

The London Plan – The Spatial Development Strategy for Greater London, Draft for Public Consultation, December 2017

Dear Sir or Madam

Thames Water is pleased to comment on the draft replacement London Plan.

General Comments

Thames Water is the largest water and wastewater services company in the UK, serving over 15 million customers across the London and Thames Valley area, from Kent and Essex in the east to the edge of Gloucestershire in the west.

We are committed to constantly improving the standards of service we provide to our customers. This means that we plan for the long-term, balancing the needs of current and future customers and working to deliver safe, secure, sustainable and affordable water and wastewater services. London, and the seven million customers we serve across the capital, is at the heart of our business and as such we regard the Greater London Authority (GLA) - both the Mayor and Assembly - as a key partner in achieving these aims.

Every five years, we are required to prepare and consult on a Business Plan, setting out the investment we wish to make over a five-year period, together with the impact this will have on customers' bills and a Water Resources Management Plan (WRMP), explaining how we will balance the supply and demand for water in the longer term.

On Friday 09 February, we published our draft Water Resource Management Plan 2019 ('draft water plan') for public consultation. The draft water plan sets out that a growing demand for water, driven by population growth, will exceed the availability of water resources, which are reducing due to climate change and the need to leave more water in the environment. This creates a supply-demand deficit of 326 million litres per day (Mld) in London by 2045, which increases to 767Mld by 2100.

The key focus of our draft water plan is to use the water we have wisely before seeking to boost supplies. It proposes that from 2020-25 we reduce leakage from our water mains by 15 per cent, we install nearly one million smart meters and plan to undertake nearly 6,000 Smarter Home Visits (water efficiency advice and retrofit visits) per month. We will also start the construction of a major new river water abstraction point from the Thames at Teddington to improve our resilience to drought from its current standard of 1:125 to 1:200 by 2030 (subject to the outcome of the consultation and obtaining planning consent). In order to maintain water security in the longer term, we will need to bring in more water resources from the west of London in the late 2040s, most likely through a new reservoir in the upper Thames in Oxfordshire or a pipeline from the River Severn to the top of the Thames. A wastewater reuse plant in Beckton Wastewater Treatment Works is proposed for the mid-2060s.

On Monday 19 February, as part of the development of our 2020-25 Business Plan, we published a document setting out options on the different levels of service customers may wish to pay for services including avoiding sewer flooding and reducing leaks and river pollution events and resilience to drought. The consultation period on both draft plans concludes on 29 April and comments can be submitted via our [consultation website](#) or directly to consultations@thameswater.co.uk

Our Business Plan and water resources management plan have been developed through extensive engagement with the GLA, other stakeholders and our customers. We believe that through partnership working we can develop and deliver activities with better outcomes. As both our plans are currently out for consultation, we will work with GLA officers to keep them informed on the development of our revised plans and to integrate key actions from these plans into the next stages of the London Plan.

We have also recently started work on developing a long-term wastewater management plan, known as 'London 2100'. The same rapid population growth and changing weather patterns that affect our supply and demand for water resources are also placing an increasing strain on our ageing drainage and sewerage infrastructure, while we strive to meet tighter environmental standards. The scale and complexity of these challenges in London requires us to take a much longer-term approach, to enable the management of risk and for us to embrace opportunities for innovation. The London 2100 project will inform our 2025-2030 Business Plan.

We are keen to work closely with the Mayor, Assembly and GLA officers to make London an exemplar city for demonstrating how water can be managed through a more sustainable and integrated approach with new development minimising consumption and disposal requirements.

We have the following specific comments on the draft London Plan. Where we seek changes to the proposed content of a Policy, we have highlighted the suggested changes in a box.

Chapter 1 Planning London's Future (Good Growth Policies)

We welcome the Mayor's commitment to 'Good Growth'. We believe that having a secure and sustainable supply of water, managing flood-risk at an acceptable level, maintaining high standards of wastewater treatment and supporting a high-quality environment are critical to achieving and sustaining 'Good Growth'.

Policy GG6 Increasing efficiency and resilience

We agree that infrastructure needs to be designed to be robust, or adaptable to a changing climate and other shocks and stresses. We believe that water security starts with using the water we have wisely.

In relation to protecting critical infrastructure from flooding, regard should be had to whether the protective measures can be effectively funded and that the cost-benefit adequately reflects the wider public good. For example, protecting operational sites in London is achievable but the requirement for flood compensation [i.e. land] and the additional costs make delivery of many schemes prohibitively expensive.

