London Infrastructure Framework

Annex A: Project Descriptions

Key:

n Currently underway

v Confirmed, not yet commenced

p Concept stage and/or live proposal



Pan-London Exemplar projects

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| **Connected London programme** n*TfL* | As part of a wider programme of increasing London’s digital connectivity, this delivers 2,000 km of full fibre connectivity across the London Underground, bringing city-wide connectivity improvement and readying London for 5G.  |
| **London Power Tunnels** n*National Grid* | A 7-year programme, currently underway, re-wiring South London via 32.5km of 3m diameter tunnels between Wimbledon and Crayford, connecting London to safe and reliable electricity. |
| **Bus Fleet Upgrades & decarbonisation** n*TfL* | A programme upgrading TfL's buses to electrify and decarbonise the fleet, alongside wider works on route extensions, increased services and improved infrastructure. |
| **Smart Meter roll out programme** n*Thames Water* | Rollout of Smart Meters across London helping save water, detect leaks, and reduce carbon emissions. |
| **Bakerloo Line Extension** p*TfL* | An extension of the Bakerloo line from Elephant & Castle to Lewisham town centre via the Old Kent Road and New Cross Gate, with a second phase potentially stretching beyond Lewisham to Hayes and Beckenham Junction in Bromley. The route of the extension has been safeguarded by the Secretary of State for Transport.  |
| **High Speed 2 (HS2) & West Coast Mainline (WCML)** n*Network Rail* | The UK’s new high speed rail network (which will increase capacity and allow for increased suburban and local services on the WCML)  |
| **Lower Thames Crossing** p*National Highways* | New 23km long road which includes a tunnel underneath the River Thames, doubling road capacity between Kent, Thurrock, Essex and Havering whilst reducing congestion and reliance on the Dartford Tunnel. |
| **West London Orbital** p*TfL* | A proposed new rail link making use of existing, underused lines in northwest and west London, which would become part of the London Overground network. The West London Orbital rail service would run from Hounslow towards Hendon and West Hampstead in the north and provide 10 new unique interchanges with new and existing rail and underground links. |
| **DLR extension** p*TfL* | Proposal for extending the DLR to Beckton Riverside (north of the Thames) and Thamesmead (south of the river) via a new tunnel. It will be designed with consideration of a potential future extension to Lower Belvedere town centre and Station. This extension creates new additional capacity for river crossings in East London, a particular priority for the city.  |
| **Crossrail 2** p*Network Rail, TfL* | Crossrail 2 is a new proposed railway linking the National Rail networks in Surrey and Hertfordshire via an underground tunnel through London. The new railway would stop at key locations throughout the city centre, improving access to and from London across the wider South East, and significantly reducing congestion on existing Tube and National Rail services. |
| **Thames Tideway** n*Thames Water* | Construction of a 25km Super Sewer under the Thames to intercept, store and ultimately transfer sewage waste away from the river and reduce polluting overflows.  |
| **Thames Estuary 2100** v*Thames Water* | A 10-year capital investment programme to refurbish and improve existing tidal flood defences to manage tidal flood risk in the Thames Estuary. This aims to protect 1.4 million people, £320 billion worth of property and critical infrastructure from increasing tidal flood risk. |
| **Thames Estuary, Phase 1** n*Thames Water* | Phase one of the Thames Estuary programme around flood defence construction - protection of properties and people from flooding and coastal erosion.  |
| **Thames river services expansion** n*TfL* | Supporting new piers in the east of the city, promoting safe and sustainable growth of piers to make river services an integral part of London’s public transport network and increasing the capacity of the river network for freight handling, allowing for reduction of HGVs using the road network. |



