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PLANNING FOR CRITICAL INFRASTRUCTURE IN LONDON

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The Greater London Authority

The Greater London Authority (GLA) is London's regional governance body led by the Mayor of London, Sadiq Khan, and the 25-member London Assembly that holds the Mayor to account. The Mayor holds responsibilities for planning, housing and transport, is responsible for preparing the London Plan - the Mayor's spatial strategy - and has oversight of planning applications of strategic significance.

London's growth will place increasing pressure on housing, transport and infrastructure. These responsibilities means that infrastructure is a core focus when delivering the Mayor's ambitions for good growth, both in terms of upgrading London's existing infrastructure and to planning for new infrastructure to support development.

To find out more about the GLA's Infrastructure Team and how they work with industry, read the Team Prospectus.

About this paper

This paper provides recommendations to improve the planning and delivery of essential utilities in London, focused on electricity, gas, water, wastewater and digital infrastructure. It was written by James Harris through action research with the GLA Infrastructure Team.

Front and back cover image

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Executive summary

Infrastructure investment will be critical to the economic recovery from Covid-19, while reducing carbon emissions, ensuring resilience, and delivering growth and regeneration. The planning system has a key role to play in delivering infrastructure through place-leadership, plan-making and development management.

In London, the role of local and strategic planning in delivering transport and social infrastructure is relatively well established. However, approaches to planning for utilities infrastructure are more varied and fragmented. While there is evidence of good practice, this is often limited to high-profile locations where utility constraints presented an obvious barrier to growth. This has yet to translate into a consistent approach to the planning and delivery of utilities infrastructure across London.

To improve practice, the RTPI has worked with the Greater London Authority's (GLA) Infrastructure Team to develop a **handbook for practitioners** which describes how to coordinate the delivery of utilities infrastructure under the current planning system, including key leverage points.

During the research process, stakeholders also highlighted **four main barriers to effective infrastructure planning:**

1. **Gaps in national infrastructure strategies, policies and funding**

   A lack of direction on key infrastructure challenges, such as decarbonisation, and an absence of stable funding which leads to reliance on competitive bidding for infrastructure projects.

2. **A lack of alignment between local planning and investment in utilities**

   Difficulties in securing investment in new capacity to meet future demand, and uncertainty for utility providers about the scale and pace of development.

3. **Fragmented and inaccessible data**

   Limited incentives and formal processes to enable consistent data sharing between local authorities, developers and utility providers during the earlier stages of planning.

4. **A lack of resources and skills**

   As a result of austerity, challenges in securing the staff, funding and information needed to carry out proactive engagement between local authorities and utility providers.

Overcoming these barriers requires action from central government, regulators, utility providers, the GLA and London Boroughs. This paper sets out **four practical recommendations:**

1. **Clarify the role of planning in delivering national infrastructure objectives**

   The government should recognise the value of effective local and strategic planning in national strategies for infrastructure investment, clean growth, decarbonisation, resilience and environmental improvement, promoting a place-based approach to addressing these challenges and supporting engagement between key stakeholders during plan-making.

2. **Support a strategic evidence base for London's utilities**

   The government should assist in creating an evidence base for each of London's five 'sub-regions', to provide local authorities, landowners, developers and communities with information on infrastructure location, assessments of capacity and need, and scenario modelling tools to support effective planning.

3. **Early alignment of investment in utilities with spatial planning**

   The government should amend the relevant regulatory frameworks to encourage upfront investment in advance of growth, and ensure that planners have the tools to coordinate the delivery of sustainable infrastructure to support place-making and development.

4. **Provide stable funding for infrastructure planning and coordination**

   The government should provide local authorities with the resources to establish dedicated infrastructure planning and coordination teams, as part of a wider programme of investment in public sector planning.

These would help both London and local authorities across the country to plan and deliver infrastructure more effectively. This paper describes how these can be addressed through the government's changes to the planning system along with the National Infrastructure Strategy, Devolution White Paper, Comprehensive Spending Review and wider strategies.

1. Introduction

1.1. London's infrastructure challenge

To meet anticipated population growth, London needs to deliver approximately 52,000 new homes every year, along with commercial and industrial space to accommodate 1.3 million new jobs by 2041, in line with the new London Plan. The scale and pace of growth in London puts pressure on infrastructure and assets which rely on the provision of infrastructure. This includes transport networks, utilities, schools, hospitals and cultural venues, and green, blue and public spaces. These pressures are most obvious in London's Opportunity Areas (OAs): strategic brownfield sites designated in the London Plan for significant levels of development, but which often have major infrastructure constraints.

In addition to accommodating growth, London's infrastructure investment must also help to deliver wider economic, social and environmental objectives including:

- Reducing greenhouse gas emissions from transport and buildings to net zero by 2050 at the latest, including through energy efficiency retrofit, the rollout of heat networks and conversion of the gas grid, and the deployment of heat pumps, thermal storage and battery storage
- Supporting a goal for 80% of trips to be made by public transport, walking or cycling by 2041, and enabling the rollout of electric vehicle charging points
- Achieving ubiquitous gigabit-capable digital connectivity and preparing for 5G
- Increasing resilience to flooding, drought and overheating, and reversing the decline in biodiversity
- Tackling air pollution, reducing waste and moving to a low-carbon circular economy
- Improving health and quality of life, reducing inequality and making the city a better place to live, work and visit

The UK, including London, is anticipated to experience a serious recession due to Covid-19, and infrastructure investment will play a key role in supporting the economic and social recovery. The challenge is immense, with recent analysis estimating the total cost of London's infrastructure requirements[1] at £968 billion to 2041 (in 2018 prices), with a £121 billion funding gap[2]. To achieve value for money, a 'whole-systems' approach will be needed to ensure that the right infrastructure is delivered at the right time and place.