Ensuring the infrastructure to support growth

We support the recognition in Policy GG6 part D that an integrated approach is required for infrastructure delivery. Close collaboration between all key stakeholders will be critical to ensuring infrastructure is in place to support the growth of London. We already work closely with developers, Boroughs, other utilities and the GLA, to deliver London's water and wastewater infrastructure requirements. As members of the Mayor's Infrastructure High-Level

Group we provide information on our delivery programmes and are committed to enabling the more efficient planning, delivery and maintenance of London's infrastructure.

Chapter 2 Spatial Development Patterns

Policy SD1 Opportunity Areas

We welcome the statement in policy SD1 Part B.3 stating that Boroughs should work with infrastructure providers to plan for the infrastructure to support growth. We have been working with the GLA to understand where the capacity of our water and wastewater networks may struggle to support the scale of new development and may require significant investment. We have identified a number of Opportunity Areas (Vauxhall-Nine Elms – Battersea, Old Oak Common and Park Royal, Old Kent Road, Greenwich Peninsula, Charlton Riverside, Woolwich, Thamesmead & Abbey Wood, Bexley Riverside) where future water / wastewater demands exceed current capacity and are working with the GLA and Boroughs in these areas to develop Integrated Water Management Strategies (IWMS).

The purpose of the IWMS is to develop a framework to sustainably manage water supply and demand, wastewater and flood risk in an integrated way, and to provide guidance on how the required infrastructure should be planned, provided and managed. It provides critical insight to inform the DIFs, masterplans, OAPFs and Area Action Plans for these areas if initiated early enough and integrated into the plans and studies.

We believe that Policy SD1 should state that an IWMS should be undertaken for Opportunity Areas where there is insufficient capacity to support new strategic development and that the outputs of the IWMS should be integrated into the DIFs / masterplans / OAPFs / Area Action Plans. We are keen to work with the Mayor and Boroughs to agree which Opportunity Areas would benefit from this approach. We suggest that what an IWMS should consider should be set out in Policy SI5 and have proposed suggested additions under that policy heading.

Specific Opportunity Areas

A number of our key London infrastructure assets are located within the OAs and we have made specific representations to this effect to inform the OAPFs as they emerge. For example, Beckton Sewage Treatment Works is located in the Royal Docks OA.

Beckton STW has recently been upgraded to meet new effluent consent requirements and to increase treatment capacity. The latest population growth forecasts in the Beckton STW catchment necessitate investment to expand the sewage treatment capacity to be made available sooner than previously expected. Additional capacity will need to be made available in the early 2020s and work on design and planning is commencing and work on the project will need to commence prior to 2020. However, further expansion at Beckton is limited by the safeguarding for the Thames Gateway Bridge. Please see our more detailed comments under the Transport Policy.

Chapter 3 Design

We believe that to enable properly integrated, cost-effective, water efficiency and sustainable drainage / flood risk management, these objectives need to be considered at the earliest possible development stage.

We would like to see Policy D1 Part A.9 explicitly state the need to consider water management (including water reuse, flood risk management and sustainable drainage).

In Policy D1 Part B, we believe that development design 'should' deliver, rather than 'aim' to deliver high sustainability standards.

Policy D7 Public Realm

We support Policy D7 Part H regarding sustainable drainage.

In relation to Policy D7 Part M and paragraph 3.7.11 which states that new development should provide free drinking water fountains. We support increasing the availability of high quality water without people needing to purchase bottled water and are working with the Mayor to roll out the Refill scheme <https://www.refill.org.uk/> in London. However, it is essential that drinking water fountains are designed, installed and maintained to ensure that water quality is not compromised. Thames Water has developed a policy document on drinking water fountains that local authorities and others should follow. This document is available on request and will shortly be uploaded onto the Thames Water website.

Policy D9 Basement Development

All basement developments should be required to install protection against the risk of surcharge flooding from the sewers as recommended in part H of the building regulations.

Basement development in areas at risk of surface water flooding should be required to investigate appropriate mitigation to reduce the risk of overland surface water flooding

Policy D12 Agent of Change

Where development is being proposed in proximity to (within 800m) a sewage treatment works, the developer or local authority should liaise with Thames Water to consider whether an odour impact assessment is required as part of the promotion of the site and potential planning application submission. The odour impact assessment would determine whether the proposed development would result in adverse amenity impact for new occupiers, as those new occupiers would be located in closer proximity to a sewage treatment works.

Where development is being proposed within 15m of a sewage pumping station, the developer or local authority should liaise with Thames Water to consider whether an odour and / or noise and / or vibration impact assessment is required as part of the promotion of the site and potential planning application submission. Any impact assessment would determine whether the proposed development would result in adverse amenity impact for new occupiers, as those new occupiers would be located in closer proximity to a pumping station.