Sub-Regional Exemplar projects

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| **Silvertown Tunnel** n*TfL* | Construction of a tunnel under the Thames linking Silvertown to the Greenwich Peninsula in East London. The tunnel, planned to open in 2025, will help reduce chronic congestion at the Blackwall Tunnel and allow for better public transport links, including more cross-river bus journeys. |
| **South East London Combined Heat and Power (SELCHP) Extension** n*Southwark Council* | Extension of the SELCHP facility heat network west towards the Old Kent Road regeneration area and onwards to some of the large housing estates in Peckham. SELCHP is a waste incinerator in Lewisham which generates heat and electricity.  |
| **Lea Valley priority bridges programme** n*LB Newham / Tower Hamlets* | A programme of connectivity projects in the Lower Lea Valley which will initially focus on 3 priority bridges in the stretch of the River Lea at Bow Creek. The project will encourage active/sustainable transport in the area. Priority bridges work underway, full programme tbc. |
| **Western Rail to Heathrow** p*Network Rail* | A proposed new direct rail link from the West to Heathrow would improve journeys to Britain’s busiest airport, providing environmental benefits and supporting economic growth for the Thames Valley, South West and South Wales. Currently subject to a satisfactory business case and agreement of acceptable terms with the Heathrow aviation industry. |
| **Southern rail to Heathrow** p*Network Rail* | Potential private investment for construction of up to 8 miles of new railway from the west end of the existing Terminal 5 station to create southern access to Heathrow Airport, enabling trains to operate between Heathrow and Waterloo via Clapham Junction, Putney, Hounslow, Twickenham, Richmond, Staines and other intermediate stations |
| **Brentford Rail link** p*Hounslow, TfL* | Project will aim to create a new rail line that would connect a new station in Brentford’s ‘Golden Mile’ on the A4 Great West Road, to Southall Station in Ealing, subsequently allowing passenger services to be restored from Southall Station on an existing line currently used to transport freight.  |
| **Elizabeth Line continuation** p*TfL* | Continuation of Elizabeth Line from current terminal station to Kent, sharing tracks with Southeastern and Thameslink services. |
| **Euston Terminus** n*HS2* | Through increasing capacity, this would allow for the connection of HS2, Network Rail, London Underground, and the proposed Crossrail 2. Eleven new dedicated platforms, a newconcourse and improvements to underground stations will facilitate not only the efficient operations of HS2, but free up capacity on local and regional services. |
| **Stratford Station upgrades** p*Newham Council/LLDC* | Upgrade surrounding transport infrastructure with associated delivery of new homes. |
| **Cycleway 4** n*TfL* | Cycleway 4 will give cyclists a continuous segregated route between Tower Bridge and Greenwich, and improve pedestrian facilities and public spaces |
| **Cycleway 9** p*TfL* | Cycleway 9 will create a continuous, largely segregated route between Kensington Olympia and Brentford town centre, via Hammersmith and Chiswick |
| **West London Area Energy Plan** n*West London Alliance* | This project aims to solve regional transmission and network constraints through streamlined stakeholder engagement and better targeted / coordinated projects. This will involve creation of a subregional evidence base that can be used by a newly established energy planning partnership of stakeholders to identify best options for ongoing subregional energy work and create best practice recommendations for other areas in the future. |
| **Haringey Walking and Cycling Action Plan** n*LB Haringey* | Aiming to deliver a high-quality network of walking and cycling infrastructure in Haringey linking up to existing networks in surrounding boroughs, significantly reducing motor vehicle use for short trips and drive a shift to much greater active travel |
| **West London Electric Vehicles and Future Mobility plan** p*West London Alliance* | Responding to emerging electric & hydrogen HGV developments requires a consistent West London approach. This plan would focus on rapid super charging hubs and induction charging at Opportunity Areas with potential initial focus at OOC/ Park Royal & Great West Corridor. |
| **Local London Digital Area Plan** n*LGA* | Funding and procuring full fibre infrastructure to public sites across member boroughs in Local London and Haringey |
| **Digital West Programme** n*West London Alliance* | Secured funding in business rates through Strategic Investment Pool funds to address areas of poor connectivity in West London. |
| **Strategic Infrastructure Enabling Works** n*Meridian Water* | Develop key infrastructure to unlock housing development, including roads, bridges, substation, earth works, remediation, flood alleviation works and rail enhancement works to increase stopping trains at Meridian Water station. |



