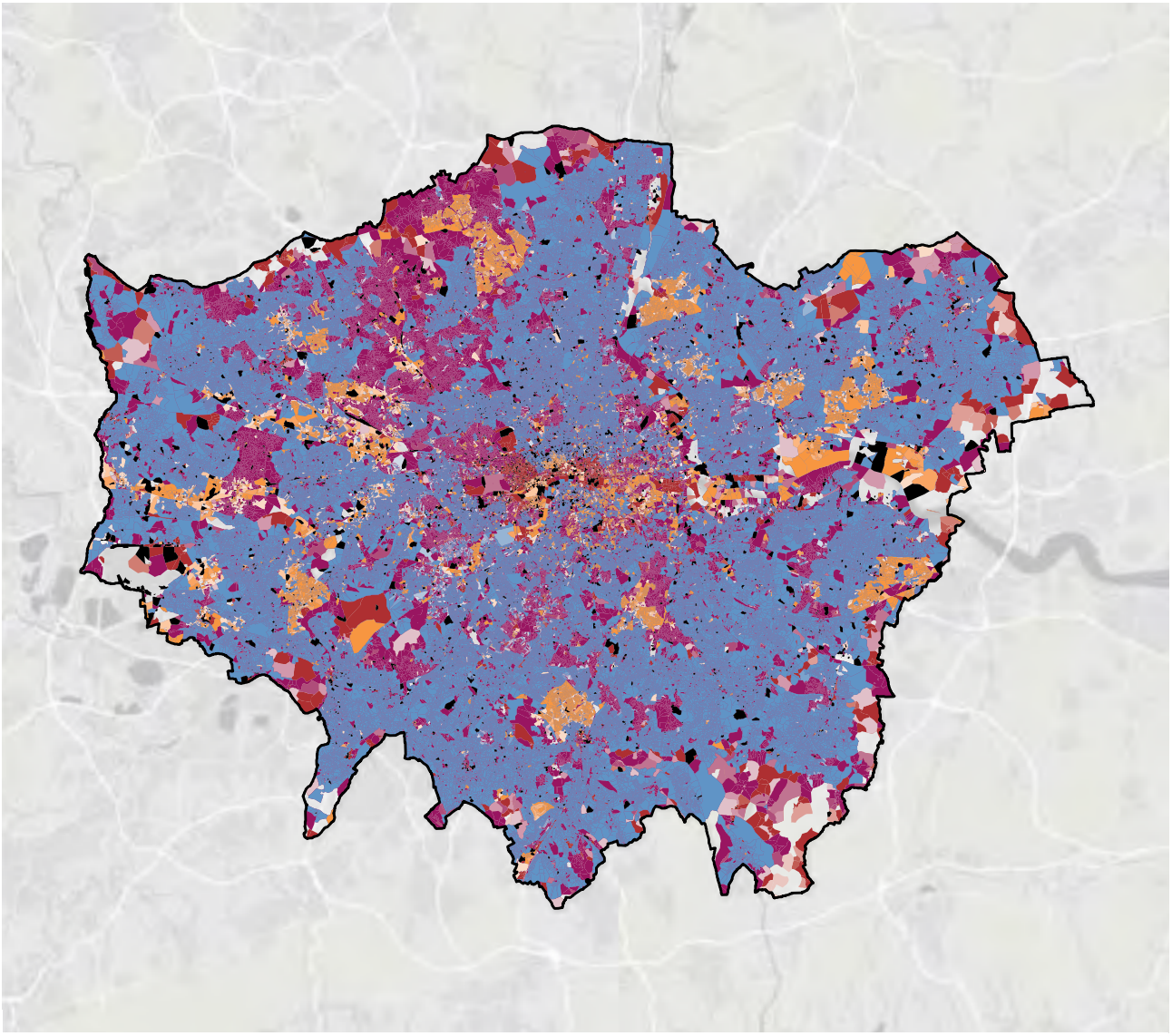
Figure 9.5 - Broadband coverage May 2019



Broadband coverage as of May 2019

Availability (% Premises)

Full Fibre	Ultra-fast Broadband	Super-fast Broadband	30Mbit/s Unavailability
1 - 20	1 - 20	1 - 20	1 - 20
21 - 40	21 - 40	21 - 40	21 - 40
41 - 60	41 - 60	41 - 60	41 - 60
61 - 80	61 - 80	61 - 80	61 - 80
81 - 100	81 - 100	81 - 100	81 - 100
			No Data Available (Postcode areas)

Source: Ofcom

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Note for Figure 9.5: For the most up to date broadband coverage and information on broadband connection types please see https://www.london.gov.uk/what-we-do/business-and-economy/supporting-londons-sectors/connectivity

Policy SI 7 Reducing waste and supporting the circular economy

A Resource conservation, waste reduction, increases in material re-use and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:

1) promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible
2) encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products
3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026
4) meet or exceed the municipal waste recycling target of 65 per cent by 2030[163]
5) meet or exceed the targets for each of the following waste and material streams:
    a) construction and demolition – 95 per cent reuse/recycling/recovery
    b) excavation – 95 per cent beneficial use[164]
6) design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.

163 Based on the EU definition of municipal waste being household waste and other waste similar in composition to household waste. This includes business waste collected by local authorities and by the private sector.

164 All inert excavation waste should be used for beneficial uses.

B Referable applications should promote circular economy outcomes and aim to be net zero-waste. A Circular Economy Statement should be submitted, to demonstrate:

1) how all materials arising from demolition and remediation works will be re-used and/or recycled
2) how the proposal's design and construction will reduce material demands and enable building materials, components and products to be disassembled and re-used at the end of their useful life
3) opportunities for managing as much waste as possible on site
4) adequate and easily accessible storage space and collection systems to support recycling and re-use
5) how much waste the proposal is expected to generate, and how and where the waste will be managed in accordance with the waste hierarchy
6) how performance will be monitored and reported.

C Development Plans that apply circular economy principles and set local lower thresholds for the application of Circular Economy Statements for development proposals are supported.

9.7.1 Waste is defined as anything that is discarded. A **circular economy** is one where materials are retained in use at their highest value for as long as possible and are then re-used or recycled, leaving a minimum of residual waste. London should move to a more circular economy as this will save resources, increase the resource efficiency of London's businesses, and help to reduce carbon emissions. The successful implementation of circular economy principles will help to reduce the volume of waste that London produces and has to manage. A key way of achieving this will be through incorporating circular economy principles into the design of developments (see also Policy D3 Optimising site capacity through the design-led approach) as well as through Circular Economy Statements for referable applications.

9.7.2 The adoption of circular economy principles for referable applications means creating a built environment where buildings are designed for **adaptation, reconstruction and deconstruction**. This is to extend the useful life of buildings and allow for the salvage of components and materials for reuse or recycling. Un-used or discarded materials should be brought back to an equal or

comparable level of quality and value and reprocessed for their original purpose (e.g. recycling glass back into glass, instead of into aggregate).

9.7.3 To assist with the introduction of Circular Economy principles, the Mayor will be providing further guidance on **Circular Economy Statements**. Circular Economy Statements are intended to cover the whole life cycle of development. This will apply to referable schemes and be encouraged for other major infrastructure projects within London. Boroughs are encouraged to set lower local thresholds through Development Plans.

9.7.4 In 2015[165] London produced just under 18 million tonnes (mt) of **waste**, comprising:

- 3.1mt household waste – 17 per cent
- 5.0mt commercial/industrial waste – 28 per cent
- 9.7mt construction, demolition and excavation waste – 54 per cent

9.7.5 Modelling[166] suggests that if London achieves the Mayor's reduction and recycling targets, it will have sufficient **Energy from Waste** capacity to manage London's non-recyclable municipal waste, once the new Edmonton and Beddington Lane facilities are operational.

9.7.6 The London Environment Strategy sets out a pathway to achieving a municipal recycling target of 65 per cent by 2030 and outlines the Mayor's approach to **municipal waste** management in detail. This includes London achieving a 50 per cent reduction in food waste and associated packaging waste per person by 2030, and London local authorities needing to provide a minimum level of recycling service, including separate food waste, to residents by 2020. To achieve these recycling targets, it will be important that recycling, storage and collection systems in new developments are appropriately designed. Further detail on how developments should do this is set out in guidance.

9.7.7 Re-use and recycling rates for **construction, demolition and excavation waste** and material (CD&E) in London is estimated between 50 – 60 per cent[167] for 2015 with some large construction projects including the Olympic Park achieving 85 – 95 per cent recovery rates. The targets for CD&E waste and material are already

165 https://www.london.gov.uk/what-we-do/planning/london-plan/london-plan-technical-and-research-reports

166 See objective 7.4 London Environment Strategy, May 2018

167 Based on CD&E waste data interrogator data 2015. Estimate only as actual CD&E waste performance data is not available and not a requirement to report. Actual performance likely to be higher as waste reused or recycled on- site is not reported through the waste data interrogator.

being set on some projects, but better data (particularly relating to reuse on site) is needed to inform performance. The adoption of circular economy principles in referable applications (and promoted in Local Plans) is expected to help London achieve the CD&E waste and material recovery targets early in the Plan period.

9.7.8 The movement and management of household, commercial and industrial, and construction, demolition and excavation waste will be monitored in collaboration with other stakeholders through available data sets (including the Environment Agency's Waste Data Interrogator tool and WasteDataFlow) and reporting against commitments in Circular Economy Statements. This will inform reporting on and **monitoring** of the achievement of the targets set out in this policy, Part A.

9.7.9 Part A4 reflects recent **changes to the regulatory regime** that mean that the particular characteristics of excavation waste make it difficult to recover. The Mayor will continue to work with stakeholders to understand the implications of this regulatory change and to promote its beneficial use and limit the amount sent to landfill. The best environmental option practicable for the management of excavation material should be used. This could, for example, include using the material as a resource within the construction of the proposed development, or in other local construction projects, or using the material in habitat creation, flood defences or landfill restoration. In line with circular economy principles, the management of excavation waste should be focused on-site or within local projects.

9.7.10 When it is intended to send **waste to landfill** it will be important to show evidence that the receiving facility has the capacity to deal with waste over the lifetime of the development. This information should be made available to the relevant waste planning authority to help plan for future needs.

Policy SI 8 Waste capacity and net waste self-sufficiency

A In order to manage London's waste sustainably:

1) the equivalent of 100 per cent of London's waste should be managed within London (i.e. net self-sufficiency) by 2026
2) existing waste management sites should be safeguarded (see Policy SI 9 Safeguarded waste sites)
3) the waste management capacity of existing sites should be optimised
4) new waste management sites should be provided where required
5) environmental, social and economic benefits from waste and secondary materials management should be created.

B Development Plans should:

1) plan for identified waste needs
2) identify how waste will be reduced, in line with the principles of the Circular Economy and how remaining quantums of waste will be managed
3) allocate sufficient sites, identify suitable areas, and identify waste management facilities to provide the capacity to manage the apportioned tonnages of waste, as set out in Table 9.2 – boroughs are encouraged to collaborate by pooling their apportionment requirements
4) identify the following as suitable locations to manage borough waste apportionments:
    a) existing waste and secondary material sites/land, particularly waste transfer facilities, with a view to maximising their capacity
    b) Strategic Industrial Locations and Locally Significant Industrial Sites
    c) safeguarded wharves with an existing or future potential for waste and secondary material management.

C Mayoral Development Corporations must cooperate with host boroughs to meet identified waste needs.

D Development proposals for materials and waste management sites are encouraged where they:

1) deliver a range of complementary waste management and secondary material processing facilities on a single site

2) support prolonged product life and secondary repair, refurbishment and remanufacture of materials and assets

3) contribute towards renewable energy generation, especially renewable gas technologies from organic/biomass waste, and/or

4) are linked to low emission combined heat and power and/or combined cooling heat and power (CHP is only acceptable where it will enable the delivery or extension of an area-wide heat network consistent with Policy SI 3 Energy infrastructure Part D1c)

E Developments proposals for new waste sites or to increase the capacity of existing sites should be evaluated against the following criteria:

1) the nature of the activity, its scale and location

2) effective implementation of the waste hierarchy and its contribution to London's circular economy

3) achieving a positive carbon outcome (i.e. re-using and recycling high carbon content materials) resulting in significant greenhouse gas savings – all facilities generating energy from waste will need to meet, or demonstrate that steps are in place to meet, a minimum performance of 400g of CO_2 equivalent per kilowatt hour of electricity produced

4) the impact on amenity in surrounding areas (including but not limited to noise, odours, air quality and visual impact) – where a site is likely to produce significant air quality, dust or noise impacts, it should be fully enclosed

5) the transport and environmental impacts of all vehicle movements related to the proposal – the use of renewable fuels from waste sources and the use of rail and waterway networks to transport waste should be supported.

F When planning for new waste sites or to increase the capacity at existing sites the following should be considered:

1) job creation and social value benefits, including skills, training and apprenticeship opportunities

2) local need

3) accessibility of services for local communities and businesses.

Table 9.1 - Forecast arisings of household, commercial and industrial waste by borough 2021-2041 (000's tonnes)

Borough	2021	2041
Barking & Dagenham	214	230
Barnet	315	340
Bexley	225	241
Brent	259	274
Bromley	249	267
Camden	360	374
City of London	230	238
Croydon	305	327
Ealing	291	306
Enfield	305	327
Greenwich	209	226
Hackney	183	195
Hammersmith & Fulham	183	190
Haringey	190	201
Harrow	188	205
Havering	229	249
Hillingdon	347	365
Hounslow	260	275
Islington	241	251
Kensington & Chelsea	201	210
Kingston	152	160
Lambeth	208	219
Lewisham	191	206
Merton	174	184
Newham	244	260
Redbridge	196	216
Richmond	179	190
Southwark	292	308
Sutton	161	172
Tower Hamlets	260	273
Waltham Forest	202	218
Wandsworth	251	264
City of Westminster	722	749
London total	**8,217**	**8,726**

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Table 9.2 - Borough-level apportionments of household, commercial and industrial waste 2021-2041 (000's tonnes)

Borough	Apportionment *	2021	2041
Barking & Dagenham	6.1	505	537
Barnet	2.6	215	229
Bexley	5.6	457	485
Brent	5.0	412	437
Bromley	2.3	192	204
Camden	1.6	133	141
City of London	1.0	84	90
Croydon	3.1	252	268
Ealing	6.6	542	576
Enfield	4.3	356	379
Greenwich	4.1	338	359
Hackney	1.3	111	118
Hammersmith & Fulham	2.6	210	223
Haringey	2.3	192	203
Harrow	1.9	160	170
Havering	4.5	370	393
Hillingdon	5.1	423	449
Hounslow	5.0	407	432
Islington	1.2	101	108
Kensington & Chelsea	1.4	116	123
Kingston	2.3	187	199
Lambeth	1.7	143	152
Lewisham	2.2	184	195
Merton	2.9	238	253
Newham	4.7	383	407
Redbridge	1.8	151	160
Richmond	1.8	148	157
Southwark	1.8	150	159
Sutton	2.6	211	224
Tower Hamlets	2.4	195	207
Waltham Forest	2.4	199	211
Wandsworth	3.2	264	280
City of Westminster	2.3	188	200
London total	**100.0**	**8,217**	**8,726**

* Apportionment is per cent share of London's total waste to be managed by borough

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Table 9.3 - Projected net exports of household, commercial and industrial waste from London (000's tonnes)

Type	2015	2021	2026	2041
London's arisings	8,100	8,216	8,299	8,726
London's exports	3,449	1,725	0	0

Note: 2015 is an actual figure (SLR May 2017), data for 2021, 2026 and 2041 are projections

9.8.1 In 2015, London managed 7.5mt of its own waste and exported 11.4mt of waste. London also imported 3.6mt of waste. This gives London a current waste **net self-sufficiency figure** of approximately 60 per cent. Around 5mt (49 per cent) of waste exported from London went to the East of England and 4.2mt (42 per cent) to the South East. The bulk of this waste is CD&E waste. Approximately 1.3mt of waste was exported overseas. The term net self-sufficiency is meant to apply to all waste streams, with the exception of excavation waste. The particular characteristics of this waste stream mean that it will be challenging for London to provide either the sites or the level of compensatory provision needed to apply net self-sufficiency to this waste stream.

9.8.2 In 2015, 2.9mt of the waste sent to the East of England went to landfill and 2.2mt went to landfill in the South East. Some 32 per cent of London's waste that was biodegradable or recyclable was sent to landfill. The Mayor is committed to **sending zero biodegradable or recyclable waste to landfill by 2026**.

9.8.3 Waste contracts do not recognise administrative boundaries and waste flows across borders. Therefore, sufficient sites should be identified within London to deal with the equivalent of 100 per cent of the waste apportioned to the boroughs as set out in Table 9.2. The Mayor will work with boroughs, the London Waste and Recycling Board, and the London and neighbouring Regional Technical Advisory Bodies to address **cross-boundary waste flow issues**. Examples of joint working include ongoing updates to the London Waste Map, sharing data derived from Circular Economy Statements, the monitoring of primary waste streams and progress to net self-sufficiency, supporting the Environment Agency's annual monitoring work, and collaboration on management solutions of waste arisings from London.

9.8.4 Waste is deemed to be managed in London if any of the following activities take place within London:

- waste is used for energy recovery

- the production of solid recovered fuel (SRF), or it is high-quality refuse-derived fuel (RDF) meeting the Defra RDF definition as a minimum[168] which is destined for energy recovery
- it is sorted or bulked for re-use (including repair and re-manufacture) or for recycling (including anaerobic digestion)
- It is reused or recycled (including anaerobic digestion).

9.8.5 Supporting the production of **SRF and high-quality RDF feedstock** will promote local energy generation and benefit Londoners, improving London's energy security, helping to achieve regional self-sufficiency and possibly reducing leakage of SRF and RDF overseas. London facilities should produce high-quality waste feedstock with very little recyclable content (i.e. plastics), supporting renewable energy generation.

9.8.6 Table 9.1 shows projected arisings for household, commercial and industrial waste for each borough. National policy guidance requires boroughs to have regard to the **waste apportionments** set out in the London Plan. The Plan's waste apportionment model defines the proportion of London's total household, commercial and industrial waste that each borough should plan for, and these apportionments are set out in Table 9.2. Part B3 requires boroughs to allocate sufficient land (sites and/or areas) and identify waste management facilities to provide the capacity to manage their apportioned tonnages of waste. Boroughs are encouraged to collaborate by pooling their apportionment requirements. Boroughs with a surplus of waste sites should offer to share these sites with those boroughs facing a shortfall in capacity before considering site release.

9.8.7 Boroughs should examine in detail **how capacity can be delivered at the local level** and demonstrate how this can be provided for through the allocation of sufficient sites and the identification of suitable areas in Development Plans to meet their apportionment, and should aim to meet their waste apportionment as a minimum. It may not always be possible for boroughs to meet their apportionment within their boundaries and in such circumstances boroughs will need to agree the transfer of apportioned waste. Where apportionments are pooled, boroughs must demonstrate how their joint apportionment targets will be met, for example through joint waste Development Plan Documents, joint evidence papers or bilateral agreements.

9.8.8 **Mayoral Development Corporations** (MDCs) must cooperate with host boroughs to meet identified waste needs; this includes boroughs'

168 See http://www.sita.co.uk/services-and-products/our-products/rdf-srf for an explanation of the differences between SRF and RDF.

apportionment requirements. This could be widened to cover boroughs in the relevant waste planning group where appropriate. In future iterations of the Plan full consideration will be given to apportioning waste needs to MDCs.

9.8.9 Waste planning authorities and groups should plan to meet the identified waste management needs of their local area and are encouraged to identify suitable **additional capacity for waste**, including those waste streams not apportioned by the London Plan, where practicable. This could include, waste transfer sites, new sites managing construction, demolition and excavation waste, or the reconfiguration and intensification of existing uses that increase management capacity.

9.8.10 Plans or agreements **safeguarding waste sites** should take a flexible approach. They should be regularly reviewed and updated to take account of development that may lead to the integration of waste sites or appropriate relocation of lost waste sites. Waste plans should be responsive to strategic opportunities across borough and joint waste planning boundaries for optimising capacity on existing waste sites, or that help to unlock investment in developing new waste sites. Where a waste site may be lost, compensatory capacity should first be explored within the borough. In cases where this can't be provided, and suitable capacity is found in another borough, the receiving borough or joint waste planning group is encouraged to take on the apportionment and include it as part of their Development Plan.

9.8.11 Land in Strategic Industrial Locations will provide the main opportunities for locating waste treatment facilities. Existing waste management sites should be clearly identified and safeguarded for waste use. Boroughs should also look to Locally Significant Industrial Sites and intensification of existing waste management sites. Large-scale redevelopment opportunities and redevelopment proposals should incorporate waste management facilities within them. The London Waste Map[169] shows the locations of London's permitted waste facilities and sites that may be suitable for waste facility location.

9.8.12 As noted above, waste flows across boundaries and London exported 3.4mt of household, commercial and industrial waste in 2015. To meet the Mayor's policy commitment of net self-sufficiency by 2026 there needs to be a reduction in exports or an increase in imports in the lead up to 2026. Table 9.3 is included to help neighbouring authorities plan for London's expected household, commercial and industrial waste exports.

169 London Waste Map, https://maps.london.gov.uk/webmaps/waste/

9.8.13 Tables 9.1, 9.2 and 9.3 only refer to household, commercial and industrial waste, not construction, demolition and excavation waste. As the **reliability of CD&E waste data is low**, apportionments for this waste stream are not set out. For a fuller discussion of the issues around CD&E waste data see paragraph 9.7.7 and the SLR consulting report (task 2) (May 2017).

9.8.14 To support the shift towards a low-carbon circular economy, all facilities generating energy from waste should meet, or demonstrate that they can meet in future, a measure of minimum greenhouse gas performance known as the **carbon intensity floor** (CIF). The CIF is set at 400g of CO_2 equivalent generated per kilowatt hour (kwh) of electricity generated. The GLA's free on-line ready reckoner tool can assist boroughs and applicants in measuring and determining performance against the CIF.[170] Achieving the CIF effectively rules out traditional mass burn incineration techniques generating electricity only. Instead, it supports techniques where both heat and power generated are used, and technologies are able to achieve high efficiencies, such as when linked with gas engines and hydrogen fuel cells. More information on how the CIF has been developed and how to meet it can be found in the London Environment Strategy.

9.8.15 Waste to energy facilities should be equipped with a **heat off-take** from the outset such that a future heat demand can be supplied without the need to modify the heat producing plant in any way or entail its unplanned shut-down. It should be demonstrated that capacity of the heat off-take meets the CIF at 100 per cent heat supply. In order to ensure it remains relevant, the CIF level will be kept under review.

9.8.16 Examples of the '**demonstrable steps**' required under Part E3 are:

- a commitment to source truly residual waste – waste with as little recyclable material as possible
- a commitment (via a Section 106 obligation) to deliver the necessary means for infrastructure to meet the minimum CO_2 standard, for example investment in the development of a heat distribution network to the site boundary, or technology modifications that improve plant efficiency
- an agreed timeframe (via a Section 106 agreement) as to when proposed measures will be delivered
- the establishment of a working group to progress the agreed steps and monitor and report performance to the consenting authority.

170 https://www.london.gov.uk/what-we-do/environment/waste-and-recycling/waste-policy

9.8.17 To assist in the delivery of 'demonstrable steps' the GLA can help to advise on **heat take-off opportunities** for waste to energy projects, particularly where these are linked to GLA supported energy masterplans.

9.8.18 In 2015 around 324,000 tonnes of **hazardous waste** was produced in London. Hazardous waste makes up a component of all waste streams and is included in the apportionments for household, commercial and industrial waste set out in Table 9.2. London sends small amounts of hazardous waste to landfill outside of London, approximately three per cent of the national total. The amount of such waste produced has continued to grow in the short and medium term. Without sustained action, there remains the risk of a major shortfall in our capacity to treat and dispose of hazardous waste safely. This could lead to storage problems, illegal disposal (including fly tipping) and rising public concern about health and environmental impacts. There is therefore a need to continue to identify hazardous waste capacity for London. The main requirement is for sites for regional facilities to be identified. Boroughs will need to work with neighbouring authorities to consider the necessary facilities when planning for their hazardous waste.

9.8.19 **Waste processing facilities** should be well designed. They should respect context, not be visually overbearing and should contribute to the local economy as a source of new products and new jobs. They should be developed and designed in consultation with local communities, taking account of health and safety within the facility, the site and adjoining neighbourhoods. Developments supporting circular economy outcomes such as re-use, repair and re-manufacture, will be encouraged. Where movement of waste is required, priority should be given to facilities for movement by river or rail. Opportunities for combined heat, power and cooling should be taken wherever possible. Although no further landfill proposals in London are identified or anticipated within the Plan period, if proposals do come forward for new or extended landfill capacity or for land-raising, boroughs should ensure that the resultant void-space has regard to the London Environment Strategy.

9.8.20 Following the Agent of Change principle, developments adjacent to waste management sites should be designed to **minimise the potential for disturbance and conflicts of use**. Developers should refer to the London Waste and Recycling Board's design guide for ensuring adequate and easily accessible storage space for high-rise developments, see Part E of Policy D6 Housing quality and standards.

Policy SI 9 Safeguarded waste sites

A Existing waste sites should be safeguarded and retained in waste management use.

B Waste facilities located in areas identified for non-waste related development should be integrated with other uses as a first principle where they deliver clear local benefits.

C Waste plans should be adopted before considering the loss of waste sites. The proposed loss of an existing waste site will only be supported where appropriate compensatory capacity is made within London that must be at or above the same level of the waste hierarchy and at least meet, and should exceed, the maximum achievable throughput of the site proposed to be lost.

D Development proposals that would result in the loss of existing sites for the treatment and/or disposal of hazardous waste should not be permitted unless compensatory hazardous waste site provision has been secured in accordance with this policy.

E Development proposals for the relocation of waste sites within London are supported where strategic waste management outcomes are achieved.

9.9.1 London has approximately 500 **waste sites**, defined as land with planning permission for a waste use or a permit from the Environment Agency for a waste use. This applies to land used for any waste stream. These sites cover a wide range of waste activities and perform a valuable service to London, its people and economy.

