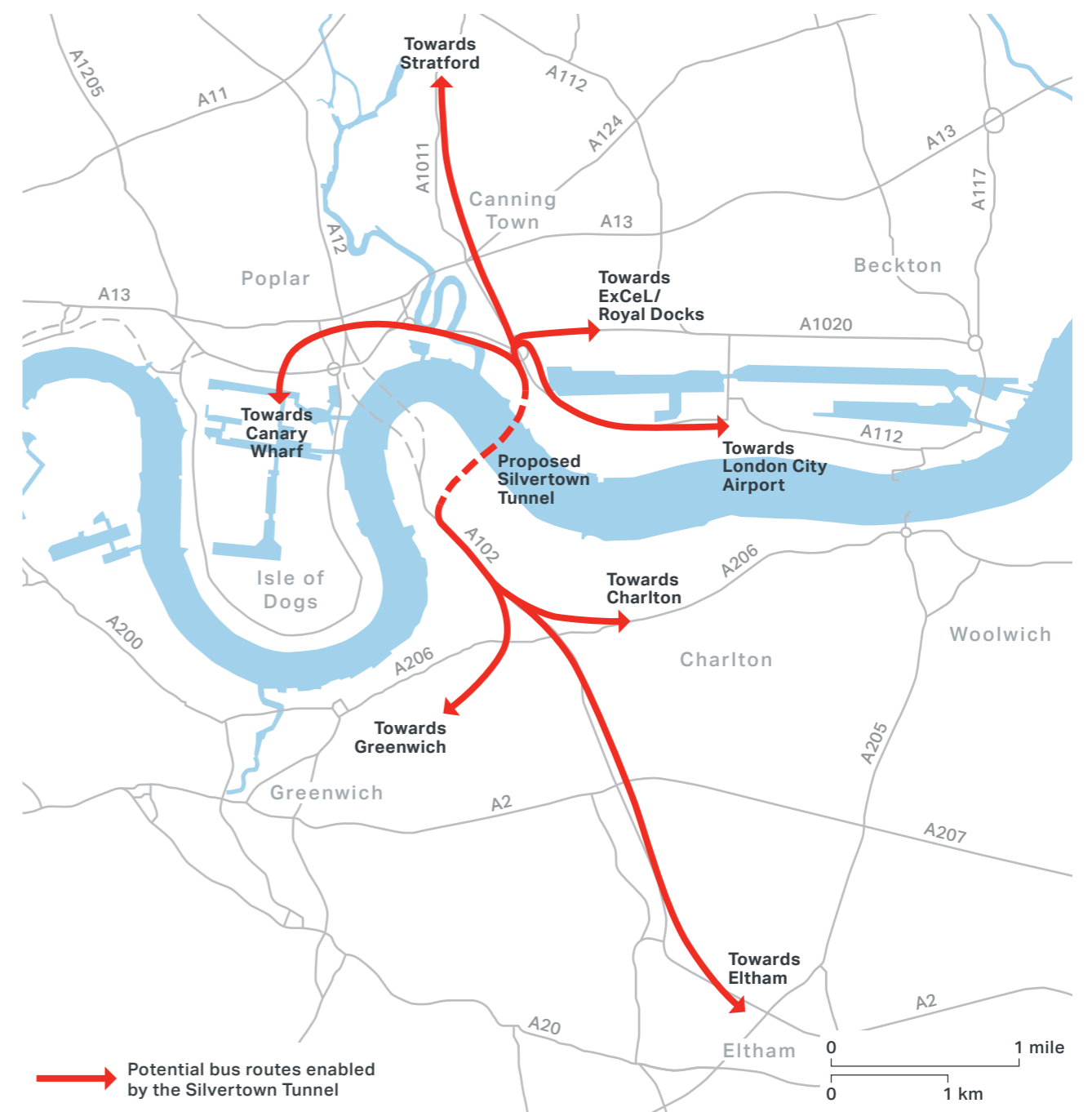
In east London, there is also the potential for new road crossings to reduce the barriers to trade between east and south east London. The Silvertown Tunnel will provide new bus links (see Figure 44) as well as ensure that there is a reliable and resilient road link between east and south east London. It will include user charges on the new crossing and on the Blackwall Tunnel to manage traffic demand.

Proposal 93

The Mayor, through TfL, will continue to support the construction and operation of the Silvertown Tunnel, together with the introduction of user charges on the Blackwall and Silvertown tunnels (once the latter

is opened), to address the problems of traffic congestion and associated air pollution, frequent closures and consequential delays, and the lack of network resilience and reliability at the Blackwall Crossing.

FIGURE 44: POTENTIAL NEW BUS ROUTES ENABLED BY THE SILVERTOWN TUNNEL





In central and inner London, new crossings for people walking and cycling can help to connect local communities and encourage healthier lifestyles. A new walking and cycling crossing between Rotherhithe and Canary Wharf would give thousands of people a direct link between Canada Water and Canary Wharf, and support jobs and new

homes in the area. Walking and cycling crossings could help to support Good Growth and encourage more active travel in other parts of London, and the Mayor will encourage their development where they are supported and led by the boroughs affected and where local funding is available.

Active travel and public transport crossings will be the first choice for further bridges and tunnels as they support healthy, sustainable living, and because public transport crossings in particular have the unique potential to unlock housing and jobs growth.

Proposal 94

The Mayor, through TfL, will promote new walking, cycling and public transport river crossings where such infrastructure would accord with the policies and proposals of this strategy.

'In the context of other measures in this strategy to promote a shift away from car use and to improve London's air quality, any new road crossings would need to have a strong public transport element.'

On the M25 orbital motorway, there is already enormous pressure on the Dartford Crossing, an important artery for people and businesses in outer London. The new Lower Thames Crossing being proposed by the Government could help to reduce pressure on this important link.

However, there are no road bridges or tunnels in outer east London. As east and south east London grow, further road crossings in this part of London may be beneficial during the course of this strategy. In the context of other measures in this strategy to promote a shift away from car use and to improve London's air quality, any new road crossings would need to have a strong public transport element and to meet the broader criteria set out in Proposal 95. Any decision on future crossings would be considered only once the effects of the Silvertown Tunnel, the Government's Lower Thames Crossing, the planned public transport crossings and other improvements in the area, and the Mayor's air quality measures are known.

Proposal 95

Following the delivery of the Silvertown Tunnel, the Government's Lower Thames Crossing and the Docklands Light Railway (DLR) extension to Thamesmead, the Mayor will give consideration to the case for further road crossings of the river in east London where the following criteria are met:

- a) The proposal is shown to meet a growth and development need that cannot be met through the provision of a public transport-only crossing.
- b) The proposal has been developed through engagement with all affected boroughs, and its location and utility are determined by reference to demand and growth modelling.
- c) The proposal is consistent with the Mayor's overall vision for a healthy city, and includes provision for a mechanism to ensure that any negative impacts of the likely volume of traffic carried can be managed within relevant environmental limits.
- d) In conjunction with the Silvertown Tunnel, the Government's Lower Thames Crossing and the DLR to Thamesmead, the proposal would support Good Growth and reduce barriers to trade and employment between east and south east London.
- e) The proposal includes appropriate provision for people walking, people cycling and public transport services (unless there is already alternative provision for these users nearby).
- f) Legal limits for air quality are met, and there would be no significant adverse air quality impacts at sensitive receptors, including schools.
- g) The use of the river for the movement of freight will be maintained and protected.

