

## **Under pressure**

Report by the Health and Public Services Committee  
into water pressure management in London

March 2005





## **Under pressure**

Report by the Health and Public Services Committee  
into water pressure management in London

March 2005

# copyright

**Greater London Authority**  
**March 2005**

**Published by**  
Greater London Authority  
City Hall  
The Queen's Walk  
London SE1 2AA  
**[www.london.gov.uk](http://www.london.gov.uk)**  
enquiries **020 7983 4100**  
minicom **020 7983 4458**

**ISBN 1 85261 724 1**

This publication is printed on recycled paper

## Chair's Foreword



Since the nineteenth century, London has been planned, designed and built with regard to a particular level of water pressure. It is now largely Thames Water's responsibility to deliver fresh water at a reasonable cost at the right pressure to London's seven and a half million people. This is a complex task, particularly so given London's topography and the old age of much of its water pipes.

The Health and Public Services Committee held a short inquiry in January 2005 to investigate claims that Thames Water wanted to lower the water pressure across London, partly as a response to high leakage rates caused by burst pipes. We have sought to engage with Thames Water over its proposals to alter water pressure in different zones across London. These proposals are still at an early stage of development but we believe that there is need for greater dialogue between Thames Water, the boroughs and members of the public to ensure that the implications, including the costs of any remedial action, can be fully examined in advance of any action. We are particularly concerned to ensure that vulnerable families, including the elderly on fixed incomes, do not suffer as a result of any action taken by Thames Water.

The results of our findings and recommendations to Thames Water are set out in more detail in the report that follows. We would like to highlight in particular, our belief that as the influential supplier in the London region Thames Water must aspire to high standards of corporate social responsibility. In our view this means that Thames Water must do more to inform Londoners of their plans in this area. Thames Water must also seek to cover any additional costs incurred by private and council residents as a result of their own actions.

We have benefited from a large number of written responses and email messages from members of the public and our work has drawn on contributions from a large number of individuals and organisations. We are grateful for the time and effort taken by all those who have contributed to our work.

A handwritten signature in black ink, reading 'J. McCartney', written in a cursive style.

Joanne McCartney AM

## The Health and Public Services Committee

The Health and Public Services Committee was established in July 2004. The Committee has a wide remit covering health issues, as well as London's public services (other than those that fall within the remit of other committees of the London Assembly). This includes the performance of utility companies in London.

The Committee is flexible in its remit, and is not bound to issues emanating from individual localities or health authorities. It has a unique role, in that, it can identify and investigate health and public service issues that are of concern to London as a whole. The Committee also works across agency boundaries, encouraging participation from the voluntary sector, the private sector and local people; ensuring that these diverse views are reflected in its work.

### Membership & Terms of Reference

<b>Name</b>	<b>Party</b>
Angie Bray	Cons
Elizabeth Howlett <b>Deputy Chair</b>	Cons
Joanne McCartney <b>Chair</b>	Lab
Jennette Arnold	Lab
Dee Doocey	Lib Dem
Darren Johnson	Green

### Terms of Reference

1. To examine and report from time to time on -
  - the strategies, policies and actions of the Mayor and the Functional Bodies
  - matters of importance to Greater London as they relate to the promotion of health in London and the provision of services to the public (other than those falling within the remit of other committees of the Assembly) and the performance of utilities in London.
2. To liaise, as appropriate, with the London Health Commission when considering its scrutiny programme.
3. To consider health matters on request from another standing committee and report its opinion to that standing committee.
4. To take into account in its deliberations the cross cutting themes of: the achievement of sustainable development in the United Kingdom; and the promotion of opportunity.
5. To respond on behalf of the Assembly to consultations and similar processes when within its terms of reference.

Committee Contact: Ijeoma Ajibade, Scrutiny Manager, 020 7983 4397 or [ijeoma.ajibade@london.gov.uk](mailto:ijeoma.ajibade@london.gov.uk)

## Contents

	Page
1. Introduction	4
2. Is Thames Water planning to reduce water pressure across London?	6
3. Key Issues	8
Communication	8
Additional equipment to preserve water supplies	8
Protection for the economically and physically vulnerable	10
Inappropriate action by companies selling pumping equipment	10
Potential impact on Combi-boilers and Fittings	11
Danger of back-flow contamination	12
Impact on the Fire Service	12
4. Conclusion	13
<hr/>	
Annex A – Thames Water – Clean Water Supply Area	16
Annex B – List of Evidence	17
Annex C - Current Programme Network Improvements as at January 2005*	18
Annex D – How to Order Translations	20

## 1. Introduction

- 1.1 The Health & Public Services Committee was approached by members of the public and London Boroughs with concerns over the possibility that Thames Water was seeking to introduce a general reduction of water pressure across London. A long-term reduction in water pressure in London could have serious implications for, among others, those living above the third storey in a block of flats, for those with combi-boilers and for the emergency use of fire sprinklers and fire hydrants.
- 1.2 We have taken written evidence from a number of organisations<sup>1</sup> including the Association of London Government and we are grateful to all those individuals who took the time to write in. Thames Water agreed to come to answer Members' questions in public on 25 January 2005, and we are grateful to their officers for sparing the time to come to address our concerns. Thames Water provided a supplementary submission to the Secretariat on 23 March.