9.9.2 Any **proposed release of current waste sites** or those identified for future waste management capacity should be part of a plan-led process, rather than done on an ad-hoc basis. Waste sites should only be released to other land uses where waste processing capacity is re-provided elsewhere within London, based on the maximum achievable throughput of the site proposed to be lost. When assessing the throughput of a site, the maximum throughput achieved over the last five years should be used; where this is not available potential capacity of the site should be appropriately assessed.

9.9.3 Policy SI 8 Waste capacity and net waste self-sufficiency promotes **capacity increases at waste sites** where appropriate to maximise their use. If such increases are implemented over the Plan period, it may be possible to justify the

release of waste sites if it can be demonstrated that there is sufficient capacity available elsewhere in London at appropriate sites over the Plan period to meet apportionment and that the target of achieving net self-sufficiency is not compromised. In such cases, sites could be released for other land uses.

Policy SI 10 Aggregates

A An adequate supply of aggregates to support construction in London will be achieved by:

1) encouraging re-use and recycling of construction, demolition and excavation waste within London, including on-site
2) extracting land-won aggregates within London
3) importing aggregates to London by sustainable transport modes.

B Development Plans should:

1) make provision for the maintenance of a landbank (i.e. seven years' supply) of at least five million tonnes of land-won aggregates up to 2041, in particular through a landbank apportionment of:
    a) at least 1.75 mt to London Borough of Havering
    b) at least 0.7 mt to London Borough of Redbridge
    c) at least 1.75 mt to London Borough of Hillingdon
    d) at least 0.7 mt to London Borough of Hounslow.
2) ensure sufficient capacity of aggregates wharves and aggregate rail depots is available to ensure a steady and adequate supply of imported and marine aggregates to London and maximise the movement of aggregates by sustainable modes
3) support the production of recycled/secondary aggregates and, where practicable, expand capacity at/or adjacent to aggregates wharves and rail depots and quarries during their operational life, within or adjacent to major construction projects.

C All Mineral Planning Authorities should, in Development Plans:

1) identify mineral safeguarding areas to protect sand and gravel resources from development that would otherwise sterilise future potential extraction

2) identify and safeguard sites and facilities, including wharves and railheads, with existing, planned or potential capacity for transportation, distribution, processing and/or production of primary and/or secondary/ recycled aggregates.

D To reduce the environmental impact of aggregate sites and facilities development proposals should:

1) demonstrate that appropriate measures to deal with aftercare, restoration and re-use of minerals sites following extraction are in place; with particular emphasis on promoting green infrastructure and biodiversity

2) ensure that potential impacts, in particular to the natural and historic environment and to human health, are assessed and effectively controlled.

E Development proposals should be designed to avoid and mitigate potential conflicts with sites safeguarded for the transportation, distribution, processing and/or production of aggregates, in line with the Agent of Change principle.

9.10.1 London needs a **reliable supply of construction materials** to support continued growth. National planning policy requires Mineral Planning Authorities to maintain a steady and adequate supply of aggregates. These include land-won sand and gravel, crushed rock, marine sand and gravel, recycled materials and secondary aggregates created from construction, demolition and excavation (CD&E) and industrial waste. Most aggregates used in the capital come from outside London, including marine sand and gravel and land-won aggregates, principally crushed rock from other regions. There are relatively small resources of workable land-won sand and gravel in London.

9.10.2 A realistic **landbank** (i.e. seven years' supply) of at least 5 million tonnes of land-won aggregates for London throughout the Plan period has been apportioned to boroughs as set out in this policy. There remains some potential for extraction beyond the four boroughs identified, including within the Lee Valley. Boroughs with aggregates resources should consider extraction opportunities when preparing Development Plans.

9.10.3 Those boroughs with an apportionment should plan to meet their landbank target and plan for the steady and adequate supply of **minerals** through the

identification of specific sites where viable resources are known to exist, preferred areas where known resources are likely to get planning permission, and areas of search where mineral resources might reasonably be anticipated.

9.10.4 Aggregates are bulky materials so Development Plans should maximise their use and re-use and minimise their movement, especially by road. The objective of proximity dictates that the best option is the use of local materials where feasible. The **re-use/recycling** of building materials and aggregates is a significant and well established component of the circular economy advocated in Policy SI 7 Reducing waste and supporting the circular economy and reduces the demand for natural materials.

9.10.5 Boroughs should identify and safeguard existing, planned and potential **sites for aggregate extraction, transportation, processing and manufacture** – and recognise where there may be benefits in their co-location. Existing and future wharf capacity is essential, especially for transporting marine-dredged aggregates, and should be protected in accordance with Policy SI 5 Water infrastructure. Equally important are railway depots for importing crushed rock from other parts of the UK. Railheads are vital to the sustainable movement of aggregates and boroughs should safeguard these sites in line with Policy T7 Deliveries, servicing and construction. Boroughs should also safeguard sites for the production and distribution of aggregate products.

9.10.6 Development proposals and planning decisions should ensure that **impacts to environment, heritage and amenity values** are considered, including the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality. Principal issues include noise, dust, air quality, lighting, archaeological and heritage features, traffic, land contamination, impacts to surface and ground water and land stability.

9.10.7 **Sites for depots** may be particularly appropriate in preferred industrial locations and other employment areas. Boroughs should examine the feasibility of using quarries as CD&E recycling sites once mineral extraction has finished.

9.10.8 Mineral Planning Authorities are required to prepare an annual **Local Aggregates Assessment** (LAA). The Mayor will work with boroughs and the London Aggregates Working Party to explore options for the preparation of joint LAAs in the future.

Policy SI 11 Hydraulic fracturing (Fracking)

A Development proposals for exploration, appraisal or production of shale gas via hydraulic fracturing should be refused.

9.11.1 In line with the Plan's policy approach to energy efficiency, renewable energy, climate change, air quality, and water resources, the Mayor does not support fracking in London.

9.11.2 The British Geological Survey concluded in a 2014 report for the Department of Energy and Climate Change that "there is no significant Jurassic shale gas potential in the Weald Basin".[171] It is highly unlikely that there is any site that is geologically suitable for a fracking development in London.

9.11.3 Should any London fracking proposal come forward there is a high probability that it would be located on **Green Belt or Metropolitan Open Land**. Furthermore, London and the south east of England are **seriously water-stressed areas**. Fracking operations not only use large amounts of water but also presents risks of potential contamination, presenting significant risks to London.

9.11.4 In addition to avoiding or mitigating adverse construction and operational impacts (noise, dust, visual intrusion, vehicle movements and lighting, on both the natural and built environment, including air quality and the water environment), any fracking proposal would need to take full account, where relevant, of the following **environmental constraints**:

- Areas of Outstanding Natural Beauty
- Sites of Special Scientific Interest
- Groundwater Source Protection Zone 1
- Special Protection Areas (adopted or candidate)
- Special Areas of Conservation (adopted or candidate)
- Sites of Metropolitan Importance for Nature Conservation
- groundwater or surface water

171 The Jurassic shales of the Weald Basin: geology and shale oil and shale gas resource estimation, British Geological Survey, 2014

9.11.5 The United Kingdom Onshore Oil and Gas Group (UKOOG), which represents the industry, has established a **Community Engagement Charter** for new onshore oil and gas proposals.[172] The Charter sets out a number of commitments for operators which includes engagement with local communities at each of the three main stages of operations (exploration, appraisal and production). Where any proposals for fracking to come forward, applicants who are members of UKOOG would be expected to comply with these commitments.

Policy SI 12 Flood risk management

A Current and expected flood risk from all sources (as defined in paragraph 9.2.12) across London should be managed in a sustainable and cost-effective way in collaboration with the Environment Agency, the Lead Local Flood Authorities, developers and infrastructure providers.

B Development Plans should use the Mayor's Regional Flood Risk Appraisal and their Strategic Flood Risk Assessment as well as Local Flood Risk Management Strategies, where necessary, to identify areas where particular and cumulative flood risk issues exist and develop actions and policy approaches aimed at reducing these risks. Boroughs should cooperate and jointly address cross-boundary flood risk issues including with authorities outside London.

C Development proposals should ensure that flood risk is minimised and mitigated, and that residual risk is addressed. This should include, where possible, making space for water and aiming for development to be set back from the banks of watercourses.

D Developments Plans and development proposals should contribute to the delivery of the measures set out in Thames Estuary 2100 Plan. The Mayor will work with the Environment Agency and relevant local planning authorities, including authorities outside London, to safeguard an appropriate location for a new Thames Barrier.

E Development proposals for utility services should be designed to remain operational under flood conditions and buildings should be designed for quick recovery following a flood.

172 Community Engagement Charter – oil and gas from unconventional reservoirs, UKCOOG, 2013, http://www.ukoog.org.uk/community/charter

F Development proposals adjacent to flood defences will be required to protect the integrity of flood defences and allow access for future maintenance and upgrading. Unless exceptional circumstances are demonstrated for not doing so, development proposals should be set back from flood defences to allow for any foreseeable future maintenance and upgrades in a sustainable and cost-effective way.

G Natural flood management methods should be employed in development proposals due to their multiple benefits including increasing flood storage and creating recreational areas and habitat.

9.12.1 In London, the boroughs are **Lead Local Flood Authorities** (LLFAs) and are responsible, in particular, for local surface water flood risk management and for maintaining a flood risk management assets register. They produce Local Flood Risk Management Strategies. LLFAs should cooperate on strategic and cross-boundary issues.

9.12.2 The **Regional Flood Risk Appraisal** (RFRA) considers all sources of flood risk including tidal, fluvial, surface water, sewer, groundwater and reservoir flooding and has been updated in collaboration with the Environment Agency. The RFRA provides a spatial analysis of flood risk including consideration of risks at major growth locations such as Opportunity Areas and Town Centres and key infrastructure assets. The Government's updated allowances for climate change are reflected in the expected sea level rise and increased flood risks considered in the RFRA. The updated allowances consider the lifetime, vulnerability and location of a development.

9.12.3 The **Thames Estuary 2100 Plan** (TE2100), published by the Environment Agency, and endorsed by Government, focuses on a partnership approach to tidal flood risk management. It requires the ability to maintain and raise some tidal walls and embankments. The Environment Agency estimates that a new Thames Barrier is likely to be required towards the end of the century. Potential sites will be needed in Kent and/or Essex requiring close partnership working with the relevant local authorities.

9.12.4 The concept of Local Authorities producing **Riverside Strategies** was introduced through the TE2100 Plan to improve flood risk management in the vicinity of the river, create better access to and along the riverside, and improve the riverside environment. The Mayor will support these strategies.

9.12.5 The Environment Agency's Thames River Basin District **Flood Risk Management Plan** is part of a collaborative and integrated approach to catchment planning for water. Measures to address flood risk should be integral to development proposals and considered early in the design process. This will ensure they provide adequate protection, do not compromise good design, do not shift vulnerabilities elsewhere, and are cost-effective. Natural flood risk management in the upper river catchment areas can also help to reduce risk lower in the catchments. Making space for water when considering development proposals is particularly important where there is significant exposure to flood risk along tributaries and at the tidal-fluvial interface. The Flood Risk Management Plan should inform the boroughs' Strategic Flood Risk Assessments.

9.12.6 In terms of mitigating **residual risk**, it is important that a strategy for resistance and then resilience including safe evacuation and quick recovery to address such risks is in place; this is also the case for utility services. In the case of a severe flood, especially a tidal flood, many thousands of properties could be affected. This will make rescue and the provision of temporary accommodation challenging. Designing buildings such that people can remain within them and be safe and comfortable in the unlikely event of such a flood, will improve London's resilience to such an event.

Policy SI 13 Sustainable drainage

A Lead Local Flood Authorities should identify – through their Local Flood Risk Management Strategies and Surface Water Management Plans – areas where there are particular surface water management issues and aim to reduce these risks. Increases in surface water run-off outside these areas also need to be identified and addressed.

B Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:

1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
2) rainwater infiltration to ground at or close to source
3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)

4) rainwater discharge direct to a watercourse (unless not appropriate)
5) controlled rainwater discharge to a surface water sewer or drain
6) controlled rainwater discharge to a combined sewer.

C Development proposals for impermeable surfacing should normally be resisted unless they can be shown to be unavoidable, including on small surfaces such as front gardens and driveways.

D Drainage should be designed and implemented in ways that promote multiple benefits including increased water use efficiency, improved water quality, and enhanced biodiversity, urban greening, amenity and recreation.

9.13.1 London is at particular risk from surface water flooding, mainly due to the large extent of impermeable surfaces. Lead Local Flood Authorities have responsibility for managing surface water drainage through the planning system, as well as ensuring that appropriate maintenance arrangements are put in place. **Local Flood Risk Management Strategies and Surface Water Management Plans** should ensure they address flooding from multiple sources including surface water, groundwater and small watercourses that occurs as a result of heavy rainfall.

9.13.2 Development proposals should aim to get as close to greenfield run-off rates[173] as possible depending on site conditions. The **well-established drainage hierarchy** set out in this policy helps to reduce the rate and volume of surface water run-off. Rainwater should be managed as close to the top of the hierarchy as possible. There should be a preference for green over grey features, and drainage by gravity over pumped systems. A blue roof is an attenuation tank at roof or podium level; the combination of a blue and green roof is particularly beneficial, as the attenuated water is used to irrigate the green roof.

9.13.3 For many sites, it may be appropriate to use **more than one form of drainage**, for example a proportion of rainwater can be managed by more sustainable methods, with residual rainwater managed lower down the hierarchy. In some cases, direct discharge into the watercourse is an appropriate approach, for example rainwater discharge into the tidal Thames or a dock. This should include suitable pollution prevention filtering measures, ideally by using soft engineering or green infrastructure. In addition, if direct discharge is to a watercourse where

173 The runoff that would occur from a site in undeveloped natural state.

the outfall is likely to be affected by tide-locking, suitable storage should be designed into the system. However, in other cases direct discharge will not be appropriate, for example discharge into a small stream at the headwaters of a catchment, which may cause flooding. This will need to be assessed on a case-by-case basis, taking into account the location, scale and quality of the discharge and the receiving watercourse. The maintenance of identified drainage measures should also be considered in development proposals.

9.13.4 The **London Sustainable Drainage Action Plan** complements this policy. It contains a series of actions to make the drainage system work in a more natural way with a particular emphasis on retrofitting.

Policy SI 14 Waterways – strategic role

A Development Plans and development proposals should address the strategic importance of London's network of linked waterways, including the River Thames, and should seek to maximise their multifunctional social, economic and environmental benefits.

B To ensure coordination and alignment at the interface between terrestrial and marine planning, Development Plans and development proposals should take account of the emerging Marine Spatial Plans prepared by the Marine Management Organisation.

C Boroughs are encouraged to work together on policies or other appropriate area-based strategies that address cross-boundary waterways issues.

D To reflect the distinctiveness of areas that specifically relate to the River Thames, relevant Development Plans should designate, and ensure the maintenance of, Thames Policy Areas (TPAs). Setting the boundary of TPAs should be done in consultation with neighbouring boroughs, including those across the river. Boroughs are encouraged to plan for TPAs through joint Thames Strategies.

E Joint Thames Strategies and other area-based joint waterways strategies should consider:

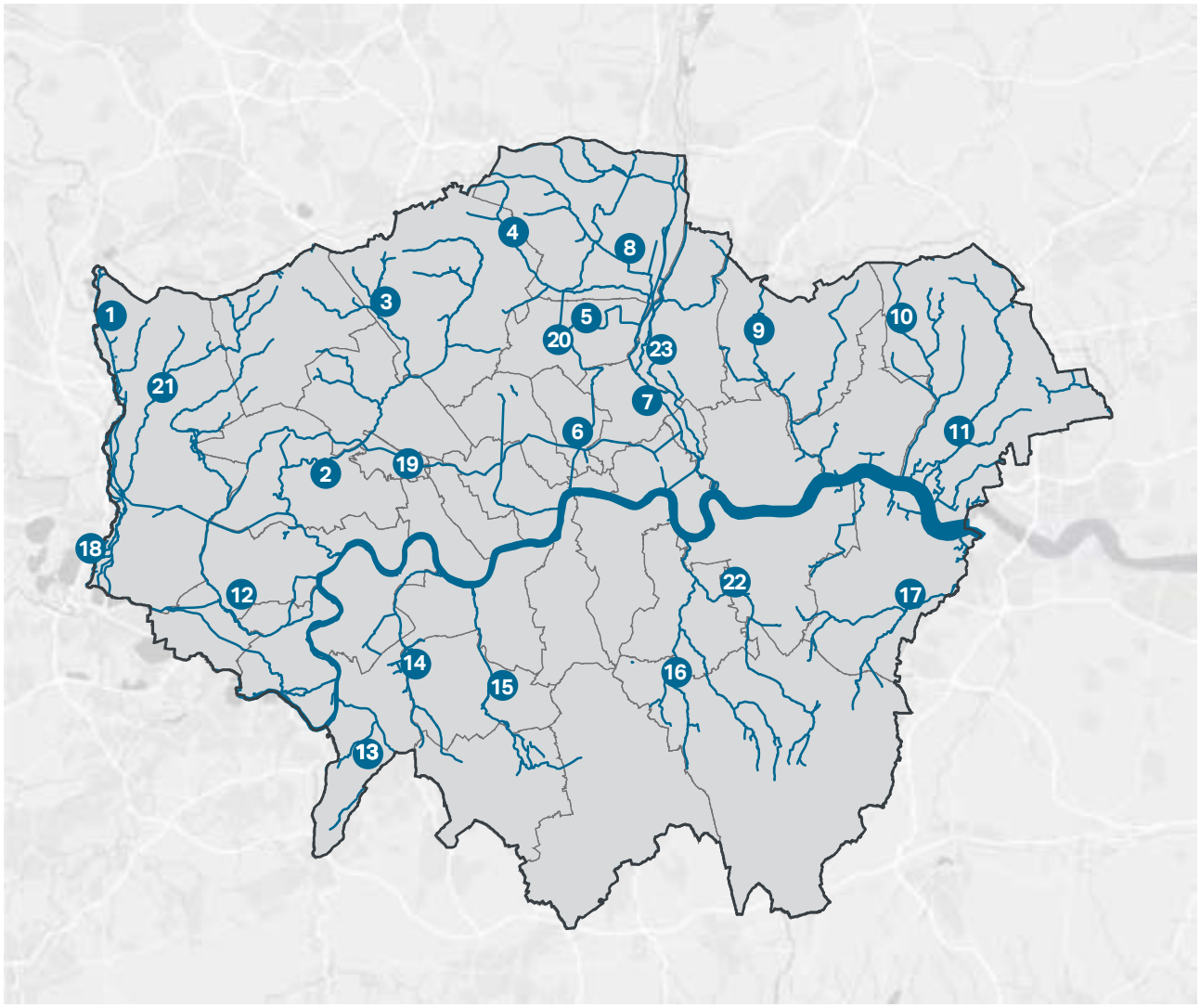
- the local character of the river/waterway
- water-based passenger and freight transport nodes
- development sites and regeneration opportunities

- opportunities for environmental/ecological and urban design improvements
- sites of ecological, historic, or archaeological importance
- sites, buildings, structures, landscapes and views of particular sensitivity or importance
- focal points of public activity
- inclusive public access
- strategic cultural value
- recreation and marine infrastructure
- river crossings and other structures
- indicative flood risk and water quality.

9.14.1 The term 'waterways' does not only refer to the River Thames, its tributary rivers and canals, but also to other water spaces including docks, lakes and reservoirs. **This network of linked waterways** – also known as the Blue Ribbon Network – is of strategic importance for London. Every London borough contains some waterways – 17 border the Thames and 15 contain canals (see Figure 9.6).

9.14.2 London's **waterways are multifunctional assets**. They provide transport and recreation corridors; green infrastructure; a series of diverse and important habitats; a unique backdrop for important heritage assets, including World Heritage Sites, landscapes, views, cultural and community activities; as well as drainage, flood and water management and urban cooling functions. As such, they provide environmental, economic and health and wellbeing benefits for Londoners and play a key role in place making. They also provide a home for Londoners living on boats. The waterways are protected and their water-related use – in particular safe and sustainable passenger and freight transport, tourism, cultural, community and recreational activities, as well as biodiversity – is promoted. Many of these functions are also supported by boroughs' local Riverside Strategies, the Environment Agency's Thames River Basin Management Plan and the Port of London Authority's Vision for the Thames. In addition to the Thames, other water spaces, and in particular canals, have a distinct value and significance for London and Londoners.

Figure 9.6 - London's Network of Waterways (the Blue Ribbon Network)



London's Waterways

● Waterways

Note: Not all tributaries shown

Source: OS Open Rivers

1. Grand Union Canal
2. River Brent
3. Silk Stream
4. Pymmes Brook
5. Moselle Brook
6. Regents Canal
7. Lee Navigation
8. Salmons Brook
9. River Roding
10. River Rom
11. Ingrenbourne R.
12. R. Crane
13. Hogsmill River
14. Beverley Brook
15. R. Wandle
16. Ravensbourne R.
17. River Cray
18. River Colne
19. Paddington Arm
20. New River
21. River Pinn
22. River Quaggy
23. River Lea

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9.14.3 The **Thames and London Waterways Forum**[174] has been established jointly by the GLA, TfL and the Port of London Authority to address waterways priorities set out in this Plan, the Mayor's Transport Strategy, the London Environment Strategy and the Port of London Authority's Vision for the Thames.

9.14.4 As London's waterways cross borough boundaries, it is important to plan for their management strategically. Boroughs are encouraged to work together to develop appropriate policies or **joint area-based waterways strategies** to maximise the multifunctional benefits waterways provide.

9.14.5 The River Thames is a strategically-important and iconic feature of London. It is a focal point for London's identity reflecting its heritage, natural and landscape values as well as cultural opportunities. Its character changes on its way through London. Where **Thames Policy Areas** (TPAs) are not defined in Development Plans, the boundaries defined in Figure 9.7 apply. Within TPAs, lower-height thresholds for referable planning applications apply (25m compared to 30m elsewhere).

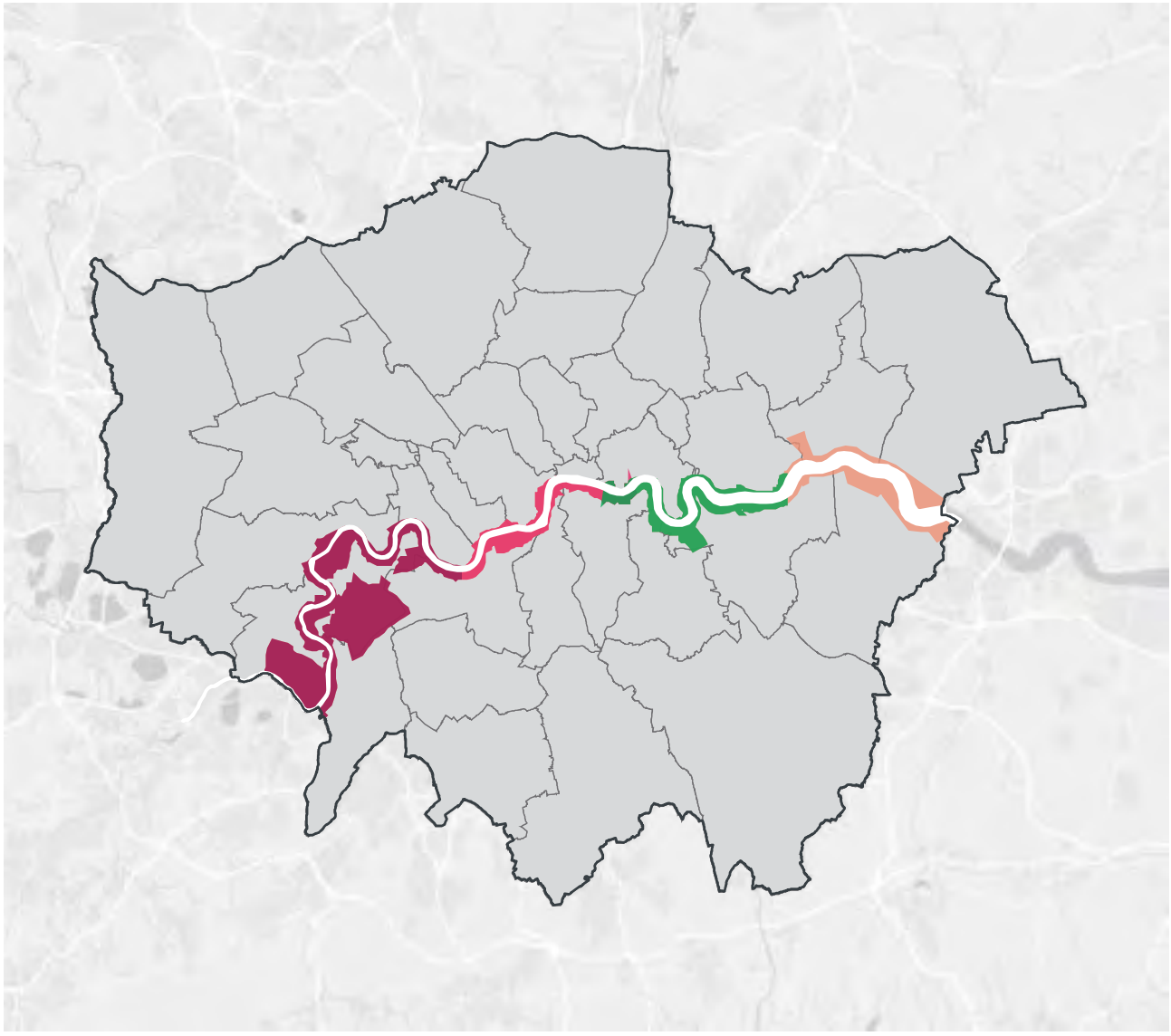
9.14.6 In **defining TPA boundaries**, boroughs should work collaboratively and have regard to the following:

- proximity to the Thames
- clear visual links between areas, buildings and the river
- specific geographical features such as main roads, railway lines and hedges
- the whole curtilage of properties or sites adjacent to the Thames
- areas and buildings whose functions relate or link to the Thames
- areas and buildings that have an historic, archaeological or cultural association with the Thames
- consistent boundaries with neighbouring authorities.

9.14.7 **Joint Thames Strategies** should specifically identify and address deficiencies in: water-based passenger, tourism and freight transport; sport, leisure and mooring facilities; marine support infrastructure; and inclusive access and safety provision. Thames Strategies are in place for Hampton–Kew, Kew-Chelsea and East (of Tower Bridge). No joint strategy currently exists for the central section of the Thames (Chelsea-Tower Bridge).