[1] Sectors in scope included transport (excluding aviation), affordable housing, energy, water supply flooding and drainage, green infrastructure, waste management, digital connectivity.

[2] Arup & Greater London Authority, 2019. ***The cost of London's infrastructure requirements to 2041 and the funding gap***

1.2. The value of planning

Planning plays a central role in coordinating the delivery of infrastructure, to serve both new development and regenerate existing places. It does this in several ways. Through the local and strategic plan-making process it identifies infrastructure needs; in development management it regulates, sets conditions and raises revenue for infrastructure; and through 'place-leadership' it engages across different sectors and geographical boundaries. This helps to coordinate different investment streams - many of which are administered centrally - into places.

This approach enables synergies to be identified and exploited, delivering infrastructure, buildings, public spaces and environmental improvements in an integrated way to achieve a shared vision for place - something more than the sum of individual parts. In doing so, good planning reduces costs and risks, and provides greater certainty for communities, developers and infrastructure providers.

However, this approach has become increasingly difficult to achieve. The last few decades have seen decision-making in related sectors, such as transport, health, energy and the environment, become fragmented across different departments, regulatory agencies and private companies. Planning policy has become increasingly focused on housing delivery, with planners often lacking the resources, skills and tools to coordinate infrastructure delivery in this complex landscape.

Multiple reports have highlighted similar barriers to integrated infrastructure planning, citing complex governance arrangements, short-term funding, centralised decision-making, a lack of resourcing, capacity and skills, and unclear objectives at the national level[3].

Many, including the National Infrastructure Commission, have called for a more integrated approach, and referenced positive examples from London. These highlight the role of the Greater London Authority (GLA) and Transport for London (TfL) in coordinating strategic transport infrastructure with growth, and innovative approaches by the London Boroughs to delivering essential utilities in areas like Vauxhall Nine Elms Battersea, Kings Cross Central, Elephant and Castle, the Isle of Dogs and South Poplar and the Queen Elizabeth Olympic Park.

While these are positive examples, they represent high-profile locations and significant levels of growth, in areas with complex infrastructure constraints. Boroughs have piloted different approaches to improving coordination between planners, landowners, developers, infrastructure providers and communities. They often received support from the GLA and TfL, and benefited from experienced master-planning teams and dedicated funding.

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[3] National Infrastructure Commission, 2020. ***Infrastructure to support housing***

National Infrastructure Commission, 2019. ***Strategic investment and public confidence***

National Engineering Policy Centre & Royal Academy of Engineering, 2020. ***Sustainable Living Places – a systems perspective on planning, housing and infrastructure***

Institute of Civil Engineers, 2019. ***State of the Nation 2019: Connecting infrastructure with housing***

Royal Town Planning Institute, 2019. ***A smarter approach to infrastructure planning***

Energy Systems Catapult, 2018. ***Local Area Energy Planning: Supporting clean growth and low carbon transition***

However, the wider policy and regulatory framework still make it difficult to consistently plan and deliver utility infrastructure in advance of growth, with limited tools available to planners. This can lead to the wrong type of infrastructure or piecemeal solutions being installed, which later require costly retrofit and creates disruption. It can also lead to uncoordinated streetworks – a major problem in the UK's larger cities – where multiple contractors dig up the same stretch of road in quick succession to install or upgrade infrastructure. In London, approximately 15% of congestion is attributable to works by utilities and highways authorities[4].

1.3. The strategic role of the GLA

The GLA provides a number of important functions which influence how utility infrastructure is planned and delivered across London. These include:

- The **London Infrastructure Plan**, which provides a high-level assessment of need.
- The **London Environment Strategy** and the **1.5C Compatible Climate Action Plan**, which provide a strategic policy framework to guide the delivery of energy, water and green infrastructure.
- **Projects** which support London boroughs and private/public sector partners in developing decentralised energy projects.
- The **Mayor's Transport Strategy**, which provides a framework to guide the delivery of electric vehicle charging points and green infrastructure.
- The **Connected London Team** and the **Smarter London Together roadmap**, which help to coordinate the rollout of new digital technologies, including 5G.
- The **London Development Database**, which monitors certain planning permissions, starts and completions, and makes these available in a standardised, open format.
- A range of detailed supplementary guidance.

The GLA's Infrastructure Team supports the improved coordination of infrastructure planning and delivery across London in order to achieve 'good growth' - a key policy objective of the new London Plan. Its services include:

- Convening the **London Infrastructure Group**, which brings together the organisations responsible for building and maintaining London's infrastructure.
- The Infrastructure Coordination Service, a dedicated arm of the Infrastructure Team that supports better coordination of infrastructure delivery
- Working closely with the GLA's planning team to support utility coordination in London's Opportunity Areas.
- Developing the **Infrastructure Mapping Application**, a browser-based GIS tool that provides a central register for data on growth in London, asset capacity and future infrastructure investment. This enables infrastructure providers, local authorities, and the

[4] INRIX, 2019. ***INRIX Global Traffic Scorecard: Congestion cost UK economy £6.9 billion in 2019***

GLA to work together to coordinate streetworks and invest in infrastructure ahead of demand.

