

<p>Non-Executive Report of the:</p> <p><b>Housing Scrutiny Sub-committee</b></p> <p>9<sup>th</sup> April 2019</p>	 <p><b>TOWER HAMLETS</b></p>
<p><b>Report of:</b> Matthew Pullen, Infrastructure Planning Manager</p>	<p><b>Classification:</b> Unrestricted</p>
<p><b>Responding to growth and water infrastructure needs and tackling the issue of low water pressure</b></p>	

<b>Wards affected</b>	All wards
-----------------------	-----------

### **Executive Summary**

This report responds to the request for a spotlight session at Housing Scrutiny Sub-committee regarding planning for future water infrastructure to support growth and tackling the issue of low water pressure.

Detail is provided of collaborative action between the Council, the GLA and utilities providers to put in place the forward planning necessary to meet future infrastructure needs, in particular in areas of high residential and commercial growth. This includes:

- The approach to assessing and planning for future water needs
- Collaborative work to effectively plan for future water needs
- Collaborative work to support the delivery of utilities infrastructure.

Feedback from the committee is sought to influence the objectives of the on-going collaborative work through an Integrated Water Management Strategy (see Para 3.11).

Additionally, answers are provided from Thames Water to a range of pre-provided questions from the committee regarding water pressure. Thames Water will also attend the Housing Scrutiny Sub-committee to add to the answers provided in advance.

### **Recommendations:**

N/a – no decision necessary.

#### **1. REASONS FOR THE DECISIONS**

1.1 N/a – no decision necessary.

#### **2. ALTERNATIVE OPTIONS**

2.1 N/a – no decision necessary.

### 3. **DETAILS OF THE REPORT**

#### **Forward Planning and Collaboration**

Borough-wide Planning for Needs:

- 3.1 The need for future investment into the water network is recognised by Thames Water, the Council and the GLA. Alongside developers, all parties are working collaboratively to ensure that the future for the whole borough is well planned and that the necessary infrastructure is in place to support both existing and new residents and businesses.
- 3.2 The Council's emerging Local Plan, through policy D.ES6 Sustainable Water and Wastewater Management, places requirements on developers to ensure that there is sufficient capacity in the local water supply and public sewerage network to serve development. The policy states that:
- “1. *Development is required to reduce water consumption: new residential developments must achieve a maximum water use of 105 litres per person per day and refurbishments and other non-domestic development should meet BREEAM water efficiency credits.*
  2. *New development is required to minimise the pressure on the combined sewer network.*
  3. *Major development is required to demonstrate that the local water supply and public sewerage networks have adequate capacity both on and off-site to serve the development, taking into consideration the cumulative impact of current and proposed development.”*
- Tower Hamlets Draft Local Plan – Policy D.ES6
- 3.3 Developers are encouraged in the supporting text to the policy to communicate early on in the process of designing their scheme, to discuss their development proposals and delivery programme with Thames Water. This affords Thames Water with the necessary notice to ensure that any potential water and wastewater network reinforcement requirements are identified and necessary upgrades are undertaken.
- 3.4 On a site by site basis this is an established and effective process that is generally adopted across the development industry. It does not, however, negate the need for holistic and long term planning for development in an area, supporting good sustainable growth.
- 3.5 The Council's Infrastructure Delivery Plan, which supports the draft Local Plan states that further work is needed to ensure the resilient future planning of the water network in light of planned high levels of residential and commercial growth in the Borough. In particular, there is likely to be considerable growth in demand in the Isle of Dogs, Poplar and the east of the Borough, close to

the River Lea. Indeed the GLA's Opportunity Area Planning Framework and supporting Development Infrastructure Funding Study for the Isle of Dogs and South Poplar identifies that this may require considerable strategic investment in the network. Potentially, enhanced connections from Copper Mills, 11km from the Isle of Dogs, may be required to serve the planned growth. Alongside this, there are likely to be required local improvements in the area in question.

- 3.6 Further investigation is required to establish a detailed picture of future requirements and to understand when and where interventions may be necessary. The same can be said when considering the network for dealing with wastewater, including surface water run-off. Enhancements are likely to be necessary, but Thames Water has suggested that the network is capable of adequately serving near future development.