174 The Forum replaces the former London Waterways Commission and the River Concordat Group.

Figure 9.7 - Thames Policy Areas



Thames Policy Areas

- Hampton to Wandsworth
- Wandsworth to Bermondsey
- Bermondsey to Woolwich
- Woolwich to Crayford Ness

Source: Town and Country Planning (Mayor of London) Order, CLG, 2008

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9.14.8 The interface between terrestrial land-side and marine planning is at the centre of on-going coordination and engagement with the Marine Management Organisation (MMO). The **South East Inshore Marine Plan** is currently under development as part of a suite of Marine Spatial Plans[175] under the Marine Policy Statement. It covers the coastline from Felixstowe to Dover, including the tidal Thames. Development Plans and development proposals should take account of these plans.

Policy SI 15 Water transport

A Development proposals should protect and enhance existing passenger transport piers and their capacity. New piers will be supported in line with the Port of London Authority and Transport for London's Pier Strategy. The necessary provision of moorings, waste and sewage facilities for passenger vessels should be provided.

B Existing boatyard sites should be protected and development proposals to increase their capacity or range of services should be supported. Alternative use of a boatyard site should only be accepted if the facilities of the site are re-provided at a site with equivalent or enhanced facilities in Greater London. Proposals for a new strategic-scale boatyard site, at an appropriate site within London, will be supported.

C Development proposals to facilitate an increase in the amount of freight transported on London's waterways should be supported.

D The Mayor will keep the network of safeguarded wharves under regular review. Boroughs should protect existing locations and identify new locations for additional waterborne freight. There may be opportunities to consolidate wharves as part of strategic land use change, in particular, within Opportunity Areas; these will need to ensure that the existing and potential capacity and operability of the safeguarded wharves is retained and where possible expanded.

E Safeguarded wharves should only be used for waterborne freight-handling use, including consolidation centres. The redevelopment of safeguarded wharves for other land uses should only be accepted if the wharf is no longer

175 South East Inshore Marine Plan, Marine Management Organisation, https://www.gov.uk/government/collections/south-east-marine-plan

viable or capable of being made viable for waterborne freight-handling (see viability testing criteria). Temporary uses should only be allowed where they do not preclude the wharf being reused for waterborne freight-handling uses.

F Development proposals which increase the use of safeguarded wharves for waterborne freight transport, especially the reactivation of wharves which are currently not handling freight by water, will be supported.

G Development proposals on a safeguarded wharf that include the provision of a water freight use below or alongside another land use, must ensure that the water freight use is secured long-term, that the development is designed so that there are no conflicts of use and that the freight-handling capacity of the wharf is not reduced.

H Development proposals adjacent to or opposite safeguarded wharves (including vacant wharves) should be designed to minimise the potential for conflicts of use and disturbance, in line with the Agent of Change principle.

I Development proposals close to navigable waterways should maximise water transport for bulk materials during demolition and construction phases.

9.15.1 The Mayor will work with relevant partners to **increase the number of people travelling by river** on passenger and tourist services in line with the 20 million by 2035 patronage target outlined in the Port of London Authority (PLA) Thames Vision. This builds on significant passenger trip increases in recent years.

9.15.2 The PLA and Transport for London's **Pier Strategy** will promote extending river services to East London and its growth areas to encourage modal shift to the river. This will relieve road congestion and better integrate other forms of transport such as walking and cycling.

9.15.3 **Boatyards** are essential for servicing passenger and other vessels. Beyond the existing strategic-scale boatyard at Bay Wharf, Greenwich, research indicates that a further facility with the capability to repair and service large commercial boats is required. This is to avoid operators having to get their vessels serviced and repaired far beyond the Thames Estuary at the East Coast or even in the near continent.

9.15.4 Water transport is recognised as one of the most sustainable modes for **freight,** particularly for low-value, non-time-critical bulk movements. Water transport already reduces the number of lorry movements on London's roads and their associated negative impacts on Londoners. Greater use of water transport

has the ability to remove further lorries from London's roads. The Mayor will promote positive action to achieve this, including consolidation and the use of compulsory purchase powers where necessary, to bring inactive sites into use or to optimise the use of under-utilised sites. Appropriate access to the highway network and relevant freight-handling infrastructure such as jetties should also be protected.

9.15.5 Many of London's **river freight wharves** are located in areas of high demand and high value for other land uses. A network of wharves is protected from redevelopment by Safeguarding Directions. The Mayor will regularly review wharf safeguarding to ensure the changing need for waterborne freight is addressed. Where the transition of wharves from waterborne freight to other uses is acceptable, the re-use of those wharves for waterborne public transport use should be considered.

9.15.6 The **redevelopment of safeguarded wharves** should only be accepted if a wharf is no longer viable or capable of being made viable for waterborne freight-handling uses. The only exception to this would be for a strategic proposal of essential benefit for London, which cannot be planned for and delivered on any other site in Greater London.

9.15.7 Where a development proposal for a safeguarded wharf includes land uses unrelated to the handling of waterborne freight, the design of the development must not result in conflicts of use between wharf operations and the other land uses, nor constrain the **long-term use and viability** of the safeguarded wharf. The freight-handling capacity of the wharf must not be reduced and the reactivation of the wharf for waterborne freight handling must be delivered and secured for the long term in order for proposals to be deemed acceptable.

9.15.8 Factors to be considered in **assessing the viability of a safeguarded wharf** under Part E of this policy include:

- its size, shape, navigational access, road access, rail access (where possible), planning history, environmental impact and surrounding land use context
- its geographical location, in terms of proximity and connections to existing and potential market areas
- the existing and potential contribution it can make towards reducing road-based freight movements
- existing and potential relationships between the wharf and other freight-handling sites or land uses
- the location and availability of capacity at comparable alternative wharves, having regard to current and projected wharf capacity and market demands.

9.15.9 Appropriate **temporary uses on vacant safeguarded wharves** can ensure that investment in those wharves is maintained and negative perceptions are minimised. Temporary uses must maintain the existing freight-handling infrastructure to a specified standard and be limited by a temporary permission with a specific end date. Priority should be given to uses which require a waterside location. Temporary uses should not be permitted where a permanent freight-handling use is available.

9.15.10 Many wharves are in Opportunity Areas and/or are increasingly surrounded by different land uses that do not have an industrial or freight purpose. In line with the **Agent of Change principle**, new development next to or opposite wharves should utilise the site layout, building orientation, uses and materials to design out potential conflicts. Proposals for neighbouring development sites must ensure that appropriate highway access to wharves for commercial vehicles is maintained.

Policy SI 16 Waterways – use and enjoyment

A Development Plans and development proposals should protect and enhance waterway infrastructure.

B Development proposals should protect and enhance, where possible, water-related cultural, educational and community facilities and events, and new facilities should be supported and promoted, but should take into consideration the protection and other uses of the waterways.

C Development proposals that increase the provision of water sport centres and associated new infrastructure will be supported if a deficit in provision has been identified locally, and if the infrastructure does not negatively impact on navigation or on the protection of the waterway (see Policy SI 17 Protecting and enhancing London's waterways).

D Development proposals adjacent to waterways should protect and enhance, where possible, existing moorings. The provision of new moorings and/or required facilities (such as power, water and waste disposal) should be supported if they are:

1) off-line from main navigation routes, in basins or docks, unless there are negative impacts on navigation or on the protection of the waterway (see Policy SI 17 Protecting and enhancing London's waterways)

2) appropriately designed including the provision of wash mitigation, where necessary

3) managed in a way that respects the character of the waterways.

E Existing access points to waterways (including slipways and historic steps) and alongside waterways (including paths) should be protected and enhanced.

F Development proposals along waterways should protect and enhance inclusive public access to and along the waterway front and explore opportunities for new, extended, improved and inclusive access infrastructure to/from the waterways.

G Development proposals should improve and expand the Thames Path and the towpaths, improve alignment with the waterway where relevant, enhance them as walking routes, and provide better linkages to the transport network. This will require collaboration with relevant partners including London boroughs, the PLA, the Canal and River Trust, the Environment Agency and Natural England, as well as landowner, developer and community representatives. These paths will be public and not private spaces.

9.16.1 New development should utilise the waterways (also known as the Blue Ribbon Network) for transport purposes where possible, but also for active water-based leisure, and for informal waterside recreation or access. In order to make the maximum use of London's waterways a range of supporting infrastructure is required including jetties, moorings, slipways, steps and waterside paths (piers, wharves and boatyards are addressed in Policy SI 15 Water transport). **Waterways infrastructure** can directly enable water-based recreation and sports including rowing, canoeing and sailing. New water sports centres may bring such activities together, and development proposals should consider the affordability of these activities for Londoners. Waterways infrastructure can also facilitate the enjoyment of wildlife, landscapes, heritage and culture. There could be particular scope for new infrastructure within specific Opportunity Areas.

9.16.2 Moorings, moored boats, and continuous cruiser boats, as well as live-aboard boat dwellers are an integral part of the character of the waterways. There has been a significant increase in the number of boats on London's canals (from 2,000 sighted in 2010 to 5,000 in 2016), with a notable increase in central and eastern parts of London's network. There is a **deficit of short-stay and long-**

term moorings and required facilities (such as power, water and waste disposal) to meet this increase in demand, including for residential, leisure, visitor and commercial uses.

9.16.3 The Canal and River Trust has produced a London Mooring Strategy which provides an overview of the number of people living on boats on the canal network and identifies zones for potential **additional moorings**. Some community-based projects to create residential moorings may be considered as community-led housing (Part A4 of Policy H2 Small sites). In addition, a number of creative businesses such as artists' studios and post-production facilities are located on boats. Development proposals for residential moorings in particular should consider innovative solutions to address site-specific conditions, including wash, to enable the creation of new appropriate moorings without detrimentally impacting on navigation.

9.16.4 Historic steps and slipways to the Thames foreshore are vital for enabling access to/from activities and events. The **Thames Path and the towpaths** are particularly important in terms of providing safe access for a large number of Londoners along the waterways, facilitating their enjoyment of the river as well as providing health and wellbeing benefits as walking routes. Development proposals provide a significant opportunity to improve and expand the Thames Path and the towpaths, and to develop better linkages to the transport network. This requires prioritisation and collaboration between local, strategic and institutional partners. Borough River Strategies and Thames Strategies should support these opportunities.

9.16.5 Complementing development proposals for cultural facilities and events, the Mayor is producing, in partnership with the Port of London Authority, a case for a **Cultural Vision for the River Thames**. It aims to increase Londoners' engagement with the River for culture and leisure purposes, including night-time use and focusing on under-used areas. It also provides information on the heritage and importance of the River Thames and its banks to London's cultural life, especially in Opportunity Areas.

9.16.6 London's waterways are often an appropriate setting for public art and performance. People generally like to gather by the waterside and opportunities for this should be encouraged. The waterways are also a valuable **educational resource** with organisations promoting water-based educational programmes. This should also be encouraged.

Policy SI 17 Protecting and enhancing London's waterways

A Development Plans should support river restoration and biodiversity improvements.

B Development proposals that facilitate river restoration, including opportunities to open culverts, naturalise river channels, protect and improve the foreshore, floodplain, riparian and adjacent terrestrial habitats, water quality as well as heritage value, should be supported. Development proposals to impound and narrow waterways should be refused.

C Development proposals should support and improve the protection of the distinct open character and heritage of waterways and their settings.

D Development proposals into the waterways, including permanently moored vessels, should generally only be supported for water-related uses or to support enhancements of water-related uses.

E Development proposals along London's canal network, docks, other rivers and water space (such as reservoirs, lakes and ponds) should respect their local character, environment and biodiversity and should contribute to their accessibility and active water-related uses. Development Plans should identify opportunities for increasing local distinctiveness and recognise these water spaces as environmental, social and economic assets.

F On-shore power at water transport facilities should be considered at wharves and residential moorings to help reduce air pollution.

9.17.1 London's rivers have been significantly altered from their natural state. **River restoration** seeks to enhance their biodiversity, water quality and amenity value. The London Rivers Action Plan,[176] and the Catchment Partnerships[177] which support the Thames River Basin Management Plan, identify many opportunities for river restoration, as well as showing examples that have been implemented around London.

9.17.2 Generally, permanently-moored vessels and **development into waterways** should only be permitted for water-related uses. However, ancillary uses, such as bars and restaurants (for example ancillary to a passenger pier), can support

176 http://www.therrc.co.uk/lrap/lplan.pdf

177 https://www.thames21.org.uk/catchment-partnerships-in-london/

enhancements of water-related uses, as well as improve access to or along waterways and related public realm. Ancillary uses can also add to the diversity, vibrancy and regeneration of waterways, in particular in basins or docks. The specific siting of such facilities requires careful consideration so that navigation, hydrology, biodiversity and the character, access to, and use of waterways is not compromised. The waterways should not be used as an extension of developable land in London, nor should parts be a continuous line of moored craft.

9.17.3 **Pollution** from vessels should be minimised in terms of emissions from vessels and related land-side infrastructure. A baseline is being established jointly with key stakeholders including TfL and the PLA, along with appropriate measures and investment to minimise impact. This includes the requirement in this policy to consider providing on-shore power at wharves and moorings.

9.17.4 Development proposal should protect and promote the vitality, attractiveness and historical interest of London's **remaining dock areas**.

Chapter 10

Transport

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Policy T1 Strategic approach to transport

A Development Plans should support, and development proposals should facilitate:

1) the delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041

2) the proposed transport schemes set out in Table 10.1.

B All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated.

10.1.1 The integration of land use and transport, and the provision of a robust and resilient public transport network, are essential in realising and maximising growth and ensuring that different parts of the city are connected in a sustainable and efficient way. In order to help facilitate this, an integrated **strategic approach to transport** is needed, with an ambitious aim to reduce Londoners' dependency on cars in favour of increased walking, cycling and public transport use. Without this shift away from car use, which the policies in the Plan and the Mayor's Transport Strategy seek to deliver, London cannot continue to grow sustainably. To achieve sustainable growth, Development Plans should support walking, cycling and public transport through policies that support mode shift and the schemes in Table 10.1. Development proposals should facilitate sustainable travel through their location and design and by not precluding the implementation of the schemes in Table 10.1.

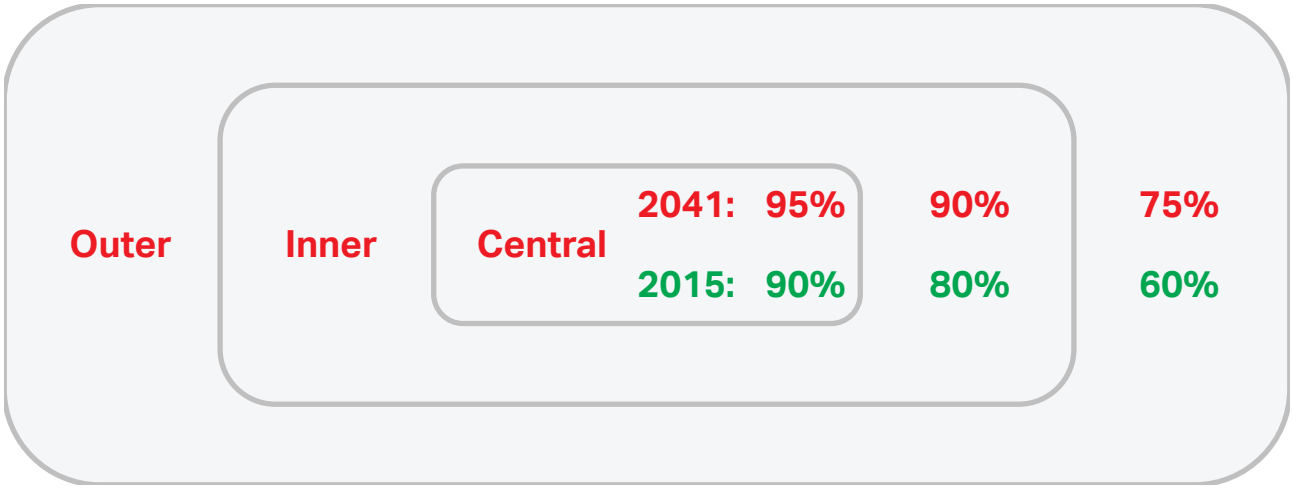
10.1.2 A shift from car use to more space-efficient travel also provides the only long-term **solution to the road congestion** challenges that threaten London's status as an efficient, well-functioning globally-competitive city. Reliable deliveries and servicing, and easy access to workplaces and key attractions are dependent on an increasingly-efficient transport network. Roads will continue to play a vital role in this, and greater priority needs to be given to making them more efficient for those activities that depend on them the most.

10.1.3 The Mayor will work with partners to minimise **freight trips** on the road network including through consolidation. He will promote safe, clean and efficient freight functions, including by road, rail, water and, for shorter distances, cycle.

10.1.4 **Rebalancing the transport system towards walking, cycling and public transport**, including ensuring high quality interchanges, will require sustained investment including improving street environments to make walking and cycling safer and more attractive, and providing more, better-quality public transport services to ensure that alternatives to the car are accessible, affordable and appealing. Achieving this is expected to result in different outcomes in different places, including modal splits in central, inner and outer London, as shown by Figure 10.1.

10.1.5 The **Mayor's Transport Strategy** provides more detail on the holistic approach that needs to be taken by all stakeholders to achieve these aims.

Figure 10.1 - Change in mode shares within central, inner and outer London expected to be required for a city-wide shift from 63 to 80 per cent share for walking, cycling and public transport



Policy T2 Healthy Streets

A Development proposals and Development Plans should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling.

B Development Plans should:

1) promote and demonstrate the application of the Mayor's Healthy Streets Approach to: improve health and reduce health inequalities; reduce

car dominance, ownership and use, road danger, severance, vehicle emissions and noise; increase walking, cycling and public transport use; improve street safety, comfort, convenience and amenity; and support these outcomes through sensitively designed freight facilities.

2) identify opportunities to improve the balance of space given to people to dwell, walk, cycle, and travel on public transport and in essential vehicles, so space is used more efficiently and streets are greener and more pleasant.

C In Opportunity Areas and other growth areas, new and improved walking, cycling and public transport networks should be planned at an early stage, with delivery phased appropriately to support mode shift towards active travel and public transport. Designs for new or enhanced streets must demonstrate how they deliver against the ten Healthy Streets Indicators.

D Development proposals should:

1) demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance

2) reduce the dominance of vehicles on London's streets whether stationary or moving

3) be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport.

10.2.1 **Streets** account for 80 per cent of London's public spaces. High quality streets are fundamental to the character and efficient functioning of the city, and play a fundamental role in moving people around safely, improving public realm and providing spaces for people to come together. Successful streets are inclusive and provide for the various requirements of their users.

10.2.2 This Plan supports the implementation of the Mayor's Transport Strategy which aims to deliver the infrastructure and public realm required to **significantly increase levels of walking, cycling and public transport use** throughout London. It aims to make the city more accessible, inclusive, safe and welcoming to all, so that every Londoner can be active every day, creating a healthier city for people from all backgrounds, ensuring inequalities are reduced.

10.2.3 The **Healthy Streets Approach** is an evidence-based approach to improve health and reduce health inequalities, which will help Londoners use cars less, and walk, cycle and use public transport more. It supports the delivery of the

Mayor's aim that by 2041 all Londoners will be able to undertake at least the 20 minutes of active travel each day needed to stay healthy. It also requires better management of freight so the impact of moving goods, carrying out servicing and supporting construction on London's streets is lessened. To apply the Healthy Streets Approach, changes are required at a strategic, network and street level.

10.2.4 Londoners' direct interaction with the Healthy Streets Approach will be through the streets they use every day. The Healthy Streets Approach aims to bring about **positive changes to the character and use of the city's streets**. High-quality, pleasant and attractive environments with clean air and enough space for dwelling, walking, cycling and public transport use must be provided. The dominance of vehicles should be reduced by using design to ensure slower vehicle speeds and safer driver behaviour, in line with the Mayor's Vision Zero ambition. Measures that improve Londoners' experience of individual streets, including greening, to encourage them to live active lives should be embedded within new development.

10.2.5 Street environments are also affected by how the city's streets are planned and used at a larger scale. The Mayor will work with partners to deliver appealing local street environments and to plan the capital at the network level so that it functions better. This should be supported through development which facilitates opportunities to improve route choice and capacity for walking and cycling as well as linking to bus networks. As part of this, the Mayor will work with the freight industry, its customers and London's boroughs to develop more creative solutions to **managing freight**. This will include considering different uses of London's streets across the day so that more street space is available for walking, cycling and leisure purposes, while ensuring shops and services continue to thrive.

10.2.6 London's rapid growth means people need to travel more efficiently to keep the city functioning and to maintain and improve the quality of life for residents. S**trategic-level planning** to ensure walking, cycling and public transport are the first choices for travel is the only way to achieve this. Developing new housing around stations and improving connections to town centres will mean more people have the things they need within walking or cycling distance, while destinations further afield will be easily accessible by public transport.

10.2.7 The Healthy Streets Approach uses **10 indicators** that reflect the experience of being on streets. These indicators are based on evidence of what is needed to create a healthy, inclusive environment in which people choose to walk, cycle and use public transport.

Figure 10.2 - The Ten Healthy Streets Indicators

Source: Lucy Saunders

10.2.8 The Mayor has a long-term vision to reduce road danger so that no deaths or serious injuries occur on London's streets. This **Vision Zero** will be achieved by designing and managing a street system that accommodates human error and ensures impact levels are not sufficient to cause fatal or serious injury. This will require reducing the dominance of motor vehicles and targeting danger at source.

Policy T3 Transport capacity, connectivity and safeguarding

A Development Plans should develop effective transport policies and projects to support the sustainable development of London and the Wider South East as well as to support better national and international public transport connections.

B Development Plans and development decisions should ensure the provision of sufficient and suitably-located land for the development of the current and expanded public and active transport system to serve London's needs, including by:

1) safeguarding existing land and buildings used for public transport, active travel or related support functions (unless alternative facilities are provided to the satisfaction of relevant strategic transport authorities and service providers that enable existing transport operations to be maintained and expanded if necessary)

2) identifying and safeguarding new sites/space and route alignments, as well as supporting infrastructure, to provide necessary strategic and local connectivity and capacity by public transport, walking and cycling, as well as to allow for sustainable deliveries and servicing

3) safeguarding London's walking and cycling networks

C Development Plans should appropriately safeguard the schemes outlined in Table 10.1. Development proposals should provide adequate protection for and/or suitable mitigation to allow the relevant schemes outlined in Table 10.1 to come forward. Those that do not, or which otherwise seek to remove vital transport functions or prevent necessary expansion of these, without suitable alternative provision being made to the satisfaction of transport authorities and service providers, should be refused.

D In Development Plans and development decisions, particular priority should be given to securing and supporting the delivery of upgrades to Underground lines, Crossrail 2, the Bakerloo line extension, river crossings and an eastwards extension of the Elizabeth line.

E Development proposals should support capacity, connectivity and other improvements to the bus network and ensure it can operate efficiently to, from and within developments, giving priority to buses and supporting infrastructure as needed.

Table 10.1 - Indicative list of transport schemes

Scheme	Cost*	Timescale
Healthy Streets and active travel		
Accessibility and inclusivity embedded in planning and design of Healthy Streets	low	2017-2041
Borough-led traffic reduction strategies (including workplace parking levies)	low	2017-2030
Cycle Hire network development	medium	2017-2041
Cycle network development (London-wide)	medium	2017-2030
Electric vehicle charging infrastructure	low	2017-2041
Freight consolidation programme	medium	2017-2041
Freight fleet emissions reductions	low	2017-2041
Highway decks to release land for housing (subject to further assessment)	high	2017-2030
Personal safety and security improvements on London's streets	low	2017-2041
Road pricing: existing schemes reviewed	low	2018-2020
Road pricing: next generation charging (subject to further assessment)	medium/high	2022-2041
Street trees increases	low	2017-2041
Sustainable drainage system improvements on railway land	low	2017-2041
Sustainable drainage system improvements on streets	low	2017-2041
Transformation of Parliament Square (subject to further assessment)	low	2020s
ULEZ in central and inner London	medium	2017-2021
LEZ strengthening London-wide for buses, coaches and HGVs	low	2020
Vision Zero (safer road user behaviours through education, engagement and enforcement, and improved vehicle safety including banning most dangerous HGVs/HGV Direct Vision)	low	2017-2041

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Scheme	Cost*	Timescale
Walk and cycle bridge between Battersea and Fulham	low	2020-2025
Walk and cycle river crossing: Nine Elms Pimlico Bridge	low	2020-2030
Walk and cycle river crossing between Rotherhithe and Canary Wharf	medium	2017-2030
Walk and cycle to school schemes	low	2017-2041
Walk and cycle to work and in local communities schemes	low	2017-2041
Walk and cycle wayfinding improvements	low	2017-2041
Walk London Network enhancements	low	2017-2041
Walking: improved local routes	low	2017-2030
Public Transport		
Bakerloo line extension	high	2020-2030
Beam Park station	low	2020-2030
Brighton Mainline Upgrade (higher frequencies)	high	2020-2030
Bus network: demand-responsive bus services (subject to further assessment)	medium	2017-2041
Bus network: enhancements to meet existing and future demand	medium	2017-2041
Bus network: Low Emissions Bus Zones (including bus priority)	low	2017-2030
Bus network: retrofitted and procuring cleaner buses	medium	2017-2041
Bus network: Silvertown Tunnel and associated bus services	medium	2017-2030
Bus network: wheelchair accessible bus stops	low	2017- 2041
Bus priority network and supporting infrastructure	medium	2017-2030
Bus transit pilots	low	2020-2041
Coach hub(s) upgrade and/or reprovision	medium	2020-2030

Scheme	Cost*	Timescale
Crossrail 2 (including West Anglia Main Line 4-tracking)	high	2020-2041
Crossrail 2 eastern branch (subject to further assessment)	high	2020-2041
Devolved suburban rail services to enable London suburban metro	high	2020-2030
DLR extension from Gallions Reach to Thamesmead (subject to further assessment)	medium	2017-2030
DLR station upgrade programme	low	2017-2041
DLR upgrades	high	2020-2041
Elizabeth line	high	2017-2021
Elizabeth line extension / rail enhancements east of Abbey Wood	medium/high	2020-2041
Heathrow Airport Southern Rail Access (required if airport expansion proceeds)	high	2020-2041
Heathrow Airport Western Rail Access (required if airport expansion proceeds)	high	2020-2041
HS2 and associated National Rail changes, including mitigation of impacts at street level	high	2020-2041
London Overground extension to Barking Riverside	medium	2017-2030
London Overground extension – West London Orbital	medium	2020-2030
London Overground extensions (subject to further assessment)	low	2030-2041
London Overground frequency upgrades (network-wide)	low	2017-2041
London Overground station upgrade programme	medium	2017-2041
London Overground strategic interchanges at Clapham Junction, Lewisham, Stratford and Old Oak Common and improved accessible interchange facilities across inner and outer London	low	2017-2030
London Underground air quality improvements	low	2017-2041

Scheme	Cost*	Timescale
London Underground station capacity programme	high	2017-2041
London Underground step-free stations and more accessible vehicles.	medium	2017-2041
London Underground upgrades – various (e.g. Deep Tube programme, Four Lines Modernisation programme etc)	high	2017-2041
National Rail capacity increases (other lines)	medium	2020-2030
National Rail freight upgrades, especially to enable freight to bypass London	low	2017-2041
National Rail station capacity and step-free access upgrades	high	2017-2041
Night Overground	low	2017-2020
Night-time services on the DLR	low	2020-2030
Night Tube extensions	low	2017-2030
Northern line extension	high	2017-2020
River crossing at Gallion's Reach and/or Belvedere (subject to further assessment)	medium	2030-2041
River crossings (public transport) in East London (subject to further assessment)	medium	2017-2041
River services extensions to the east (subject to further assessment)	low	2017-2030
Stratford to Angel Road enhancements	medium	2017-2020
Sutton Link	medium	2020-2030
Thameslink Programme	high	2017-2020
Tram upgrades	medium	2017-2041
Walk and cycle ferry between North Greenwich and Canary Wharf (subject to further assessment)	low	2017-2030

10.3.1 The Mayor recognises the vital importance of **working collaboratively** with a wide range of strategic partners to achieve good transport connectivity within London, and also between London and the Wider South East, the rest of the UK and a global network of other cities. Public transport is the most efficient means of moving people over distances that are too long to walk and cycle. London has one of the most extensive public transport networks in the world, with more than nine million trips made every day by bus, tram, tube, train and river. Use of the public transport system has increased by 65 per cent since 2000 largely because of enhanced services and an improved customer experience.