- Piloting the **London Underground Assets Register**, a project which maps existing underground assets in up to fifteen London boroughs to increase safety and efficiency during streetworks and developer connections (funded by the Cabinet Office)
- Developing the **Collaboration Handbook** which promotes a 'dig once' approach to streetworks.
- Piloting the **Developer Infrastructure Coordination Service** in partnership with Tower Hamlets, Westminster and Croydon, which provides developers with a dedicated contact who has a strong local knowledge of infrastructure constraints and opportunities, and facilitates engagement with local infrastructure asset owners.
- Managing the Mayor's **Infrastructure Advisory Panel** that brings together a diverse range of leaders in the infrastructure and development sectors to contribute to and inform his work programme.
- Working to establish a network of infrastructure planners across the London Boroughs.

Many of these interventions were developed at the request of developers and utility providers, who recognise the barriers to effective infrastructure planning (described in Chapter 2) and benefit from earlier collaboration and effective data-sharing in terms of reduced costs and risks. The GLA is perceived by developers and utility providers as a trusted third party without a commercial or competitive interest, and with a commitment to the public good.

This service has been referenced in reports from the National Infrastructure Commission[5], Institute of Civil Engineers[6] and RTPI[7]. These recognise the value of a coordinating body which can bring together relevant parties ahead of development - when they otherwise lack incentives to engage - and which works to improve consistency across local authorities. These reports also note that the approaches piloted in London can provide a template for local and combined across England.

1.4. Opportunities for change

In 2020, the Infrastructure Team partnered with the RTPI to develop a handbook which describes how the current planning system can be used to coordinate the delivery of utility infrastructure, including key leverage points[8]. However, with the challenges facing London, and the likelihood of increased national infrastructure investment, there is an urgent need to create a more supportive policy and regulatory framework for planning utility infrastructure in London.

This paper complements the handbook by setting out recommendations for wider changes at the national, strategic and local level. Some of these relate directly to planning, and others to the systems and processes that interact with planning. Together, these are intended to help London

[5] National Infrastructure Commission, 2020. ***Infrastructure to support housing***

[6] Institute of Civil Engineers, 2019. ***State of the Nation 2019: Connecting infrastructure with housing***

[7] Royal Town Planning Institute, 2019. ***A smarter approach to infrastructure planning***

[8] GLA & RTPI, 2020. ***Coordinating utilities infrastructure through local planning***

deliver growth in a way that supports the economic and social recovery, and responds to the climate and ecological crisis.

These recommendations also come during a time when major changes to the English planning system are being proposed[9]. The stated aims of the government's White Paper are to streamline and modernise the planning process, improve outcomes on design and sustainability, reform developer contributions and ensure more land is available for development where it is needed. Its proposals could significantly impact on planning for utility infrastructure, and include:

- A shift to interactive map-based Local Plans produced on a statutory 30-month timeframe which identify 'Growth', 'Renewal' and 'Protected' land areas over a minimum 10-year period, with prescriptive rules and codes used to regulate the use, form, design and compatibility of development.
- The automatic grant of development rights equivalent to outline planning permission in 'Growth' areas, and development rights similar to Permission in Principle in 'Renewal' areas ('Protected' areas are envisaged as having more stringent controls, as under the current system).
- Democratic engagement front-loaded at the plan-making stage, with a "*much more streamlined and digitally-enabled*" development management process which uses policies set at the national level.
- A new Infrastructure Levy to replace S106 and the Community Infrastructure Levy (CIL), paid before occupation and based on a fixed proportion of the final value of development above a certain threshold, with either a single nationally-set rate or rates for different areas.
- The use of the Infrastructure Levy to fund affordable housing, and the ability of local authorities to borrow against receipts to forward fund infrastructure.
- Retaining the London Mayoral Community Infrastructure Levy (MCIL) and similar strategic infrastructure levies in combined authorities.

It is critical that any changes improves London's ability to plan and deliver utilities infrastructure in an integrated way, both at a strategic and local level, to support economic, social and environmental objectives. However, comprehensive reform will require primary and secondary legislation, and the current system is expected to remain in place for a number of years. Meanwhile, the government has recently made changes the current planning regulation[10], and is consulting on further amendments[11]. In addition, the government is due to publish its first National Infrastructure Strategy during the autumn, with a Devolution White Paper expected to follow.

This complex and evolving policy landscape is already changing the context in which local infrastructure planning takes place, and affecting the barriers to infrastructure planning in London. The recommendations reflect different opportunities for change, and highlight some of the risks.

[9] Ministry of Housing, Communities and Local Government, 2020. ***Planning for the future***

[10] Specifically the expansion of Permitted Development Right and introduced of a new Use Class. For more details see MHCLG, 2020. ***Planning Update Newsletter (July 2020)***

[11] Ministry of Housing, Communities and Local Government, 2020. ***Changes to the current planning system***

2. Barriers to infrastructure planning in London

Through extensive stakeholder engagement and practical working, the GLA Infrastructure Team and RTPI have identified a number of barriers to effective utility infrastructure planning in London. These include gaps in national infrastructure strategies, policies and funding; a lack of alignment between local planning and utility investment; fragmented and inaccessible data; and a lack of resources and skills. This chapter provides details on each.