### Background

- 1.3 The largely unseen 32,000 kilometres of piping delivers fresh water daily on demand to London's seven and half million people. Thames Water is in charge of much of this vast and complex network [A map of the Thames water area is included at Annex A]. Maintaining and managing this system, much of it a hundred years old and in need of replacement or total overhaul, is a challenging and resource intensive task.
- 1.4 London's water is delivered by a pumped distribution system, as opposed to a gravity fed one. Thames Water sets the water pressure at which the water flows through the pipes and into homes and offices. However, this is not a simple, straightforward task. It is impossible to deliver, consistently, a set pressure across the whole of London. The water pressure that flows through our taps is a function of the pressure that Thames Water pumps, the topography of the neighbourhood, the demand in the area, whether an individual lives above the third floor and the extent to which there are leaks and bursts in local pipes.
- 1.5 Thames Water's coverage in London is broken down into more than 800 different areas called "district metering areas" (DMA). In each one of these DMA there is different water pressure at different times of the day as the pressure adjusts to changes in levels of demand. Though the legal position is difficult to interpret there are statutory and service requirements on water providers (or water "undertakers" as they are referred to by OFWAT<sup>2</sup>). The principal statute containing the obligations of water undertakers is the Water Industry Act 1991, which requires the water undertaker in a region to provide a supply of water that is sufficient for domestic use, but accepts that the water undertaker is not required to provide a supply of water at a height greater than that to which it would flow by gravitation from the reservoir or tank from which the supply is taken.

---

<sup>1</sup> See Appendix B for a full list of contributors

<sup>2</sup> Office of Water Services



- 1.6 Under the Water Supply and Sewerage Service (Customer Service Standards) Regulations 1989 there is a minimum pressure of 0.7 bar that needs to be maintained in communication pipes serving premises. Nevertheless, OFWAT has service standards that establish 1 bar<sup>3</sup> as the minimum at a boundary stop. Generally though pressure across London exceeds this rate; historically much of London has approximately 3 bars pressure.

---

<sup>3</sup> 1 bar is a measure of pressure sufficient to raise water to a height of 10 metres (two storeys high).

## 2. Is Thames Water planning to reduce water pressure across London?

- 2.1 Our work has taken us into an area of service delivery that affects every household, business and public service in London. The provision of water to all these places is a dynamic process. Population and economic growth pushes up demands for water delivered from a system made to meet the demands of 50 or 100 years ago. For years the pressure in one neighbourhood may be relatively constant and then leaks and pipe bursts bring unsettling variations. Every day the pressure fluctuates as demands change; the 8 am rush for showers requires a higher water pressure than is necessary at say 2 am. We are acutely aware of the challenges required to service Londoners' needs.
- 2.2 We are grateful to all those people that have contacted us by letter and email about local water pressure issues; the insights these responses have given us have helped inform our inquiry. Our work here, though, is primarily focused on Thames Water's Network Improvement Plan (NIP). Thames Water describes the programme as part of a raft of measures designed to better manage supply and demand and to provide a sustainable water supply for all customers.
- 2.3 There are two streams to the NIP: Zonal reconfiguration and pressure management. The NIP is being prepared in response to a number of different issues including; the high levels of water lost through leaks and burst pipes<sup>4 5</sup>, smoothing peaks and troughs in daily water pressure flows, alleviating falling water pressure and resourcing areas where homes have no water for parts of the day. **What is certain is that many areas will experience a reduction in water pressure.**
- 2.4 There are concerns from the Association of London Government (ALG) that the reduction of water pressure may affect the water supply for residents and owners of properties of three storeys and above. This can only be remedied by the installation of extra pumping equipment. Reduced water pressure will affect not only residents in council – owned properties, but owner – occupiers, as well as the business community and other public premises such as schools.
- 2.5 Thames Water have stated that to date it has **only completed survey work in one water supply zone (Woodford Zone), but has not yet put into operation any changes.** This zone covers the London Boroughs of Waltham Forest, Enfield, Haringey and Newham. Thames Water is at the initial stages of preparing/starting the surveys that will roll into 2005 for the remaining boroughs that are part of this programme.<sup>6</sup>
- 2.6 In discussions with the Committee, Thames Water stated that "Firstly, the projects which [I am] responsible for, only the one which is going on in the Newham and Haringey area, just at the moment in time, we are just starting to look at reducing some of the pressures in that area. We have not reduced

---

<sup>4</sup> Recent work by the London Assembly's Environment Committee examines issues for London's water supply in more detail including problems with Thames Water's leakage rate and considers policy changes needed to conserve water usage and promote water saving devices over the long term. (see [london.gov.uk/assembly/reports/environment](http://london.gov.uk/assembly/reports/environment) -Down the Drain - March 2005)

<sup>5</sup> Currently 925 million litres per day (Briefing from the Head of Overview and Scrutiny at Southwark)

<sup>6</sup> Thames Water – General information provided via email – see attached table as Appendix C

pressures in any other area as part of these projects that we are here to talk to you about today, so any reductions in pressure that you are seeing – and where tall buildings are impacted – it is purely because the network is suffering from high demands, and obviously the increase in growth in London over the last few years and looking forward is tremendous. Those increases in population and use of water, especially in terms of everyone who has washing machines, dishwashers, everything else, that demand is bringing down pressures”<sup>7</sup>.