FOCUS ON: NEW HOMES AND JOBS ON TRANSPORT LAND

Surplus land

TfL is the owner of substantial areas of public land in London. In order to facilitate delivery of much needed housing, the Mayor intends to ensure that TfL surplus land is used to maximise affordable housing and so reduce the inequalities in housing provision for those who are from low-income households, younger people and disabled people.

By 2020/21, TfL will start on the property development sites that will deliver 10,000 homes. The Mayor intends that, overall, 50 per cent of homes (as measured by habitable rooms) built on TfL land and brought to market since May 2016 will be affordable.

TfL has brought forward four schemes in 2016-17 (at Kidbrooke, Fenwick, Landmark Court and Blackhorse Road) which are on target to deliver, overall, more than 50 per cent affordable homes. Many more surplus sites will be brought forward over the next four years and beyond. Given their locations, most of them being within Opportunity Areas,

town centres and in accessible locations within suburban areas, development will aim to meet the Good Growth principles, and the revenue raised will be reinvested into the transport network to benefit all Londoners.

The development of TfL's surplus sites will also act as a catalyst to other land owners, particularly those in the public sector, to bring forward their sites. Where appropriate, TfL will work with adjoining public sector land owners to maximise development opportunities.

Proposal 96

The Mayor, through TfL, will consider, when surplus transport land becomes available, its accessibility to the transport network and its potential for the development of sustainable, affordable housing. Any capital receipts generated from the sale of TfL surplus land shall be allocated to TfL's transport investment programme.

Development at TfL stations and other co-location opportunities

There are also opportunities to co-locate transport and homes or jobs as has been done at Hammersmith and Westminster Tube stations. Given the amount of operational land TfL holds, significant numbers of homes and jobs could be delivered in future, for example, by developing housing over or around bus and rail stations or depots. In developing innovative approaches to mixed-use redevelopment, the Mayor and TfL can lead the way in showing other land owners and businesses how to maximise homes and jobs as sites around the capital are redeveloped. Higher-density redevelopment at sites with low-density uses such as retail parks (including supermarkets) could support London's growth sustainably.

Proposal 97

The Mayor, through TfL, will pursue opportunities for mixed-use development and redevelopment in and around operational sites such as rail or bus stations to deliver much-needed housing and regeneration, while continuing to protect, and enhance where practicably possible, transport operations.

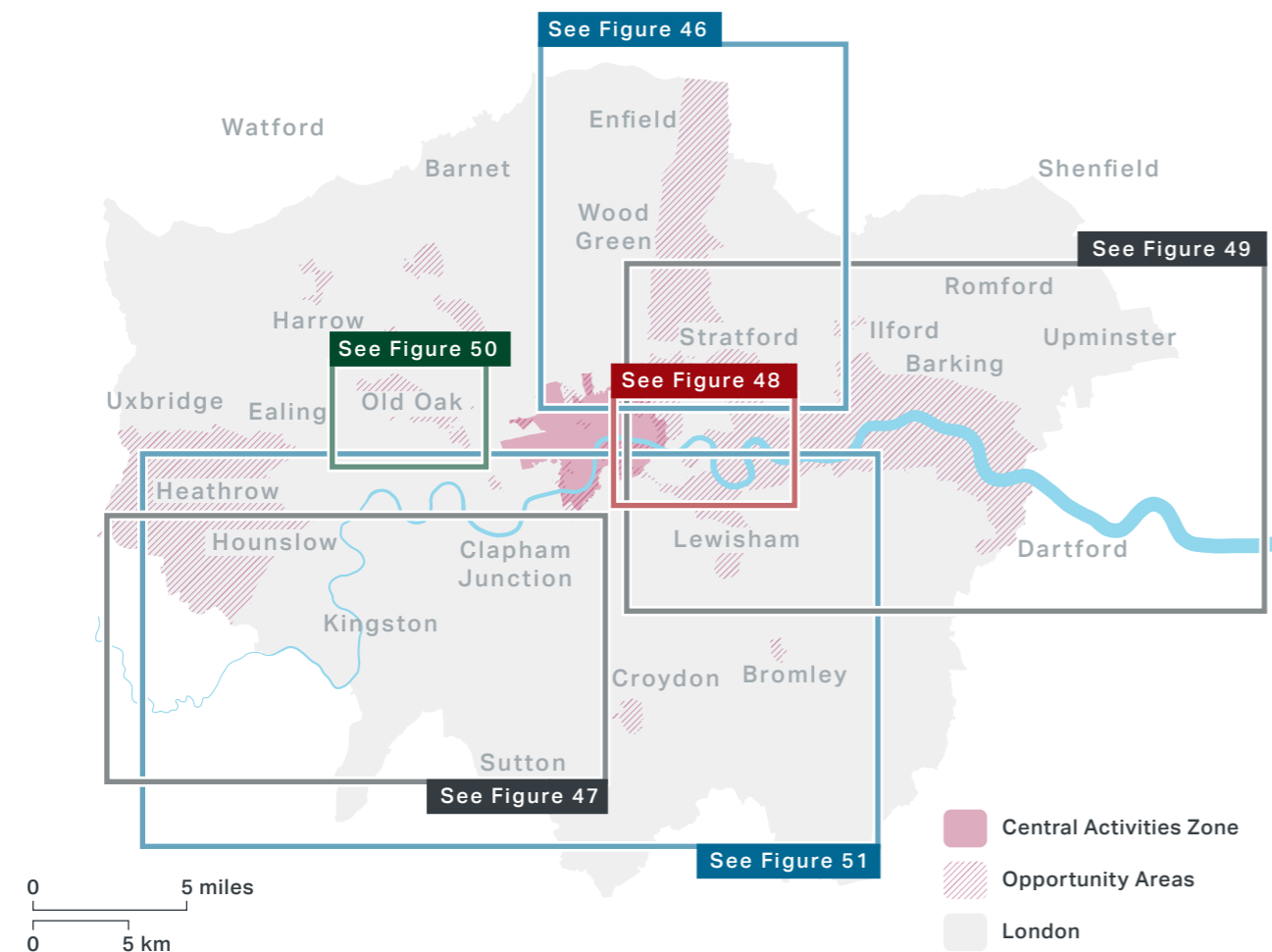
Decking over roads and other transport infrastructure

Large roads and other transport infrastructure can divide communities, create air pollution hotspots and take up a lot of land that could be used for housing or to support jobs growth. 'Decking over' is a method of building across underpasses or rebuilding roads or other transport infrastructure into tunnels, so the land above becomes usable for other types of development. This is expensive to do and must be carefully managed. Early feasibility studies suggest that there may be an opportunity at Barking on the A13 to deck over a section of highway. This could allow an area that has been blighted by noise and poor air quality to be made a more pleasant place to live, while also yielding land for new growth. This scheme would be funded by the development unlocked.