2.1. Gaps in national infrastructure strategies, policies and funding

National policies and strategies provide the context for infrastructure planning in London, by providing clarity on long-term objectives and directing investment to projects on the ground. However, there are several important areas where national decisions are yet to be taken, including:

- An integrated strategy to reduce carbon emissions from surface transport, through reducing travel demand, encouraging the shift to sustainable modes, and providing electric vehicle charging infrastructure (a Transport Decarbonisation Plan is expected late 2020)
- A strategy to reduce carbon emissions from new development (the government's response to the consultation on the Future Homes Standard is expected late 2020)
- A national retrofit strategy to improve energy and water efficiency in existing buildings, and increase resilience to environmental risks (a Buildings and Heat Strategy is expected late 2020)
- Strategies for the decarbonisation of heat, future of gas and completion of the smart meter programme (an Energy White Paper and Buildings and Heat Strategy is expected late 2020)
- Strategies to deliver the objectives of the 25 Year Environment Plan (an England Tree Strategy is expected late 2020)

These gaps create uncertainty for planners, developers and infrastructure providers about how buildings, infrastructure, behaviours and places will change, and the investment that will be required.

A related problem is the absence of a satisfactory long-term financial settlement for local government, with infrastructure funding largely administered through competitive bidding processes administered by different central government departments. This incurs opportunity costs for local authorities and encourages them to adopt a 'wish list' or 'quick win' approach in bids, rather than securing the investment needed to deliver a long-term vision for place[12]. The Housing Infrastructure Fund (HIF) has gone the furthest to promote an integrated approach, but is still

[12] Royal Town Planning Institute, 2019. ***A smarter approach to infrastructure planning***

allocated via a competitive bidding process rather than being devolved to the GLA and other strategic authorities. This uncertainty is reflected in local authority Infrastructure Delivery Plans (IDPs). These often set out significant funding gaps, and in the case of utilities infrastructure, lack robust evidence[13].

2.2. A lack of alignment between local planning and investment in utilities

The GLA has no statutory powers or responsibilities to convene utility providers or align their investment strategies with London's wider objectives, nor to encourage the retrofit of existing buildings to reduce energy and water demand (beyond major refurbishments that require planning consent). This contrasts with the governance of London's transport infrastructure. Here, through Transport for London, the Mayor has the statutory responsibility to plan, manage and develop transport services across the city-region. The Mayor's Transport Strategy (MTS) is integrated with the London Plan and Mayoral strategies for health inequalities, economic development, housing, environment and culture. The MTS is delivered through TfL's Business Plan, and through the Borough Local Implementation Plans (LIPs), which received dedicated funding to support implementation.

This type of alignment is just as critical for utilities where network upgrades can be needed to unlock strategic sites for development. This can require substantial financial resources and take time to programme, finance and deliver - for example by requiring land to be assembled and safeguarded. Through early engagement between planners, landowners, developers and utility providers, opportunities can be identified to achieve more sustainable, resilient and inclusive design. This might include promoting higher levels of energy and water efficiency in new developments to reduce the need for carbon-intensive infrastructure, or strategically locating land for critical infrastructure such as an electricity substation, heat network or sustainable drainage system (SuDS). It might identify opportunities to coordinate with nearby programmes of energy efficiency retrofit, or coordinate streetworks.

This early engagement is made difficult by the regulatory frameworks for utilities. Their primary focus is keeping consumer bills low, protecting against the risk of stranded assets and delivering returns to shareholders. While regulatory frameworks have evolved in recent years to address wider objectives, these still differ from the objectives of the National Planning Policy Framework (NPPF), which focuses on sustainable development. The five-year price control periods, which set out investment in energy and water infrastructure, are not aligned to the timescales of the London Plan or the Local Development Plans of individual boroughs, nor the geographical boundaries on which decisions are taken (with the exception of London's wastewater).

Through agreement with their respective regulators, electricity, gas, water and telecom providers do use the price-control period to set investment strategies which include network upgrades to accommodate future demand. However, the regulators require a high degree of certainty that development will come forward, and rarely permits investment to meet 'speculative' future demand. This degree of certainty is difficult to provide, as large sites will often have multiple landowners and developers, moving at different speeds. Without proactive place-leadership by local authorities,

[13] Royal Town Planning Institute, 2019. ***A smarter approach to infrastructure planning***

including engagement between local authorities and developers at the masterplanning stage, utility providers often wait for individual connection requests to trigger investment in the necessary upgrades. Even in sites with masterplans, planners have limited powers to influence the phasing of development to coordinate with utility investment.

This lack of alignment has created particular challenges in the electricity sector, where inadequate capacity can impose unpredictable network reinforcement costs on developers, or require costly retrofit at a later date. The NIC has warned that these issues could increase in frequency, as electricity demand is set to rise[14]. Similar issues also exist with the capacity of raw water and treatment works[15].

The problem is exacerbated by a lack of emphasis on utilities infrastructure in planning. While the preparation of IDPs do require local authorities to calculate the utility infrastructure needed to support growth, they can be inconsistent in terms of quality, accuracy and accessibility. They are also commonly prepared to support a Local Plan and so reflect a specific moment in time, rather than a dynamic or 'live' assessment of capacity and constraint. The Local Plan site allocation process is not able to provide the necessary detail on what will be built, including the scale and form of development, and relevant site constraints, to enable upfront investments in utility infrastructure[16].