---

<sup>7</sup> Thames Water official – transcript from the Committee meeting of 25 January 2005, page 11

### 3. Key Issues

3.1 There are a number of key issues that have emerged from our inquiry, which are set out in the paragraphs that follow. They include:

- the lack of communication between Thames Water and customers (including Local Authorities);
- the likely cost of additional pumps and secondary backflow prevention devices needed to preserve water pressure levels and prevent; contamination in buildings three storeys and above;
- the impact on the economically and physically vulnerable;
- concerns that constituents have been required, inappropriately, to enter into contracts for new pumping equipment;
- the likely impact on combi-boilers and fittings;
- the danger of “backflow” contamination;
- the likely impact on the fire service.

#### **Communication**

3.2 Members of the Committee support the concerns of their colleagues in the boroughs that the Network Improvement Programme has not been clearly articulated across key stakeholders. We have received numerous representations from different boroughs over the lack of proactive consultation by Thames Water.

**In response to this report we would recommend that Thames Water produces a detailed project plan for the Network Improvement Plan setting out the timelines for survey, consultation and action for all London’s supply zones and urge that this is communicated to the ALG and London Boroughs.**

3.3 Following from discussion with Thames Water, Members of the Committee felt that there needs to be a clearer and more defined communication strategy with boroughs and key stakeholders. **There is a clear need for a senior officer as the one point of contact at Thames Water** who can deal with queries that arise in relation to one-off events, including leaks or burst pipes, or can field more generic questions in relation to the Network Improvement Programme from boroughs and residential inquiries. This is likely to be a demanding task and the individual involved will need to combine excellent customer service skills with knowledge of technical issues. It is however a vital one to ensure open and effective communication between Thames Water, its stakeholders and London’s general public. **This should be clearly communicated to Boroughs and affected residents.**

#### **Additional equipment to preserve water supplies**

3.4 For buildings with more than three storeys in supply zones where water pressure might be reduced under the NIP, additional pumping equipment and secondary backflow prevention devices (which prevent contaminated water in the mains flowing back into water supply) may be needed to ensure all residents have

access to water of an adequate pressure for showers and washing machines. There are therefore significant additional capital and running costs to these buildings that could occur from Thames Water's pressure management programme. For council owned blocks or buildings the costs will be shared by all council tax payers; for privately owned blocks the costs will be shared between the residents<sup>8</sup>.

- 3.5 There appears to be a wide price range for the fitting of new pumps. Thames Water has given an indicative range of £6,000 to £25,000<sup>9</sup>. Total costs for the Woodford zone have not yet been finalised but Thames Water's survey suggests that there are over one hundred buildings, which will need additional pumps, which suggests an indicative cost of up to £2m<sup>10</sup>. Thames Water suggest that Haringey Council will have to spend £289k on the cost of pressure boosting. According to the evidence from Haringey they have already spent over £300,000 installing pumping equipment in 75% of their affected properties. They estimate a cost of over £1.4m for the fitting of secondary backflow prevention devices in all dwellings<sup>11</sup>.
- 3.6 For London as a whole the ALG estimates that for council housing alone there could be a cost of between £90 million and £340 million affecting some 300,000 properties. **Adding in housing associations and private residential blocks, one estimate puts the final aggregate cost to Londoners from the Network Improvement Programme at £1 billion<sup>12</sup>.** This figure is disputed by Thames Water, as it does not believe that so many buildings will be affected. **The Committee was seriously concerned that even at this stage in their planning Thames Water was unable to provide its own estimate of the total costs likely to be incurred for London as a whole.**
- 3.7 Members were keen to discuss the issue of who should carry the cost for these pumps and secondary backflow prevention devices, when the expense is incurred because of action by Thames Water, but which could over the long-run save the company money and boost profits through lessening leakage rates. Thames Water already offer a contribution of £2,500 per pump booster set, and in discussion with the Committee noted that they were reconsidering the extent of their contribution.

**We would recommend that Thames Water publish clarification on the cost implications to both themselves and their customers of their water pressure management programme. We would also recommend that Thames Water pay the cost of the additional pumping equipment to ensure that water supplies are maintained to those properties which will suffer from reduced water pressure as a result of their pressure management programme. We welcome Thames Water's commitment to meet with the ALG further and recommend that this is done without delay and that this will be the start of an on-going regular dialogue.**

---

<sup>8</sup> According to the ALG six boroughs have already spent over £1.3 million in 2004 on pumps in response to changes to water supply pressure unrelated to the Network Improvement Programme.