Paragraph 176 of the NPPF refers to mitigation measures necessary to make developments acceptable in planning terms, noting that *"Where safeguards are necessary to make a particular development acceptable in planning terms (such as environmental mitigation or compensation), the development should not be approved if the measures required cannot be secured through appropriate conditions or agreements. The need for such safeguards should be clearly justified through discussions with the applicant, and the options for keeping such costs to a minimum fully explored, so that development is not inhibited unnecessarily."*

The NPPF Paragraph 187 relates to the role of applicants and local planning authorities in working together. *"Local planning authorities should look for solutions rather than problems, and decision-takers at every level should seek to approve applications for sustainable*

development where possible. Local planning authorities should work proactively with applicants to secure developments that improve the economic, social and environmental conditions of the area.”

The odour impact study would establish whether new resident’s amenity will be adversely affected by the sewage works and it would set the evidence to establish an appropriate amenity buffer. On this basis, text similar to the following should be incorporated into the London Plan: *“When considering sensitive development, such as residential uses, close to the Sewage Treatment Works, a technical assessment should be undertaken by the developer or by the Borough. The technical assessment should be undertaken in consultation with Thames Water. The technical assessment should confirm that either: (a) there is no adverse amenity impact on future occupiers of the proposed development or; (b) the development can be conditioned and mitigated to ensure that any potential for adverse amenity impact is avoided.”*

We welcome Policy D12 ‘Agent of Change’ and propose that the policy should be extended to cover odour and vibration as well as noise.

Chapter 4 Housing

Policy H1 Increasing housing supply

Thames Water recognises the need to provide significant numbers of new homes to support London’s growth and address overcrowding in existing housing. We will work to ensure that sufficient water and wastewater infrastructure is in place to support this growth. We would welcome continued close working with the GLA to improve the confidence on the number and phasing of new homes to enable us to strategically plan new infrastructure in the most efficient way.

Policy H2 Small Sites

We support the approach of promoting small sites for housing delivery but note that incremental ‘infill’ development also cumulatively places significant stress on our networks. We are keen to work with the GLA to identify areas where high infill development is likely to occur so we can plan accordingly. Where these sites are being promoted, recognition should be made that sustainable urban drainage features and appropriate surface water disposal should be implemented to the same level as required for large sites. With the limited available sewer capacity an increased use of small sites with less stringent delivery considerations could pose a future flood risk.

The encouragement for small site developments is noted as is the intention to set out design principles for such developments as part of the review of GLA design guidance. These principles should require sustainable urban drainage features and appropriate surface water disposal to be implemented to the same level as required for large sites, to ensure no increase in flood risk

Policy H3 Monitoring and Housing Targets

We would welcome support from the GLA in requiring the Boroughs to improve and publish housing monitoring data and trajectories, on an annual basis. The quality and availability of this data varies greatly, but is essential in planning for water and wastewater service provision.

The Planning and Compulsory Purchase Act 2004, as amended by the Localism Act 2011, sets out a requirement for Annual Monitoring Reports to be submitted to the Secretary of State. Notwithstanding the requirement set out in the above Act, the publication of Annual Monitoring Reports by Local Planning Authorities is often sporadic, out of date or difficult to locate.

In order to assist with planning the delivery of infrastructure it would be beneficial to ensure that information on housing need, observed housing delivery (location and scale) and projected housing delivery (location, scale and phasing) is made publically available on an annual basis with a standardised approach and publication date. It would also be beneficial if such data could be released in a standard digitised format that could be downloaded by infrastructure providers for their use in infrastructure planning. This would assist with monitoring the rate of housing delivery within an area which will also assist with planning future water and wastewater infrastructure delivery. For further clarity on the position of all local authorities there may also be benefits in establishing a detailed national database where data including updates on existing and projected delivery rates could be recorded providing easily accessible data to assist with forecasting short and long term infrastructure requirements.

Policy E4 Land for industry, logistics and services to support London's economic function

We welcome the recognition that there needs to be a sufficient supply of land for utilities infrastructure to support the economic growth of London. However, it will not always be feasible to provide this on existing industrial land.

We are developing long-term (to 2100) water and wastewater management plans that will set out the land requirements to provide London with the water services its needs to grow. We will work closely with GLA and Borough officers to ensure that these needs are appropriately integrated into the London Plan and Development Plans as they develop.

Most wastewater treatment/water treatment infrastructure capacity increase provision takes place at existing treatment sites. This is necessary as it is where the existing discharge points are or where the existing water resource is located. Given that many of our existing infrastructure assets are in open areas they have been designated as Green Belt, MOL and / or local open space. As many of these sites will require upgrades to provide additional capacity or meet environmental objectives we consider it important that the strategic Green Belt, MOL and local open space policies in the Plan should make reference to the requirement for the potential upgrade of our assets within these designations (also see response to Policies G10G5). It may also be necessary that new infrastructure treatment facilities, such as a new water treatment works, are provided in open space as this is where the technical constraints require them to be located. Hence it is also important that the Local Plan should recognise that new infrastructure may need to be located in open space such as Green Belt/MOL where this can be justified by technical reasons.