Proposal 98

The Mayor, through TfL and working with the relevant boroughs, will examine the feasibility of decking over the A13 at Barking and assess the case for its potential to support new homes and jobs, and to improve the character of the surrounding environment for the benefit of existing communities.

FIGURE 45: 'FOCUS AREAS': WHERE TRANSPORT IS THE ENABLER OF SIGNIFICANT CHANGE TO AN AREA



Crossrail 2 and the Lee Valley

Maximising the housing, employment and mode shift potential of the Lee Valley requires significant transport investment, including faster and more frequent public transport connections to more destinations and embedding active, efficient and sustainable travel patterns from the start through good design and place-making.

Crossrail 2 will support 200,000 new homes and 200,000 jobs along its route and has the potential to transform the accessibility and growth potential of the Lee Valley and its local centres. Early upgrades of the West Anglia Main Line in advance of Crossrail 2 could accelerate the delivery of this growth. Long-term planning for Good Growth is necessary in order to phase the delivery of homes and jobs alongside investment in the railway.

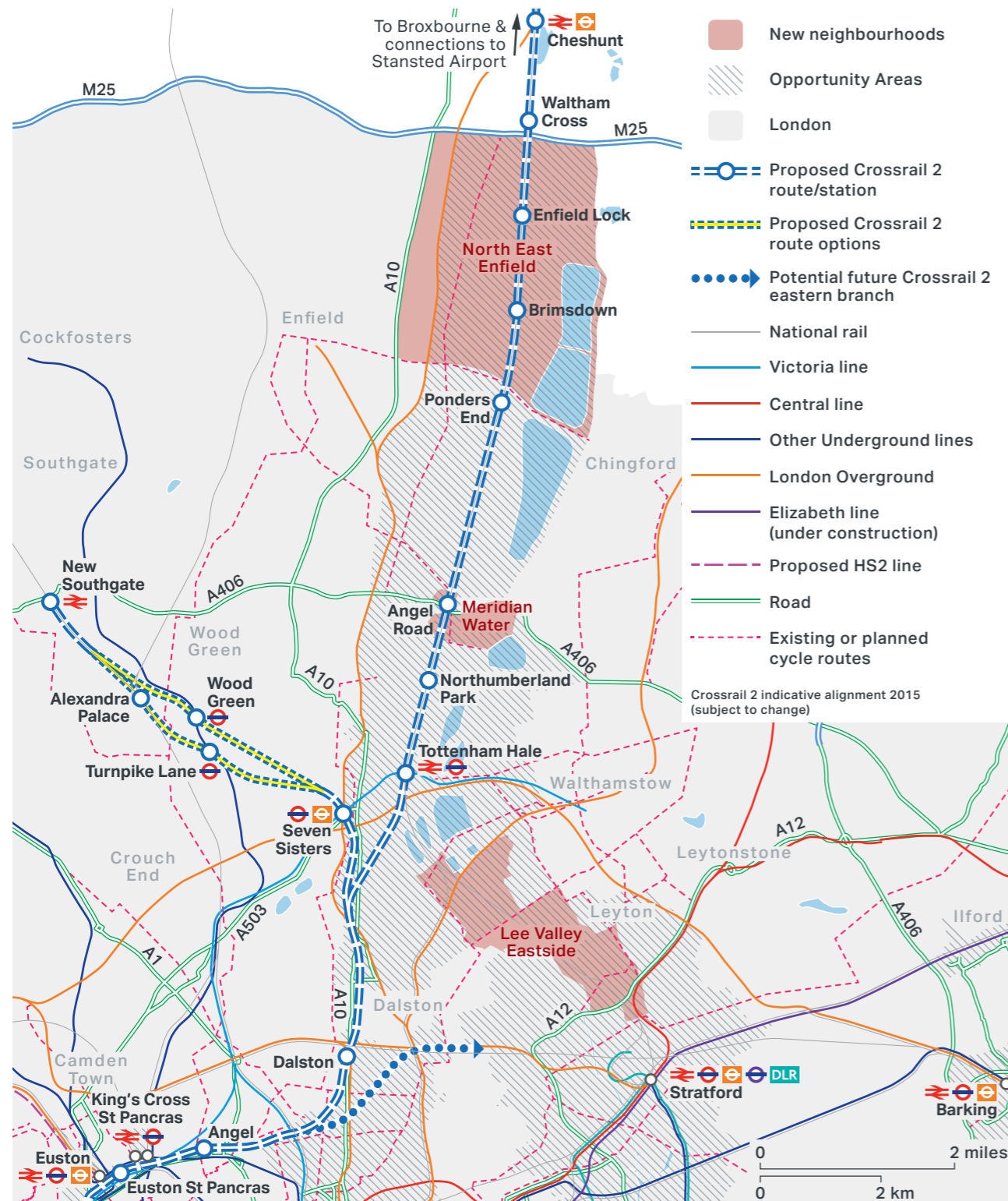
To reach its full potential and optimise the places it serves, Crossrail 2 will need to be complemented by a network of streets that enable and encourage walking and cycling and deliver a reliable and clean bus and freight network.

Barriers to more localised movement (for example east-west connectivity) must be addressed to support growth and enable behaviour change towards more active modes of travel that also support the local economy. Transforming the way local people see walking and cycling will depend on delivering new routes and enhancing the experience of walking or cycling through improvements to the public realm and excellent place-making. A particular focus will need to be put on ensuring better access to the poorly connected but newly emerging neighbourhoods of Meridian Water, Lea Bridge/Leyton and north east Enfield.

The Crossrail 2 corridor also provides excellent opportunities to support growth beyond London's boundaries, building on existing synergies, including as part of the London Stansted Cambridge Consortium.

Figure 46 sets out the main transport proposals to support new jobs and homes in the Lee Valley.

FIGURE 46: TRANSPORT PROPOSALS FOR HOMES AND JOBS IN THE LEE VALLEY



VERSION FOR PUBLICATION

Crossrail 2 in south west London

The growth enabled by Crossrail 2 will be delivered using the principles of the Healthy Streets Approach to create 'Liveable Neighbourhoods'. It will promote active forms of movement by densifying town centres and around stations, alongside targeted improvements in walking, cycling and the public realm.