<sup>9</sup> Thames Water official – transcript from the Committee meeting of 25 January 2005

<sup>10</sup> Thames Water's initial estimate was of an indicative cost of £2.5m

<sup>11</sup> Transcript from the Committee meeting 25 January 2005 and also written evidence submitted to the Committee, page 20

<sup>12</sup> Transcript from the Committee meeting of 25 January 2005, page 2

- 3.8 Contributors to our inquiry expressed significant frustrations that though they had heard rumours of a possible plan to alter water pressure in their area they had not been involved in any discussion as to timing or roll-out. This lack of local involvement in the proposed changes has undermined the ability of key stakeholders to plan effectively. Given the enormous scale of the possible impact (for example City West Homes estimate up to 750 blocks may be affected in their area) there are serious financial implications to plan for and council budgets may be affected; most councils operate over a two year planning cycle. We also heard of one individual block where Thames Water had recommended installation of new pumping equipment at considerable expense to residents with just two months notice. **Clearly such tight time constraints are not acceptable and the Committee feels that Thames Water should give residents and Boroughs a far longer notice period; for the boroughs this means having the time to feed such proposals into their budget planning processes, which could mean a two year lead time.**

#### **Protection for the economically and physically vulnerable**

- 3.9 In their initial survey work Thames Water make an assessment of buildings where there are likely to be vulnerable people living, for example, hospitals or care homes. In the Woodford trial zone there are 22 buildings that require closer assessment. According to Thames Water “we have got information of all the dialysis patients. We have spoken to the hospital that will be affected. We have spoken to all [those in] the buildings that will be affected.” Thames Water has a communications team that focuses its activities on those vulnerable people who might be affected by changes to water pressure and keep in regular contact with them.

**We welcome Thames Water’s consultation with vulnerable people to date but would strongly recommend that it also liaise with Social Services teams in each Boroughs to identify those vulnerable individuals that may be cared for in their own homes.**

- 3.10 Thames Water has “in loose terms a welfare fund for any customer who has problems with their bill...” and that it does utilise it on a case-by-case basis<sup>13</sup>.

**If residents are to face increased charges to maintain water pressure, we would like Thames Water to look, on a case-by-case basis, at instances where families on low incomes or the elderly might suffer, and would recommend that sufficient money is put aside for this purpose. We would also recommend that Thames Water clearly promote the availability of such assistance to customers.**

#### **Inappropriate action by companies selling pumping equipment**

- 3.11 Members of the Committee have heard of occasions where Thames Water or its subsidiaries appear to have made appointments to provide a survey of, for example, a school or a residents’ block. It has then advised that the building needs a pumping system and then provided a detailed estimate of the likely

---

<sup>13</sup> Thames Water official – transcript from the Committee meeting of 25 January 2005, page 13

costs from its sister company Engenica. **Members condemned such behaviour in the strongest terms.** Thames Water argues that there is no intention to bounce property owners into a particular course of action. Rather it believes that what is important is “to try and give people an indication [of the likely cost] and information as quickly as possible as to what they would need to do to avoid the problem [of a lack of pressure]”. Thames Water assured the Committee that in any conversations or communication they have on this issue with property owners “we make it clear to them in those discussions...we advise[d] them to go for x number of quotes of other contractors to do the work”.

**We will monitor instances where new pumps are required and would not expect Thames Water or its sister companies to use their influential position to gain unfair advantage from the installation of equipment which is required as a result of Thames Water’s reduction of water pressure.**

### **Potential impact on Combi-boilers and Fittings**

- 3.12 Committee Members questioned Thames Water as to whether the possible reduction in water pressure in supply zones might impact on the performance of combi-boilers. Mains fed combi-boilers are increasingly popular as they are an efficient and more environmentally friendly hot water boiler. Contacts with the Association of Plumbing and Heating Contractors (APHC) and the Institute of Plumbing and Heating Engineering confirm that if water pressure drops below a certain level then combi-boilers will cease to work and the provision of hot water will cut out. Also many modern shower fittings and taps require high pressure systems to work effectively. Thames Water is clearly aware of the technical issues involved, but it asserted to Members that the proposed water pressure management programme did not envisage reducing pressure below the 0.7 bar level at which Thames Water believe that combi-boilers will continue to work. Thames Water assert that “London’s water supply will continue to operate above one bar. New combi-boilers are designed to work at less than one bar, so I do not think we have a problem, but it is still clearly something we have to work on.”<sup>14</sup>

**We recommend that Thames Water undertakes immediate consultation with the plumbing and heating industry and produces a comprehensive statement on the likely impact of reducing water pressure on combi-boilers, other mains fed systems and fittings. We would also wish to see proposals as to how this information will be communicated with the plumbing manufacturing and installation industries and to customers.**