10.3.2 By 2041, London's transport networks will need to cater for over five million additional trips every day. There is therefore an urgent **need to improve public transport capacity, connectivity and quality of service** to ensure that it continues to cater for London's growth. Particular attention should be paid to how the complementary modes of walking, cycling and public transport interconnect at transport hubs and on streets across London.

10.3.3 Table 10.1 sets out both the transport schemes identified in the Mayor's Transport Strategy evidence base as being able to accommodate London's growth sustainably, and those that can achieve the wider economic, health and environmental objectives of this Plan. Additionally, a number of schemes are required to unlock growth (particularly after 2029),[178] which need to be appropriately protected so the Plan can be delivered.

10.3.4 When preparing Development Plans, local authorities should engage with TfL (and other relevant authorities) to appropriately plan for sites and routes, including those in Table 10.1, required to deliver an enhanced or expanded transport network.

10.3.5 Where a scheme in Table 10.1 could potentially be affected by a proposal, applicants should consult with TfL (and other relevant authorities) at an early stage to understand the latest status of the scheme (which may change over time) and identify impacts and whether any suitable mitigation is possible.

10.3.6 Development proposals should identify new sites or routes that are or will be required for local public transport and active travel connections, where appropriate. This should be set out in a **transport assessment or transport statement**. The way in which developments connect to local public transport and active travel networks plays a critical role in widening transport choice across London and therefore it may be necessary for proposals to facilitate the delivery of local connections through, for example, provision of land for walking and cycling routes or bus stops and supporting infrastructure.

178 Strategic Housing Land Availability Assessment, Mayor of London, Nov 2017

10.3.7 The **Elizabeth line** will increase capacity within central London by about ten per cent, relieving crowding on the Tube network and reducing journey times and congestion at stations. An eastward extension to the Elizabeth line could support thousands of new homes and jobs along the route in Bexley and north Kent. The extension could link to High Speed 1 at Ebbsfleet and boost rail connectivity throughout the Wider South East.

10.3.8 **Crossrail 2** is essential to London's future. This major new line will provide capacity for 270,000 people to travel into and across central London each morning and help to reduce crowding elsewhere on the network, as well as unlocking around 200,000 new homes and supporting up to 200,000 new jobs. Working with partners, the Mayor aims to open Crossrail 2 in the 2030s.

10.3.9 Extending the **Bakerloo line** is also necessary to provide extra capacity on the Tube in south east London. The scheme would enable capacity for up to for 65,000 passenger journeys during the morning and evening peaks and support more than 25,000 new homes and 5,000 jobs.

10.3.10 A key means of improving the efficiency of the transport network and unlocking growth potential is to **eliminate physical barriers to movement**, including in places where the Thames divides the communities on either side of it. Increasing the number and capacity of public transport links, as well as walking and cycling crossings, across the Thames will help to improve access to employment opportunities, support the development of thousands of new homes and enable healthier lifestyles.

10.3.11 The **bus network** also has an increasingly important role to play in the development of London, particularly delivering orbital connections. Therefore, the Mayor will work with partners to continue to develop a comprehensive network of frequent, high-quality bus routes.

Policy T4 Assessing and mitigating transport impacts

A Development Plans and development proposals should reflect and be integrated with current and planned transport access, capacity and connectivity.

B When required in accordance with national or local guidance,[179] transport assessments/statements should be submitted with development proposals to ensure that impacts on the capacity of the transport network (including impacts on pedestrians and the cycle network), at the local, network-wide and strategic level, are fully assessed. Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance.[180]

C Where appropriate, mitigation, either through direct provision of public transport, walking and cycling facilities and highways improvements or through financial contributions, will be required to address adverse transport impacts that are identified.

D Where the ability to absorb increased travel demand through active travel modes has been exhausted, existing public transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans and funding exist for an increase in capacity to cater for the increased demand, planning permission will be contingent on the provision of necessary public transport and active travel infrastructure.

E The cumulative impacts of development on public transport and the road network capacity including walking and cycling, as well as associated effects on public health, should be taken into account and mitigated.

F Development proposals should not increase road danger.

179 https://tfl.gov.uk/info-for/urban-planning-and-construction/transport-assessment-guide/transport-assessments

180 https://tfl.gov.uk/info-for/urban-planning-and-construction/guidance-for-applicants

10.4.1 It is important that the impacts and opportunities which arise as a result of development proposals are identified and assessed so that appropriate mitigations and opportunities are secured through the planning process. **Transport assessments** are therefore necessary to ensure that planning applications can be reviewed and assessed for their specific impacts and for their compatibility with the Healthy Streets Approach. Consideration of the potential impacts on internationally important wildlife sites should also be assessed, where required.

10.4.2 Transport assessments should include an assessment of demand arising from personal travel as well as from potential servicing and deliveries, taking into account the impacts both on all modes of transport including walking and cycling, and on streets as social spaces. For developments of strategic importance (development proposals that are referable to the Mayor), applicants are strongly advised to engage early with Transport for London through the **pre-application process** in order to ensure that all necessary elements are covered.[181]

10.4.3 It is important that development proposals **reduce the negative impact of development on the transport network** and reduce potentially harmful public health impacts. The biggest transport-related impact of development on public health in London is the extent to which it enables physical activity from walking, cycling and using public transport. The other main impacts on public health relate to air quality, road danger, noise, and severance. The phasing of development, and the use of travel plans and freight strategies, may help reduce negative impacts and bring about positive outcomes. Where adverse transport impacts have been identified from development proposals, mitigation will be sought in the form of financial contributions – to improve network service levels for example – or through directly providing infrastructure such as additional bus stops and street improvements.

10.4.4 New development that will give rise to significant numbers of new trips should be located in places well-connected by public transport, with capacity adequate to support the additional demand, or where there is a realistic prospect of additional access or capacity being provided in time to meet the new demand. The ability to absorb increased travel demand through active travel modes must also be considered. Funded proposals by applicants to improve transport access, capacity or connectivity are encouraged.

181 https://tfl.gov.uk/info-for urban-planning-and-construction/

Policy T5 Cycling

A Development Plans and development proposals should help remove barriers to cycling and create a healthy environment in which people choose to cycle. This will be achieved through:

1) supporting the delivery of a London-wide network of cycle routes, with new routes and improved infrastructure
2) securing the provision of appropriate levels of cycle parking which should be fit for purpose, secure and well-located. Developments should provide cycle parking at least in accordance with the minimum standards set out in Table 10.2 and Figure 10.3, ensuring that a minimum of two short-stay and two long-stay cycle parking spaces are provided where the application of the minimum standards would result in a lower provision.

B Cycle parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards.[182] Development proposals should demonstrate how cycle parking facilities will cater for larger cycles, including adapted cycles for disabled people.

C Development Plans requiring more generous provision of cycle parking based on local evidence will be supported.

D Where it is not possible to provide suitable short-stay cycle parking off the public highway, the borough should work with stakeholders to identify an appropriate on-street location for the required provision. This may mean the reallocation of space from other uses such as on-street car parking. Alternatively, in town centres, adding the required provision to general town centre cycle parking is also acceptable. In such cases, a commuted sum should be paid to the local authority to secure provision.

E Where it is not possible to provide adequate cycle parking within residential developments, boroughs must work with developers to propose alternative solutions which meet the objectives of the standards. These may include options such as providing spaces in secure, conveniently-located, on-street parking facilities such as bicycle hangers.

182 London Cycling Design Standards, Transport for London, https://tfl.gov.uk/corporate/publications-and-reports/streets-toolkit#on-this-page-2

F Where the use class of a development is not fixed at the point of application, the highest potential applicable cycle parking standard should be applied.

Table 10.2 - Minimum cycle parking standards*

Use Class		Long-stay (e.g. for residents or employees)	Short-stay (e.g. for visitors or customers)
A1	food retail above 100 sqm	1 space per 175 sqm gross external area (GEA)	areas with higher cycle parking standards (see Figure 10.3): • first 750 sqm: 1 space per 20 sqm; • thereafter: 1 space per 150 sqm (GEA) rest of London: • first 750 sqm: 1 space per 40 sqm; • thereafter: 1 space per 300 sqm (GEA)
	non-food retail above 100 sqm	• first 1000 sqm: 1 space per 250 sqm • thereafter: 1 space per 1000 sqm (GEA)	areas with higher cycle parking standards (see Figure 10.3): • first 1000 sqm: 1 space per 60 sqm; • thereafter: 1 space per 500 sqm (GEA) rest of London: • first 1000 sqm: 1 space per 125 sqm; • thereafter: 1 space per 1000 sqm (GEA)

Use Class		Long-stay (e.g. for residents or employees)	Short-stay (e.g. for visitors or customers)
A2-A5	financial / professional services; cafes & restaurants; drinking establishments; take-aways above 100 sqm	1 space per 175 sqm (GEA)	areas with higher cycle parking standards (see Figure 10.3): • 1 space per 20 sqm (GEA) rest of London: • 1 space per 40 sqm (GEA)
B1	business offices	• areas with higher cycle parking standards (see Figure 10.3): 1 space per 75 sqm • rest of London: 1 space per 150 sqm (GEA)	• first 5,000 sqm: 1 space per 500 sqm • thereafter: 1 space per 5,000 sqm (GEA)
	light industry and research and development	1 space per 250 sqm (GEA)	1 space per 1000 sqm (GEA)
B2-B8	general industrial, storage or distribution	1 space per 500 sqm (GEA)	1 space per 1000 sqm (GEA)
C1	hotels (bars, restaurants, gyms etc. open to the public should be considered individually under relevant standards)	1 space per 20 bedrooms	1 space per 50 bedrooms
C2	Hospitals	1 space per 5 FTE staff	1 space per 30 FTE staff
	care homes / secure accommodation	1 space per 5 FTE staff	1 space per 20 bedrooms

Use Class		Long-stay (e.g. for residents or employees)	Short-stay (e.g. for visitors or customers)
C3-C4	dwellings (all)	• 1 space per studio or 1 person 1 bedroom dwelling • 1.5 spaces per 2 person 1 bedroom dwelling • 2 spaces per all other dwellings	• 5 to 40 dwellings: 2 spaces • Thereafter: 1 space per 40 dwellings
D1	Nurseries	1 space per 8 FTE staff + 1 space per 8 students	
	primary schools / secondary schools/ sixth form colleges	1 space per 8 FTE staff + 1 space per 8 students	1 space per 100 students
	universities and colleges	1 space per 4 FTE staff + 1 space per 20 FTE students	1 space per 7 FTE students
	health centre, including dentists	1 space per 5 FTE staff	1 space per 3 FTE staff
	other (e.g. library, church, etc.)	1 space per 8 FTE staff	1 space per 100 sqm (GEA)
D2	sports (e.g. sports hall, swimming, gymnasium, etc.)	1 space per 8 FTE staff	1 space per 100 sqm (GEA)
	other (e.g. cinema, bingo, etc.)	1 space per 8 FTE staff	1 per 30 seats
Student accommodation		0.75 spaces per bedroom	1 space per 40 bedrooms
Specialist older persons housing**		1 space per 10 bedrooms	1 space per 40 bedrooms
Sui generis		As per most relevant other standard e.g. casino and theatre = D2, room in large-scale purpose-built shared living = studio C3	

Use Class	Long-stay (e.g. for residents or employees)	Short-stay (e.g. for visitors or customers)
Stations	To be considered on a case by case basis through liaison with TfL. The level of provision should take into account the type and location of the station, current and future rail and cycle demand and the potential for journey stages to and from the station to be made by cycle. A step-change in provision is expected, especially at termini, in order to meet the Mayor's mode share target.	

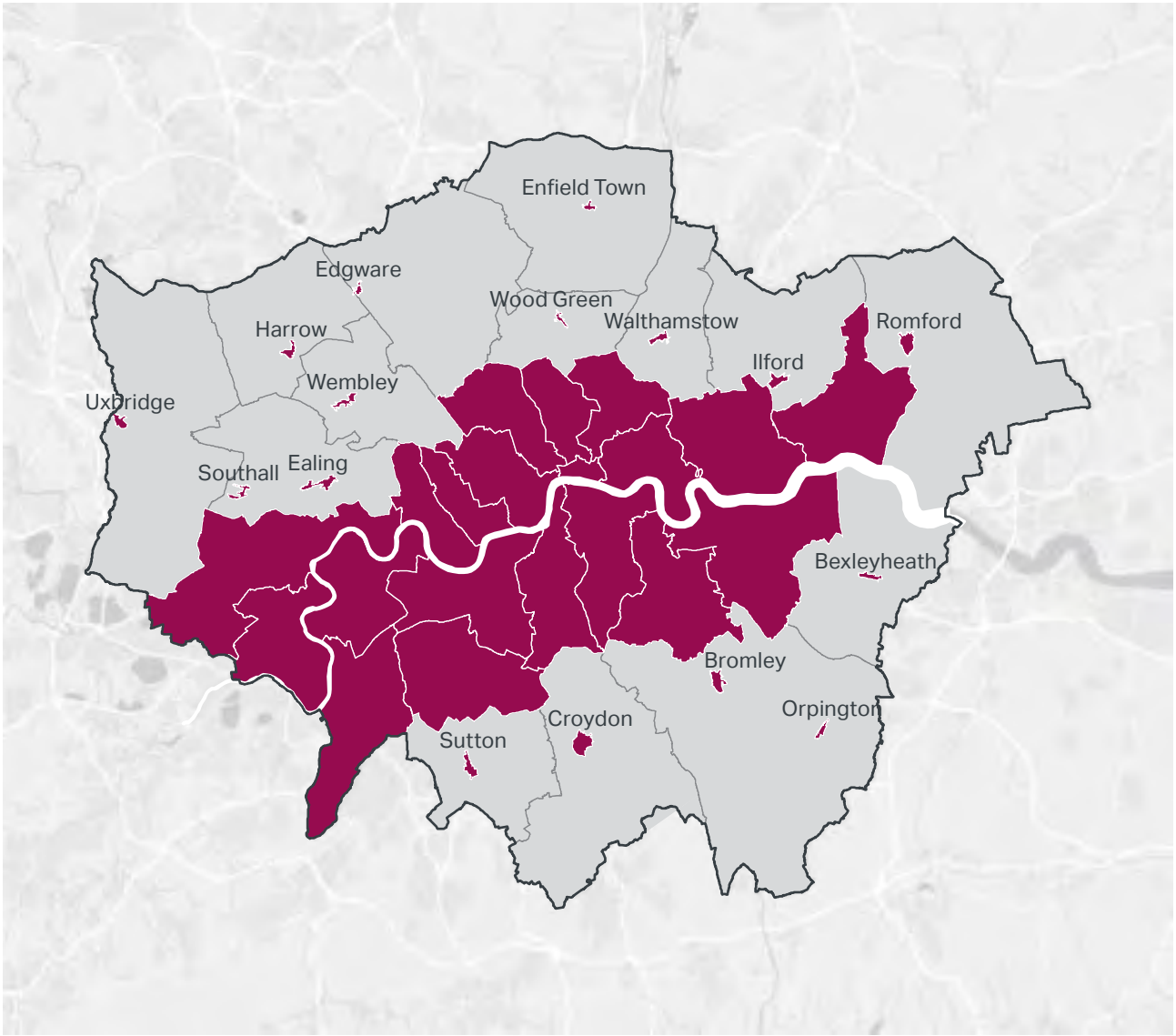
* The minimum of two short-stay and two long-stay cycle parking spaces does not apply to A1-A5 developments of less than 100 sqm or to short-stay parking at residential developments of fewer than 5 dwellings.

** as defined by Policy H13 Specialist older persons housing. The Mayor will continue to gather evidence with a view to revising and updating this standard. Where appropriate, proposals should provide higher provision than the above standard where it is needed.

10.5.1 Development should **facilitate and encourage cycling**, and reduce car dependency and the health problems it creates. Cycling is a space-efficient mode compared to cars so making streets attractive for cycling can bring benefits to all road users while also improving the experience of living, working and spending time in the city. The Mayor will deliver, in partnership with boroughs, a new London-wide network of strategic cycling routes which will transform the convenience and experience of cycling for all types of trips.

10.5.2 For some types of trip, the **level of cycling is dependent on the location of the destination**. For the boroughs identified on Figure 10.3 (the central and inner London boroughs, plus Richmond, Merton, Kingston, Hounslow and Barking & Dagenham), around 3.5 per cent of trips arriving at workplace, leisure and shopping destinations are made by cycle. This compares to around 1.5 per cent elsewhere in London.

Figure 10.3 - Boroughs and town centres where higher minimum cycle parking standards apply



Areas where higher minimum cycle parking standards apply

see table 10.2

● Higher minimum cycle parking standards

Source: Transport for London (TfL)

10.5.3 The **minimum standards** for short-stay (for visitor / customer) cycle parking for Class A Uses and long-stay cycle parking (for employees) for office use in the locations identified on Figure 10.3 are thus set at twice the level as elsewhere – though the Mayor will support other boroughs adopting these higher standards borough-wide or for defined areas through their Development Plan Documents (such as existing Mini-Hollands, and Liveable Neighbourhoods or Opportunity Areas).

10.5.4 The locations where higher standards apply also include outer London Metropolitan and Major town centres where TfL has identified high potential for a switch to cycling. **Higher provision** in these locations is required to enable this increased level of cycling and contribute to Healthy Streets in town centres.

10.5.5 Cycle parking and cycle parking areas should allow easy access and provide **facilities for disabled cyclists**. This could include identifying and reserving specific spaces which provide step-free cycle parking and opportunities for people using adapted cycles, as well as providing facilities for other non-standard cycles such as tricycles, cargo bicycles and bicycles with trailers, for both long-stay and short-stay parking.

10.5.6 At **university campuses and schools**, cycle parking should be located in close proximity to the entrances of all buildings to provide convenience and choice for users. For nurseries and primary schools, an appropriate proportion of long-stay cycle parking spaces for students may be met through scooter parking. Nurseries should meet the standard through an appropriate mix of long and short-stay parking to cater for staff, those dropping off children, and children's cycle and scooter parking.

10.5.7 Staff cycle parking should be suitable for long-stay parking in terms of location, security and protection from the elements and inclement weather. In places of employment, **supporting facilities** are recommended, including changing rooms, maintenance facilities, lockers (at least two per three long-stay spaces are recommended) and shower facilities (at least one per ten long-stay spaces is recommended). Accessible facilities for disabled cyclists should also be provided.

10.5.8 **Short-stay cycle parking** must be available for shoppers, customers, messengers and other visitors, and must be convenient and readily accessible. It must have step-free access and be located within 15 metres of the main entrance wherever possible.

10.5.9 The provision of **space for folding bicycles** is generally not an acceptable alternative to conventional cycle parking. An exception may be applied in office developments in the CAZ, where the location of rail termini lends itself to greater levels of folding bicycle use. This should only be applied for up to 10 per cent of

long-stay spaces and where the full provision could not otherwise be provided. Provision of cycle hire caters for a different market of cyclist and also should not be accepted in lieu of cycle parking.

10.5.10 Where standards are based on floorspace, these have been calculated on the basis of the level of demand and potential growth in relation to Gross External Area (GEA). This calculation already takes into account that not all of the area covered by GEA will generate cycling trips.

Policy T6 Car parking

A Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.

B Car-free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking ('car-lite'). Car-free development has no general parking but should still provide disabled persons parking in line with Part E of this policy.

C An absence of local on-street parking controls should not be a barrier to new development, and boroughs should look to implement these controls wherever necessary to allow existing residents to maintain safe and efficient use of their streets.

D The maximum car parking standards set out in Policy T6 .1 Residential parking to Policy T6 .5 Non-residential disabled persons parking should be applied to development proposals and used to set local standards within Development Plans.

E Appropriate disabled persons parking for Blue Badge holders should be provided as set out in Policy T6 .1 Residential parking to Policy T6 .5 Non-residential disabled persons parking.

F Where provided, each motorcycle parking space should count towards the maximum for car parking spaces at all use classes.

G Where car parking is provided in new developments, provision should be made for infrastructure for electric or other Ultra-Low Emission vehicles in line with Policy T6 .1 Residential parking, Policy T6 .2 Office Parking, Policy T6 .3 Retail parking, and Policy T6 .4 Hotel and leisure uses parking.

All operational parking should make this provision, including offering rapid charging. New or re-provided petrol filling stations should provide rapid charging hubs and/or hydrogen refuelling facilities.

H Where electric vehicle charging points are provided on-street, physical infrastructure should not negatively affect pedestrian amenity and should ideally be located off the footway. Where charging points are located on the footway, it must remain accessible to all those using it including disabled people.

I Adequate provision should be made for efficient deliveries and servicing and emergency access.

J A Parking Design and Management Plan should be submitted alongside all applications which include car parking provision, indicating how the car parking will be designed and managed, with reference to Transport for London guidance on parking management and parking design.

K Boroughs that have adopted or wish to adopt more restrictive general or operational parking policies are supported, including borough-wide or other area-based car-free policies. Outer London boroughs wishing to adopt minimum residential parking standards through a Development Plan Document (within the maximum standards set out in Policy T6 .1 Residential parking) must only do so for parts of London that are PTAL 0-1. Inner London boroughs should not adopt minimum standards. Minimum standards are not appropriate for non-residential use classes in any part of London.

L Where sites are redeveloped, parking provision should reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy. Some flexibility may be applied where retail sites are redeveloped outside of town centres in areas which are not well served by public transport, particularly in outer London.

10.6.1 To manage London's road network and ensure that people and businesses can move about the city as the population grows and housing delivery increases significantly, new parking provision must be carefully controlled. The **dominance of vehicles on streets** is a significant barrier to walking and cycling, reduces the appeal of streets as public places and has an impact on the reliability and journey times of bus services. Reduced parking provision can facilitate higher-density development and support the creation of mixed and vibrant places that are designed for people rather than vehicles. As the population grows, a

fixed road network cannot absorb the additional cars that would result from a continuation of current levels of car ownership and use. Implementing the parking standards in this Plan is therefore an essential measure to support the delivery of new housing across the city. In some areas, it will be necessary for boroughs to introduce additional parking controls to ensure new development is sustainable and existing residents can continue to park safely and efficiently.

10.6.2 **Maximum standards for car parking** take account of PTAL as well as London Plan spatial designations and use classes. Developments in town centres generally have good access to a range of services within walking distance, and so car-free lifestyles are a realistic option for many people living there. Opportunity Areas offer the potential to coordinate new transport investment with development proposals to embed car-free or car-lite lifestyles from the outset. Differences in car use and ownership between inner and outer London are recognised, with trip distances and trip patterns sometimes making walking and cycling difficult in outer London.

10.6.3 The approach to parking in **outer London Opportunity Areas** should be set out in Opportunity Area Planning Frameworks, complementing the OA mode share target.[183] Through OAPFs, parking provision can vary within an outer London OA to reflect PTAL, but the overall quantum must not exceed the relevant maximum standard.

10.6.4 When **calculating general parking provision within the relevant standards**, the starting point for discussions should be the highest existing or planned PTAL at the site, although consideration should be given to local circumstances and the quality of public transport provision, as well as conditions for walking and cycling. Disabled persons parking provision for Blue Badge holders, car club spaces and provision for electric or other Ultra-Low Emission vehicles should be included within the maximum provision and not in addition to it.

10.6.5 **Where no standard is provided**, the level of parking should be determined on a case-by-case basis taking account of Policy T6 Car parking, current and future PTAL and wider measures of public transport, walking and cycling connectivity.

10.6.6 The quantum of any parking provision, as well as its design and implementation, should have regard to the need to promote active modes and public transport use. Provision should be **flexible for different users and adaptable** to future re-purposing in the context of changing requirements, including technological change. Alternative uses could include: seating, places for people to stop and spend time, areas of planting or additional cycle parking.