Chapter 5 Green Infrastructure and Natural Environment

We welcome the recognition of the vital importance of green infrastructure and the Mayor's commitment to increase its provision. We know that climate change could put London's wastewater systems under greater pressure, including a more frequent and severe risk of flooding. We see green infrastructure as a major component in managing future rainfall and alleviating flood risk.

Policy G1 Green Infrastructure

Given that many of our utility infrastructure assets are in open areas they have been designated as Green Belt, MOL and / or local open space. As many of these sites will require upgrades to meet environmental and economic objectives we do consider the strategic Green Belt, MOL and local open space policies in the Plan should make reference to the requirement for the potential upgrade of our assets within these designations.

Policy G2 London's Green Belt

Several of our large infrastructure sites are located in areas designated as Green Belt and they will need to be upgraded to meet our future requirements.

Policy G2 should be amended to read:-

'Some of London's utility infrastructure, such as reservoirs and treatment plants are also designated as Green Belt land and will require upgrading to meet the requirements of population growth, climate change and environmental regulations.'

Policy G3 Metropolitan Open Land

Taking into consideration that many of our infrastructure sites are also located in areas of MOL, for example, the remaining area of undeveloped land within Beckton Sewage Treatment Works.

Policy G3 should be amended to include:

'Some of London's utility infrastructure, such as reservoirs and treatment plants are also designated as MOL and will require upgrading to meet the requirements of population growth, climate change and environmental regulations.'

We have promoted the removal of the MOL designation at Beckton STW, but to date LB Newham have refused to do this on the basis that it is a GLA/Mayoral decision. We therefore support the clarification in Policy G3 Part C that: "*Any alterations to the boundary of MOL should be undertaken through the Local Plan process, in consultation with the Mayor and adjoint boroughs*".

Policy G4 Local green and open space

Some of our infrastructure sites have also been designated as local open space, even though there may be no public access.

Policy G4 should be amended to include:

'Some of London's utility infrastructure, such as reservoirs and treatment plants are also designated as local open space and will require upgrading to meet the requirements of population growth, climate change and environmental regulations.'

Policy G5 Urban greening

As part of the planning for urban greening works, consideration must be given to the direct and indirect impacts on water supply. The planting and establishment of street trees can involve significant amounts of water and, ideally this should be done using stored rainwater or other non-mains supplies.

Once established, street trees can pose a problem for water infrastructure with roots affecting the structural integrity of water mains and sewage pipes. The presence of trees can also affect our ability to operate, maintain or refurbish assets (e.g. operation of valves or replacement of mains). This will also be true for other utilities. Strategic coordination on the timing and location of tree planting schemes is desirable to avoid conflicts with essential programmes, such as our leakage reduction programme.

We support the incorporation of green roofs and green walls on new developments as they can help to reduce surface water runoff and provide enhanced onsite biodiversity. Such options are important in tackling drainage issues more sustainably, and will be a key part of the London 2100 plan.

However, given the operational difficulties in applying green roof technology to an infrastructure asset, green roofs are only practical on a small variety of utility assets. Therefore we consider that green roofs should be incorporated in major developments 'where feasible'.

Policy G8 Food growing

We support this policy in principle, but in relation to Part A 2) would need to assess the water impact of commercial food production and assess each proposal on its own merits to understand how water intensive they were and whether this had an impact on water infrastructure .

Chapter 9 Sustainable Infrastructure

We note that para 9.2.10 includes a footnote stating that the Mayor may update the SPG on sustainable design and construction. We would welcome an update of the 2014 guidance document and would be pleased to contribute to its review.

Policy SI1 Improving Air Quality

We have recently made major improvements to our Sewage Treatment Works to address growth, including improving the quality of the discharged effluent in London and reducing the potential impact of odour on surrounding areas. In so doing so, we have been helping to facilitate appropriate regeneration, particularly in East London around Beckton STW and in North London around Deephams STW.

Where a new development is proposed in close proximity to an existing STW, the operational characteristics (e.g. odour) of the STW should be recognised, as should the practical

difficulties and overriding constraints on investment, which may prevent works to address those characteristics. It should therefore be recognised that unless those operational characteristics can be addressed, it may be inappropriate to locate the new development in the location proposed. To mitigate impacts, measures ought therefore to be required to be put in place before the development is occupied. Thames Water may provide such measures if funding is allowed under the periodic review process. If not, funding in full would have to be provided by the developer. We would like the Mayor to support our position on this matter, so that the amenity of neighbouring uses are protected. This would be in line with our suggested amendment to Policy D12.