#### Collaborative Working to Meet Need:

- 3.7 Recognising the future challenges facing the water network in the area, the Council, the GLA and Thames Water are committed to working collaboratively to plan for and ensure timely delivery of enhancements. The three bodies, alongside colleagues from the Environment Agency are working to produce an Integrated Water Management Strategy for the east / south east of the Borough.
- 3.8 While it is essential that the water network is capable in all areas, in much of the borough, where development levels are relatively low, this is sufficiently accommodated by local interventions that can be considered on a site by site basis by developers and Thames Water. The higher level of growth in the east / south east of the borough will require wider consideration and likely strategic interventions alongside local site by site improvements.
- 3.9 A broad objective of the strategy is to ensure that supply meets demand consistently in the future. In achieving this, the strategy will recommend opportunities for reducing demand through good water management and efficiency. Examples of how this can be achieved could include reducing water usage and reducing surface water run-off through rainwater harvesting systems in new developments. Other measures may include greywater harvesting, green roofs and innovative landscaping of public and private spaces.
- 3.10 Reducing water usage and run-off will not alone ensure that supply meets demand. It is acknowledged that enhanced infrastructure will be necessary. The strategy will use a shared evidence base to understand when and where development is likely to come forward in order that additional infrastructure capacity can be introduced in the right places and in good time.
- 3.11 Early work on the Integrated Water Management Strategy has commenced, establishing the detailed evidence base to support the recommendations of the document. Further collaboration with wider stakeholders, such as landowners and developers, the Canal & River Trust and Port of London will be included within the programme to ensure all options for delivery are

considered. **Feedback from the Housing Scrutiny Sub-committee on the development of the strategy would be welcomed by the group in order to assist in shaping an effective document and approach.**

- 3.12 While a formal timetable has not yet been established for the completion of the strategy, significant progress is expected in 2019.

Collaborative Working to Ensure Smart Infrastructure Delivery:

- 3.13 Given the scale of growth in some parts of the borough, again in particular in the east / south east, the Council recognises the impact of development and the delivery of infrastructure on existing residents and businesses. Improvements to utility networks, including the water network can cause considerable disruption to the highway and associated public spaces. They can also be disruptive through noise and other environmental factors.
- 3.14 This is a challenge across the multiple growth areas in London and therefore the Councils Infrastructure Planning Service sought to engage the GLA and other partners to understand best practice and opportunities for shared approaches to meeting this challenge.
- 3.15 The GLA have established an Infrastructure and Delivery Co-ordination Team (IDCT). Summarily, the IDCT is seeking to support boroughs in identifying solutions and best practice for tackling infrastructure and delivery challenges and ensuring timely, sustainable, supported growth. One such challenge they are seeking to explore and meet is how utilities delivery can be better co-ordinated.
- 3.16 Through collaborative working between the Council and the GLA IDCT, the Isle of Dogs and South Poplar has been identified as a location where a focus on utilities delivery co-ordination would be productive. A partnership and pilot have been formed and the particular initial focus will be on considering how utilities infrastructure can best be delivered in this area.
- 3.17 Initial work has included a workshop with representatives from the local development industry; public sector; and a wide range of utilities companies, meeting to explore where there may be opportunities for better co-ordination and smoother delivery. With the Council committing resources to tackle this issue through the Infrastructure Planning Service, the GLA investing their time, money and expertise and in-principle buy-in from both utilities and major developers, there is a real prospect of enhancing the way in which utilities are delivered in the borough.
- 3.18 This work places the Councils Infrastructure Planning Service as an industry leader of innovative work on utilities delivery. The solutions identified through this pilot work are intended to deliver not only in Isle of Dogs and South Poplar, but also to provide a template and best practice for the rest of the Borough and more widely in London.

- 3.19 Complementary work also included as part of the pilot working between the GLA IDCT and the Councils Infrastructure Planning Service will seek to ensure high quality construction management and logistics as well as plans to improve the wider co-ordination of streetworks.

### **Thames Water Responses to Pre-provided Committee Questions regarding Water Pressure**

What is TW's infrastructure plan and maintenance programme (including upgrading pipes)?

- 3.20 Our PR19 submission was not approved by OFWAT and there is substantial work ongoing in the business to review and resubmit our plans for 2020-25. Our intended programme of work includes the replacement of 650km of the worst performing distribution mains (<12" in London generally) and 55km of trunk mains (>12" in London generally) as part of a programme of activities set to reduce leakage by around 97MI/d and target the riskiest trunk mains.
- 3.21 Furthermore, we are installing additional monitoring units across our network to detect any potential issues sooner. We are also carrying out a number of local and strategic network reinforcements in response to proposed new developments, ensuring that we are able to maintain/improve upon our existing service levels.

The TW resource management plan and its implementation – how can Tower Hamlets help?

- 3.22 Our WRMP sets out our long term plans to meet the water needs of our current and future customers, including seeking to share resources with other companies in the South East where this represents better overall value than companies developing their own resources. Reducing leakage and per capita consumption is a critical element of this and we have set out our plans to reduce leakage by 15% (97MI/d) over the course of next AMP. Thames Water are every keen for developments to consider water efficiency in their design, from low consumption appliances to grey water or water recycling schemes and we would be keen to discuss further how we can encourage this through the planning process. Thames Water can also offer water efficiency assistance to the council's owned non-domestic buildings, through our Smarter Business Visit team which undertakes simple water efficiency installations and internal plumbing leak fixes.
- 3.23 It would also help if Thames could have a greater confidence in the phasing/likelihood of developments going ahead as far in advance as possible, to ensure that we are able to identify and install any network reinforcements in advance of developments being built.

How is TW managing water pressure? Is there a water pressure management plan?