183 As required by the Mayor's Transport Strategy

10.6.7 The general principles outlined in paragraphs 10.6.4 to 10.6.6 above apply to the parking standards set for residential, office (and Use Classes B2 and B8), retail, and hotel and leisure uses under Policy T6 .1 Residential parking to Policy T6 .5 Non-residential disabled persons parking. In relation to Policy T6 Car parking Part L, where industrial sites are redeveloped parking will be considered on a case by case basis as set out in paragraph 10.6.18.

10.6.8 Surface-level car parking should be **permeable** in accordance with Policy Policy SI 13 Sustainable drainage.

Policy T6.1 Residential parking

A New residential development should not exceed the maximum parking standards set out in Table 10.3. These standards are a hierarchy with the more restrictive standard applying when a site falls into more than one category.

B Parking spaces within communal car parking facilities (including basements) should be leased rather than sold.

C All residential car parking spaces must provide infrastructure for electric or Ultra-Low Emission vehicles. At least 20 per cent of spaces should have active charging facilities, with passive provision for all remaining spaces.

D Outside of the CAZ, and to cater for infrequent trips, car club spaces may be considered appropriate in lieu of private parking. Any car club spaces should have active charging facilities.

E Large-scale purpose-built shared living, student accommodation and other sui generis residential uses should be car-free.

F The provision of car parking should not be a reason for reducing the level of affordable housing in a proposed development.

G Disabled persons parking should be provided for new residential developments. Residential development proposals delivering ten or more units must, as a minimum:

1) ensure that for three per cent of dwellings, at least one designated disabled persons parking bay per dwelling is available from the outset

2) demonstrate as part of the Parking Design and Management Plan, how an additional seven per cent of dwellings could be provided with one designated disabled persons parking space per dwelling in future upon

request as soon as existing provision is insufficient. This should be secured at the planning stage.

H All disabled persons parking bays associated with residential development must:

1) be for residents' use only (whether M4(2) or M4(3) dwellings)
2) not be allocated to specific dwellings, unless provided within the curtilage of the dwelling
3) be funded by the payment of a commuted sum by the applicant, if provided on-street (this includes a requirement to fund provision of electric vehicle charging infrastructure)
4) count towards the maximum parking provision for the development
5) be designed in accordance with the design guidance in BS8300vol.1
6) be located to minimise the distance between disabled persons parking bays and the dwelling or the relevant block entrance or lift core, and the route should be preferably level or where this is not possible, should be gently sloping (1:60-1:20) on a suitable firm ground surface.

Table 10.3 - Maximum residential parking standards

Location	Number of beds	Maximum parking provision*
Central Activities Zone Inner London Opportunity Areas Metropolitan and Major Town Centres All areas of PTAL 5 – 6 Inner London PTAL 4	All	Car free~
Inner London PTAL 3	All	Up to 0.25 spaces per dwelling
Inner London PTAL 2 Outer London Opportunity Areas	All	Up to 0.5 spaces per dwelling
Inner London PTAL 0 – 1	All	Up to 0.75 spaces per dwelling

Location	Number of beds	Maximum parking provision*
Outer London PTAL 4	1 – 2	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 4	3+	Up to 0.5 - 0.75 spaces per dwelling+
Outer London PTAL 2 – 3	1 – 2	Up to 0.75 spaces per dwelling
Outer London PTAL 2 – 3	3+	Up to 1 space per dwelling
Outer London PTAL 0 – 1	1 – 2	Up to 1.5 space per dwelling
Outer London PTAL 0 – 1	3+	Up to 1.5 spaces per dwelling^

* Where Development Plans specify lower local maximum standards for general or operational parking, these should be followed

~ With the exception of disabled persons parking, see Part G Policy T6 .1 Residential parking

+ When considering development proposals that are higher density or in more accessible locations, the lower standard shown here should be applied as a maximum

^ Boroughs should consider standards that allow for higher levels of provision where there is clear evidence that this would support additional family housing

10.6.9 The Mayor's ambition is for London to be a city where it is easy for all disabled people to live and travel in London. Disabled people should have a genuine choice of housing that they can afford within a local environment that meets their needs. This means taking a holistic approach to creating streets, local services and a public transport network that caters for disabled people and people with long-term health conditions. It is recognised that some disabled people will rely on car travel more than others, whether as a passenger or a driver. This means that to ensure genuine housing choice, **disabled persons' parking** should be provided for new residential developments. In some circumstances this may include visitor parking for disabled residents who might have regular visitors such as carers. Any such parking should be marked out as such and restricted only for these users from the outset.

10.6.10 Where general parking is provided on-site, any disabled persons parking bays not provided at the outset should be identified on plan. For car-free development, how provision will be made, including whether bays are provided on-site or on-street, should be clearly set out and justified, in line with relevant guidance and local policies. All provision should be fully assessed and demonstrably consistent with the **inclusive design principles** of Policy D5 Inclusive design, and GG1 Building strong and inclusive communities; further information on how disabled persons parking should be approached and delivered will be set out in guidance.

10.6.11 Through **Parking Design and Management Plans**, applicants should provide details of how initial and future provision of disabled persons parking spaces will be made, managed and enforced. They should show where these spaces will be located and demonstrate how their availability will be made clear to residents prior to occupation to inform their housing decision. Where a bay is being marked up for a particular resident, this should be done prior to occupation. Details should also be provided of how existing or future residents would request a bay, how quickly it would be created and what, if any, provision of visitor parking for disabled residents is available. In car-free developments, at no time should any on-site space marked on plan for future disabled persons parking be used for general parking.

10.6.12 In implementing this policy, if three per cent of a scheme is less than one space, this should be rounded up to one.

10.6.13 Given the aims of this Plan and the Mayor's Transport Strategy in reducing car use and the priority given to affordable housing provision, to ensure the provision of parking does not impact on the level of affordable housing that is viable, the inclusion of parking provision (excluding disabled persons parking), even where consistent with the standards set out above, **should not result in a reduction to affordable housing**.

10.6.14 **Parking spaces should be leased rather than sold** to ensure the land they take up is used as efficiently as possible over the life of a development. This includes ensuring that disabled persons parking bays can be used by those who need them at any given time and ensuring enlarged bays are available to be converted to disabled persons parking bays as required. Leasing allows for spaces with active charging points to serve electric or other Ultra-Low Emission vehicles, and can more easily support passive provision becoming active. Leasing also supports parking provision to be adaptable to future re-purposing, such as following changes to transport technology or services. Leases should be short enough to allow for sufficient flexibility in parking allocation to reflect changing circumstances.

10.6.15 **Car clubs** count towards the maximum parking permitted because they share many of the negative impacts of privately-owned cars. However, in some areas, car club spaces can help support lower parking provision and car-lite lifestyles by enabling multiple households to make infrequent trips by car.

Policy T6.2 Office Parking

A The maximum parking standards set out in Table 10.4 should be applied to new office development.

B In well-connected parts of outer London, including town centres, in close proximity to stations and in Opportunity Areas, office developments are encouraged to be car-free.

C Car parking provision at Use Classes Order B2 (general industrial) and B8 (storage or distribution) employment uses should have regard to these office parking standards and take account of the significantly lower employment density in such developments. A degree of flexibility may also be applied to reflect different trip-generating characteristics. In these cases, appropriate provision for electric or other Ultra-Low Emission vehicles should be made.

D Outer London boroughs wishing to adopt more generous standards are required to do so through an evidence-based policy in their Development Plan that identifies the parts of the borough in which the higher standards will be applied, and justifies those standards, including:

1) the provision and operation of (existing and future) public transport, especially in relation to bus reliability
2) the impact on the ability to deliver Healthy Streets, promote active travel and deliver mode shift
3) the impact on congestion and air quality locally and on neighbouring boroughs and districts outside London as appropriate
4) a commitment to increase or enhance publicly-available cycle parking
5) a requirement (via Travel Plans) to reduce car parking provision over time and convert it to other uses.

E Boroughs should not seek to adopt more generous standards borough-wide.

F Operational parking requirements should be considered on a case-by-case basis. All operational parking must provide infrastructure for electric or other

Ultra-Low Emission vehicles, including active charging points for all taxi spaces.

G A Parking Design and Management Plan should be submitted alongside all applications which include car parking provision.

H Disabled persons parking should be provided as set out in Policy T6 .5 Non-residential disabled persons parking.

Table 10.4 - Maximum office parking standards

Location	Maximum parking provision*
Central Activities Zone and inner London	Car free^
Outer London Opportunity Areas	Up to 1 space per 600 sq.m. gross internal area (GIA)
Outer London	Up to 1 space per 100 sq.m. (GIA)
Outer London locations identified through a DPD where more generous standards apply	Up to 1 space per 50 sq.m. (GIA)

* Where Development Plans specify lower local maximum standards for general or operational parking, these should be followed

^ With the exception of disabled persons parking, see Policy T6 .5 Non-residential disabled persons parking

10.6.16 Parking associated with offices has the potential to generate car travel in the morning and evening peaks when streets are the most congested. In many parts of London this means that bus travel is less reliable and active travel is less attractive. **Office parking** also has the potential to induce habitual car travel even where alternatives to the car exist, impacting on the ability for the Mayor to meet his mode share target for 80 per cent of trips to be made by public transport and active travel. For these reasons, offices should be located in places that are accessible by public transport, walking and cycling and car parking provision should be kept to a minimum.

10.6.17 The **management of parking** that is provided should ensure that employees and visitors are encouraged to use non-car modes as much as possible. It should also ensure that the operation of car and cycle parking and the public

realm does not prioritise vehicles over people and that under-utilised parking is converted to other uses such as amenity space or green infrastructure.

10.6.18 For **industrial sites**, the role of parking – both for workers and operational vehicles – varies considerably depending on location and the type of development proposed. Provision should therefore be determined on a case-by-case basis, with the starting point for commuter parking being the standards in Table 10.4 with differences in employment densities[184] taken into account. Flexibility may then be applied in light of site-specific circumstances as above. Operational parking should be considered and justified separately.

Policy T6.3 Retail parking

A The maximum parking standards set out in Table 10.5 should be applied to new retail development, unless alternative standards have been implemented in a Development Plan through the application of Policy G below. New retail development should avoid being car-dependent and should follow a town centre first approach, as set out in Policy SD7 Town centres: development principles and Development Plan Documents.

B To make the most efficient use of land, the starting point for assessing the need for parking provision at all new retail development should be the use of existing public provision, such as town centre parking.

C Opportunities should be sought to make the most of all existing parking, for example using office parking for retail outside working hours. Where shared parking is identified, overall provision should be reduced to make better use of land and more intensively use the parking that remains.

D If on-site parking is justified it should be publicly-available.

E Disabled persons parking should be provided as set out in Policy T6 .5 Non-residential disabled persons parking.

F Where car parking is provided at retail development, provision for rapid electric vehicle charging should be made.

184 Density Guide 3rd Edition, Homes & Communities Agency, 2015, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/484133/employment_density_guide_3rd_edition.pdf (for standard employment density assumptions, see the employment density matrix)

G Boroughs may consider amended standards in defined locations consistent with the relevant criteria in the NPPF where there is clear evidence that the standards in Table 10.5 would result in:

1) A diversion of demand from town centres to out of town centres, undermining the town centres first approach.
2) A significant reduction in the viability of mixed-use redevelopment proposals in town centre.

Table 10.5 - Maximum retail parking standards

Location	Maximum parking provision*
Central Activities Zone and all areas of PTAL 5-6	Car-free^
Inner London Outer London Opportunity Areas Outer London retail below 500 sq.m.	Up to 1 space per 75 sq.m. gross internal area (GIA)
Rest of outer London	Up to 1 space per 50 sq.m. (GIA)

* Where Development Plans specify lower local maximum standards for general or operational parking, these should be followed

^ With the exception of disabled persons parking, see Policy T6 .5 Non-residential disabled persons parking.

10.6.19 Retail developments are significant trip attractors and should be located in places that are well-connected by public transport. Many retail trips are potentially walkable or cyclable, and improving the attractiveness of these modes through improved public realm and the application of the Healthy Streets Approach will support the vitality of London's many town centres and high streets. As such, **car parking provision should be kept to a minimum** and space should be used for activities that create vibrancy and contribute to the formation of liveable neighbourhoods.

10.6.20 Where significant provision of car parking at retail development can be justified, provision of r**apid electric vehicle charging facilities** should be made. Supplementary Planning Guidance on what provision is required will be provided.

10.6.21 As with office parking, any provision that is made should be carefully **managed** so that it does not undermine the attractiveness of alternatives to the car.

Policy T6.4 Hotel and leisure uses parking

A In the CAZ and locations of PTAL 4-6, any on-site provision should be limited to operational needs, disabled persons parking and parking required for taxis, coaches and deliveries or servicing.

B In locations of PTAL 0-3, schemes should be assessed on a case-by- case basis and provision should be consistent with the Healthy Streets Approach, mode share and active travel targets, and the aim to improve public transport reliability and reduce congestion and traffic levels.

C All operational parking must provide infrastructure for electric or other Ultra-Low Emission vehicles, including active charging points for all taxi spaces.

D Disabled persons parking should be provided as set out in Policy T6 .5 Non-residential disabled persons parking.

10.6.22 Hotel and leisure uses should be located in accessible locations to encourage walking, cycling and public transport use. Where Development Plans specify **lower local maximum standards** for general or operational parking, these should be followed.

Policy T6.5 Non-residential disabled persons parking

A Disabled persons parking should be provided in accordance with the levels set out in Table 10.6, ensuring that all non-residential elements should provide access to at least one on or off-street disabled persons parking bay.

B Disabled persons parking bays should be located on firm and level ground, as close as possible to the building entrance or facility they are associated with.

C Designated bays should be marked up as disabled persons parking bays from the outset.

D Enlarged bays should be large enough to become disabled persons parking bays quickly and easily via the marking up of appropriate hatchings and

symbols and the provision of signage, if required i.e. if it can be demonstrated that the existing level of disabled persons parking is not adequate. The process for converting enlarged bays should be set out in a Parking Design and Management Plan and secured at the planning stage.

E Designated disabled persons parking bays and enlarged bays should be designed in accordance with the design guidance provided in BS8300: Vol 1.

Table 10.6 - Non-residential disabled persons parking standards

Use	Designated bays (Per cent of total parking provision)	Enlarged bays (Per cent of total parking provision)
Workplace	5 per cent	5 per cent
Education	5 per cent	5 per cent
Retail, recreation, hotels and leisure	6 per cent	4 per cent
Transport car parks	5 per cent	5 per cent
Medical and health facilities	6 per cent	4 per cent
Religious buildings and crematoria	Minimum two spaces or 6 per cent, whichever is the greater	4 per cent
Sports facilities	Refer to Sport England Guidance	Refer to Sport England Guidance

10.6.23 Standards for non-residential disabled persons parking are based on a percentage of the total number of parking bays. Careful assessment will therefore be needed to ensure that these percentages make adequate provision in light of the need for disabled persons parking bays by Blue Badge holders. The provision of disabled persons parking bays should be **regularly monitored and reviewed** to ensure the level is adequate and enforcement is effective. All proposals should include an appropriate amount of Blue Badge parking, providing at least one space even if no general parking is provided.

Policy T7 Deliveries, servicing and construction

A Development plans and development proposals should facilitate sustainable freight movement by rail, waterways and road.

B Development Plans, Opportunity Area Planning Frameworks, Area Action Plans and other area-based plans should include freight strategies. These should seek to:

1) reduce freight trips to, from and within these areas
2) coordinate the provision of infrastructure and facilities to manage freight at an area-wide level
3) reduce road danger, noise and emissions from freight, such as through the use of safer vehicles, sustainable last-mile schemes and the provision of rapid electric vehicle charging points for freight vehicles.

Such strategies should be developed through policy or through the formulation of a masterplan for a planning application.

C To support carbon-free travel from 2050, the provision of hydrogen refuelling stations and rapid electric vehicle charging points at logistics and industrial locations is supported.

D Development Plans should safeguard railheads unless it can be demonstrated that a railhead is no longer viable or capable of being made viable for rail-based freight-handling. The factors to consider in assessing the viability of a railhead include:

- planning history, environmental impact and its relationship to surrounding land use context – recognising that the Agent of Change principle will apply
- location, proximity to the strategic road network and existing/potential markets
- the existing and potential contribution the railhead can make towards catering for freight movements by non-road modes
- the location and availability of capacity at alternative railheads, in light of current and projected capacity and market demands.

E Consolidation and distribution sites at all scales should be designed to enable 24-hour operation to encourage and support out-of-peak deliveries.

F Development proposals for new consolidation and distribution facilities should be supported provided that they do not cause unacceptable impacts on London's strategic road networks and:

1) reduce road danger, noise and emissions from freight trips
2) enable sustainable last-mile movements, including by cycle and electric vehicle
3) deliver mode shift from road to water or rail where possible (without adversely impacting existing or planned passenger services).

G Development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible. Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments.

H Developments should be designed and managed so that deliveries can be received outside of peak hours and in the evening or night time. Appropriate facilities are required to minimise additional freight trips arising from missed deliveries and thus facilitate efficient online retailing.

I At large developments, facilities to enable micro-consolidation should be provided, with management arrangements set out in Delivery and Servicing Plans.

J Development proposals must consider the use of rail/water for the transportation of material and adopt construction site design standards that enable the use of safer, lower trucks with increased levels of direct vision on waste and landfill sites, tip sites, transfer stations and construction sites.

K During the construction phase of development, inclusive and safe access for people walking or cycling should be prioritised and maintained at all times.

10.7.1 An efficient freight network is necessary to support the function of the city. This policy seeks to facilitate **sustainable freight movement** by rail, waterways and road in London through consolidation, modal shift and promoting deliveries at different times of day and night in order to reduce the impact on road congestion and air quality, and conflict with other users.

10.7.2 Currently many deliveries of non-urgent goods are made, unnecessarily, at congested times of the day. As many as two in every three delivery slots are missed, leading to repeat trips that cause additional congestion and emissions. Many van and lorry trips could be avoided or re-timed if freight activity were better **consolidated**.

10.7.3 The Mayor will work with all relevant partners to improve the **safety and efficiency** of freight across London and support consolidation within and beyond London, as well as the retiming of movements to avoid peak hours. To reduce the pressure on London's streets, developments should provide for deliveries and servicing off-street where possible, and through dedicated loading bays if not. Where loading in the carriageway is unavoidable and the impacts can be made acceptable, it should be designed to minimise the impact on people walking or cycling and other road users. Improved on-site storage can also reduce the need for deliveries during peak hours.

10.7.4 When planning freight movements, development proposals should demonstrate through Construction Logistics Plans and Delivery and Servicing Plans that all reasonable endeavours have been taken towards the use of **non-road vehicle modes**. Where rail and water freight facilities are available, Transport for London's freight tools should be used when developing the site's freight strategy.

10.7.5 Delivery and Servicing Plans should demonstrate how the requirements of the site are met, including **addressing missed deliveries**. Appropriate measures include large letter or parcel boxes and concierges accepting deliveries. Car-free developments should consider facilitation of home deliveries in a way that does not compromise the benefits of creating low-car or car-free environments.

10.7.6 **Construction Logistics and Delivery and Servicing Plans** should be developed in line with TfL guidance and adopt the latest standards around safety and environmental performance of vehicles to ensure freight is safe, clean and efficient. To make the plans effective they should be monitored and managed throughout the construction and operational phases of the development.

10.7.7 **To reduce the road danger associated with the construction of new development** and enable the use of safer vehicles, appropriate schemes such as CLOCS (Construction Logistics and Community Safety) or equivalent and FORS (Fleet Operator Recognition Scheme) or equivalent should be utilised to plan for and monitor site conditions. Development proposals should demonstrate 'good' on-site ground conditions ratings or the mechanisms to reach this level, enabling the use of vehicles with improved levels of driver direct vision. To support the procurement of these vehicles and to minimise road danger, the Mayor has introduced his Direct Vision Standard, which rates Heavy

Goods Vehicles on a star rating from 0 (lowest) to 5 (highest), based on how much the driver can see directly through the cab windows.

Policy T8 Aviation

A The Mayor supports the role of the airports serving London in enhancing the city's spatial growth, particularly within Opportunity Areas well connected to the airports by public transport and which can accommodate significant numbers of new homes and jobs. This should be reflected in relevant Development Plans and other area-based strategies.

B The environmental and health impacts of aviation must be fully acknowledged and aviation-related development proposals should include mitigation measures that fully meet their external and environmental costs, particularly in respect of noise, air quality and climate change. Any airport expansion scheme must be appropriately assessed and if required demonstrate that there is an overriding public interest or no suitable alternative solution with fewer environmental impacts.

C The Mayor will oppose the expansion of Heathrow Airport unless it can be shown that no additional noise or air quality harm would result, and that the benefits of future regulatory and technology improvements would be fairly shared with affected communities.

D All airport expansion development proposals that would impact on passenger movements through London should demonstrate how public transport and other surface access networks would accommodate resulting increases in demand alongside forecast background growth; this should include credible plans by the airport for funding and delivery of the required infrastructure.

E Development proposals that would lead to changes in airport operations or air traffic movements must take full account of their environmental impacts and the views of affected communities. Any changes to London's airspace must treat London's major airports equitably when airspace is allocated.

F Development proposals should make better use of existing airport capacity, underpinned by upgraded passenger and freight facilities and improved surface access links, in particular rail.

G Airport operators should work closely with airlines, Transport for London and other transport providers and stakeholders to ensure straightforward,

seamless and integrated connectivity and to improve facilities and inclusive access. They should also increase the proportion of journeys passengers and staff make by sustainable means such as rail, bus and cycling, and minimise the environmental impacts of airport servicing and onward freight transport.

H Development proposals relating to general and business aviation activity should only be supported if they would not lead to additional environmental harm or negative effects on health, nor impact on scheduled flight operations. Any significant shift in the mix of operations using an airport – for example, the introduction of scheduled flights at airports not generally offering such flights – should be refused.

I New heliports should be refused, other than for emergency services.

10.8.1 **London's airports form part of a single wider aviation system** whose impacts are felt across local authority boundaries. This policy therefore establishes a strategic approach to aviation within London and provides guidance for decision takers outside of London. The primary focus of the policy is the planning system, but it also serves to inform other processes, such as the development of Airport Masterplans, as well as wider discussions with stakeholders.

10.8.2 London's major airports provide essential connectivity for passengers and freight, support vital trade, inward investment and tourism, generate prosperity, and provide and support significant numbers of jobs. The aviation industry must fully address its **environmental and health impacts**. Government and industry must also recognise local communities' concerns about aviation noise and pollution, consult fully with those affected, and use new technologies to deliver tangible reductions in noise exposure and pollution.

10.8.3 It is important, in the first instance, to **make best use of existing airport capacity**, which fast, frequent, sustainable surface access can support. Opportunity Areas with excellent airport rail connections can serve as airport gateways and be the focus for new development, in turn helping meet London's need for new homes and jobs. Any airport expansion proposals should not be at the expense of London's environment or the health of its residents. Heathrow airport's current operations are already a cause of concern for hundreds of thousands of Londoners, with its significant noise impacts and contribution to illegal levels of air pollution.

10.8.4 Any airport expansion proposals should only be taken forward on the basis that **noise impacts** are avoided, minimised and mitigated, and proposals should

not seek to claim or utilise noise improvements resulting from technology improvements unrelated to expansion. Nor should expansion result in significant numbers of new people being exposed to new or additional noise harm.

10.8.5 Any airport expansion proposals should not worsen existing **air quality** or contribute to exceedance of air quality limits, nor should they seek to claim or utilise air quality improvements resulting from unrelated Mayoral, local or national policies and actions. Airport expansion should also incorporate air quality positive principles to minimise operational and construction impacts.

10.8.6 The Mayor will therefore strongly oppose any expansion of Heathrow Airport that would result in additional environmental harm or negative public health impacts. Air quality gains secured by the Mayor or noise reductions resulting from new technology must be used to improve public health, not to support expansion. The Mayor also believes that expansion at Gatwick could deliver significant benefits to London and the UK more quickly, at less cost, and with significantly fewer adverse environmental impacts. Stansted Airport will, in due course, be able to make better use of its single runway following the raising of its flight cap, alongside appropriate environmental mitigation. London City Airport is working to upgrade its passenger facilities and enhance operational efficiency in conjunction with the introduction of additional environmental mitigation measures and what amounts to a reduction of its maximum permitted number of movements. Luton and Southend airports are also undertaking substantial upgrades of their terminal facilities.

10.8.7 Any airport expansion proposals must show that **surface transport networks** would be able to accommodate the additional trips they would lead to. It will not be sufficient to rely on schemes designed to cater for background growth such as the Elizabeth line, Thameslink and Crossrail 2. If significant airport expansion is to be accommodated sustainably and not lead to additional road traffic movements, this will require major investment by the airport authority and central Government in new infrastructure, particularly rail, in order to deliver the necessary additional capacity and connectivity.

10.8.8 The **aviation impacts on climate change** must be fully recognised and emissions from aviation activities must be compatible with national and international obligations to tackle climate change. The implications for other sectors and other airports must also be fully understood when expansion proposals are brought forward, and aviation greenhouse gas emissions must be aligned with the Mayor's carbon reduction targets.

10.8.9 **Air freight** plays an important role in supporting industry in London and the UK, and the provision of both bellyhold and dedicated freighter capacity should be

an important consideration when plans for airport development in the south east of England are taken forward.

10.8.10 General and business aviation, typically utilising smaller airports, can complement and help sustain London's economy. However, the introduction of **scheduled flights** at such airports can significantly impact local communities, and scheduled flights should therefore normally operate from London's major airports which also tend to have much better surface and public transport networks in place.

10.8.11 The regime governing **helicopter flights** over London is outdated and requires urgent review by the CAA. The noise impacts from helicopters can be considerable and there are also concerns about the local air quality impacts around heliports. An updated regime should take full account of London's spatial growth and changes in technology to reduce noise and other environmental impacts, as well as safety risks. Steps should be taken to reduce helicopters overflying London.

Policy T9 Funding transport infrastructure through planning

A The Mayor will charge the Mayoral Community Infrastructure Levy (MCIL) to secure funding towards transport infrastructure of strategic importance such as Crossrail 2, and potentially other strategic transport infrastructure.

B In consultation with the Mayor, boroughs should identify a package of other strategically-important transport infrastructure, as well as improvements to public realm, along with other funding streams to deliver them.