Growth Catalyst projects

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| **Old Oak Common / Park Royal rail package** n*TfL* | OOC and enabling rail to deliver the intended housing capacity. Includes a possible connection to the North London Line at the new Old Oak Common station transport hub. In the medium-long term Chiltern Line extension recognised as desirable. |
| **Old Oak Common / Park Royal road and cycle package** n*TfL* | A set of cycle, pedestrian, and road works to unlock development. |
| **Old Oak Common / Park Royal bus package** n*TfL* | Enabling the bus network for development and growth by adding new routes and infrastructure and extending current services |
| **Waterloo City Hub** p*Lambeth Council* | Much of the public realm surrounding Waterloo station is traffic dominated and unattractive for pedestrians, cyclists, and other users. A strategic re-design of the roundabout, roads and surrounding public realm at Waterloo will unlock and support growth in the Opportunity Area as well as improve local connectivity, particularly towards South Bank |
| **Vauxhall Gyratory** | The proposed changes look to return the one-way road system at Vauxhall to two-way roads, while offering greater cycling and pedestrian crossings, public spaces and a new central bus station. |
| **Sutton programme of work** p*Sutton Council* | A programme of work in Sutton including Belmont Rail Frequency Improvement, Active Mode travel routes and public realm, and town centre master planning. |
| **Edgware Town Centre** p*Barnet Council* | Town centre improvements including upgrades to the environment for pedestrians and cyclists as well as a new bus / tube interchange. The project will provide better options for more sustainable transport and safe and active movement and provide opportunities for new high-quality homes. |
| **Waste Depot Redevelopment Works** p*Barnet & Enfield Councils* | Feasibility of redeveloping depot land to free up land for new homes, parks and open spaces and schools whilst generating capital receipts.  |
| **Upper Roding Crossing** p*Barking & Dagenham Council* | This 5-year, concept stage project, would provide a new sustainable bus / cycle crossing over the River Roding would dramatically increase connectivity between the London Riverside and Royal Docks Opportunity Areas. |
| **Hammersmith Fly-Under** p*TfL* | A concept project to replace A4 flyover with a tunnel scheme to better link town centre to river, with a potential cost of £1.7bn; subject to further exploration of alternative infrastructure solutions.  |
| **A13 Connectivity** p*Barking & Dagenham Council* | Consideration into the construction of a 1.3km tunnel next to the A13 in the Castle Green area of Dagenham to eventually replace the existing dual carriageway. This could support the provision of up to 30,000 new homes by 2041 across a broad area, as part of a wider strategy including a new Overground station in Castle Green. Also investigating alternative infrastructure solutions. |
| **Rotherhithe Crossing** p*TfL* | TfL have previously consulted on three potential crossing options to address distinct lack of river crossings for cyclists and pedestrians east of Tower Bridge: a bridge, a tunnel, and an enhanced ferry service. Initially the preferred option was a navigable bridge, but recent costs challenges have meant this project was paused and consideration of an enhanced ferry service is being made. |
| **Santander Cycle Hire Expansion** p*TfL* | There are large areas of central London without ready access to the Santander cycle hire scheme, particularly south of the riverThames and north of the Central Activities Zone. Expanding the scheme would allow new stations to be created and the roll-out of e-bikes |
| **West London Cycling Network** p*TfL* | TfL considering Strategic cycling projects needed to address active travel connectivity challenges between West London's growth areas. |
| **Four Lines Modernisation** n*TfL* | £4.5bn TfL programme transforming the Circle, District, Hammersmith & City and Metropolitan lines through fleet, track, and signalling upgrades to increase capacity up to 32 trains per hour in Central London during peak times and boosting reliability - making journeys faster and more comfortable.  |
| **Piccadilly Line upgrade** n*TfL* | Modernisation of the Piccadilly line and prepare for the arrival of new trains from 2025 |
| **DLR upgrades** v*TfL* | Planned upgrades to the DLR network include replacing two-thirds of the existing rolling stock, providing 10 more trains, and new signalling. This would ensure the DLR is fit for the future, and able to support continued growth in the east end |
| **Northern Line Upgrades** n*TfL* | Upgrades at Camden Town station could help separate the branches of the Northern Line, adding 25% more capacity through stations in central and south London. |
| **East London Line Overground growth capacity improvements** n*GLA* | Increased transport capacity is funded on the London Overground to 18tph (from 16tph) as well as funding being available to support the creation of a step free access and a second entrance to Surrey Quays Station. Phase 2, subject to funding, would increase capacity up to 20tph and a provide a new station at Surrey Canal Road. |
| **Piccadilly Line Signalling Upgrades** v*TfL* | A project which could increase capacity by one third and allow for the reorganisation of underground services on shared lines in West London.  |
| **Brighton Main Line upgrades (Croydon)** p*Network Rail* | Croydon Area Remodelling Scheme (CARS) - Scheme of work including providing a total of 8 platforms at East Croydon station, adding 2 additional tracks between East Croydon station and Windmill Bridge Junction, and providing extra track layout capacity at Norwood Junction including a step free access solution.  |
| **Ruckholt Road Overground station** p*LB Waltham Forest* | Construction of new overground rail station to serve Waltham Forest’s largest growth area and improve rail access to Tottenham Hale and Stratford. |
| **Beam Park Station** p*LB Havering / GLA* | Concept stage project that would see a railway built in Beam Park (LB Havering), which will be the only viable transport link to support the Rainham and Beam Park housing zone. |
| **Harrow on the Hill Station Redevelopment** p*LB Harrow and TfL* | LB Harrow and TfL exploring a comprehensive residential led mixed use redevelopment of the bus station, underground station approach, together with land to the north and south of the station with improved infrastructure and new public realm. Estimate of 1000 homes. |
| **Meridian Line** p*LB Waltham Forest* | A concept project in Waltham Forest that would see a reinstatement of an overground rail connection between Chingford and Stratford. |