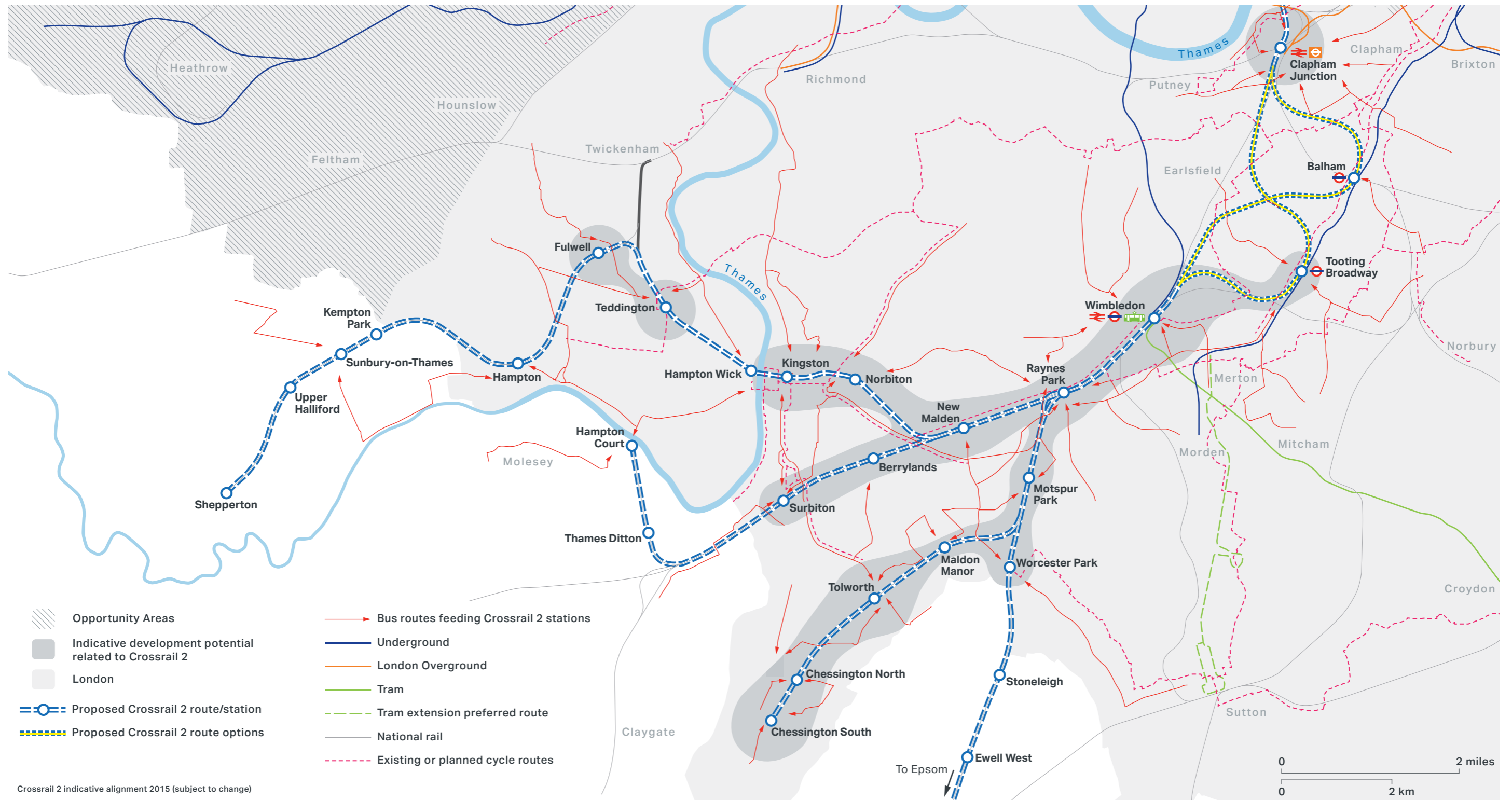
This will be further supported by co-ordination of land use, transport and regeneration activity in south west London, implementing borough-level traffic reduction strategies, and improving existing links and 'feeder' bus and tram services to Crossrail 2 stations.

Rail capacity into central London will be radically improved by Crossrail 2. This will relieve crowding on existing south west rail routes and provide new direct connections.

Currently, off-peak and weekend public transport services can be poor in areas of outer London, creating a cultural reliance on car ownership and travel. Complementary measures for Crossrail 2 will aim to tackle this bias towards car use by improving public transport links between outer London town centres, providing accessible multi-modal interchanges, as well as enhancing walking and cycling access to local services and destinations to reduce the need to travel long distances. These interventions will lead to many more people building walking and cycling into their daily lives and so help to tackle reliance on cars in outer London, reducing health inequalities by encouraging active travel, improving the environment and supporting local economies.

Figure 47 sets out the main transport proposals to support new jobs and homes in south west London.

FIGURE 47: TRANSPORT PROPOSALS FOR HOMES AND JOBS IN SOUTH WEST LONDON





Inner East London and the Isle of Dogs

Significant growth is expected across Inner East London to 2041, with the potential to deliver more than 100,000 new homes and 170,000 new jobs. Within this, the northern part of the Isle of Dogs will continue to act as a global employment hub, at Canary Wharf.

Despite significant transport improvements, such as the Elizabeth line from 2019, crowding is predicted to worsen on all routes into the area. Further investment is needed to continue to support growth and serve existing communities, and so options for further enhancements to the network as well as new connections must be considered. Current proposals include DLR fleet replacement and improved services, Jubilee line upgrade, and an improved bus and cycle network to enable greater travel choice and enhance bus reliability. However, congestion on public transport and the street network is unlikely to reduce without a focus on behaviour change that enables and encourages people to choose to walk and cycle for short and medium-length journeys.

At present, the Thames contributes to this problem by acting as a barrier to movement, particularly for journeys by foot and cycle. Feasibility studies are under way for a new walking and cycling crossing from Rotherhithe to Canary Wharf. To optimise its potential to change travel behaviour and encourage more active forms of travel, any crossing will need to be supported by improvements to the surrounding walking and cycle networks in order to change the attitude towards these modes. New and updated piers and a cross-river ferry from North Greenwich will also mean more river services in east and central London. The Silvertown Tunnel will deliver a fundamental change in cross-river bus services.

Figure 48 sets out the main transport proposals to support new jobs and homes in Inner East London and the Isle of Dogs.



Outer East London and the Thames corridor

Outer East London and the Thames corridor have long been identified as having substantial potential for housing and employment growth, but progress has been limited by poor public transport connections. There is potential for a further 250,000 new homes and 200,000 new jobs within the GLA boundary over the next 20 years, subject to there being improvements to transport connectivity and capacity, and a reduction in the barriers to movement in the area presented by the Thames and local waterways.

TfL's planned extension of the London Overground to Barking Riverside will support the delivery of 11,000 new homes that would otherwise not have been viable. In addition, a further 55,000 homes and 50,000 jobs are planned along the proposed route corridor of a potential extension of the Elizabeth line in Bexley and North Kent (as shown in Figure 40), of which at least 20,000 homes would be directly unlocked by the scheme.

The Elizabeth line will boost the area's connectivity, and investment is already under way to continue to transform old industrial land into new neighbourhoods, while providing the necessary supporting transport infrastructure.