This lack of alignment can lead to missed opportunities to use pre-emptive infrastructure investment to reduce risk for developers, minimise disruption for residents and businesses, and influence site layout and building design in ways that reduce carbon and improve resilience. This is especially true when planning for growth outside London's Mayoral Development Corporations, where boroughs can lack the resources and capacity to engage with utility providers on an individual basis (see below).

Recent changes to the planning system, including the expansion of Permitted Development Rights and flexibility under the Use Class Order, also reduce the ability of local authorities to manage the cumulative impacts of development on utility networks.

2.3. Fragmented and inaccessible data

The flow of information between local authorities, developers and utility providers is critical to effective infrastructure planning, but this is frustrated by a number of factors. There are few formal requirements or processes for sharing utility data with planners and developers, and concerns about quality and commercial sensitivity can make providers reluctant to participate. There is a lack of certainty around roles and responsibilities, and the regulatory framework provides few incentives to share utility data in an open and accessible format. This can make it difficult for local planning authorities to assess utility constraints at the plan-making stage.

Planning data is similarly difficult for utility providers to access. Local Plans do provide some information on the location and volume of development and the impact on infrastructure (for example in Annual Monitoring Reports and IDPs). However, templates and formats vary between

[14] National Infrastructure Commission, 2020. ***Infrastructure to support housing***

[15] National Infrastructure Commission, 2019. ***Strategic investment and public confidence***

[16] Royal Town Planning Institute, 2018. ***Planning risk and residential development***

local authorities, and data is rarely machine-readable. Scheme-level infrastructure assessments provide more detail but only capture a moment in time, and are rarely integrated with wider monitoring activities. Furthermore, as many planning applications do not proceed to timely development outcomes, the granting of planning consent does not provide sufficient justification for infrastructure investment.

There are examples of good practice in overcoming these barriers. London's Infrastructure Mapping Application was created to aid decision-making when planning infrastructure - utilising data from a variety of sources to model and visualise the likelihood of development projects being delivered by a specified date, and to summarise the scale, scope and status of infrastructure and development projects in a specified area. It can also filter out dormant development projects that have not completed a new unit for a specified number of years. The London Underground Asset Register provides a similar service, with consistent and accessible data on location of pipes and cables to improve safety and efficiency during streetworks and developer connections.

Further changes to CIL regulations in 2019 also require local authorities to produce annual Infrastructure Funding Statements (IFSs) which contain information on the receipts, allocations and expenditure of S106 and CIL. IFSs should improve the consistency and accessibility of infrastructure data for different stakeholders, and provide better evidence for Local Plan-making and review. However, despite these improvements, issues with data consistency and accessibility still make it difficult for utility providers to understand delivery rates or forecast the cumulative impact of development on network capacity, which makes it difficult to justify investment in advance of demand.

2.4. A lack of resources and skills

As a result of austerity, the amount invested by English local authorities in planning reduced by 42% since 2009-10 in real terms. In 2017/18 local authorities spent just under £900 million on planning. Over half of this was recouped in planning fees and other income, which means that net investment in planning by local authorities was only around £400 million. This works out to just £1.2 million per local planning authority per year, or about £7 per person[17]. These cuts have reshaped local planning authorities, in particular by forcing them to prioritise statutory obligations around development management over strategic policy-making and proactive planning.

However, even in 2009-10 the resource dedicated to planning was low compared to other countries recognised for achieving good planning outcomes. There are around 22,000 planners in the UK, or around one planner for every 3,000 people. By contrast, the Netherlands, which is known for excellent planning, has one planner per 1,100 people[18].

This severe lack of resources has created additional barriers. Research has found that few local authorities are confident they have either the funding, staff, or information needed to support effective infrastructure planning, which relies heavily on proactive and early engagement[19]. In London, several boroughs have appointed new officers or established dedicated infrastructure

[17] Royal Town Planning Institute, 2019. ***Resourcing public planning***

[18] *Ibid*

[19] Royal Town Planning Institute, 2019. ***A smarter approach to infrastructure planning***

planning teams to address this gap, including the City of London, Tower Hamlets, Waltham Forest and Croydon. These work across local authority departments, and with developers and infrastructure providers, often focused on managing growth in areas with high levels of development.

With the support of the GLA, this shows a commitment from local authorities to overcome the barriers outlined in the chapter. However, more is needed to resource and upskill infrastructure planning across London.

3. Recommendations

The new London Plan, Mayoral Transport Strategy and Environment Strategy are already promoting a more integrated and coordinated approach to infrastructure planning across the city. The **GLA/RTPI handbook on coordinating utilities infrastructure** describes what is possible to achieve under the current planning system.

However, wider changes are needed to overcome the remaining barriers and deliver a more consistent and efficient approach, supporting national, strategic and local objectives and creating more sustainable, resilient and inclusive places.

Recommendation 1: Clarify the role of planning in delivering national infrastructure objectives

Chapter 2.1 describes where national strategies are needed to enable the GLA and London Boroughs to make critical decisions about future infrastructure investment to support growth while delivering net zero carbon and increasing resilience to risk.

Solutions to these challenges increasingly require integrated solutions across multiple infrastructure sectors. Examples include planning networks of multifunctional green infrastructure which can support flood mitigation, biodiversity, urban cooling and active travel, *passivhaus* building designs that can alleviate the need for new energy capacity, and highway maintenance programmes that provide opportunities to lay new utilities infrastructure and support healthy streets.