Strategic Pilot projects

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| **North London Heat and Power Project – EcoPark** n*North London Waste Authority* | Redeveloping and expanding the 'EcoPark' in North London to provide flagship recycling facilities and a world-class energy recovery facility to treat non-recyclable waste in an efficient and environmentally friendly way. Construction commenced in 2019, expected to be complete by 2025. |
| **Energetik heat network (linked to EcoPark)** n*Energetik* | City scale heat network built with significant additional capacity to supply very low carbon energy to connected homes and businesses, by utilising waste heat from the EcoPark. Energetik will take a small amount of the waste heat from that process, that would otherwise be lost to the atmosphere, to heat large scale thermal storage. Estimated capacity in the region of 60,000 homes equivalent. |
| **Renewable energy small power stations** p*LB Hounslow* | Local generation and supply of green power and heat to new major investable propositions – 1 per major neighbourhood with grid import/export and battery storage operated by LBH op.co under commissioning or contract. |
| **Sewage-powered domestic heating scheme** p*Thames Water* | Excess heat recovered from the sewage treatment process could be used to power more than 2,000 homes thanks to a new carbon-cutting partnership between Thames Water and Kingston Council |
| **Haringey Decentralised Energy Network** v*LB Haringey* | Significant carbon reduction project through delivery of a Decentralised Energy Network (DEN) for Tottenham and Wood Green with potential for expansion into adjacent boroughs.The DEN programme would replace thousands of highly polluting individual gas boilers in homes and buildings and replace them with an infrastructure which could reduce CO2 emissions from heating by 80% versus the use of gas. |
| **South Westminster Area Network** p*AECOM]* | A district heat network serving the St James Ward of Westminster, which will offer low carbon heat to buildings in the area.  |
| **Light Freight in the Thames** p*Thames Estuary Growth Board* | The aim of this project is to reinstate the River Thames as a major transport corridor whilst generating additional economic activity and jobs within the marine logistics centre. This involves the construction of new infrastructure and greater utilisation of existing infrastructure to enable modal shifts from road HGVs to commercially competitive river freight.  |
| **Depots strategy** p*Bexley & Lewisham* | The proposal was for Lewisham to share Bexley's depot and free up their Wierside Road depot for residential development. There was also the potential for public sector partners to share facilities. Initial feasibility work undertaken but project paused as impacted by Bakerloo Line Extension. |
| **Enfield Chase Landscape Restoration** n*LB Enfield* | The project aims to restore the natural landscape of up to 1,000 hectares of green belt in the north-west of Enfield by creating woodland and other key habitats and restoring rivers and wetlands. The project also aims to improve accessibility by creating a network of footpaths and cycleways linked to existing urban areas in the south and east of Enfield as well as transport hubs/railway stations that connect to the rest of London. Potential to offset over 20,000 tonnes of carbon emissions over its lifetime. Improvements to the environment by creating woodland habitat that benefits biodiversity and alleviates flood risk by reducing rainfall runoff from Enfield’s rural upland areas. Project is underway with potential to scale and deliver further benefits with more funding.  |
| **Introduction of Plastic Roads** p*LB Harrow* | To investigate the feasibility and carry out a proof on concept to install plastic roads which are 100% recyclable, defrost themselves, generate renewable energy and change the way maintain roads across the borough. |
| **Magway tunnels** p*Magway* | The idea is to deliver parcels and even online grocery orders between distribution centres and consolidation centres, in small carriages or pods, which are the same size as a standard retail shopping tote. These will travel via underground, overground, and even suspended pipelines, which measure less than one meter wide. |