We recommend that Policy SI1 should include an additional bullet point which states that ***'new development in close proximity to existing sewage treatment works should consider and address potential adverse air quality impacts.'***

We would note that during a severe drought we may need to enforce restrictions on water use to conserve the remaining water resources. Dust control measures on construction sites may be subject to these restrictions, potentially impacting on construction.

Policy SI2 Minimising greenhouse gas emissions

We support the Mayor's commitment to London becoming a zero-carbon city. However, it is essential that savings are delivered where they are most cost beneficial/effective to the London economy.

Thames Water is a founder member of the London Climate Change Partnership and we have our own Climate Change Strategy and Carbon Management Action Plan. We were the first water utility to achieve the Carbon Trust standard.

We note that the Mayor supports the greater use of renewable and low-carbon generation technologies. We support this aspiration and we already generate 14 percent of our own electricity needs from renewable sources, making us the largest non-commercial generator of renewable energy inside the M25.

Examples of the ways we have set out to reduce our carbon footprint includes installing efficient machinery and changing the operational culture with which Thames Water's employees use equipment and machinery. Our recent upgrades at Mogden, Crossness, Beckton, Riverside and Long Reach Wastewater Treatment Works (WWTW) and current upgrade at Deephams WWTW assumes the use of renewable energy from either new onsite wind turbines or from gases produced by sludge digestion. We intend to continue to reduce our carbon footprint and expand our renewable energy generation.

We support the reference to the energy hierarchy but consider that the carbon emission reduction targets set out in Policy SI2 will be challenging. This is because there are significant differences between the provision of energy efficiencies within utility development and conventional commercial (non-domestic) schemes.

As domestic hot water use is the second largest element of a household's energy bill and accounts for at least 20% of domestic greenhouse gas emissions, we believe that the London Plan could go further in enabling combined water, energy and financial savings.

We would like to see a reference to the combined benefits of water efficiency and energy and financial savings in each of the supporting text for policies SI2, SI3 and SI5.

Policy SI5 Water Infrastructure

In principle we support Policy SI5 which generally reflects our previous consultation responses.

We suggest that as Policy SI5 covers both water supply and wastewater treatment infrastructure in an integrated way, the title should be amended to reflect this i.e. Policy SI5 Water and **Wastewater** Infrastructure.

We strongly support Policy SI5 Part A, as we agree that water resources should be conserved and protected and that the water we have should be used wisely. We also welcome the recognition that new water resources will be needed to ensure London has a secure supply of water. Following the consultation on our draft water resources management plan and the approval of our revised draft Water Resource Management Plan 19 and our Business Plan, we will work with GLA and relevant Borough officers to plan and deliver strategic new water resource infrastructure.

New water treatment capacity will also be required in London and it may be necessary to provide this on new sites.

Policy SI5 Part B should therefore be amended to require that Development Plans support new **water** treatment infrastructure and Boroughs should work with Thames Water in relation to local **water** and wastewater infrastructure” So that it is consistent with Part D 2) in relation to wastewater.

In Part C.1, we support the Mayor’s commitment to improve the water efficiency of new development through adopting the ‘Optional’ standard in Building Regulations.

We would like to see the policy commitment to smart water metering, water saving and recycling measures strengthened part C.3 to read:

C) Development proposals should:

3) Incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help achieve lower water consumption rates and maximise future-proofing where possible.

This would then match the weight given to energy infrastructure in Policy SI3.

We believe that an Integrated Water Management Strategy provides an efficient and effective way to identify, assess and plan for the most appropriate balance of measures to enable major new development areas to be water efficient, manage flood risk, reduce the risk of sewer flooding and avoid the installation of unnecessary infrastructure.

As noted in our response to Policy SD1, we propose that a policy stating that an IWMS should be prepared for strategic development areas where there is insufficient strategic

water and/or waste infrastructure capacity to support that development and that outputs of the IWMS should be integrated into the development plans and proposals.

We would be pleased to work with the GLA to define exactly where IWMS should be undertaken, what an IWMS should consider and how it should be implemented. The appropriate level of detail of this could then be set out in Policy SI5.

We have been engaging with developers involved in some of the Opportunity Areas to discuss the prospect of them enabling 'water neutrality'. This would see the volume of new water demand created by the Opportunity Area's new development, offset by the water saved through retrofitting of water efficiency devices into the existing homes and supporting changing behaviour of households in the surrounding area. Such projects have the potential to make London's Opportunity Area's water neutral or even 'water positive' (achieving a net reduction in demand), and would help make London more resilient to drought and avoid unnecessary Infrastructure upgrades. The potential for water neutrality could be identified as part of the IWMS.