Upcoming national strategies, plans, policies and funds should therefore clarify where planning is needed to integrate and coordinate multiple types of infrastructure, and ensure that investment is prioritised towards solutions which deliver multiple economic, social and environmental benefits.

An example can be found in the emerging Transport Decarbonisation Plan from the Department for Transport, which identifies place-based solutions as a strategic priority. This plan recognises the need to move away from individual projects and technological fixes, and towards programmes of integrated solutions delivered through local and strategic planning. These include place-making measures to reduce overall travel demand, encourage walking, cycling, public transport and shared mobility, support vehicle electrification and reduce the impact of last-mile deliveries.

Government should similarly ensure that the role of local planning is clearly defined in the following strategies, plans, policies and funds:

a) The **National Infrastructure Strategy,** which should recognise the important role of local and strategic planning authorities in identifying infrastructure need and coordinating investment into place

b) The anticipated **Clean Growth Strategy, Energy Strategy** and **Buildings and Heat Strategy,** which should collectively set out a clear pathway to achieving net zero carbon by 2050, and clarify the role of the local planning system in minimising energy demand, for example through coordinating programmes of retrofit with the rollout of smart, decentralised

and low-carbon energy infrastructure including heating and cooling networks, renewable energy and battery storage

c) The **Future Homes Standard,** which should place greater emphasis on the role of planning and place-making in reducing energy demand, for example through the integration of green and blue infrastructure to tackle overheating and reduce the need for carbon-intensive flood defences

d) The **Environment Act**, which should look beyond Biodiversity Net Gain to clarify the role of the local planning system in delivering the Local Nature Recovery Networks and multifunctional green infrastructure, and remove barriers to the delivery of green SuDS

e) The **Treasury Green Book** and accompanying guidance, which should give greater weight to infrastructure programmes rather than individual projects, and reflect a wider range of economic, social and environmental objectives

Benefits

By addressing these gaps, the government can provide much-needed direction on how different stakeholders will need to cooperate to deliver sustainable development. By strengthening the role of planning in delivering infrastructure, these strategies will support earlier engagement between local authorities, landowners, developers and infrastructure providers, and help to direct funding towards place-based solutions that provide multiple benefits. This will enable buildings and places to be future-proofed now, reducing risk and the need for costly retrofitting.

Recommendation 2: Support a strategic evidence base for London's utilities

Chapter 2 described the challenges in aligning local planning with investment in utilities, which requires early and proactive engagement to understand infrastructure capacity and constraint. The GLA is already working to support this engagement by commissioning standalone reports, such as the 2015 London Infrastructure Plan, which demonstrate infrastructure needs at a strategic scale. These provide useful evidence for boroughs as they prepare Infrastructure Delivery Plans (IDPs) – a key part of the Local Plan evidence base. Through IDPs, boroughs can then provide more detailed assessments of infrastructure capacity and constraint at the local authority or site level, and set out any funding gaps.

While IDPs provide valuable evidence on the infrastructure needed to support growth, they can also be time-consuming to prepare, and vary in structure, detail and quality. A lack of consistency can also mean that IDPs struggle to deal with utility issues which cross local authority boundaries. In London's Opportunity Areas (OAs), the GLA and boroughs often commission a more detailed infrastructure evidence base, known as a Development Funding Infrastructure Study (DIFS). While these work better for complex strategic sites, a lack of standardised and accessible data mean that these are expensive to prepare, and risk becoming outdated as development progresses.

The Mayor is now considering developing a new Infrastructure Strategy for London, to support the implementation of the National Infrastructure Strategy and the recovery from Covid-19. To

maximise the benefits of this work, and inform the preparation of future IDPs and DIFS, more robust and accessible data is needed.

To enable this, **the GLA and London Boroughs should** now collaborate to develop a 'live' strategic evidence base for London's utility infrastructure. These should be built upon the existing GIS-based Infrastructure Mapping Application, and divided according to the five sub-regions used in the 2016 London Plan[20]. In addition to information on the location of existing utility infrastructure, the platform would provide a high-level assessment of the infrastructure needed to deliver the Mayor's Infrastructure Strategy and the expected funding gap. Scenario modelling tools could enable users to assess growth thresholds against infrastructure capacity, while GIS layers could demonstrate planning policy and other relevant information, such as:

- Strategic investment in London's utility networks, mapped from utility business plans
- Data integrated from the Infrastructure Mapping Application
- Data on the phasing of development
- Pressure points where multiple developers require connections to utilities
- Zones where developers are obliged to connect to existing heat networks
- Appropriate siting of required new sub-stations, heat networks and utility corridors
- Air Quality Management Zones
- Areas at risk of flooding and overheating
- The location of streetwork coordination initiatives

Government should work with the regulators to place requirements on infrastructure providers to share data on network capacity in a consistent and machine-readable format, in order to facilitate regular updates to the GLA's strategic evidence base[21]. Non-disclosure agreements can be used to restrict the availability of sensitive data to public agencies.

Boroughs should then produce more detailed IDPs using a consistent template and structure, with machine-readable data which can be used to update the sub-regional evidence base.