---

<sup>14</sup> Thames Water official – transcript from the Committee meeting of 25 January 2005, page 10

## **Danger of back-flow contamination**

- 3.13 The Committee heard from the Institute of Plumbing and Heating Engineering that low pressure in the mains can also cause contamination to the water supply. The lower the pressure the more chance of bacteria and contaminants entering the system through leakage and broken valve/joints/pipework. Furthermore there are concerns that with the installation of pumping equipment comes the risk of the backflow of contaminated water, so compromising the drinking water supply. The installation of secondary backflow equipment to every dwelling where there is additional pumping equipment would be costly. Haringey Council estimate that the installation of anti-backflow equipment across 15 sites they identified could cost £1.4 million; five times that of the pumping equipment itself.

**We recommend that Thames Water undertakes immediate research into the possible link between reducing water pressure and the increased risk of contamination. The Committee believes that although there may be no legal obligation on Thames Water to fund the installation of secondary backflow devices there is an issue of corporate responsibility to do so as the sole supplier of a vital public service. The need for such devices to ensure the health and safety of Londoners arises solely as a result of Thames Water's pressure management scheme.**

- 3.14 We are also concerned as to the responsibilities being placed on Councils for ensuring that secondary backflow devices are fitted to each dwelling where modification to the main supply means such changes are necessary. One Council states that it was told by Thames Water that such devices could be introduced over a five-year period. However, the Council remains concerned that Thames Water cannot actually waive the Water Regulations<sup>15</sup> and that the fitting of such devices is a matter of urgency where the quality of the water supply to dwellings might be compromised. Thames Water argue that they seek to be flexible given the practicalities involved in arranging a plumber within the time set by the regulation. We understand that further dialogue on this matter is on-going. **The issue of Thames Water's role as an enforcer of regulations and its ability to waive statutory requirements requires further clarification.** We welcome Thames Water's assurance that it would not reduce water pressure in the Woodford zone whilst there are works outstanding<sup>16</sup>.

## **Impact on the Fire Service**

- 3.15 The Committee received evidence from the London Fire & Emergency Planning Authority (LFEPA) that the London fire service is concerned that lower water pressure could make ineffective water sprinklers and also fire hydrants. A National Guidance Document on the Provision of Water for Firefighting (agreed between the Local Government Association and Water UK in 2002) sets out guidance for water flow rates for fire fighting in a range of situations. We understand from LFEPA that Thames Water has so far refused to commit to the guidance rates. Nevertheless the fire service is in discussion with Thames Water

---

<sup>15</sup> Section 6 of the Water Supply (Water Fittings) Regulations 1999.

<sup>16</sup> Thames Water official – transcript from the Committee meeting of 25 January 2005



to update the Guidance by determining both minimum and optimum requirements for fire services nationally.

**In response to this report, we recommend that Thames Water publishes a clear commitment to meeting the guidance rates for fire sprinklers and fire hydrants.**

## 4. Conclusion

- 4.1 Our short inquiry has raised a number of important issues relating to Thames Water's Network Improvement Programme. We believe that there is a vital need for both the ALG working on behalf of the boroughs and the London Assembly offering an overview of the situation as it affects Londoners to maintain and develop our dialogue with Thames Water. We welcome their positive engagement. This short report makes a number of recommendations to Thames Water aimed primarily at clarifying a number of process and also technical issues.
- 4.2 We look forward to their response to this report, which, we would request, should be made within two months. We will maintain a watching brief on this issue and will draw together key London stakeholders again should the need arise.

### **Summary of recommendations for consideration by Thames water**

- 1. In response to this report we would recommend that Thames Water produce a detailed project plan for the Network Improvement Plan setting out the timelines for survey, consultation and action for all London's supply zones and urge that this is communicated to the ALG and London Boroughs. In particular, Thames Water needs to ensure that any suggested timeline for action allows for the planning and budgeting cycles of the boroughs.**
- 2. Thames Water should designate a senior officer as a point of contact to answer Borough and residential queries about the Network Improvement Plan. This should be clearly communicated to Boroughs and affected residents.**
- 3. We would recommend that Thames Water publish clarification on the cost implications of their water pressure management programme to both themselves and their customers. We would also recommend that Thames Water pay the cost of the additional pumping equipment to ensure that water supplies are maintained to those properties which will suffer from reduced water pressure as a result of their pressure management programme.**
- 4. If residents are to face increased charges to maintain water pressure, we would like Thames Water to look on a case-by-case basis, at instances where families on low incomes or the elderly might suffer, and would recommend that sufficient money is put aside for this purpose. We would also recommend that Thames Water clearly promote the availability of such assistance to customers.**
- 5. We recommend that Thames Water undertakes immediate consultation with the plumbing and heating industry and produces a comprehensive statement on the likely impact of reducing water pressure on combi-boilers, other mains fed systems and fittings. We would also wish to see proposals as to how this information will be communicated with the plumbing manufacturing and installation industries and to customers.**