Improving water quality/wastewater treatment

The majority of London's wastewater is treated at the London Sewage Treatment Works. However, wastewater catchments do not match up with Borough boundaries and it is therefore inevitable that some of the wastewater originating from London goes out of London for treatment and some wastewater from outside of London is treated at sewage treatment works within London.

The major London Sewage Treatment Works were upgraded during AMP 5 & 6 (2010-2015 and 2015-2020) to accommodate growth and to treat sewage to a higher standard before discharge and to fully treat more flow (Beckton, Crossness, Mogden, Riverside and Long Reach STWs). We are currently constructing a significant upgrade of Deephams STW to enable the STW to treat more existing flow, being able to deal with the impacts of climate change and population growth and this is due to be complete in the summer 2018.

Given the pace of growth further upgrades to some of the major STWs will be required during AMP 7. We therefore support Policy SI5 Part D 2) where it requires Development Plans to support 'strategic wastewater treatment infrastructure investment'. However, it is not clear why only 'strategic' infrastructure is referred to. All wastewater treatment infrastructure upgrades will be equally important and should be supported in Development Plans and therefore request that the word 'strategic' be deleted.

The final sentence should also be amended to require that: "Boroughs should work with Thames Water to support local wastewater infrastructure requirements."

It should also be noted that although some upgrades to some of the major STWs are likely to start in AMP7 they could potentially be phased over several AMPs. Phasing is appropriate for several reasons:

- 1) To allow for advances in innovation and ensure that the best available technology is used, where appropriate;
- 2) The scale of the projects would by their nature spread over multiple AMPs;
- 3) Phased upgrades better enable service to be maintained throughout construction;
- 4) Phasing may allow better adaptability to changes in population forecasts.

We have also developed high-level strategic proposals (in the form of a Sludge Strategy) for the management of sewage sludge in our region over the next 25 years. This is in response to changing circumstances affecting the amount of sludge generated through population increases, the tightening of regulations and codes of practice governing the spreading of sludge to land and increasing environmental regulation of discharges to the River Thames.

Our Sludge Strategy has led to the implementation of enhanced sludge digestion in the East London STWs in AMP5/6 and identifies the need to develop additional treatment capacity within London in the long term (2035). Our sludge strategy still favours thermal disposal at the largest STW sites, but not using dated incineration technologies. Instead we are looking into new innovative processes (gasification and pyrolysis) that would allow greater amounts of clean renewable energy to be generated.

Paragraph 9.5.10 of the draft plan refers to a major sewer tunnel in the Counters Creek catchment. This text should be updated in line with the most recent consultation on the project to state:

“Thames Water previously planned a major sewer tunnel in the Counters Creek catchment of west London. Following a detailed review of the requirement for the strategic sewer Thames Water have concluded that it is not, at present, required. Thames Water will continue to investigate what future resilience is required for the sewer network, taking into account population growth, development, urban creep and climate change.”

Government policy and water and wastewater infrastructure

A key sustainability objective of Government Policy for the preparation of Development Plans should be for new development to be co-ordinated with the infrastructure it demands and to take into account the capacity of existing infrastructure. Paragraph 156 of the National Planning Policy Framework (NPPF), March 2012, states: **“Local planning authorities should set out strategic policies for the area in the Local Plan. This should include strategic policies to deliver:.....the provision of infrastructure for water supply and wastewater....”**

Paragraph 162 of the NPPF relates to infrastructure and states: **“Local planning authorities should work with other authorities to: assess the quality and capacity of infrastructure for water supply and wastewater and its treatment.....take account of the need for strategic infrastructure including nationally significant infrastructure within their areas.”**

The web-based National Planning Practice Guidance (NPPG) includes a section on ‘water supply, wastewater and water quality’ and sets out that Local Plans should be the focus for ensuring that investment plans of water and sewerage/wastewater companies align with development needs. The introduction to this section also sets out that **“Adequate water and wastewater infrastructure is needed to support sustainable development” (Paragraph: 001, Reference ID: 34-001-20140306).**

The Waste Water NPS, March 2012, sets out the need for Nationally Significant Infrastructure Projects, but can also be a material consideration for planning applications. Defra are also currently preparing a draft Water NPS for consultation in the summer of 2018. We strongly support the preparation of a Water Resources NPS and are keen to work with Defra and the GLA in this respect.

Infrastructure Funding

As recognised at paragraph 9.5.6, water companies are funded in 5-year periods called Asset Management Plans (AMPs). We are currently in AMP6 (the sixth AMP since privatisation) which runs from 01 April 2015 to 31 March 2020. We are in the process of finalising our draft Business Plan for AMP7 (2020-2025) as part of the Price Review 2019 (PR19). The government's Water Resources Planning Guidelines require us to plan for the growth forecast in local authority Local Plans, including the London Plan. We have worked closely with the GLA's demographics team to develop growth and demographic forecasts.