Benefits

A strategic evidence base for utility infrastructure, divided into London's sub-regions, would provide timely, affordable, consistent and accessible data and evidence to boroughs, overcoming the barriers set out in Chapter 2.3. This would reduce planning risk and speed up delivery, by supporting:

[20] The five sub-regions are **Central** (Camden, City of London, Kensington and Chelsea, Islington, Lambeth, Southwark, Westminster), **East** (Barking and Dagenham, Bexley, Greenwich, Hackney, Havering, Lewisham, Newham, Redbridge, Tower Hamlets, Waltham Forest), **North** (Barnet, Enfield, Haringey), **South** (Bromley, Croydon, Kingston upon Thames, Merton, Sutton, Wandsworth) and **West** (Brent, Ealing, Hammersmith and Fulham, Harrow, Richmond upon Thames, Hillingdon, Hounslow)

[21] Options for improving data-sharing through legislation, regulation and standards are set out in the GLA's document *Mandating Infrastructure Data Sharing with Cities* [currently unpublished]

- The preparation of better borough-level IDPs and IFSs which contain more accurate forecasts of infrastructure demand and existing capacity
- The preparation of DIFSs for OAs and other strategic sites
- Site assessment and appraisal by planners, land agents and developers
- Masterplanning and site-specific planning activity, such as the preparation of Area Action Plans and Supplementary Planning Documents
- The negotiation of planning obligations and conditions

In the Planning White Paper, the government proposes that Local Plans should be "*visual and map-based, standardised, based on the latest digital technology, and supported by a new standard template"*. A move towards standardised and digital Local Plans could provide further opportunities for integration, giving local authorities, developers, utility providers and other stakeholders a common platform to assess the relationship between growth and infrastructure.

As described in Chapter 1, the Planning White Paper also proposes that a 'streamlined' Local Plan process will allocate 'growth' areas, where outline permission is automatically granted, and 'renewal' areas where development rights are granted in a manner similar to the existing Permission in Principle approach. To support these changes, comprehensive evidence bases will be needed to inform infrastructure planning at the forefront of the Local Plan process, with better and more consistent information enabling local authorities to identify utility constraints prior to designation and helping developers to factor in potential costs.

Recommendation 3: Align investment in utilities with spatial planning

In 2019, the National Infrastructure Commission (NIC) published its review of the regulatory system for energy, telecoms and water. This report set out recommendations which help to address some of the barriers identified in Chapter 2.1 - adapting the system to better meet future demand, while securing the investment needed to reduce emissions, improve digital connectivity and increase resilience to floods and drought.

Several of these recommendations could also help to overcome the barriers to alignment between local plan-making and investment in utilities, as described in Chapter 2.2. For example, the NIC recommended that major strategic investments in energy and water be removed from the price control process, and opened up to competition. This could provide flexibility to respond to significant changes, such as major growth, and enable competition in delivering investment ahead of demand. The NIC also recommended new statutory duties on the regulators, including net zero carbon, environmental impacts, quality and resilience - duties which are more closely aligned to the objectives of the planning system. A new duty on 'collaboration' was also recommended to encourage investments which increase costs in a single sector, but provide wider benefits.

The report also calls on regulators to *"engage with metro mayors and local authorities to understand the likely impact on infrastructure planning of large, strategic developments… ...so that these can be planned for in future price control settlements"*. It also calls on regulators to

"specifically require companies to demonstrate how they have taken the strategic vision of the relevant metro mayors and local government (within their powers) into account where this has material impacts for network investment."[22]

Several of the interventions listed in Chapter 1.3 already support this process of engagement between regulators, utility providers and the GLA. The London Development Database is already improving the consistency of planning data, which allows for development trends to be monitored across the city. A more robust understanding of London's infrastructure funding gap, supported by the strategic evidence base proposed above, would support the NIC's recommendations by making it easier to understand the utility investment required to accommodate growth.

To support greater alignment between utility investment and plan-making, **government should:**

- **a)** Place a duty on the regulators to ensure collaboration between utility providers and strategic planning authorities
- **b)** Clarify the evidence needed in a Local Development Plan to demonstrate a material impact on network investment, such as thresholds for significant levels of development in relation to identified infrastructure capacity issues
- **c)** Consider how utility providers can be incentivised to participate in early-stage plan-making. This could include a statutory consultee role for site-specific planning frameworks in growth areas with recognised utility constraints, or new planning guidance on the development of cost-effective programmes for sequenced infrastructure delivery
- **d)** Ensure that the assessment criteria used to promote competition in the provision of strategic enhancements to water and energy include clear requirements on collaboration with metro mayors, including data sharing and participation in coordination initiatives
- **e)** Support further innovation in the PlanTech and PropTech sector to develop scenario modelling and forecasting tools which enable better collaboration between planners, developers and utility providers, including methods to confidentially test of site capacity prior to formal site allocation and create robust utility delivery plans
- **f)** Update Building Regulations to include clear processes and metrics for reporting operational performance in terms of energy and water consumption, to make it easier to monitor the impact of growth on utility capacity and revise plans accordingly

To support greater alignment between utility investment and development management, **government should:**

- **g)** Develop a standardised planning condition which requires developers to provide information on phasing in a consistent and machine-readable format, and consider the evidence needed for local authorities to set a planning condition which restricts development from commencing until upfront utility works have been completed
- **h)** Share case studies of where local authorities have forward funded works which enable the upfront or coordinated delivery of utilities in support of development

[22] NIC, 2019: Strategic investment and public confidence

i) Review the impact of the recent extension of Permitted Development Rights and reform of the Use Class Orders[23] on the ability of local authorities and infrastructure providers to manage cumulative impacts on utility network capacity and deliver coordinated upgrades