TfL is already investing in capacity enhancements such as the upgrade

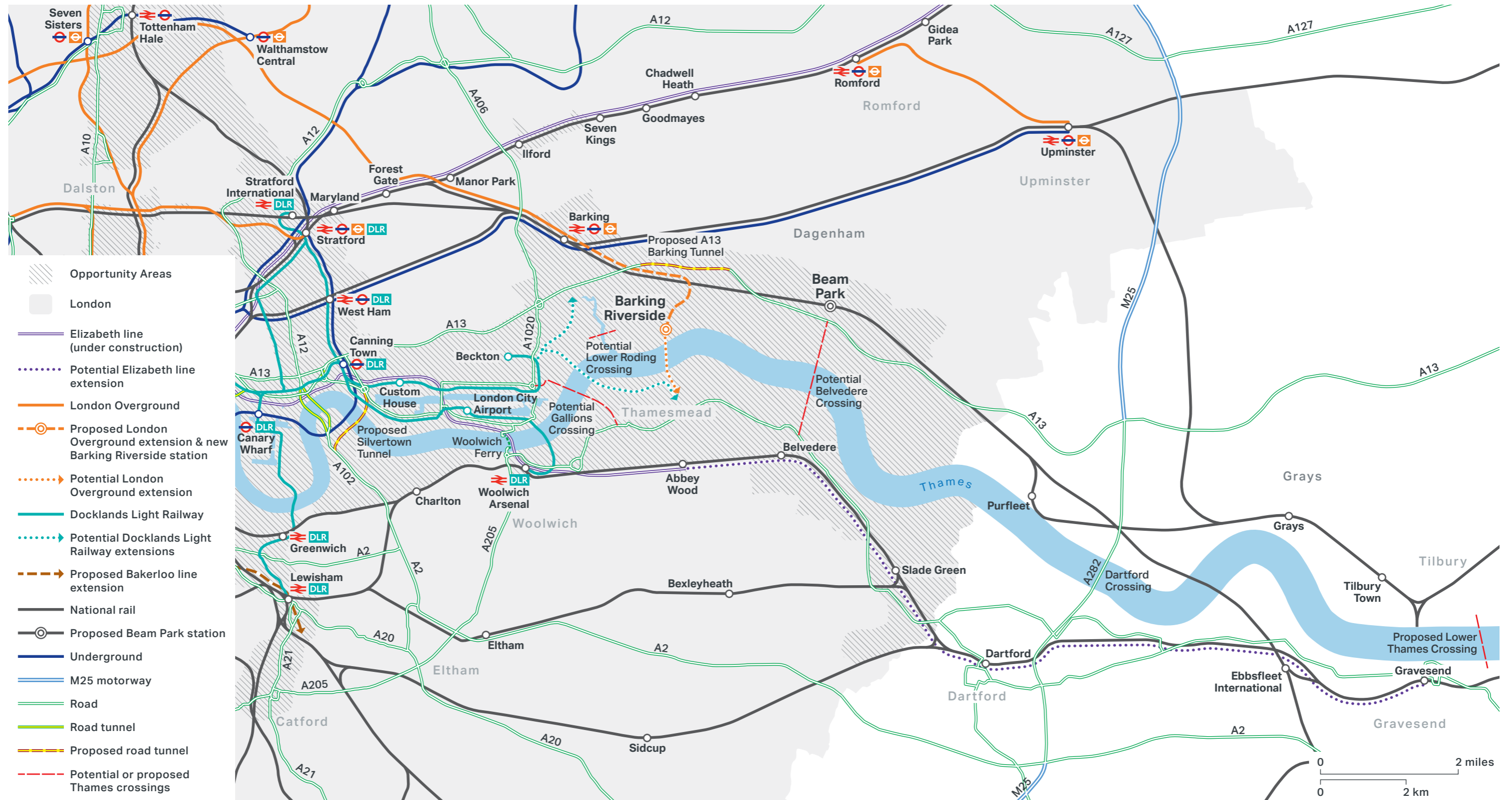
in DLR rolling stock and increasing capacity to the Docklands area. Further work is being carried out to understand what transport infrastructure is needed to support the growth in the Thames corridor in the medium and long term. This includes options for walking and cycling enhancements, new rail links and local bus improvements. It also includes the reduction of the severance caused by the A13, by putting a section of it into a tunnel.

It is essential that the Healthy Streets Approach is applied to any regeneration activity, to support a shift away from the car to walking, cycling and public transport in these places and to enable Good Growth. New developments should come forward in tandem with the provision of new transport links, and so high-quality, reliable bus connections will be fundamental to delivering and stimulating regeneration ahead of new rail links.

The Mayor recognises the importance of river crossings in east London to support new homes and employment in an area with significant growth potential. Options for new crossings are being examined, with the priority on improving public transport links across the river.

Figure 49 sets out the main transport proposals to support new jobs and homes in Outer East London and the Thames corridor.

FIGURE 49: TRANSPORT PROPOSALS FOR HOMES AND JOBS IN OUTER EAST LONDON AND THE THAMES CORRIDOR





Old Oak and Park Royal Opportunity Area – interchange between HS2, the Elizabeth line and the Great Western Main Line

Significant investment in transport infrastructure at the area around Old Oak could act as a catalyst for unlocking development opportunities.

There is space to create 25,500 new homes and 65,000 jobs for Londoners, making this one of the biggest growth areas in the city and the largest regeneration area in the UK. Neighbouring the Old Oak development area is Park Royal, Europe's largest industrial estate, which needs to be protected, supported and intensified through good transport infrastructure.

A new Old Oak station served by HS2, the Great Western Main Line and the Elizabeth line is set to open in 2026. This key strategic interchange will help to relieve pressure at Euston by allowing people to change between these lines before reaching central London, and act as a national and international gateway for travellers arriving from HS2 and Heathrow. The West London Orbital line will significantly improve orbital connectivity from Old Oak to north west and south west London.

The development area at Old Oak presents a unique opportunity to champion and implement the Healthy Streets Approach, using the principles of Good Growth to base development around active, healthy lives.