- 6. We recommend that Thames Water undertake immediate research into the possible link between reducing water pressure and the increased risk of contamination. The Committee believes that although there may be no legal obligation on Thames Water to fund the installation of secondary backflow devices there is an issue of corporate responsibility to do so as the sole supplier of a vital public service. The need for such devices to ensure the health and safety of Londoners arises solely as a result of Thames Water's pressure management scheme.**
- 7. We recommend that Thames Water publishes a clear commitment to meeting the guidance rates for fire sprinklers and fire hydrants.**

#### **Recommendation to the Mayor**

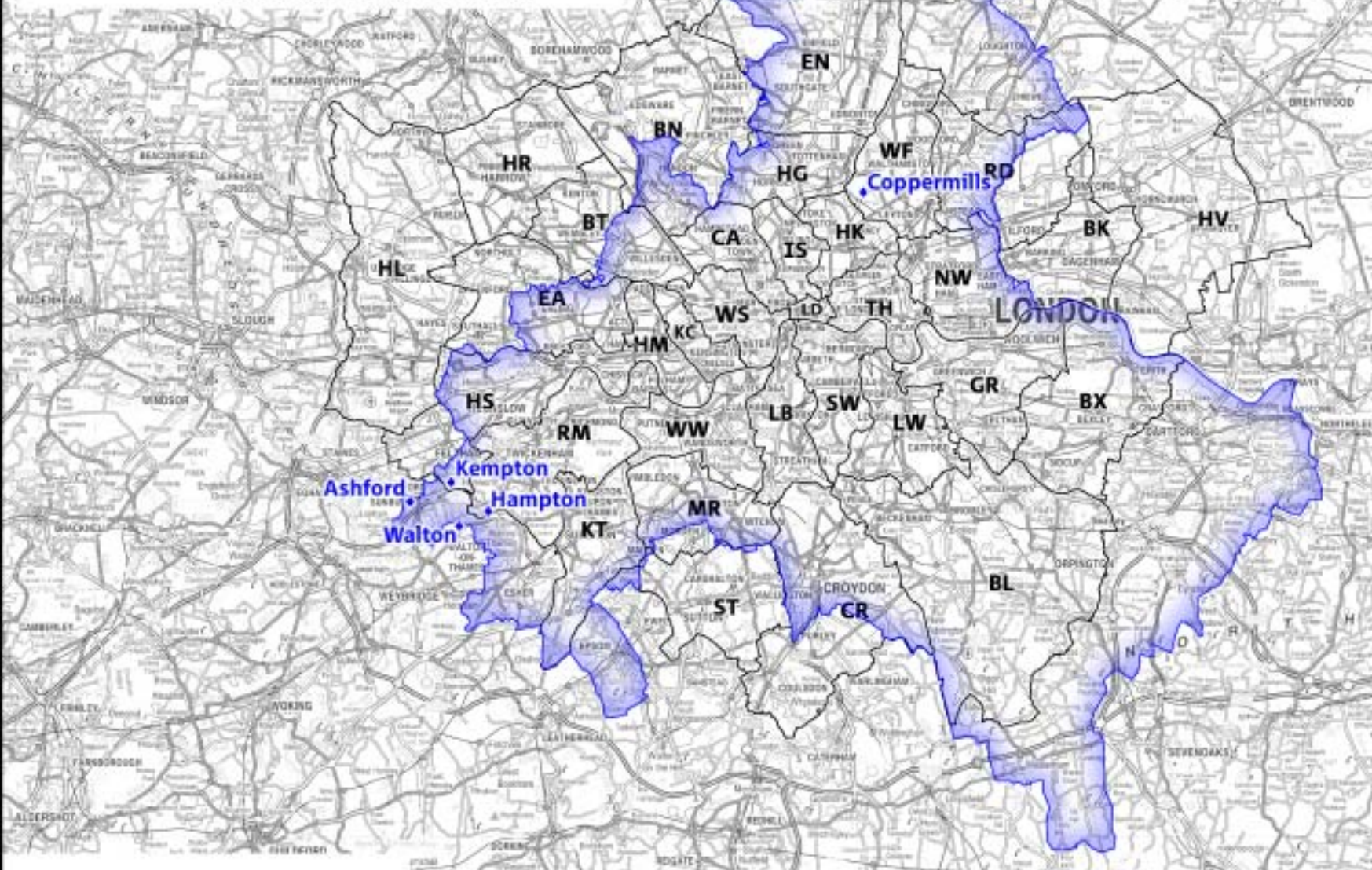
- 8. We request that the Chair of the Mayor's Water Resources Group consider the report's recommendations at the next Group meeting that follows publication of this report.**

# THAMES WATER - LONDON CLEAN WATER SUPPLY AREA

Thames Water Clean Water Supply Boundary  
 Key Water Treatment Works  
 London Borough Boundary