Ofwat has recently changed the way water and wastewater infrastructure is funded. From 01 April 2018, developers are only required to pay a fixed cost 'infrastructure charge' for network reinforcement directly pursuant to their planning applications. This means that where a water company wishes to undertake 'strategic' upgrades ahead a planning application/s, this expenditure will now be recovered from all water company customers. Developers wishing to requisition Thames Water to undertake further works will be able to estimate the costs from a published schedule of costs.

Water companies are also no longer allowed to charge developers for models to forecast the impact of their development on the water company's networks. In combination with the expectation that water companies must make sufficient capacity available for new development within a reasonable time, this increases the need for the GLA, Boroughs and developers to work collaboratively to ensure that the infrastructure required to support growth is provided in a timely manner. This will help to avoid unacceptable impacts on the environment such as sewage flooding of residential and commercial property, pollution of land and watercourses, odour and water shortages with associated low pressure.

We published the new charges on 30 January and they come into effect on 1 April 2018 as set out on our website at: <https://developers.thameswater.co.uk/-/media/Site-Content/Developer-Services/New-connections-charging/New-connection-charging-QA.pdf?la=en>

Policy SI7 Reducing waste and supporting the circular economy

Policy SI7 A.3 sets a target of ensuring that there is zero biodegradable or recyclable waste to landfill by 2026. We put 100% of London's sewage sludge to beneficial use, either through thermal destruction with energy recovery or recycling treated sludge (also known as biosolids) to agricultural land as a fertiliser. We are also recycling 100% of spoil from our Victorian Mains Replacement programme in London, putting this to beneficial use.

We note that Policy SI7 A 4.b sets a target of 95% for recycling/re-use of construction, demolition and excavation waste by 2020. Thames Water already recycles 74% of capital wastes with higher rates achieved on some individual programmes.

Policy SI8 Waste capacity and net waste self-sufficiency

Confirmation is sought that Policy SI8 does not relate to wastewater or sewage sludge as this is considered not applicable.

Policy SI12 Flood Risk management

We support the policy in principle. In particular we support the recognition at part E that utility services, which would include water and wastewater infrastructure, may be necessary in flood risk areas.

When reviewing development and flood risk it is important to recognise that water and/or sewerage infrastructure may be required to be developed in flood risk areas. By their very nature water and sewage treatment works are located close or adjacent to rivers (to abstract water for treatment and supply or to discharge treated effluent). It is likely that these existing works will need to be upgraded or extended to provide the increase in treatment capacity required to service new development. Flood risk policies should therefore accept that water and sewerage infrastructure development may be necessary in flood risk areas.

The National Planning Practice Guidance (NPPG) states that a sequential approach should be used by local planning authorities in areas to be at risk from forms of flooding other than from river and sea which includes "*Flooding from Sewers*" and this should be referenced in the policy and/or supporting text.

Part A of Policy SI12 sets out that current and expected flood risk from all sources across London should be managed. The National Planning Practice Guidance (NPPG) states that a sequential approach should be used by local planning authorities in areas to be at risk from forms of flooding other than from river and sea which includes "*Flooding from Sewers*".

Flood risk policies and supporting text should therefore reference to 'sewer flooding' and an acceptance that flooding can occur away from the flood plain as a result of development where off site sewerage infrastructure is not in place ahead of development.

We would welcome a discussion with the GLA regarding how open spaces, including roads, could be designed to retain, delay or direct stormwater flows when usual flood risk management infrastructure is overcome

Policy SI13 Sustainable Drainage

We support the policy in principle. Surface water drainage it is the responsibility of the developer to make proper provision for drainage to ground, watercourses or surface water sewer. It is important to reduce the quantity of surface water entering the sewerage system in order to maximise the capacity for foul sewage to reduce the risk of sewer flooding and we therefore support Policy SI13 Part B in this respect.

Limiting the opportunity for surface water entering the foul and combined sewer networks is of critical importance to Thames Water. Thames Water have advocated an approach to SuDS that limits as far as possible the volume of and rate at which surface water enters the public sewer system. By doing this, SuDS, where ground conditions are suitable, have the potential to play an important role in helping to ensure the sewerage network has the capacity to cater for population growth and the effects of climate change. We therefore support Policy SI13 parts C&D in this respect.

Policy SI15 Water transport

In case of an extreme drought, one option to increase water supplies may be to bring water in by tanker. We would value a discussion with the GLA to review which wharves may be capable of supporting such an extreme drought management measure.