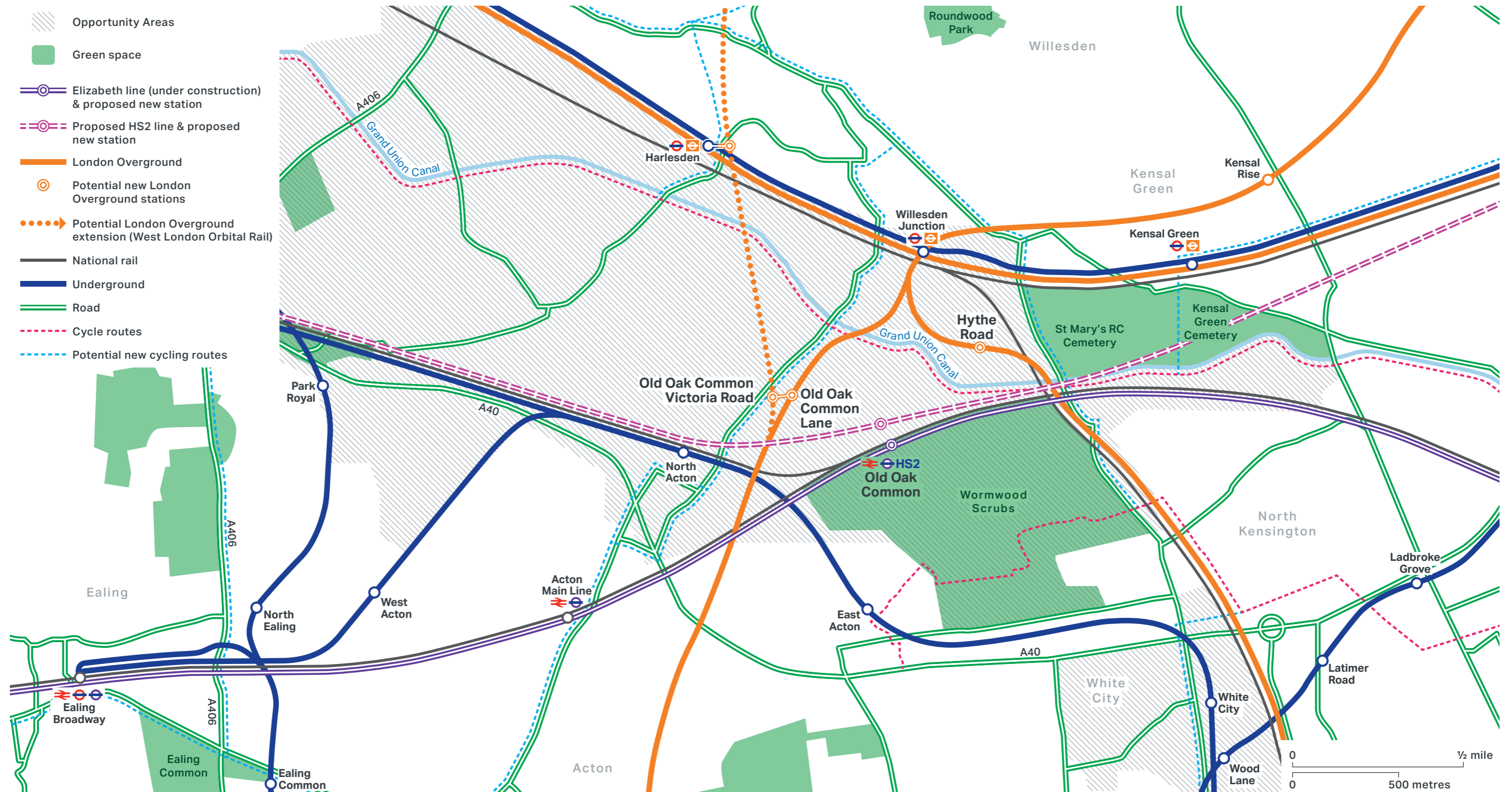
At present, the Grand Union Canal, railway lines and changes in level across the area create barriers to walking and cycling, and significant amounts of development are proposed for which public transport capacity and safe and convenient walking and cycling routes do not currently exist. It is essential that a new street network is developed using the Healthy Streets Approach to make walking and cycling the first choice across the area. This will require a series of new bridges and underpasses and careful consideration of how the proposed Old Oak High Street is delivered, ensuring it is able to link into all existing and proposed stations. High-quality and reliable bus links to and through the area from existing residential communities will also be required to ensure that everyone benefits from the proposals at Old Oak. High-density, mixed-use development will mean that local amenities are within walking and cycling distance, and exceptional public transport links for longer journeys will reduce the need to use cars.

There is already congestion on the surrounding highway network, particularly on the A40 and A406. The road network will need to be proactively managed to minimise the impact of development, especially during construction works. High-quality public transport, walking and cycling facilities, and limits on car parking are essential to encourage mode shift away from cars.

Development of this growth area is anticipated to happen over many years and transport proposals will need to be flexible enough to respond to changes in technology and behaviours. It is also essential that the needs of businesses at Park Royal and existing residential communities around the site are met during construction and development. TfL will work with stakeholders to consider a complementary package of transport investment, including the opportunities to connect with London Overground and Underground services, a potential new Chiltern Railways service to Old Oak, and new bus, walking and cycling links through the site, with flexible multi-purpose streets.

Figure 50 sets out the main transport proposals to support new homes and jobs at Old Oak and Park Royal.

FIGURE 50: TRANSPORT PROPOSALS FOR HOMES AND JOBS AT OLD OAK AND PARK ROYAL





Devolution and London's suburban metro in south London

Historically, south London's growth has been constrained by the nature of its rail connections, and much of the area has low-density housing, with opportunities for intensification. There is a limited Underground network in the region and much of that network is overcrowded. Where good rail connections do exist, they serve a wide catchment area, causing commuters to use cars to reach stations and adding to congestion on the streets in these areas.

Crossrail 2 will add significant capacity to the network and enable densification of town centres such as Kingston and Wimbledon. The proposed Bakerloo line extension would also put south east London on the Tube map and underpin the development of 25,000 new homes and 5,000 new jobs.

Devolution of the south London rail networks would bring about an immediate improvement in service quality for existing users across a wide area. This could be followed by upgrades to signalling, track and stations to further enhance frequency and therefore capacity.

Trams provide a high-quality link between Wimbledon and Croydon, and connect with the existing and future planned rail services to central London. Large increases in patronage are expected over the next 20 years, and various options for expansion are being considered, in particular, an extension to Sutton, which would support the delivery of at least 10,000 new homes and improve public transport accessibility to Sutton town centre and St Helier Hospital.