- LONDON BOROUGH KEY**
- BK BARKING AND DAGENHAM
  - BL BROMLEY
  - BN BARNET
  - BT BRENT
  - BX BEXLEY
  - CA CAMDEN
  - CR CROYDON
  - EA EALING
  - EN ENFIELD
  - GR GREENWICH
  - HG HARINGEY
  - HK HACKNEY
  - HL HILLINGDON
  - HM HAMMERSMITH AND FULHAM
  - HR HARROW
  - HS HOUNSLOW
  - HV HAVERING
  - IS ISLINGTON
  - KC KENSINGTON AND CHELSEA
  - KT KINGSTON UPON THAMES
  - LB LAMBETH
  - LD CITY OF LONDON
  - LW LEWISHAM
  - MR MERTON
  - NW NEWHAM
  - RD REDBRIDGE
  - RM RICHMOND UPON THAMES
  - ST SUTTON
  - SW SOUTHWARK
  - TH TOWER HAMLETS
  - WF WALTHAM FOREST
  - WS CITY OF WESTMINSTER
  - WW WANDSWORTH



THAMES WATER  
 ASSET INFORMATION & PERFORMANCE REPORTING  
 WITH 2013/14 CHWFL RELEASE

14/02/2004



This image includes Ordnance Survey mapping data  
 sourced from the Mapping & Information Office,  
 © Crown Copyright and database rights 2014.  
 All rights reserved.  
 License Number: 10002191

## **Annex B - Evidence**

### **Written Evidence**

Association of London Government  
Association of Plumbing & Heating Contractors  
City West Homes, London Borough of Westminster  
Eldon Junior School, London Borough of Enfield  
Essex & Suffolk Water plc  
Institute of Plumbing & Heating Engineering  
London Borough of Hackney  
London Borough of Haringey  
London Borough of Islington  
London Fire & Emergency Planning Authority  
Sutton & East Surrey Water plc  
Thames Water  
Three Valleys plc  
Water Voice  
Westminster City Homes, London Borough of Westminster

### **Oral Evidence**

The Committee held an evidentiary hearing on 25 January 2005 at which the following attended to give evidence:

Tony Head, Project Manager, Thames Water  
Tony Denton, External Affairs, Thames Water  
Paul Hammond, Project Director, Thames Water  
Councillor Stephen Cowan, London Borough of Hammersmith & Fulham and Deputy  
Chair of ALG Housing Steering Committee  
Mary McBride, Housing Policy Manager, ALG  
Gowan Turnbull, Mechanical Engineer, London Borough of Haringey  
David Wickersham, Director of Technical Services, City West Homes, London Borough of  
Westminster  
Herman Scopes, Chairman, Water Voice  
Gary Penticost, Head of Planned Maintenance (Housing), London Borough of Hackney

A transcript of the hearing can be downloaded from  
[www.london.gov.uk/assembly/health](http://www.london.gov.uk/assembly/health)

### **Other Written Evidence**

A number of letters were also received from members of the public as a result of an article being published in a number of local North London papers

### **Referenced sources of information**

London Assembly Public Services Committee Report 'London's Water Supply' October 2003

## Annex C - Current Programme Network Improvements as at January 2005\*

London Borough	Network Improvement Proposed Programme	Initial Meetings **	Future Meetings Agreed
Barnet	Yes	14.10.2004	Yes
Brent	Yes	30.11.2004	Yes
Bromley	Yes	Requested tbc	
Bexley	Yes	20.01.2005	Yes
Camden	Yes	14.06.2004;06.10.2004 02.11.2004: 06.12.2004	Yes
City of London	Yes	14.09.2004;04.10.2004 08.02.2005	Yes
Croydon	Yes	24.01.2005	Yes
Ealing	Yes	01.10.2004	Yes
Enfield	Yes	2003 ongoing to 24.01.2005	Yes
Greenwich	Yes	15.12.2004	Yes
Hackney	Yes	13.07.2004;19.01.2005;04.02.2005	
Hammersmith and Fulham	Yes	22.09.2004;04.10.2004;14.12.2004	Yes
Haringey	Yes	11.06.2004;23.06.2004; 09.07.2004;10.12.2004	Yes
Hounslow	Yes	Requested tbc	
Islington	Yes	12.01.2004; 30.09.2004;24.11.2004	Yes
Kensington and Chelsea	Yes	25.11.2004	Yes
Kingston	No*	Requested tbc	
Lambeth	Yes	09.12.2004	Yes
Lewisham	Yes	28.01.2005	
Merton	Yes	02.12.2005	Yes
Newham	Yes	2003 ongoing to 30.09.2004	Yes
Redbridge	Yes	To be contacted	
Richmond	Yes	Requested tbc	
Southwark	Yes	02.09.2004;05.01.2005;11.01.2005	Yes
Tower Hamlets	Yes	11.10.2004	Yes
Waltham Forest	Yes	2003 ongoing	Yes
Wandsworth	Yes	27.08.2004; 12.10.2004	Yes
Westminster	Yes	07.12.2004	Yes
ALG		25.03.2004;27.05.2004;06.09.2005;14.01.2005; Summit 06.11.2005	Yes

\* Programme is subject to change

\*\* Not the initial contact date requesting a meeting

tbc = meeting date to be confirmed

Note meetings and contact dates ongoing. Members / lead officers have asked for meeting as surveys are completed.