- 3.24 Thames Water have an obligation to meet minimum pressures and flows at our customers' outside stop taps of 10m (or 1 bar) and 9l/m. This is set out in

the Water Industry Act of 1992. Higher water pressures and/or significantly fluctuating water pressures can have a detrimental effect on our leakage performance and asset life, meaning we may start to see higher burst rates from impacted assets. There are locations where higher pressures are unavoidable due to the elevation of reservoirs or the topography of our water supply zones for example, but there are areas of our network where we are able to manage pressures through the installation of pressure control valves, which reduce pressure-related leakage by removing excessive network pressures whilst ensuring that we meet our customers' needs.

How is water pressure measured and what constitutes low water pressure? Do TW have data on this they can share?

- 3.25 Water pressure is measured by permanent pressure monitors located across our network, which we supplement with temporary loggers to investigate particular issues as required. Low water pressure is that which does not meet minimum pressures and flows at our customers' outside stop taps of 10m (or 1 bar) and 9l/m. This is set out in the Water Industry Act of 1992. If we breach this threshold for an hour or more six times in a reporting year (April to April) due to an inadequacy of our system, then these properties become reportable to our regulator on what is referred to as the DG2 register.

How is TW tackling low water pressure issues on new and existing developments? Low and high rises?

- 3.26 Where we are implementing programmes of actively managing pressures, we undertake a thorough tall building study, to understand what boosters exist in tall buildings in the area and to install new boosters where properties will be impacted by pressure reductions. These boosters become the property of the building owners but are installed at Thames's cost. Where any properties are recorded on our DG2 register as having a chronic poor pressure issue, we develop a plan to remove the properties, which may involve solutions such as network reconfiguration or local boosters.

- 3.27 Any new development consulted to Thames which may have a detrimental impact on pressures within the network is modelled and the necessary reinforcements implemented.

Which areas of the borough are complaints on low water pressure the greatest (and could this information be provided) and how is this being responded to?

- 3.28 Thames Water will be able to provide analysis of complaints within the borough at the scrutiny session, but this is not available in advance. Low pressure contacts may result from a variety of causes including customer network issues, Thames Water network issues or customer perception of poor pressures. Where chronic low pressure issues are identified as a DG2 issues (see above)

In places where old infrastructure has been identified as a problem, what steps have been taken to solve it and does the responsibility fall with the council or TW?

3.29 Responsibility for our network lies with us and we undertake repair and replacement of these assets as required to deliver the performance our customers expect whilst maintaining one of the lowest bills of any UK water company.

Is there a link between low water pressure and water usage resulting in increased water bills?

3.30 Not really. In some instances, customer usage can result in local pressure issues. This could be due to a number of issues, such as due to large users having uncontrolled take offs from our network, or illegal usage from hydrants. Where these are identified, we work with the users where possible to flatten usage patterns or to cease illegal usage. There is seldom a link with customer bills as we charge a flat rate for units of water throughout the day and all we would be doing here is changing the usage pattern, not reducing usage.

Roll out of water saving projects - what success is this having across the borough?

3.31 We have been delivering our Smarter Home Visits to some areas within Tower Hamlets, helping residents reduce their water use and reduce both water and energy bills. We have also been fixing internal plumbing leaks, such as leaky-loos and dripping taps, free to residents. These water efficiency services will continue as we install more smart water meters in Tower Hamlets and across London as part of our Progressive Metering Programme.

Households from new developments do not suffer from low water pressure. Can details be provided on the fittings and infrastructural changes put in place when building new homes so it can be compared to old structures?

3.32 Response to be provided at the scrutiny session by Thames Water.

Water pressure boosters are being used to solve individual households problems mostly in flats. Are there any studies from the Council or TW that show the impact that has on the rest of the properties in blocks of flats.

3.33 When TW install boosters, they are normally designed to support the whole block and not individual properties, which see an equal benefit.

3.34 We have a statutory requirement to supply water by gravity continuously for domestic purposes at a pressure that will; 'reach the top of the top-most storey of every building' (Water Industry Act 1991 Section 65). If the upper floors are above the level that could be supplied by gravity boosters may be installed. These boosters are not normally installed/sized by Thames.

#### **4. EQUALITIES IMPLICATIONS**

4.1 N/a – no decision necessary.

**5. OTHER STATUTORY IMPLICATIONS**

5.1 N/a – no decision necessary.

**6. COMMENTS OF THE CHIEF FINANCE OFFICER**

6.1 N/a – no decision necessary.

**7. COMMENTS OF LEGAL SERVICES**

7.1 N/a – no decision necessary.

---

**Linked Reports, Appendices and Background Documents**

**Linked Report**

- NONE

**Appendices**

- NONE

**Local Government Act, 1972 Section 100D (As amended)**

**List of “Background Papers” used in the preparation of this report**

List any background documents not already in the public domain including officer contact information.

- NONE

**Officer contact details for documents:**

Matthew Pullen