Chapter 10 Transport

Policy T1 and Table 10.1 Transport Schemes

River crossing at Gallions Reach and/or Bevedere (subject to further assessment)

As set out in relation to the Mayor's Draft Transport Strategy, both the DLR Extension and the previously named Thames Gateway Bridge (TGB) or River crossing at Gallions Reach and/or Bevedere have the potential to impact upon Beckton Sewage Treatment Works (STW). Land at Beckton STW has been safeguarded for a new TGB river crossing for over 16 years. The Safeguarding Direction was made on 4th May 2001 and came into force on 8th May 2001, by the Secretary of State for the Environment, Transport and the Regions.

The safeguarding Direction requires the local authority to consult the Mayor in respect of any application for development within the designated safeguarded area zone, in accordance with the procedures contained in articles 3 and 4 of the Town and Country Planning (Mayor of London) Order 2001. Consequently, an application for development within the safeguarded zone would be a "PSI application" (project of potential strategic importance) on which the local planning authority must consult the Mayor.

The DLR Extension is now a confirmed proposal, but it is understood that this is unlikely to directly impact upon the safeguarded land at Beckton STW. However, a new river road crossing is still uncertain, but remains as a potential medium term objective.

Subsequent upgrades at Beckton STW to provide additional treatment capacity are severely restricted by the existing development footprint constraints at the site and flows of the sewage treatment process. The only suitable remaining area to provide additional sewage treatment capacity to extend the works is to the west of the recent extension on the western side of the STW which starts to encroach into the TGB safeguarded area. We therefore consider that the continued need for the river crossing at Gallions Reach and/or Bevedere/Safeguarding Direction should be reviewed now and that it should be removed if a new road river crossing scheme cannot be justified.

We consider that the land to the west of the recent Beckton STW Extension should be safeguarded (or at least identified) for an AMP7 STW Upgrade to accommodate population growth and we have made representations to the Newham Borough Local Plan/Infrastructure Delivery Plan to this effect.

The TGB Safeguarding Direction has been in place for over 16 years and no specific project has been progressed to date and it just remains as a potential strategic objective as set out on page 219 of the draft Transport Strategy. But, the Safeguarding Direction is now restricting Thames Water's capability to upgrade and extend Beckton STW which could have critical implications for such essential infrastructure to London's growth.

Thames Water therefore consider that a feasibility review and programme for such a river crossing at Gallions Reach and/or Bevedere/TGB river bridge crossing needs to be progressed now or the Safeguarding Direction should be removed. It is not acceptable to wait

to make such a decision until: *“Any decision on future crossings would be considered only once the effects of the Silvertown Tunnel, the Government’s Lower Thames Crossing, the planned public transport crossings and other improvements in the area, and the Mayor’s air quality measures are known”* (page 219 of MDTs) as this would constrain the upgrade of Beckton STW for many years to come.

We believe that the continued need for the Safeguarding Direction should be reviewed now and that it should be removed if a new road river crossing scheme cannot be justified.

We consider that the land to the west of the recent Beckton STW Extension should be safeguarded (or at least identified) for an AMP7 STW upgrade to accommodate population growth and we have made representations to the Newham Borough Infrastructure Delivery Plan to this effect.

In requiring development to make the most effective use of land the policy should recognise the potential dual role of transport routes in also delivering drainage services if permeable surfaces are used.

Policy T6 Car parking

We suggest that a requirement be included for new/resurfaced surface level parking to be made permeable where possible and cross reference to Policy SI13.

Chapter 12 Monitoring

Policy M1 Monitoring

As set out in relation to Policy H3, we would welcome support from the GLA in requiring the Boroughs to improve and publish housing monitoring data and trajectories, on an annual basis. The quality and availability of this data varies greatly, but is essential in planning for water and wastewater service provision.

The Planning and Compulsory Purchase Act 2004, as amended by the Localism Act 2011, sets out a requirement for Annual Monitoring Reports to be submitted to the Secretary of State. Notwithstanding the requirement set out in the above Act, the publication of Annual Monitoring Reports by Local Planning Authorities is often sporadic, out of date or difficult to locate.

In order to assist with planning the delivery of infrastructure it would be beneficial to ensure that information on housing need, observed housing delivery (location and scale) and projected housing delivery (location, scale and phasing) is made publically available on an annual basis with a standardised approach and publication date. It would also be beneficial if such data could be released in a standard digitised format that could be downloaded by infrastructure providers for their use in infrastructure planning. This would assist with monitoring the rate of housing delivery within an area which will also assist with planning future water and wastewater infrastructure delivery. For further clarity on the position of all local authorities there may also be benefits in establishing a detailed national database where data including updates on existing and projected delivery rates could be recorded providing easily accessible data to assist with forecasting short and long term infrastructure requirements.