C Planning obligations (Section 106 agreements), including financial contributions, will be sought to mitigate impacts from development, which may be cumulative. Such obligations and contributions may include the provision of new and improved public transport services, capacity and infrastructure, the expansion of the London-wide cycle networks and supporting infrastructure, and making streets pleasant environments for walking and socialising, in line with the Healthy Streets Approach.

10.9.1 Use of **MCIL** is restricted by regulation to funding **strategic transport infrastructure** in London. The Mayor's first MCIL (MCIL1) was introduced in 2012 to contribute to Crossrail 1 (the Elizabeth line) funding, and was designed as a single rate community infrastructure levy for each London borough,

covering all development other than education and health. Running alongside MCIL1 was a Section 106 contributions scheme which applied to office, retail and hotel developments in central London, the northern part of the Isle of Dogs and around Crossrail 1 stations. In June 2017, the Mayor published proposals for an MCIL2 to contribute to Crossrail 2 funding.[185] This took effect in April 2019, replacing both MCIL1 and the Crossrail 1 Section 106 contributions scheme.

10.9.2 Negotiations on the Crossrail 2 scheme are still underway and there is no agreed funding package at present. Should no funding deal be achievable, the Mayor will apply the MCIL2 proceeds to **fund other strategic transport projects** for which there is a significant funding gap.

10.9.3 **Other transport infrastructure and improvements to public realm** will be necessary to support London's growth. Through Development Plans, boroughs should work with the Mayor to identify current and future requirements and funding streams for transport infrastructure and other measures which support growth and create a high-quality public realm in line with the Healthy Streets Approach.

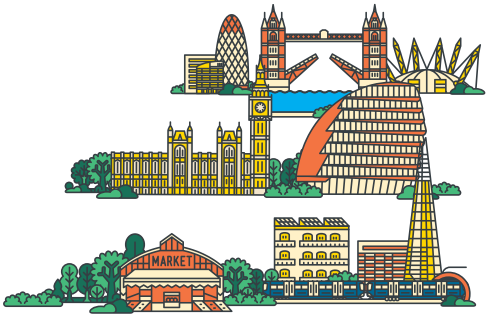
10.9.4 As part of individual development proposals, comprehensive assessment should both inform appropriate levels of mitigation and highlight opportunities for improvements. In some instances, this may include securing **planning obligations** and the development and implementation of strategies to improve the public realm.

10.9.5 Alongside the development of the income streams described above and maximisation of funding that they could generate, the Mayor will work with strategic partners to investigate **new mechanisms** to support the funding of new and improved transport services and infrastructure.

185 https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/mayoral-community-infrastructure-levy

Chapter 11

Funding the London Plan



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Overview

11.0.1 This is an ambitious Plan and delivering it is a significant challenge. The level of growth anticipated in the Plan will require significant investment from both the public and the private sector. London's growth is important for all Londoners, and for the economic prosperity of the UK. It is therefore important that the required long-term investment set out in the London Plan can be funded and delivered.

11.0.2 This chapter sets out a policy framework for viability and planning obligations and estimates the investment in infrastructure needed to deliver the London Plan. A lot of this investment will need to be provided by the public sector. The chapter outlines the gap between currently committed and required public sector funding, and summarises potential options for meeting this funding gap. It also outlines the need for a more supportive regulatory environment where private sector investment is involved.

11.0.3 The most critical areas for investment to achieve the step change in housing delivery that London needs are increased investment in transport infrastructure and fundamental changes to the housing market. There is also a significant need to invest in enabling infrastructure, such as green infrastructure, water, energy, waste, digital connectivity and social infrastructure.

Policy DF1 Delivery of the Plan and Planning Obligations

A Applicants should take account of Development Plan policies when developing proposals and acquiring land. Development proposals should provide the infrastructure and meet the other relevant policy requirements necessary to ensure that they are sustainable and to support delivery of the Plan. Where relevant policies in local Development Plan Documents are up to date, it is expected that viability testing should normally only be undertaken on a site-specific basis where there are clear circumstances creating barriers to delivery.

B Where relevant policies in local Development Plan Documents are up to date, if an applicant wishes to make the case that viability should be considered on a site-specific basis, they should provide clear evidence of the specific issues that would prevent delivery, in line with relevant Development Plan policy, prior to submission of an application.

C Where it is accepted that viability of a specific site should be considered as part of an application, the borough should determine the weight to be given to a viability assessment alongside other material considerations, ensuring that developments remain acceptable in planning terms. Viability assessments should be tested rigorously and undertaken in line with the Mayor's Affordable Housing and Viability SPG.

D When setting policies seeking planning obligations in local Development Plan Documents and in situations where it has been demonstrated that planning obligations cannot viably be supported by a specific development, applicants and decision-makers should firstly apply priority to affordable housing and necessary public transport improvements, and following this:

1) recognise the role large sites can play in delivering necessary health and education infrastructure; and

2) recognise the importance of affordable workspace, and culture and leisure facilities in delivering good growth.

E Boroughs are also encouraged to take account of the infrastructure prioritisation in Part D in developing their Community Infrastructure Levy Charging Schedule and determining the infrastructure that will be funded through borough CIL.

11.1.1 The purpose of planning is the delivery of sustainable development, and the statutory basis for this is the plan-led system. The policies in the London Plan have been subject to a viability assessment, proportionate to a Spatial Development Strategy, which has tested the cumulative impact of relevant standards, obligations and requirements to ensure they do not put implementation of the Development Plan at serious risk. Local Development Plan Documents also needed to be informed by viability testing of local sites. Therefore, applicants should take account of all relevant Development Plan policies when forming their proposals and when acquiring land. Land owners should also take account of these requirements when applying for planning permission or selling sites.

11.1.2 The assessment of viability on a site-by-site basis has caused uncertainty, increased land prices and undermined the delivery of Plan objectives. There are inherent difficulties in the assessment of viability at the application stage given input uncertainty and the sensitivity of viability appraisals to small changes in assumptions. There is also a risk that site-specific viability testing is used as a device to reduce planning requirements and enhance commercial returns, even where genuine barriers to delivery do not exist.

11.1.3 To avoid these issues, it is expected that the testing of viability of a specific scheme should only be necessary where there are clear barriers to delivery that would make the delivery of obligations unviable. This will speed up the planning process and increase certainty for applicants and planning authorities, whilst supporting the implementation of planning policies and the delivery of sustainable development.

11.1.4 In setting Local Plan policies and associated guidance, boroughs should consider whether there are circumstances in which it may be acceptable to review the viability of a development on a site-specific basis. These may include circumstances where an applicant is required to provide significant infrastructure improvements to facilitate delivery of a development (beyond the level that would typically be required for the scale of development),[186] or where the value generated by a development would be exceptionally low.

11.1.5 Where relevant policies in local Development Plan Documents are up to date, if an applicant wishes to make the case that viability should be considered on a site-specific basis, they should inform the borough, and Mayor where relevant, prior to submission of the application. Evidence should be provided

186 The need for infrastructure provision to facilitate a site being brought forward for development, or the presence of abnormal development costs, will impact land value and the cost should not necessarily be born through a reduction in planning obligations.

of the specific issues that would prevent delivery in line with relevant Mayoral and borough policies and guidance. The application should be determined in accordance with the Development Plan, with the decision-maker determining the weight to be given to viability alongside other relevant material considerations. This should ensure that proposals remain acceptable in planning terms.

11.1.6 The Mayor's Affordable Housing and Viability SPG sets out detailed guidance on the assessment of viability. Viability should be assessed robustly in line with the Mayor's guidance when undertaken on a site-specific basis.

11.1.7 This policy should inform the development of plan policies, infrastructure planning and planning decisions.

The Funding Gap

11.1.8 London's growth is important for the whole of the United Kingdom. Almost a quarter of the country's output, and around 30 per cent of its economy-related tax take is generated in the capital.[187] For London to continue to grow as set out in this London Plan, Londoners will need access to genuinely affordable homes and good jobs, supported by necessary social infrastructure, transport, utilities and green infrastructure. However, the Mayor currently possesses limited powers to fund affordable housing and infrastructure. There is a significant gap between the public-sector funding required to deliver and support London's growth, and the amount currently committed to London. In many areas of the city, major development projects are not being progressed because of the uncertainty around funding. In the short-term, it is therefore necessary for London and Londoners to have greater certainty over the public funding that central government plans to commit to the city's growth.

11.1.9 Public-sector funding is defined as money raised directly or indirectly through taxing or levying funds from individuals or businesses. The Mayor's current fundraising powers are limited to council tax and business rates, user charges such as transport fares, and third-party contributions such as MCIL. These represent a small proportion of the large number of different taxes levied on London by Government. In 2015/16, London government only had direct control over 5.1 per cent of the tax it raised (council tax and 50 per cent business rates).

11.1.10 Finance is investment sourced from companies or organisations, usually in the form of debt or equity. Where local or national government obtains debt, this can be considered (deferred) funding, as the borrowing is backed by future tax revenue and levies on economic activity.

187 Devolution: a capital idea, London Finance Commission, 2017

11.1.11 The London Infrastructure Plan 2050[188] outlined that the total investment in London's infrastructure (as defined in the plan) required between 2016 and 2050 could reach £1.3 trillion (2014 prices, within a range of £1 trillion to £1.7 trillion). The actual number is likely to be higher given inflation and the revised population estimates underpinning this London Plan.

11.1.12 The research conducted for the London Infrastructure Plan 2050 analysed the likely total required public-sector investment, under a business as usual scenario.[189] Overall, the estimates suggest that the then current level of committed funding (particularly for infrastructure provided by the public sector) would not meet London's growth needs. The research found that the total gap between required public sector investment and committed funds was estimated to be around £3.1 billion per annum. As this estimate was based on 2014 prices and lower predicted population growth, it is now likely to be higher. Where more up-to-date information is available, this is used below.

11.1.13 The Mayor is seeking clarity from Government on the availability of investment for much-needed infrastructure in the capital, and more fundamentally, is seeking further devolution of fiscal powers in line with the recommendations of the London Finance Commission. Because of the scale of the funding gap, the Mayor is also exploring other potential sources of funding, such as land value capture, and looking at how private investors can play a bigger role in investing in the upfront costs of infrastructure. He has also, through this Plan and other strategies, set out how to make more creative and efficient use of existing infrastructure assets, for example, by managing demand for utilities and transport, using new technologies and changing user behaviours.

Infrastructure

11.1.14 To support predicted growth in population, London requires a range of strategic infrastructure to unlock housing and employment growth.

11.1.15 The largest project in the pipeline in terms of cost and scope – Crossrail 2 – will support the delivery of around 200,000 jobs and 200,000 homes, making a significant contribution towards meeting London's housing needs to 2041. However, London needs to deliver some 1.6 million homes over the same period. A large amount of that growth will need to be enabled and supported by

188 London Infrastructure Plan GLA 2015, https://www.london.gov.uk/file/19038/download?token=1Zj5uQZf

189 The method used to calculate required infrastructure investment in the London Infrastructure Plan 2050 is outlined in: The cost of London's long-term infrastructure, Arup, 2014, https://www.london.gov.uk/sites/default/files/gla-the-cost-of-londons-long-term-infrastructure-by-arup.pdf

other infrastructure projects, many of which will take the form of incremental improvements and smaller schemes.

11.1.16 This section outlines what is required to deliver London's housing and planned infrastructure.

Housing

11.1.17 In the London Housing Strategy, the Mayor has set out how he will ensure that all sources of housing supply are utilised, how he intends to use the tools he currently has available to their fullest extent, and what extra powers and resources London would need to achieve a significant and sustainable step change in the delivery of new and affordable homes.

11.1.18 At the core of the London Housing Strategy is an understanding that the current model for homebuilding in the capital faces inherent constraints in terms of how many new homes it can support. These include capacity constraints of major homebuilders, and economic limitations on how quickly market homes can be sold at the prices developers want to achieve. Raising homebuilding toward the targets set out in this London Plan will require the contribution of existing players to be supported, and to be complemented by a significant expansion in the range of delivery models used, and the tenures and types of homes delivered.

11.1.19 In order to accelerate and/or de-risk housing development in the capital the Mayor is already making funding available, and he has secured £4.82 billion to support 116,000 affordable housing starts by 2022. He is also working to secure a significant share of the Government's Housing Infrastructure Fund and has made a number of bids to unlock key housing schemes across London.

11.1.20 Beyond this, the Mayor is making the case to Government for continued and sustained investment in homebuilding and enabling infrastructure. Initial estimates by the GLA indicate that at least £2.7 billion in public capital funding a year is required for affordable housing to help address housing need. This estimate will be revised based on discussions with affordable housing providers and more detailed analysis of the costs of provision.

11.1.21 Beyond his investment and planning powers, the Mayor is also proposing a more hands-on approach to increasing the supply of land for homebuilding. He intends to intervene directly, or support boroughs, housing associations and developers to do so, where land is suitable for new housing but is not coming forward for development.

11.1.22 In relation to publicly-owned land, the Mayor's functional bodies have committed to ensure that land they control is utilised to support additional housing delivery. There is also a significant stock of land in the ownership of other key public-

sector landowners. The Mayor is engaging directly with them to bring forward sites for housing, and is also working with Government to develop a more formal role for the GLA in bringing forward Government-owned land in London earmarked for housing delivery. As a minimum, this role should mirror that operated by Homes England, which directly manages the release of surplus Government landholdings outside London.

11.1.23 As a last resort, statutory powers may be required to bring forward land for development. The Mayor will work with boroughs, Mayoral Development Corporations, TfL, housing associations and developers to utilise statutory land assembly powers, such as Compulsory Purchase Orders, to bring forward housing opportunities. This will include supporting boroughs to make more use of compulsory purchase where appropriate, and the Mayor exercising compulsory purchase powers where a scheme is of strategic significance, or where a borough may be unable or reluctant to act. To support a step-change in the delivery of new and affordable housing, the Mayor is making the case to Government for further reforms of, and resources to support, compulsory purchase, and exploring options for new land assembly models.

11.1.24 The homebuilding industry needs to be diversified to increase capacity and speed up delivery. The Mayor is supporting the Build to Rent sector, which can provide additional supply above what would be delivered through the sale-led housing market. In order to encourage small and medium-sized builders, the Mayor is launching a Small Sites, Small Builders programme, which, alongside changes to CIL and new planning policies, seeks to address some of the barriers faced by smaller builders. The Mayor is also supporting boroughs and housing associations to deliver more homes directly, including by providing investment and lobbying Government for reforms to enable boroughs to build at significantly greater volumes.

11.1.25 Finally, the London Housing Strategy sets out how the Mayor will address the capacity constraints that are holding back the industry. This includes addressing the construction skills crisis by investing in a new Construction Academy Scheme, utilising the devolved Adult Education Budget, ensuring that local labour and apprenticeship opportunities are made more efficient and joined-up, and supporting the substantially greater use of precision manufacturing in building homes across London.

Transport

11.1.26 The Mayor's Transport Strategy sets out the Mayor's priorities for transport, and defines how London's transport infrastructure will be paid for. Delivering the schemes identified in the Mayor's Transport Strategy will require an average capital investment by TfL and others of around £3.3 billion a year. This equates

to around 0.9 per cent of London's Gross Value Added. The level of expenditure envisaged by the strategy is broadly in line with the National Infrastructure Commission's recommendation of an economic infrastructure spend of circa 1.2 per cent of Gross Domestic Product per annum.

11.1.27 Further information on the specific projects detailed in the Mayor's Transport Strategy that support delivery of the London Plan can be found in Table 10.1 in the Transport chapter in this Plan. Significant capital investment will be required to deliver these schemes, which can only be achieved through collaboration between the Mayor and Government, National Rail, London's boroughs and the private sector.

11.1.28 Transport in London is funded through a combination of sources, including:

- Business Rate Retention under Mayoral control, which is replacing existing direct Government grants for operations and new capital investment from 2017-18
- revenue from fares and other 'user pays' sources (e.g. Congestion Charging)
- non-fare sources (e.g. advertising and property)
- contributions from the London boroughs and the private sector, for example developer funding for associated transport investments
- other specific grants
- TfL 'prudential borrowing' against future revenue

11.1.29 In addition, for the Elizabeth line project, there are specific ring-fenced funds (e.g. specific levies such as the Business Rate Supplement and Mayoral CIL). In February 2019 the Mayor adopted a new charging schedule (MCIL2). MCIL2 came into effect on 1 April 2019 and supersedes MCIL1 and the associated Crossrail Funding SPG (applicable in central London, the northern part of the Isle of Dogs and within 1km of a Crossrail station for the rest of London). MCIL2 will be used to fund Crossrail 1 (the Elizabeth line).

11.1.30 TfL's operating expenditure, including capital renewals, is primarily reliant on fares and Business Rates Retention funding sources. In the future, additional borrowing will be limited to where the capital-spend results in an increase in future revenues that can service the operating and financing costs. The Elizabeth line, Northern line extension, Overground extension to Barking Riverside and Silvertown Tunnel have identified funding packages and will be delivered in the early years of the Plan. However, most of the schemes listed in Table 10.1 are currently unfunded and additional sustainable funding sources and project-specific deals and grants will be needed alongside contributions from London boroughs and the private sector.

11.1.31 Public sector funding for major infrastructure usually requires the support of the Treasury for direct Government investment or new devolved mechanisms. The Mayor's ability to invest in major transport schemes is therefore highly dependent on his negotiations with Government. The amount of public sector funding allocated to London's required infrastructure is uncertain, and schemes are negotiated on an individual basis which tends to lead to delays.[190] Given that the density of the public transport network correlates strongly with the potential for growth, the significant uncertainty over the funding of many transport schemes reduces confidence in the prospects for growth among all the major stakeholders responsible for building the city, including developers and utilities companies.

11.1.32 While the Mayor continues to promote the devolution agenda in line with the recommendations of the London Finance Commission, he will also continue to look for further creative options to fund required transport infrastructure. The Mayor is considering options for ensuring all beneficiaries of growth contribute to it, and for sweating London's existing assets to deliver efficiency savings. In the long term, however, a fairer and more efficient political settlement should be reached on fiscal devolution. There is good evidence to suggest that fiscal devolution would generate better outcomes for Londoners and also for the rest of the UK. Providing London with the means to control more of its own tax revenues would ensure that London can build the transport infrastructure it needs to unlock development more efficiently, more quickly and with greater certainty.[191]

11.1.33 In addition to the London Finance Commission recommendations, the Mayor believes that Vehicle Excise Duty (VED) should be devolved to TfL to provide revenue for investment in strategic roads in London, the responsibility for the management of which was devolved to TfL in 2000. This would bring investment in London's streets in line with the Government's intention to allocate VED revenue to the English Strategic Road Network from 2020. Powers to change how VED is levied would also provide London with the flexibility to trial new ways of paying for roads, which would be better linked to the impacts vehicles have on them and on London as a whole. Taxation rules should also be reviewed to ensure they incentivise sustainable travel to/from and for work.

190 Devolution: a capital idea, London Finance Commission, 2017

191 Transport Investment Strategy, DfT, 2017; Devolution: a capital idea, London Finance Commission, 2017; The Political Economy of Infrastructure in the UK, Coelho, M. and Ratnoo, V, 2014; National Infrastructure Plan, HM Treasury, 2014

Enabling Infrastructure

Schools

11.1.34 There is a growing need for school places in London. Central government provides the majority of the capital funding to create school places and to carry out capital maintenance and repair work to existing school buildings,[192] supplemented by capital contributions from London boroughs. An indicative survey by the GLA across the academic years 2011/12 and 2012/13 suggests that capital funding from Government represented around one third of the funding required. This analysis suggests that London will need in the region of £11 billion to 2050 to fund new primary and secondary school places and an additional £12 billion to undertake renewals on both new and existing school facilities.

11.1.35 This investment will need to be made by increasing Government contributions and from sources raised locally, such as through CIL or Section 106 contributions. A wide range of new sources of funding is likely to be difficult to access without providing London government with greater control and freedom over its local tax base. Further innovation and efficiencies will also be required to bring down costs.[193]

Health Facilities

11.1.36 The demand for health services in London is increasing due to a growing and ageing population and an increase in complex and long-term health conditions. As described in paragraphs 5.2.1 to 5.2.9 of this Plan, the NHS has set out the need to undertake a higher proportion of healthcare in community rather than hospital settings. However, many hospital sites contain old, poor-quality stock and there is a need for both replacement and maintenance. Investment is also needed in the workforce and digital technology to deliver service change.

11.1.37 Across London, developer contributions are used to fund the capital costs of new or expanded primary and community care facilities in order to meet the increasing demand for services which arises from population growth in new developments. Boroughs should use the London Healthy Urban Development Unit Planning Contributions Model (HUDU Model) to calculate the capital cost of the additional health facilities required to meet the increased demand. Boroughs should also work with Clinical Commissioning Groups and NHS England to

192 Through the Department for Education's Devolved Formula Capital funding

193 The cost of London's long-term infrastructure, Arup, 2014, https://www.london.gov.uk/sites/default/files/gla-the-cost-of-londons-long-term-infrastructure-by-arup.pdf

determine what investment is required by monitoring housing and population growth, keeping infrastructure plans up to date and working together to identify and develop projects towards which Section 106 and CIL contributions could be used.

11.1.38 Section 106 in-kind contributions can be used to support the provision of new health facilities, particularly in Opportunity Areas where there is little or no existing infrastructure. Examples of in-kind contributions include: transfer of land to provide new primary and community care facilities; construction and fit-out of new health facilities; and provision of 'shell and core' space at peppercorn rent. Funding sources for health buildings also include direct capital from central government and private funding through a variety of public/private joint ventures. A specific fund for Primary care estate, the Estates and Technology Transformation Fund (ETTF), is in the second of a four-year programme (to 2020).

11.1.39 London's Sustainability and Transformation Plans (STPs) were published in October 2016 to set out how health and care services would evolve and become financially sustainable over the 5-year period to 2020/21. The plans outlined a requirement to spend £4.8 billion on existing health infrastructure in London just to keep it operationally functional. Further capital investment in NHS infrastructure of £2.1 billion is needed to meet the costs of transforming health services in London and accommodating population growth. Therefore, a total 5-year investment of £6.9 billion is required.

11.1.40 ETTF and developer contributions represent only a relatively small proportion of the capital funding required, so additional sources need to be identified. The London Health and Care Devolution Memorandum of Understanding offers significant opportunities to address health and care estate challenges. These include innovative approaches to realising value from underused and unused NHS land and buildings; working more collaboratively with the Mayor and London's boroughs; and taking the One Public Estate approach to health and care developments. The London Estates Board and London Estates Delivery Unit aim to support the effective delivery of local and sub-regional estates plans, including more efficient estate utilisation. This will better meet the health and care needs of Londoners now and in the future.

Utilities

11.1.41 This Plan assumes that all regulated utilities infrastructure necessary to support growth will be delivered by the statutory providers and network operators. The London Infrastructure Plan 2050 suggests that energy and water infrastructure will require £148 billion and £46 billion of investment in London respectively over the period. Investment in energy and water infrastructure is usually funded by providers through user charges. Spend on new assets and operating costs

are agreed through negotiations between the provider and regulator. These plans are then set out at the beginning of the regulatory price-control period in the provider's business plan. Because capital expenditure is funded through user charges, utilities companies typically borrow to fund the upfront costs of investment.

11.1.42 The exception to this approach for utilities infrastructure is heat network infrastructure, the pipework that carries hot water connecting sources of low-cost, low-carbon energy to homes and business to meet their space heating and hot water needs. Heat networks are an emerging class of infrastructure recognised by both the Mayor and the Government as being essential in meeting climate change targets. Heat networks are not a regulated undertaking and therefore not subject to the same restrictions or benefits (in terms of powers) as statutory undertakers. The Mayor is exploring how to increase the rate of their development in London, which will require central government to create a level playing field for the treatment of district heating networks compared to other statutory utilities regarding access rights and business rates.

11.1.43 The scale of growth in London will require significant capital investment in water and energy infrastructure. Investment ahead of demand will be required to ensure the utilities are available when sites are developed. It can also realise significant efficiency savings for all parties involved in a development. The Mayor is working with providers and regulators to ensure the regulatory regime supports investment at the right time.

Flood Risk Management

11.1.44 The Environment Agency and Lead Local Flood Authorities are responsible for the identification and delivery of flood risk management schemes. Funding is provided by Government as Grant in Aid, through local levies and partnership funding sources, distributed through the Regional Flood and Coastal Committee (RFCC). It is also important to consider how direct beneficiaries of flood reduction projects can contribute to the costs of these projects.

Digital Infrastructure

11.1.45 The London Infrastructure Plan 2050 estimates that £8 billion will be required to provide the digital connectivity infrastructure London needs. As in the case of energy and water investment, new digital connectivity infrastructure is paid for upfront through finance or private equity investment backed by user charges. In general, decisions on where to invest in infrastructure are determined on a demand-led or network capability and capacity basis. There are also regulatory obligations for coverage, and infrastructure roll-out decisions are also dependent on technology delivery type. Increasing demand, as business

activities and people's lifestyles become more dependent on faster broadband, means that, as with other utilities, the regulatory regime must support investment ahead of demand. This should take account of the fast-changing nature of digital technology.

Green Infrastructure

11.1.46 The city's green infrastructure provides a wide range of benefits and services that generate significant economic value in a cost-effective way. The Mayor, in partnership with the National Trust and Heritage Lottery Fund, has published a natural capital account that clearly demonstrates this.[194]

11.1.47 Provision of green infrastructure has traditionally been the responsibility of public authorities and various public or third-sector land-management bodies, but increasingly, a number of private sector actors (including utility companies, developers and businesses) are contributing to delivery. This is especially the case in the built environment where green roofs and walls, street trees and sustainable drainage systems are being delivered and maintained by private land-owners.

11.1.48 The funding model for green infrastructure differs from that of other enabling infrastructure in that there are rarely obvious primary revenue streams (such as fares, bills or charges) that relate the provision of the service to the cost of managing, maintaining and upgrading the infrastructure.

11.1.49 In an attempt to address the problem of not properly valuing the services and benefits of green infrastructure, the Government has committed to including natural capital accounts in the UK Environmental Accounts by 2020. This is to ensure that the economic benefits of green infrastructure can be understood alongside other key indicators of economic performance. The Office for National Statistics has been charged by Government with developing a roadmap to enable this.

11.1.50 This re-framing of our understanding of the economic value of green infrastructure makes a considerable difference to decisions about the allocation of existing resources. For example, the willingness of developers to integrate green infrastructure into developments rather than considering the provision of green space as simply a condition of planning.