Organization	Network Improvement Proposed Programme	Initial Meetings **	Future Meetings Agreed
Land Securities Managing Agents	Yes	08.01.2004; 13.08.2004; 22.11.2004	Yes
Gross Fine Managing Agents	Yes	12.05.2004	Yes
London Fire Brigade	Yes	11.08.2004; 07.12.2004;	Yes
BASA/BFPSA*	Yes	04.06.2004	Yes
Combi Boiler Association	Yes	Tbc	
Insurance Association	Yes	Tbc	
London Underground	Yes	30.05.2004; 01.07.2004; 17.08.2004; 01.11.2004	

## Annex D - How to order translations

### How To Order

For further information on this report or to order a copy, please contact Ijeoma Ajibade, Scrutiny Manager, on 0207 983 4397 or email at [ijeoma.ajibade@london.gov.uk](mailto:ijeoma.ajibade@london.gov.uk)

### See it for Free on our Website

You can also view a copy of the report on the GLA website:  
<http://www.london.gov.uk/assembly/reports/>

### Large Print, Braille or Translations

If you, or someone you know, needs a copy of this report in large print or Braille, or a copy of the summary and main findings in another language, then please call us on 020 7983 4100 or email to [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk).

আপনি বা আপনার পরিচিত কেউ এ রিপোর্টের সারসর্ম ও প্রস্তাবের কপি বিনামূল্যে বড়ছাপা বা ব্রেইল, অথবা তাদের নিজের ভাষায় চাইলে 020 7983 4100 এ নাম্বারে ফোন করুন বা ই মেইল করুন এ ঠিকানায়:  
[assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk)

જો તમને કે તમે જાણતા હો તેવી કોઈ વ્યક્તિને, આ અહેવાલમાંથી કાર્યકારી સંક્ષેપ અને ભલામણોની નકલ મોટા અક્ષરોમાં છપાયેલી, બ્રેઈલમાં કે તેમની પોતાની ભાષામાં વિના મૂલ્યે જોઈતી હોય, તો કૃપા કરીને ફોન દ્વારા 020 7983 4100 ઉપર અમારો સંપર્ક કરો અથવા આ સરનામે ઈ-મેઈલ કરો [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk)

Se você, ou alguém de seu conhecimento, gostaria de ter uma cópia do sumário executivo e recomendações desse relatório em imprensa grande ou Braille, ou na sua língua, sem custo, favor nos contatar por telefone no número 020 7983 4100 ou email em [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk)

ने तुमीं नं बेडी तुवाडा नह-पढाह वहा टिम रिपोर्ट द अगनैक्टिव खुलासा अउ मुडादां दी नकल वड्डे अंधरां दिच, ब्रैल दिच नं आपही बामा दिच मुढड पुपड करुन चर्चुदा वै तं बिपा करुने माडे ठाल 020 7983 4100 उ टैलीफोन चर्चा मंथरुन बरे नं [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk) उ मर्हु छी-मेल बरे।

Si usted, o algún conocido, quiere recibir copia del resumen ejecutivo y las recomendaciones relativos a este informe en forma de Braille, en su propia idioma, y gratis, no duden en ponerse en contacto con nosotros marcando 020 7983 4100 o por correo electrónico:  
[assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk)

اگر آپ یا آپ کا کوئی جاننے والا اس انگریزی کیٹوسری اور اس رپورٹ میں سے سفارشات کی ایک کاپی بڑے پرنٹ میں یا بریل پر یا اپنی زبان میں بلا معاوضہ حاصل کرنا چاہیں تو براہ کرم ہم سے فون 020 7983 4100 پر رابطہ کریں یا [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk) پر ای میل کریں۔

Ta ba ri enikeni ti o ba ni ife lati ni eda ewe nla ti igbimo awon asoju tabi papa julo ni ede ti abinibi won, ki o kansiya lori ero ibanisoro. Nomba wa ni 020 7983 4100 tabi ki e kan si wa lori ero [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk). Ako ni gbowa lowo yin fun eto yi.

Haddii adiga, ama qof aad taqaanid, uu doonaayo inuu ku helo koobi ah warbixinta oo kooban iyo talooyinka far waaweyn ama farta qofka indhaha la' loogu talagalay, ama luuqadooda, oo bilaash u ah, fadlan nagala soo xiriir telefoonkan 020 7983 4100 ama email-ka cinwaanku yahay [assembly.translations@london.gov.uk](mailto:assembly.translations@london.gov.uk)





**Greater London Authority**

City Hall

The Queen's Walk

London SE1 2AA

**[www.london.gov.uk](http://www.london.gov.uk)**

Enquiries **020 7983 4100**

Minicom **020 7983 4458**