And when considering planning reform, **government should** ensure that any new system:

j) Provides sufficient time and resources to engage with utility providers at the plan-making stage, with a consenting regime that increases certainty for utility providers and enables them to make upfront investment in major growth areas

k) Enables utility providers to engage during the development of masterplans and site-specific design codes, so that utility requirements are factored into decisions about layout, massing, density and design

l) Retains and improves upon the ability of planning to phase infrastructure with development, for example through the use of conditions and non-financial obligations

m) Accounts for the high infrastructure costs of development in London's brownfield sites, and addresses any risks incurred by local authorities when borrowing to forward-fund infrastructure. This is especially important for developments with long build-out periods, and may require government or the GLA to underwrite upfront investment

n) Is complemented by regulatory reform which requires that utility investment strategies are published in a standardised map-based format with machine-readable data

o) Places greater weight on infrastructure delivery at Local Plan examination, evidenced through a robust IDP

Benefits

These changes would help to de-risk development by encouraging upfront investment in utility networks to accommodate growth and support development viability, ensuring the timely release of units onto the market. It would also direct infrastructure investment towards solutions which deliver good value for money, and support infrastructure providers when demonstrating compliance with wider regulatory objectives.

Recommendation 4: Provide stable funding for infrastructure planning and coordination

The National Infrastructure Commission (NIC) and many others have called on the government to devolve a greater portion of infrastructure funding to mayoral combined authorities, with flexible multi-year budgets. It is important that this does not just cover capital investment, but also provides the resources and skills required for effective infrastructure planning, overcoming the barriers described in Chapter 2.4.

The Infrastructure Coordination Service (ICS), part of the Infrastructure Team, is currently funded

[23] As described in footnote 8

by the TfL lane rental scheme. This charges utility companies and other works promoters a daily fee for works on the most sensitive parts of the TfL's roads network. Coordination initiatives in individual boroughs are largely funded from the proceeds of growth, including CIL and Mayoral Growth Zone funding. However, there is a need to resource and upskill infrastructure planning on a stable long-term basis across all parts of London.

The government has announced plans to increase funding for places, including through reviewing planning fees and providing additional funding for affordable homes and infrastructure, while the Planning White Paper promises a "*comprehensive resources and skills strategy for the planning sector*." To provide stable funding for infrastructure coordination, **government should** also:

- **a)** Recognise the need for local planning, engineering and delivery capacity in the National Infrastructure Strategy, and provide flexible capital and revenue funding as part of a broader programme of investment in public sector planning in the Comprehensive Spending Review. This could include devolving a portion of the proposed Single Housing Infrastructure Fund to the GLA, to invest in best practice early engagement with developers, infrastructure providers and the public during the plan-making process, and coordination initiatives in high-growth areas across London.
- **b)** Consider how utility providers could directly fund local authority planning in significant growth and regeneration areas
- **c)** Fund a greater portion of affordable housing through central government grant, to reduce the pressure on developer contributions and free up resources for infrastructure
- **d)** Resource local planning authorities to manage the expansion of Permitted Development Rights, which otherwise increases costs through the Prior Approval process
- **e)** Activate the powers to enable local authorities to borrow against future CIL receipts, and amend regulation to remove the requirement to spend the 5% CIL administration fee in the same year as collected
- **f)** Use the **Digital Catapult** and **Connected Places Catapult** to accelerate the deployment of innovative approaches to infrastructure delivery in support of development

And finally, when considering planning reform **government should** ensure that Infrastructure Levy receipts are prioritised for infrastructure as oppose to wider council services, and that local authorities are encouraged to establish infrastructure planning and coordination initiatives.

To complement these actions, the **GLA should:**

- **g)** Examine whether future rounds of Mayoral CIL (MICL) could create a permanent resource for infrastructure coordination at a strategic or local level, building on the pilot Infrastructure Coordination service, and looking beyond major transport infrastructure towards more localised infrastructure planning to encompass wider objectives.
- **h)** Explore how to further strengthen the delivery of London's strategic environmental objectives through local planning, for example by replicating the use of funded Local Implementation Plans (LIPs) used to deliver strategic transport objectives.
- **i)** Examine how different Mayoral funding programmes and guidance can encourage infrastructure coordination initiatives.

j) Review how S106 and CIL, and the proposed Infrastructure Levy, could better support infrastructure coordination initiatives at the borough level

k) In partnership with the London Boroughs, RTPI, Planning Advisory Service and London Planning Officers Society, develop an Infrastructure Planning Network to help pool resources and share best practice, and to promote the recommendations of the handbook on coordinating utilities through local planning

Benefits

Stable funding will provide local authorities with the resources to proactively liaise across council departments and between landowners, developers and infrastructure providers, creating and managing the collaborative partnerships which are critical to integrated planning and coordinated delivery. These individuals or teams can provide a range of benefits, including:

- Examining utility investment programmes and identifying opportunities for alignment with developments, highway works and other council-led capital investment programmes
- Conducting in-house development viability assessments to maximise developer contributions for affordable housing and infrastructure
- Agreeing multi-stakeholder programmes to schedule infrastructure investment in support of phased development, which saves time and reduces risk and disruption
- Providing a single point of contact for a range of stakeholders to improve the flow of information and provide accountability

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