11.1.51 The majority of funding for green infrastructure is still likely to come from public sector budgets for the management and maintenance of parks and green spaces. However, future funding may be derived from a wider range of public sector sources in recognition of the contribution green infrastructure makes to

194 Natural Capital Account for London's Public Green Spaces, Vivid Economics, 2017

improving public health, enhancing resilience and providing more sustainable transport options.

11.1.52 Nevertheless, new funding streams will need to be identified in order to improve existing parks and green spaces and to create new green infrastructure in those areas where it is deficient. This might include offsetting funds, new environmental levies to address specific challenges (such as surface water flooding), and new devolved mechanisms. There is also an opportunity to explore new mechanisms to ensure that those who benefit from land value uplift resulting from good-quality green infrastructure contribute to its maintenance and improvement.

Waste and Circular Economy Infrastructure

11.1.53 As London's population increases so will the amount of waste it produces both at home and in the workplace. Continuation of the current linear economy – where we take resources, make products, use them until the end of their lifetime and then dispose of them – would require significant investment in additional waste infrastructure to cope with this increase.

11.1.54 Transitioning to a circular economy, however, would bring about a net annual benefit of £7 billion by 2036 according to the London Waste and Recycling Board Circular Economy Route Map.[195] This is because the circular economy is restorative and regenerative by design. Relying on system-wide innovation, it aims to redefine products and services to design out waste, while minimising negative impacts. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural and social capital.

11.1.55 Business will lead the transition to a circular economy, often through start-ups identifying a market opportunity. The investment required by these businesses will be a mixture of venture capital and equity, some of which will come from commercial investors but some of which will need to come from the public and not-for-profit sectors. The GLA and London Waste and Recycling Board have an identified budget to invest in circular economy businesses on commercial terms, but accelerating the transition to a circular economy will require more investment.

Cultural Infrastructure

11.1.56 There is growing evidence of the continuing loss of cultural infrastructure in the capital. By 2019, London is projected to lose 35 per cent of its affordable creative workspace, 35 per cent of its music venues, 58 per cent of LGBT+

195 London The Circular Economy Capital, London Waste and Recycling Board, 2015

and night-time venues and 25 per cent of its pubs. This is of concern because cultural infrastructure is important to local communities, to the tourism industry and to sustaining the creative economy, which is a source of significant employment growth and worth £47 billion to London's economy.

11.1.57 London will require significant investment to reverse the loss of these valued assets and to develop new production hubs, for example as part of the sub-regional vision for a Thames Estuary Production Corridor. In addition, investment in London's cultural and heritage assets will be needed to maintain the capital's position as a world-leading creative capital and tourist destination, with four out of five visitors stating that culture and heritage are the main reason for their visit.

11.1.58 To protect and develop London's cultural infrastructure, investment will need to be raised locally, including from CIL and Section 106 contributions, where appropriate. The Mayor will also explore other sources of investment including philanthropic funding. Additional sources of funding will also be required, but will be difficult to access unless London is given greater control over its local tax base.

Potential Options for Raising the Required Funding

Fiscal Devolution

11.1.59 Delivering London's required strategic infrastructure and housing demands significant investment of public sector funding. Because the UK possesses a comparatively centralised distribution of fiscal powers, substantial proportions of the total cost of strategic infrastructure tend to be funded through fiscal transfers, issued by the Treasury. This often leads to significant uncertainty over the outcome of a proposed project, and delays in funding being agreed. In recognition of the challenges this can create for industry, businesses and Londoners, the Mayor is committed to ensuring that London has more control over its own resources.

11.1.60 London is the world's largest financial centre, and has one of the largest metropolitan GDPs. It is a vital component of the UK economy, driving growth across the country. London contributes significant amounts of the UK's tax revenue and is a net contributor. In 2015/16 it contributed £136.7 billion, which was more than the total public expenditure devoted to London that year (£110 billion), generating a net fiscal contribution of £26.7 billion. To ensure that London continues to contribute in this way to the national economy, it is vital that the capital's required infrastructure and housing is delivered to support the city's economic growth, and ensure it remains a pleasant and healthy place to live, work and visit.

11.1.61 The Mayor believes that fiscal devolution is required to help ensure that London can deliver this vital infrastructure efficiently and to budget. The London Finance Commission report published in 2017 sets out the options and rationale for devolution. Devolution to London would allow the city's government to develop bespoke policy for its citizens and manage its budget efficiently across areas of policy, rather than be tied to a mix of funding streams channelled through government departments and other agencies.

11.1.62 The London Finance Commission recommended the full devolution of property taxes, including council tax, business rates and stamp duty, as well as permissive powers to develop new mechanisms, subject to consultation. This would allow for the development of a consistent approach with Section 106 payments and the Mayoral and borough CIL. This devolved approach would help London to deliver major transport, and other capital investments, as well as taking the lead in solving its own housing problems.

11.1.63 The success of the UK economy depends increasingly on the success of our major cities. The Mayor recognises fiscal devolution as a national agenda, rather than a priority exclusively for Londoners, and is working with combined authorities across the UK and with newly appointed Metro Mayors, to promote devolution across the country.

Sharing in Land Value Uplift

11.1.64 Successful infrastructure systems benefit everyone in the city, and so it is logical that it is not direct users alone who fund them. All beneficiaries, such as road users, businesses, and home owners should contribute to funding transport and other infrastructure according to the benefits they receive, the external costs their use of it generates – such as congestion and air pollution – and their ability to pay.

11.1.65 Major transport investment can significantly increase the value of land, particularly if it is close to a train station or transport hub. Land value capture is a term used to describe the use of this increase in land value to fund investment in public services, such as transport. In 2017 the Government announced a taskforce[196] to investigate a new way of paying for infrastructure projects, such as new public transport, including via land value capture. The Government asked the taskforce to look at the so called 'Development Rights Auction Model' of

196 The taskforce is led by the Ministry of Housing, Communities and Local Government and the Mayor of London's Office, and includes HM Treasury, the Department for Transport, TfL and London Councils.

land value capture. TfL prepared a report, which studied the model in detail, and found that it would be unlikely to raise significant funding in London.

11.1.66 There are a range of other infrastructure investments and interventions that can increase the value of land, and other options for capturing land value uplift. The Mayor will continue to work with government to explore all avenues for ensuring Londoners receive the vital infrastructure required to support growth.

Conclusion

11.1.67 Through this Plan, the Mayor is determined to tackle the housing crisis and support London's continued growth in a sustainable and inclusive way. This chapter has set out how the funding gap must be met if the infrastructure to support growth is to be planned and delivered at the right time. The step change in housing delivery that London needs cannot happen without it. The Mayor needs new fiscal tools to fund this infrastructure. Where it can be funded privately, he requires a supportive regulatory regime so that it can be provided when needed.

11.1.68 A successful London economy benefits the whole of the UK, so there is a strong case for devolving control over resources to the Mayor to enable greater investment in infrastructure. Local, city-wide, and central government need to work together with the private sector to identify creative and innovative ways to deliver the infrastructure in London that will unlock growth and new homes.

Chapter 12

Monitoring

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Policy M1 Monitoring

A The implementation of the London Plan will be kept under review using, in particular, the Key Performance Indicators set out in Table 12.1 and the Annual Monitoring Report.

12.1.1 It is important to have a succinct set of **Key Performance Indicators** (KPIs) and measures against which to monitor the successful implementation of this Plan's policies. The KPIs support key Mayoral commitments and priorities in a structured way. They seek to assess yearly progress and to build meaningful time series. The measure for each indicator shows the direction and scale of change that the London Plan policies are seeking to achieve. They do not themselves represent additional policy.

12.1.2 Performance against the KPIs will be reported in the statutory **Annual Monitoring Report** (AMR) to be published by the Mayor each Spring. The KPI figures will be accompanied by commentary that may also include additional corresponding performance figures. The AMR will also monitor a range of other data that is relevant to understanding the implementation of the Plan in the wider context, and to inform future reviews of the Plan.

Table 12.1 - Key Performance Indicators and Measures

Housing	
KPI	Supply of **new homes**
Measure	Increase in the supply of new homes over the period (monitored against housing completions and the net pipeline of approved homes), towards meeting the 66,000 net additional homes needed each year up to March 2029.
KPI	Supply of **affordable homes**
Measure	Positive trend in percentage of planning approvals for housing that are affordable housing (based on a rolling average).

Economy	
KPI	Supply of **office capacity**
Measure	Pipeline of planning permissions for office floorspace is at least three times the average office floorspace construction started over the previous three years.
KPI	Provision of **affordable workspace**
Measure	Positive trend in affordable B1 workspace as a share of total B1 floorspace in planning approvals (based on a rolling average).
KPI	Availability of **industrial land**
Measure	No overall net loss of industrial and warehousing floorspace in London (B1c, B2 and B8) in designated industrial locations (based on a rolling average).
Environment	
KPI	Protection of **Green Belt and Metropolitan Open Land**
Measure	Harm to the Green Belt and Metropolitan Open Land prevented through the referred application process.
KPI	**Carbon emissions** through new development
Measure	Average on-site carbon emission reductions of at least 35% compared to Building Regulations 2013 for approved referable development applications.
Transport	
KPI	**Modal share**
Measure	Increasing mode share for walking, cycling and public transport (excluding taxis) towards the target of 80% by 2041.
Health	
KPI	Londoners engaging in **active travel**
Measure	Positive trend in provision of cycle parking (based on a rolling average) to support the target of all Londoners doing two ten-minute periods of active travel a day by 2041.

Air Quality	
KPI	**Air quality**
Measure	Positive trend in approved referable development applications demonstrating that they meet at least air quality neutral standard for emissions (based on a rolling average).
Heritage	
KPI	Impact of development on London's **heritage**
Measure	Positive trend in the reduction of harm and/or an increase in benefits to designated heritage assets in approved referable development applications (based on a rolling average).
Culture	
KPI	Provision of **cultural infrastructure**
Measure	No net loss of culture venues and facilities* (based on a rolling average).

* Suggested to include: A4 use (public houses), D1 use (museums, public libraries, public halls, exhibition halls), D2 use (cinemas, concert halls, bingo halls, dance halls, other areas for indoor and outdoor sports or recreations not involving motorised vehicles or firearms), Sui Generis (theatres, nightclubs, casinos).

12.1.3 The **Good Growth** objectives in Chapter 1 set out the Mayor's vision for the capital: London should be socially and economically inclusive and environmentally sustainable. The topic and spatially-specific policies of the Plan contribute to the delivery of the Good Growth objectives. They will be monitored through a combination of these KPIs and other performance measures, which will be set out in the AMR.

12.1.4 A comprehensive set of **complementary and more detailed data** and performance measures will sit alongside the KPIs in the AMR. Some of the KPIs from the previous Plan will be included and those time series therefore retained. Some policy areas are not covered by KPIs, but measuring trends for those areas covered by the Plan – including key planning-related social, economic and environmental issues - is important. Additional measures to be included in the AMR will be explored over time and this will be informed by engagement with relevant stakeholders in the process.

12.1.5 A new set of indicators measuring the **performance of referable planning applications** in terms of compliance with important policy issues is also being

investigated. This could include for example if a design review has been carried out. The performance of referable schemes represents the most direct measure of the performance of the Plan.

12.1.6 The **AMR is not the only tool** to monitor London's performance. It is complemented by the monitoring arrangements for the other Mayoral Strategies and other thematic reports including, for example, the Energy Monitoring Report and TfL's Travel in London Report. Their indicators do not need to be duplicated in the AMR.

12.1.7 However, AMRs will include commentary on some **contextual indicators** that are influenced largely by factors outside the planning system. This includes, for example, outcomes that are measured via other Mayoral Strategies, but which provide a better contextual understanding of potential effects of the policies of the Plan. All quantitative measures mentioned in this Plan will be referenced in the AMR.

12.1.8 For specific geographies such as Opportunity Areas (Policy SD1) and Strategic Areas for Regeneration (Policy SD10), tailored monitoring and investigations will be carried out to inform the implementation of the area-specific policy objectives.

Annex 1

Town Centre Network

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Town Centre Network and Future Potential Network Classification

Table A1.1 classifies London's larger town centres into five categories: International, Metropolitan, Major and District centres, as well as CAZ retail clusters. In addition, there are Local and Neighbourhood centres throughout London, which may be designated in Local Plans. This classification provides a hierarchy, recognising the different size and draw of town centres. Table A1.1 also identifies those centres that may have the potential to be re-classified in the future (see Policy SD8 Town centre network). The different roles in the network are:

- **International centres** – London's globally-renowned retail and leisure destinations, providing a broad range of high-order comparison and specialist shopping, integrated into environments of the highest architectural quality and interspersed with internationally-recognised leisure, culture, heritage and tourism destinations. These centres have excellent levels of public transport accessibility.
- **Metropolitan centres** – serve wide catchments which can extend over several boroughs and into parts of the Wider South East. Typically they contain at least 100,000 sqm of retail, leisure and service floorspace with a significant proportion of high-order comparison goods relative to convenience goods. These centres generally have very good accessibility and significant employment, service and leisure functions. Many have important clusters of civic, public and historic buildings.
- **Major centres** – typically found in inner and some parts of outer London with a borough-wide catchment. They generally contain over 50,000 sqm of retail, leisure and service floorspace with a relatively high proportion of comparison goods relative to convenience goods. They may also have significant employment, leisure, service and civic functions.
- **District centres** – distributed more widely than Metropolitan and Major centres, providing convenience goods and services, and social infrastructure for more local communities and accessible by public transport, walking and cycling. Typically, they contain 5,000–50,000 sqm of retail, leisure and service floorspace. Some District centres have developed specialist shopping functions.
- **CAZ retail clusters** – significant mixed-use clusters located within the Central Activities Zone, with a predominant retail function and, in terms of scale, broadly comparable to Major or District centres. See Policy SD4 The Central Activities Zone (CAZ).
- **Local and Neighbourhood centres** – typically serve a localised catchment often most accessible by walking and cycling and include local parades and small clusters of shops, mostly for convenience goods and other services. They may include a small supermarket (typically up to around 500 sqm), sub-post office, pharmacy, laundrette and other useful local services. Together with District

centres they can play a key role in addressing areas deficient in local retail and other services. This includes locally-identified CAZ retail clusters.

Figure A1.1 - Future Potential Changes To The Town Centre Network

Future Potential Changes to Town Centre Network

- International
- Metropolitan
- Major
- District
- CAZ Retail Clusters

Source: GLA Planning

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Night-time Economy Classification

These centres have a strategic night-time function involving a broad mix of activity during the evening and at night, including most or all of the following uses: culture, leisure, entertainment, food and drink, health services and shopping. (See Policy HC6 Supporting the night-time economy) and Figure 7.6 for details. They are classified into three categories:

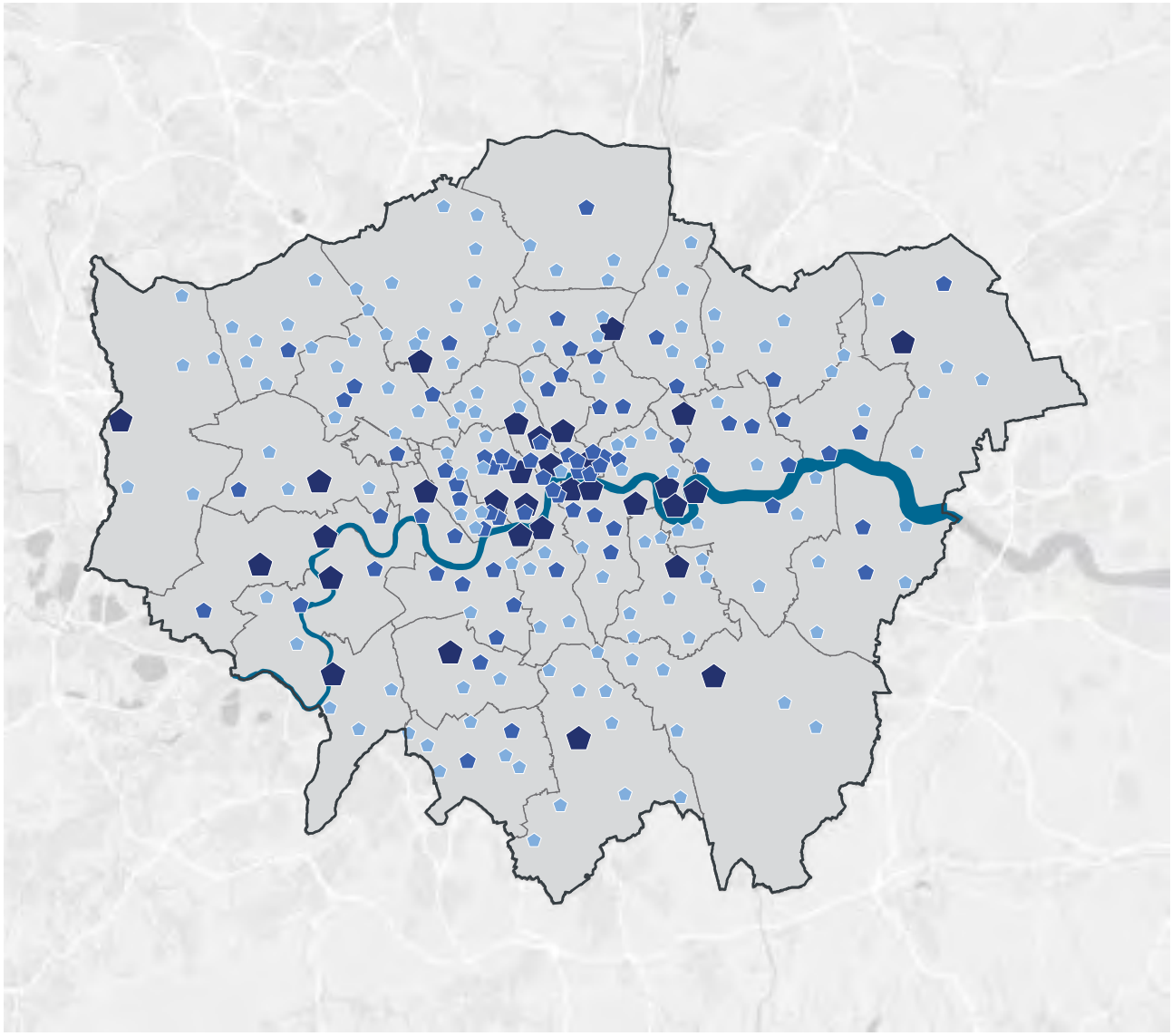
- NT1 – Areas of international or national significance
- NT2 – Areas of regional or sub-regional significance
- NT3 – Areas with more than local significance

Commercial Growth Potential

Table A1.1 provides strategic guidance on the broad future direction envisaged for the International, Metropolitan, Major and District centres and CAZ retail clusters including their possible potential for commercial growth (uses falling within the A, B, D and SG Use Classes). Three broad categories of future commercial growth potential have been identified:

- **High growth** – includes town centres likely to experience strategically-significant levels of growth with strong demand and/or large-scale retail, leisure or office development in the pipeline and with existing or potential public transport capacity to accommodate it (typically PTAL 5-6).
- **Medium growth** – includes town centres with moderate levels of demand for retail, leisure or office floorspace, and with physical and public transport capacity to accommodate it.
- **Low growth** – town centres that are encouraged to pursue a policy of consolidation by making the best use of existing capacity, either due to (a) physical, environmental or public transport accessibility constraints, or (b) low demand.

Figure A1.2 - Town Centre Growth Potential – Commercial



Town Centre Network
Commercial Growth Potential

- High
- Medium
- Low

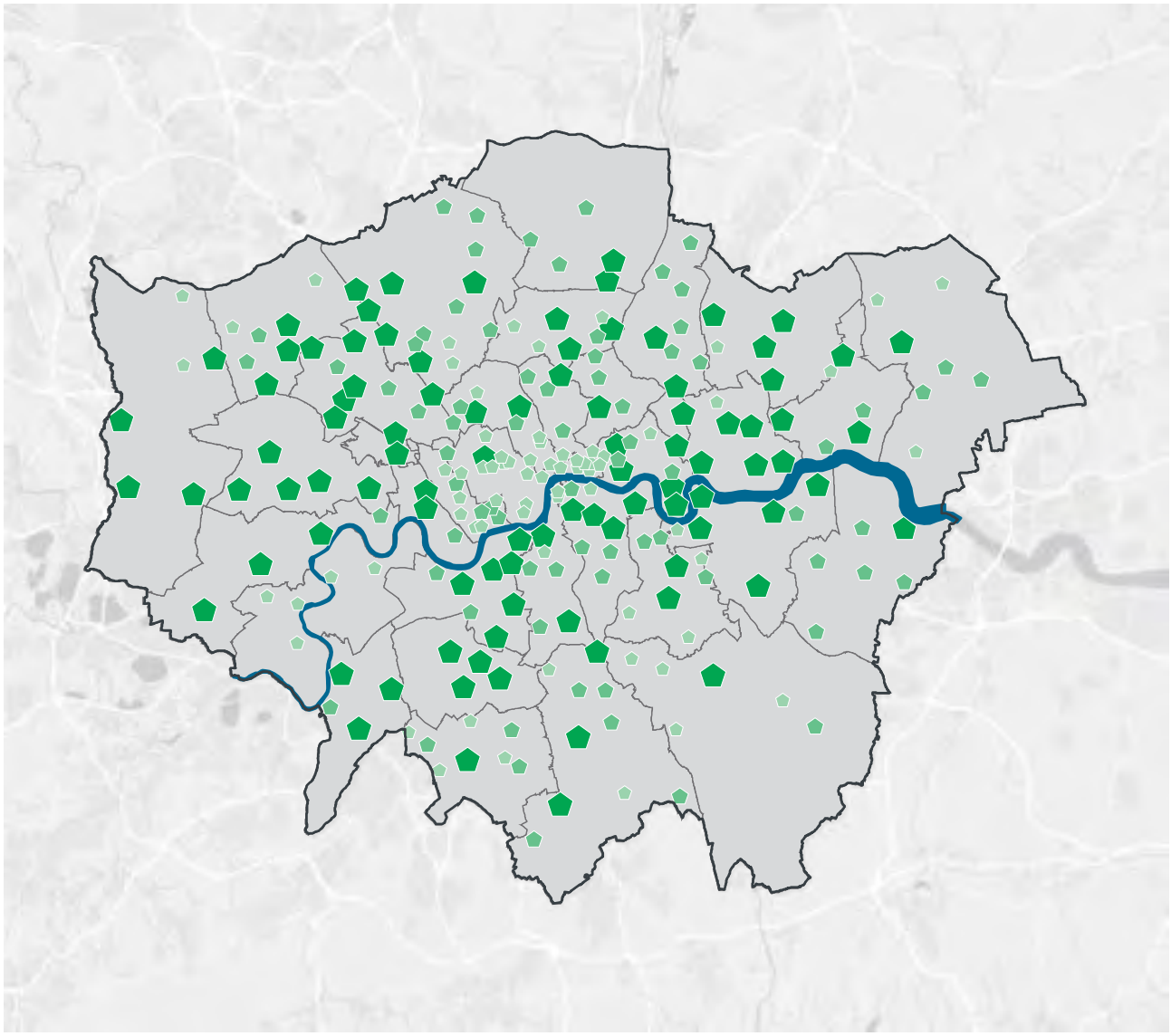
Source: GLA Planning

Residential Growth Potential

All town centres have potential for residential growth, either within or on the edge of the town centre. Table A1.1 provides strategic guidance for the relative potential for residential growth for the International, Metropolitan, Major and District centres and CAZ retail clusters, indicating whether they would be likely to be able to accommodate high or medium levels of residential growth, or incremental residential development. This is a broad strategic-level categorisation that has been informed by the SHLAAA[A1] and Town Centre Health Check, and takes into consideration the potential for impacts on heritage assets. Boroughs should be planning proactively to seek opportunities for residential growth in and around town centres, in particular using the mechanisms set out in Policy SD7 Town centres: development principles and Development Plan Documents, informed by detailed assessments of town centre capacity and complementing approaches set out in town centre strategies.

A1 https://www.london.gov.uk/what-we-do/planning/london-plan/london-plan-full-review/strategic-housing-land-availability

Figure A1.3 - Town Centre Growth Potential – Residential



Town Centre Network
Residential Growth Potential

- High
- Medium
- Incremental

Source: GLA Planning

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Office Guidelines

Table A1.1 and Figure A1.4 set out those town centres where specific approaches to offices are recommended, as informed by the London Office Policy Review[A2] **and borough evidence**.

CAZ – Centres in the Central Activities Zone with a significant office function. See Policy SD4 The Central Activities Zone (CAZ) and Policy SD5 Offices, other strategic functions and residential development in the CAZ.

CAZ Office Satellite – The Northern Isle of Dogs (NIOD) currently functions as a CAZ satellite in terms of office provision. Stratford and Old Oak Common will share the hyper-connectivity of the CAZ and could have the potential to function as future CAZ satellites, should the demand for office floorspace exceed the capacity of the CAZ and NIOD.