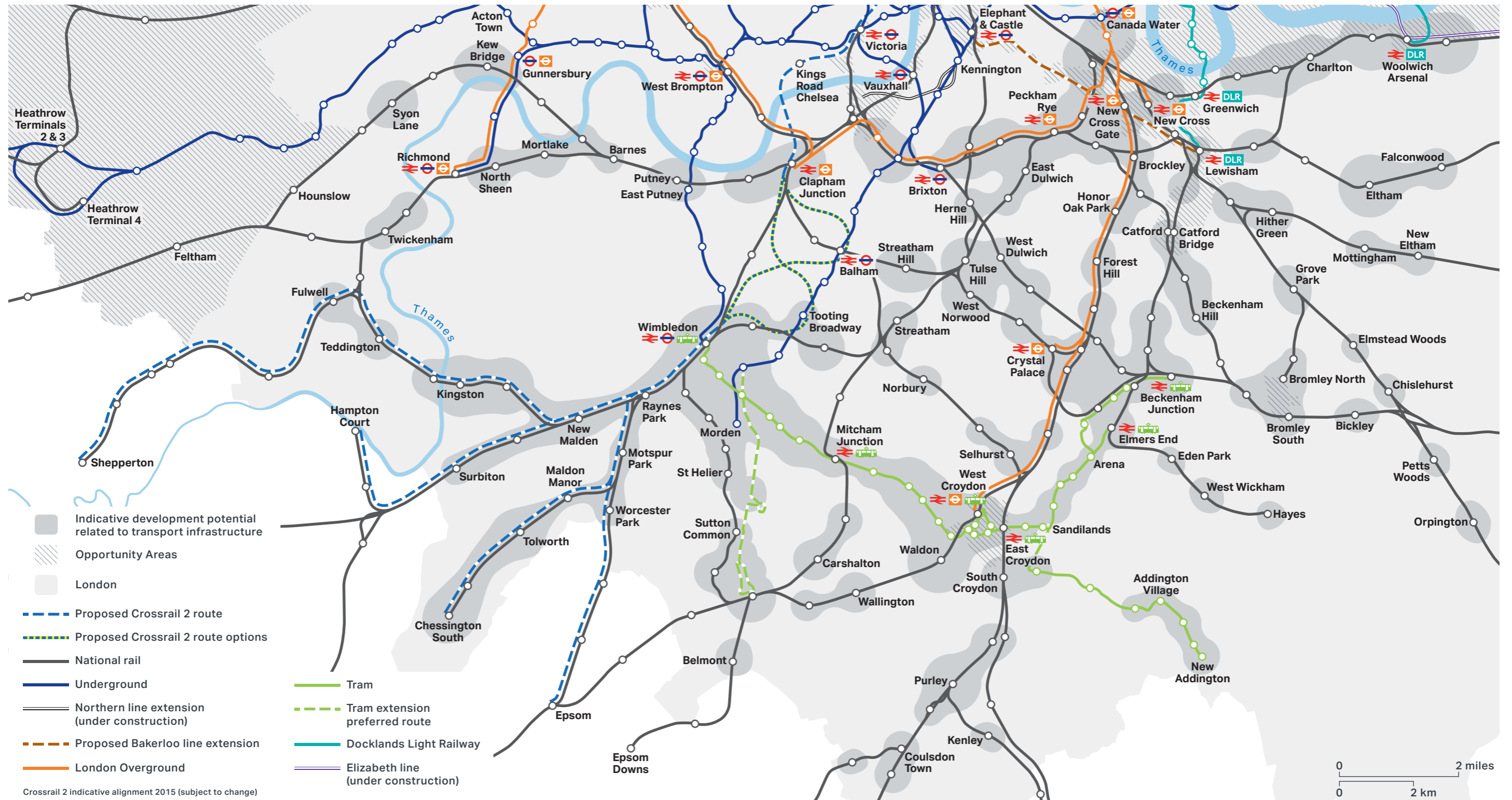
TfL will work with the GLA, boroughs and other stakeholders to better co-ordinate land use and transport planning activity around stations in south London, which will aid regeneration, increase the delivery of new jobs and homes and integrate them better with the local and wider area. By improving the environment for walking, cycling and public transport users, these will become the default modes of choice for travel rather than the use of cars.

There will also be focused transport investment at 'strategic hubs', such as Clapham Junction and Lewisham, to optimise customer experience, improve connectivity between town centres and improve accessibility by extending the reach of the step-free network.

In most places, the focus will be on increasing the density of existing land uses rather than converting industrial land (which is in scarce supply compared to other parts of the city) to housing. In some areas, it may be possible to consider the potential consolidation and co-location of industrial activities to enable the release of land for high-density development while maintaining the amount of floor-space available for industry.

Figure 51 sets out the main transport proposals to support new homes and jobs in south London.

FIGURE 51: TRANSPORT PROPOSALS FOR HOMES AND JOBS IN SOUTH LONDON



FOCUS ON: GETTING THE PLANNING PROCESS RIGHT

Delivering Good Growth depends on the planning process. It requires clear policy at all levels, with targets for mode share (such as through OAPF) and enhanced environmental standards, securing funding for transport from increased land values, and working with authorities and communities, in and outside London.

The London Plan is the spatial strategy for growth, with policies to ensure new development delivers Good Growth. Given the importance of transport infrastructure to support and unlock

growth, new development must be expected to contribute to funding it. Public sector funds can unlock development and leverage further private funding. TfL's Growth Fund supports the delivery of transport schemes that accelerate housing delivery and unlock development and regeneration opportunities in London's growth areas. The Fund allows TfL to deliver beneficial development that might otherwise be unviable. TfL works with the GLA to allocate this Fund to appropriate projects.

Proposal 99

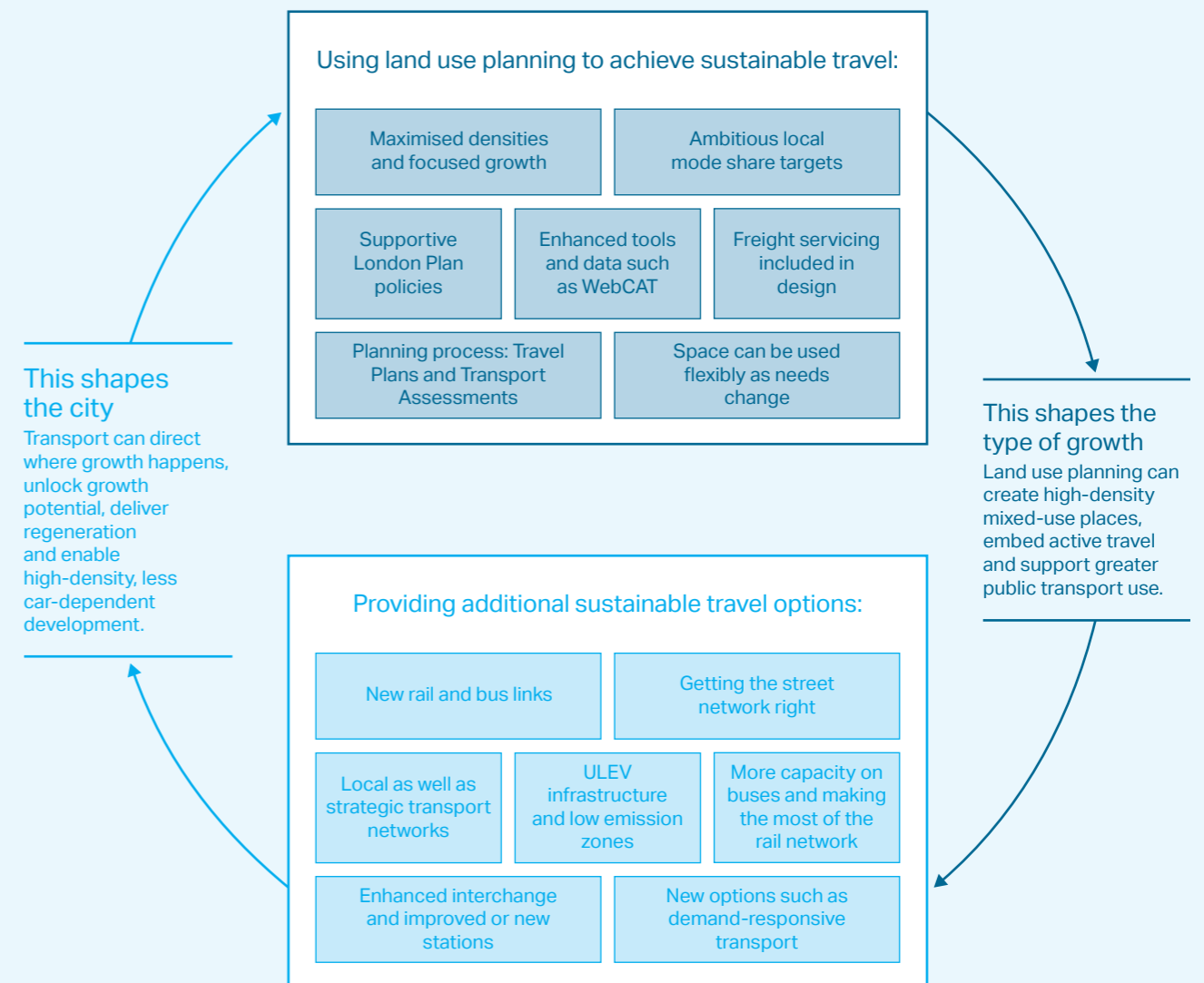
The Mayor, through TfL, the boroughs, planning authorities beyond London and other delivery agencies, will:

- a) Develop mechanisms for co-ordinating planning and investment along transport growth corridors, building on approaches such as the London Stansted Cambridge Corridor and Old Kent Road.
- b) Develop Opportunity Area Planning Frameworks with ambitious mode shares for walking, cycling and public transport, maximising the use of investment in transport infrastructure and services.

- c) Use public sector funding, such as TfL's Growth Fund, for smaller scale transport schemes that help directly unlock the creation of new homes and jobs, and leverage funding for such purposes from other sources.
- d) Embed Good Growth principles in TfL assessment of development proposals and Transport Assessment requirements, and then use and apply them.
- e) Update TfL's Travel Plan guidance to ensure developments encourage active, efficient and sustainable travel, apply the Healthy Streets Approach and help deliver carbon-free transport.

FIGURE 52: DELIVERING GOOD GROWTH

Good land use planning enables the delivery of enhanced and increased public transport and active travel provision. Transport services and infrastructure in turn shape the city through enabling high-density development and liveable neighbourhoods where people want to live and work. This is the cycle of Good Growth.



Public transport links to airports

London's airports play a vital role in maintaining and enhancing its international connectivity for both passengers and freight. Improved public transport links, notably rail, have a key role to play in making the best use of existing capacity while supporting a shift to more active, efficient and sustainable ways of travelling.

Improvements should include:

- New, longer trains for Gatwick and Luton airports as part of the Thameslink Programme and Brighton Main Line upgrade, followed by the next phase of upgrade and redevelopment of Gatwick Airport station
- Upgrading the West Anglia Main Line serving Stansted airport, including four-tracking, to be followed by increasing frequencies associated with Crossrail 2
- Enabling new routes and frequencies to Heathrow airport, with the delivery of the Elizabeth line
- Further introduction of full-length and more frequent DLR services to London City airport

- Increased frequencies on rail services to Southend airport
- New automated people-mover to better connect Luton airport with the rail network

In addition to these major schemes, improvements to bus, coach, cycling and walking facilities have a valuable part to play in improving access to all six of London's airports. These enhancements will help to integrate the airports into the wider public transport network, enabling passengers and staff to make better use of them. All surface access improvements should be planned based on the principle that airport operators provide a fair share of funding.

Proposal 100

The Mayor will promote the improvement of surface links to London's airports, with airport operators contributing a fair share of the funding required.



FOCUS ON: THE UNACCEPTABLE IMPACT OF EXPANDING HEATHROW

The Government announced its preference for a new north west runway at Heathrow in October 2016. This would increase the airport's current cap by more than 50 per cent, from 480,000 flights to 740,000 flights per year. The Mayor is engaging with the planning process around Heathrow expansion to ensure his fundamental concerns are raised and addressed.

The demand generated by the current airport combined with local traffic already place considerable strain on the roads and railways serving the airport and contribute to levels of NO₂ that are well in exceedance of legal limits. The Mayor considers that, as a result of the additional flights and associated traffic, any expansion at Heathrow would significantly impair London's ability to meet international air quality obligations in the shortest possible timescale and would contribute to an overall worsening of air quality relative to the situation without expansion.

Heathrow already exposes more people to significant aircraft noise than its five main European rivals combined, and the proposed increase in flights cannot avoid many people being newly exposed to significant noise.

Moreover, it would be unacceptable if the air quality gains secured by the Mayor and the potential noise improvements as a result of new technologies were not allowed to accrue to local communities to improve public health, but were instead used to enable expansion of Heathrow airport.

Policy 22

The Mayor will continue to oppose expansion of Heathrow airport unless it can be shown that no new noise or air quality harm would result and the benefits of future regulatory and technology improvements would be fairly shared with affected communities. Any such expansion must also demonstrate how the surface access networks will be invested in to accommodate the resultant additional demand alongside background growth.

The forecast additional airport-related highway trips are an essential component of the air quality impacts and one that any expansion would have to address. Without significant rail investment, the airport's aspiration for 'no net increase

in highway trips' is not credible and would place further pressure on already congested streets, including through the increase in freight vehicles that would result from any expansion.

If the aspiration for no new highway trips is achieved, this would result in an increase in public transport trips of more than 250 per cent. But without significant new infrastructure, it will place severe strain on the public transport networks that serve the airport. Existing committed schemes such as the Elizabeth line and the Piccadilly line upgrade – designed to support London's population growth – will not be able to accommodate this increase. Delivering the shift to public transport requires Government commitment to further schemes to provide sufficient additional capacity and connectivity, notably:

- A western rail link to Heathrow – direct services from the Thames Valley: Slough, Maidenhead and Reading
- A southern rail link to Heathrow – direct services via a route with sufficient spare capacity from central, south and south west London, as well as Surrey

Any proposals must ensure that they can deliver significant additional capacity and connectivity that are capable both of attracting sufficient passenger and staff trips that would otherwise be made in cars and taxis, and of accommodating the additional demand. This cannot be at the expense of non-airport trips and services, nor should it erode the ability of the transport network – including already planned schemes – to enable growth.

There is an important role for improvements to bus, cycling and walking infrastructure serving the airport, particularly for staff journeys. It is also essential that the access for disabled people to the airport is improved.

Proposal 101

The Mayor will:

- a) Work with industry partners and stakeholders to assess options for surface access to Heathrow, and
- b) Seek a commitment from Government to fund and deliver within an appropriate timescale the extensive transport measures required to support the expansion of Heathrow.