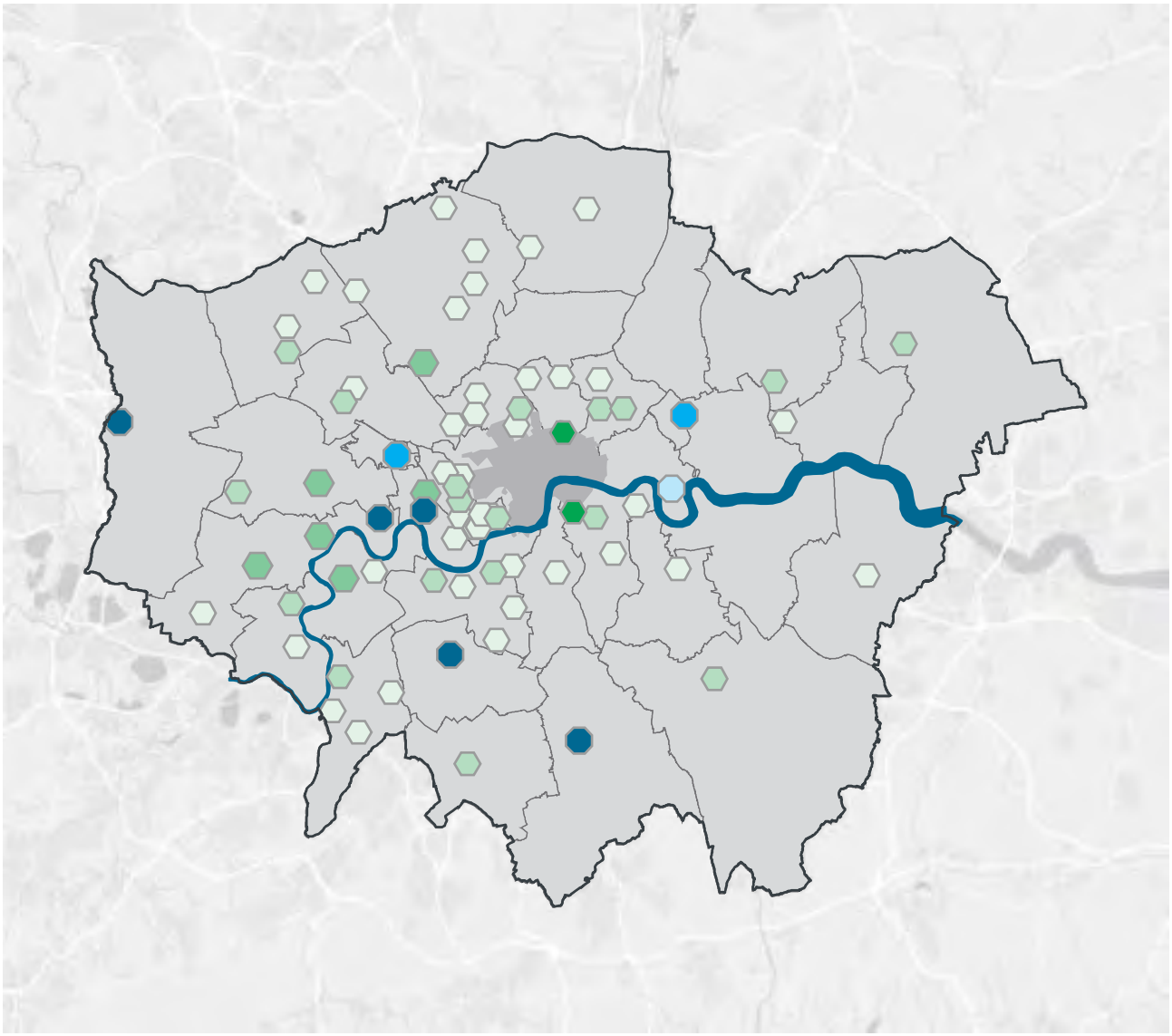
A. **Speculative office potential** – These centres have the capacity, demand and viability to accommodate new speculative office development.

B. **Mixed-use office potential** – These centres have the capacity, demand and viability to accommodate new office development, generally as part of mixed-use developments including residential use.

C. **Protect small office capacity** – These centres show demand for existing office functions, generally within smaller units.

A2 https://www.london.gov.uk/what-we-do/planning/london-plan/london-office-policy-reviews

Figure A1.4 - Town Centre Office Guidelines



Town Centre Network
Office Guidelines

- A/ CAZ Satellite
- A/potential CAZ satellite
- A
- A/B and part CAZ
- A/B
- B
- C
- CAZ

Source: GLA Planning

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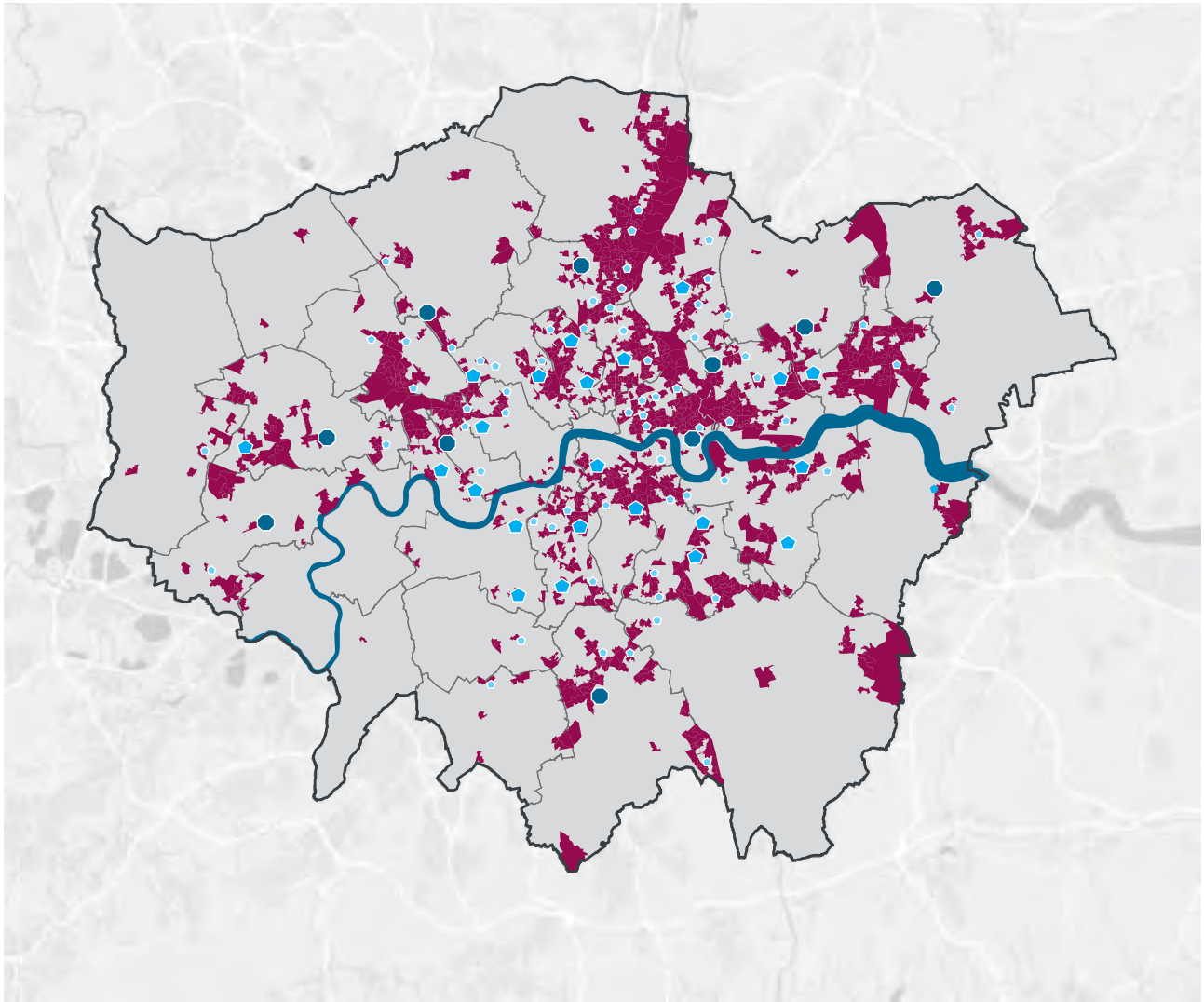
Figure A1.5 - Town Centres Within Areas For Regeneration



Strategic Areas for Regeneration

- Strategic areas for regeneration

Town Centres in Strategic Areas for Regeneration

- Metropolitan
- Major
- District

Source: GLA Planning and DCLG

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Table A1.1 - Town Centre Network

Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
1	West End	Westminster/ Camden	International		NT1	High	Incremental	CAZ	
2	Knightsbridge	Kensington & Chelsea/ Westminster	International		NT2	High	Incremental	CAZ	
3	Bromley	Bromley	Metropolitan		NT2	High	High	B	
4	Croydon	Croydon	Metropolitan		NT2	High	High	A	Yes
5	Ealing	Ealing	Metropolitan		NT2	High	High	A/ B	Yes
6	Shepherds Bush	Hammersmith & Fulham	Metropolitan	International	NT2	High	High	A/ B	Yes
7	Wood Green	Haringey	Metropolitan		NT2	Medium	High		Yes
8	Harrow	Harrow	Metropolitan		NT2	Medium	High	B	
9	Romford	Havering	Metropolitan		NT2	High	High	B	Yes
10	Uxbridge	Hillingdon	Metropolitan		NT2	High	High	A	
11	Hounslow	Hounslow	Metropolitan		NT2	High	High	A/ B	Yes
12	Kingston	Kingston	Metropolitan		NT2	High	High	B	
13	Stratford	Newham	Metropolitan	International	NT2	High	High	A/ future potential CAZ satellite	Yes
14	Ilford	Redbridge	Metropolitan		NT2	Medium	High	B	Yes
15	Sutton	Sutton	Metropolitan		NT2	Medium	High	B	Yes
16	Canary Wharf	Tower Hamlets	Metropolitan		NT2	High	High	A/ CAZ satellite	
17	Barking	Barking & Dagenham	Major		NT3	Medium	High	C	Yes
18	Edgware	Barnet/ Harrow	Major			Low	High	C	
19	Bexleyheath	Bexley	Major		NT2	Medium	Medium	C	
20	Wembley	Brent	Major	Metropolitan	NT1	Medium	High	B	
21	Kilburn	Brent/ Camden	Major		NT3	Low	Medium	C	Yes
22	Orpington	Bromley	Major			Low	Medium		
23	Camden Town	Camden	Major		NT1	High	Medium	C	Yes
24	Southall	Ealing	Major		NT3	Medium	High	B	Yes
25	Enfield Town	Enfield	Major			Medium	Medium	C	

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
26	Eltham	Greenwich	Major			Low	High		Yes
27	Woolwich	Greenwich	Major	Metropolitan	NT3	Medium	High		Yes
28	Dalston	Hackney	Major		NT2	Medium	High	B	Yes
29	Hackney Central	Hackney	Major		NT2	Medium	Medium	B	Yes
30	Fulham	Hammersmith & Fulham	Major		NT2	Medium	Medium	C	Yes
31	Hammersmith	Hammersmith & Fulham	Major		NT2	Medium	High	A	Yes
32	Chiswick	Hounslow	Major		NT3	Medium	Medium	A	
33	Angel	Islington	Major		NT2	High	Medium	A/ B and part CAZ	Yes
34	Nags Head	Islington	Major		NT3	Medium	Medium		Yes
35	Kensington High Street	Kensington & Chelsea	Major		NT2	Medium	Incremental	B	
36	King's Road (east)	Kensington & Chelsea	Major		NT2	Medium	Medium	B	
37	Brixton	Lambeth	Major		NT2	Medium	Medium	C	Yes
38	Streatham	Lambeth	Major		NT2	Low	Medium		Yes
39	Catford	Lewisham	Major		NT3	Low	High		Yes
40	Lewisham	Lewisham	Major	Metropolitan	NT3	High	High	C	Yes
41	Wimbledon	Merton	Major		NT2	High	High	A	
42	East Ham	Newham	Major			Medium	High		Yes
43	Richmond	Richmond	Major		NT2	High	Incremental	A/ B	
44	Canada Water	Southwark	Major		NT3	High	High	C	Yes
45	Elephant and Castle/ Walworth Road	Southwark	Major		NT2	Medium	High	A/ B and part CAZ	Yes
46	Peckham	Southwark	Major		NT2	Medium	Medium	C	Yes
47	Walthamstow	Waltham Forest	Major		NT2	Medium	High		Yes
48	Clapham Junction	Wandsworth	Major		NT2	Medium	High	B	Yes
49	Putney	Wandsworth	Major		NT3	Medium	Medium	B	

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
50	Tooting	Wandsworth	Major		NT3	Medium	High	C	Yes
51	Wandsworth	Wandsworth	Major		NT3	Medium	High	C	
52	Queensway/ Westbourne Grove	Westminster/ Kensington & Chelsea	Major		NT3	Low	Incremental	C	Yes
53	Dagenham Heathway	Barking & Dagenham	District			Low	Medium		Yes
54	Green Lane	Barking & Dagenham/ Redbridge	District			Low	Incremental		Yes
55	Chadwell Heath	Barking & Dagenham/ Redbridge	District			Low	High		
56	Brent Street	Barnet	District			Low	Medium		
57	Chipping Barnet	Barnet	District		NT3	Low	Medium	C	
58	Church End, Finchley	Barnet	District			Low	Medium	C	
59	East Finchley	Barnet	District			Low	Medium		
60	Golders Green	Barnet	District			Low	Incremental		
61	Hendon Central	Barnet	District			Low	Medium		
62	Mill Hill	Barnet	District			Low	High		
63	New Barnet	Barnet	District			Low	Medium		
64	North Finchley	Barnet	District		NT3	Low	High	C	
65	Temple Fortune	Barnet	District			Medium	Incremental		
66	Whetstone	Barnet	District			Low	Medium	C	
67	Colindale/ The Hyde	Barnet/ Brent	District			Low	High		
68	Cricklewood	Barnet/ Brent/ Camden	District		NT3	Medium	High		Yes
69	Burnt Oak	Barnet/ Brent/ Harrow	District			Low	High		Yes
70	Crayford	Bexley	District			Low	Medium		
71	Erith	Bexley	District			Low	High		Yes
72	Sidcup	Bexley	District			Low	Medium		
73	Welling	Bexley	District			Low	Medium		
74	Ealing Road	Brent	District			Low	High		

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
75	Harlesden	Brent	District			Low	High		Yes
76	Neasden	Brent	District			Low	Medium		Yes
77	Preston Road	Brent	District			Low	Medium		
78	Wembley Park	Brent	District		NT3	Medium	High	C	Yes
79	Willesden Green	Brent	District			Low	Medium		
80	Kingsbury	Brent/ Harrow	District			Low	High		
81	Beckenham	Bromley	District		NT3	Low	Incremental		
82	Penge	Bromley	District			Low	Incremental		Yes
83	Petts Wood	Bromley	District			Low	Incremental		
84	West Wickham	Bromley	District			Low	Incremental		
85	Hampstead	Camden	District		NT3	Low	Incremental	C	
86	Kentish Town	Camden	District		NT3	Low	High	B	Yes
87	Swiss Cottage/ Finchley Road	Camden	District		NT2	Low	High	C	Yes
88	West Hampstead	Camden	District			Low	Medium		Yes
89	Addiscombe	Croydon	District			Low	Medium		
90	Coulsdon	Croydon	District			Low	Medium		
91	New Addington	Croydon	District			Low	Medium		Yes
92	Purley	Croydon	District			Low	High		
93	Selsdon	Croydon	District			Low	Incremental		
94	South Norwood	Croydon	District			Low	Medium		Yes
95	Thornton Heath	Croydon	District			Low	Medium		Yes
96	Norbury	Croydon	District		NT3	Low	Incremental		
97	Upper Norwood/ Crystal Palace	Croydon/ Lambeth/ Bromley	District			Low	High		
98	Herne Hill	Lambeth/ Southwark	District			Medium	Medium		
99	Acton	Ealing	District		NT3	Low	High		Yes

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
100	Greenford	Ealing	District			Low	High		
101	Hanwell	Ealing	District			Low	High		
102	Angel Edmonton	Enfield	District			Low	High		Yes
103	Edmonton Green	Enfield	District			Low	High		Yes
104	Palmers Green	Enfield	District			Low	Medium		
105	Southgate	Enfield	District			Low	Medium	C	
106	East Greenwich	Greenwich	District			Low	High		Yes
107	Greenwich West	Greenwich	District		NT3	Low	Incremental		
108	Plumstead	Greenwich	District			Low	Medium		Yes
109	Thamesmead	Greenwich	District			Low	High		
110	Stamford Hill	Hackney	District			Medium	Medium		Yes
111	Stoke Newington	Hackney	District		NT3	Low	Medium	C	Yes
112	Bruce Grove/ Tottenham High Road	Haringey	District			Low	Incremental		Yes
113	Crouch End	Haringey	District		NT3	Low	Incremental		
114	Green Lanes	Haringey	District		NT3	Medium	High		Yes
115	Muswell Hill	Haringey	District		NT3	Low	Incremental		
116	West Green Road/ Seven Sisters	Haringey	District			Low	Medium		Yes
117	North Harrow	Harrow	District			Low	Medium		
118	Pinner	Harrow	District			Low	Incremental		
119	Rayners Lane	Harrow	District			Low	Medium		
120	South Harrow	Harrow	District			Low	High		
121	Stanmore	Harrow	District			Low	Incremental	C	
122	Wealdstone	Harrow	District			Low	High	C	
123	Kenton	Harrow/ Brent	District			Low	High		
124	Collier Row	Havering	District			Low	Incremental		
125	Elm Park	Havering	District			Low	Medium		

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
126	Harold Hill	Havering	District			Medium	Incremental		Yes
127	Hornchurch	Havering	District		NT3	Low	Medium		
128	Rainham	Havering	District			Low	Incremental		Yes
129	Upminster	Havering	District			Low	Medium		
130	Eastcote	Hillingdon	District			Low	High		
131	Hayes	Hillingdon	District		NT3	Low	High		Yes
132	Northwood	Hillingdon	District			Low	Incremental		
133	Ruislip	Hillingdon	District			Low	Incremental		
134	Yiewsley/ West Drayton	Hillingdon	District		NT3	Low	High		
135	Brentford	Hounslow	District			High	High	A/ B	
136	Feltham High Street	Hounslow	District			Medium	High	C	Yes
137	Archway	Islington	District		NT3	Low	Medium	C	Yes
138	Finsbury Park	Islington/ Hackney/ Haringey	District		NT3	Medium	High	C	Yes
139	Brompton Cross	Kensington & Chelsea	District			Medium	Medium	C	
140	Earls Court Road	Kensington & Chelsea	District			Low	Incremental	C	Yes
141	Fulham Road	Kensington & Chelsea	District			Low	Incremental	C	
142	King's Road (west)	Kensington & Chelsea	District			Medium	Incremental	C	Yes
143	Notting Hill Gate	Kensington & Chelsea	District			Medium	Medium	B	
144	Portobello	Kensington & Chelsea	District			Medium	Incremental	C	Yes
145	South Kensington	Kensington & Chelsea	District		NT1	Low	Medium	C	
146	New Malden	Kingston	District			Low	High	C	
147	Surbiton	Kingston	District			Low	Medium	C	
148	Tolworth	Kingston	District			Low	High	C	

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
149	Clapham High Street	Lambeth	District		NT2	Low	Medium		Yes
150	Stockwell	Lambeth	District			Low	Incremental		Yes
151	West Norwood/ Tulse Hill	Lambeth	District			Low	High		Yes
152	Lavender Hill/ Queenstown Road	Lambeth/ Wandsworth	District			Low	High	C	Yes
153	Deptford	Lewisham	District			Low	Medium		Yes
154	Downham	Lewisham	District			Low	Incremental		Yes
155	Forest Hill	Lewisham	District			Low	Incremental		Yes
156	New Cross and New Cross Gate	Lewisham	District		NT3	Low	Medium		Yes
157	Sydenham	Lewisham	District			Low	Medium		Yes
158	Blackheath	Lewisham/ Greenwich	District		NT3	Low	Incremental		
159	Lee Green	Lewisham/ Greenwich	District			Low	Medium		
160	Mitcham	Merton	District			Low	High		Yes
161	Morden	Merton	District			Low	High		
162	Canning Town	Newham	District			Medium	High		Yes
163	East Beckton	Newham	District			Low	High		Yes
164	Forest Gate	Newham	District			Low	Incremental		Yes
165	Green Street	Newham	District			Medium	High		Yes
166	Barkingside	Redbridge	District			Low	High		
167	Gants Hill	Redbridge	District		NT3	Low	High		
168	South Woodford	Redbridge	District		NT3	Low	High		
169	Wanstead	Redbridge	District			Low	Incremental		
170	East Sheen	Richmond	District			Medium	Incremental	C	
171	Teddington	Richmond	District		NT3	Low	Incremental	C	
172	Twickenham	Richmond	District		NT3	Medium	Incremental	B	
173	Whitton	Richmond	District			Low	Incremental		

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Ref	Centre	Borough	Network classification	Future potential network classification	Night-time economy classification	Commercial growth potential	Residential growth potential	Office guidelines	Strategic area for regeneration*
174	Dulwich - Lordship Lane	Southwark	District			Low	Medium		
175	Camberwell	Southwark/ Lambeth	District			Low	Medium		Yes
176	Carshalton Villiage	Sutton	District			Low	Incremental		
177	Cheam Village	Sutton	District			Low	Incremental		
178	North Cheam	Sutton	District			Low	Medium		
179	Rosehill	Sutton	District			Low	Incremental		Yes
180	Wallington	Sutton	District			Low	Medium		
181	Worcester Park	Sutton	District			Low	Incremental		
182	Bethnal Green	Tower Hamlets	District			Low	High		Yes
183	Brick Lane	Tower Hamlets	District		NT2	Medium	Incremental		Yes
184	Chrisp Street	Tower Hamlets	District			Low	Medium		Yes
185	Roman Road (east)	Tower Hamlets	District			Low	Incremental		Yes
186	Roman Road (west)	Tower Hamlets	District			Low	Medium		Yes
187	Watney Market	Tower Hamlets	District			Low	High		Yes
188	Whitechapel	Tower Hamlets	District			Medium	Medium		Yes
189	Bakers Arms	Waltham Forest	District			Low	Medium		Yes
190	Highams Park	Waltham Forest	District			Low	Medium		Yes
191	Leyton	Waltham Forest	District			Medium	High		Yes
192	Leytonstone	Waltham Forest	District			Low	Medium		Yes
193	North Chingford	Waltham Forest	District			Low	Medium		
194	South Chingford	Waltham Forest	District			Low	Medium		
195	Wood Street	Waltham Forest	District			Low	Medium		Yes
196	Balham	Wandsworth	District			Medium	High	C	
197	Earlsfield	Wandsworth	District			Low	Medium		

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198	Edgware Road/ Church Street	Westminster	District		NT3	Medium	High		Yes
199	Harrow Road	Westminster	District			Low	Medium		Yes
200	Praed Street/ Paddington	Westminster	District		NT3	Low	Incremental		
201	St John's Wood	Westminster	District			Low	Incremental		Yes
202	Euston Road (part)	Camden	CAZ retail cluster			Medium	Incremental	CAZ	Yes
203	High Holborn/ Kingsway	Camden	CAZ retail cluster			High	Incremental	CAZ	Yes
204	King's Cross/ St Pancras	Camden	CAZ retail cluster		NT2	High	Incremental	CAZ	Yes
205	Tottenham Court Road (part)	Camden	CAZ retail cluster		NT1	Medium	Incremental	CAZ	
206	Cheapside	City of London	CAZ retail cluster		NT3	Medium	Incremental	CAZ	
207	Fleet Street	City of London	CAZ retail cluster			Low	Incremental	CAZ	
208	Leadenhall Market	City of London	CAZ retail cluster			Medium	Incremental	CAZ	
209	Liverpool Street	City of London	CAZ retail cluster		NT3	High	Incremental	CAZ	
210	Moorgate	City of London	CAZ retail cluster			High	Incremental	CAZ	
211	Shoreditch	Hackney/ Islington	CAZ retail cluster		NT1	Medium	Incremental	CAZ	Yes
212	Farringdon	Islington	CAZ retail cluster		NT2	Medium	Incremental	CAZ	
213	Waterloo	Lambeth	CAZ retail cluster		NT2	Medium	Incremental	CAZ	
214	Bankside and The Borough	Southwark	CAZ retail cluster		NT1	High	Medium	CAZ	Yes
215	London Bridge	Southwark	CAZ retail cluster		NT2	High	Incremental	CAZ	
216	Wentworth Street	Tower Hamlets	CAZ retail cluster			Medium	Incremental	CAZ	Yes
217	Baker Street (part)	Westminster	CAZ retail cluster			Medium	Incremental	CAZ	
218	Covent Garden/ Strand	Westminster	CAZ retail cluster		NT1	Medium	Incremental	CAZ	

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219	Edgware Road South	Westminster	CAZ retail cluster		NT3	Medium	Incremental	CAZ	Yes
220	Marylebone High Street	Westminster	CAZ retail cluster		NT3	Medium	Incremental	CAZ	
221	Marylebone Road	Westminster	CAZ retail cluster			Medium	Incremental	CAZ	Yes
222	Victoria Street	Westminster	CAZ retail cluster		NT2	High	Incremental	CAZ	
223	Warwick Way/ Tachbrook Street	Westminster	CAZ retail cluster			Medium	Incremental	CAZ	Yes
Centres with Night-time Economy classification only									
224	Barbican	City of London	Unclassified		NT1	Medium	Incremental		
225	Southbank	Lambeth	Unclassified		NT1	Medium	Incremental	CAZ	
Centres with Future Potential Network classification only									
226	Brent Cross	Barnet	Unclassified	Metropolitan		High	High	A/ B	Yes
227	Old Oak High Street	Hammersmith & Fulham/ Ealing	Unclassified	Major		Medium	High	A/ future potential CAZ satellite	Yes
228	Gallions Reach	Newham	Unclassified	Major		Medium	High		
229	Barking Riverside	Barking & Dagenham	Unclassified	District		Medium	Medium		
230	Merrielands Crescent	Barking & Dagenham	Unclassified	District		Medium	High		Yes
231	Belvedere	Bexley	Unclassified	District		Medium	Medium		
232	North Greenwich	Greenwich	Unclassified	District	NT1	High	High		Yes
233	Tottenham Hale	Haringey	Unclassified	District		High	High		Yes
234	Colliers Wood	Merton	Unclassified	District		Medium	High		
235	Old Kent Road/ East Street	Southwark	Unclassified	District		Medium	High	B	Yes
236	Old Kent Road/ Peckham Park Road	Southwark	Unclassified	District		Medium	High		Yes
237	Hackbridge	Sutton	Unclassified	District		Medium	Medium		

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238	Bromley-by-Bow	Tower Hamlets	Unclassified	District		Medium	High		Yes
239	Crossharbour	Tower Hamlets	Unclassified	District		High	High		
240	Vauxhall	Lambeth/ Wandsworth	Unclassified	CAZ retail cluster	NT2	High	High	CAZ	Yes
241	Battersea	Wandsworth	Unclassified	CAZ retail cluster		High	High	CAZ	

* This classification refers to those town centres that are within or overlap with the Strategic Areas for Regeneration (see Policy SD10 Strategic and local regeneration).

Annex 2

Inner and Outer London Boroughs

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