

**THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA****CABINET - 21 FEBRUARY 2008****REPORT OF EXECUTIVE DIRECTOR OF TRANSPORT,  
ENVIRONMENT AND LEISURE SERVICES****FOLLOW UP REPORT ON THE FLASH FLOODS OF 20 JULY 2007**

This paper updates Cabinet on the Council's progress against the actions identified in the Cabinet paper of 27 September 2007. It reports on the Overview and Scrutiny Committee on the Public Realm's open meeting on January 30 2008 and the findings of research commissioned by the Council after the floods of 20 July 2007. The paper proposes that the Council uses its influence to get the best outcome for the Royal Borough.

**FOR DECISION****1. BACKGROUND**

- 1.1 The Royal Borough lies in the natural water catchment of the former Counters Creek stream. The Counters Creek stream rose near Kensal Rise Cemetery and flowed in a roughly straight line to Chelsea Creek before discharging into the River Thames. The drainage system in the Royal Borough handles flows from the upstream catchment as well as from within the Royal Borough.
- 1.2 Over time, the open watercourses were covered and replaced by what are now storm water relief sewers. The 19<sup>th</sup> and early 20<sup>th</sup> centuries saw a substantial urban sewage system constructed that carried both foul sewage and storm water flows. These combined flows are still intercepted and routed eastwards for treatment at Beckton Sewage Treatment Works. During times of high flows, overflows in the sewerage system can discharge to the River Thames.
- 1.3 The western borough boundary generally follows the alignment of the former Counters Creek stream and land near this area is lower lying than surrounding areas. Some basement properties may be only 80cm above the sewer pipe.
- 1.4 On 20 July 2007 a severe storm brought intense rainfall across much of England and Wales and intense rain fell in the Kensington area. This sudden storm resulted in flash floods which led to the closure of Earls Court tube station and the cancellation of 141 flights at Heathrow Airport. Hundreds of basement properties were flooded

in London and the London Fire Brigade, which usually receives 700 phone calls per day, took 1,600 phone calls on 20 July 2007.

- 1.5 Many houses in the Royal Borough have basements and over 500 basement properties have informed the local authority that they were flooded as a result of the 20 July storm.
- 1.6 At its meeting of 27 September 2007, the Cabinet agreed to seek advice from relevant independent professionals to inform a meeting of the Overview and Scrutiny Committee on the Public Realm to make recommendations on how the Council might influence Thames Water to reduce the risk to residents and businesses of future flooding. Thames Water agreed to attend this meeting but Ofwat declined the invitation.

## **2. REGULATORY FRAMEWORK AND SOME DEFINITIONS**

- 2.1 Statutory sewerage undertakers (water companies such as Thames Water) are responsible for the public sewerage system. Statutory sewerage undertakers operate under the jurisdiction of Ofwat who are the economic regulator for the water industry. Each statutory undertaker is required to meet specified Levels of Service Indicators. Ofwat agrees future expenditure which allows sufficient funding for an efficient company to maintain existing standards of service and to deliver agreed improvements to service levels, including sewer flooding.
- 2.2 Sewerage undertakers are not expected to provide protection from exceptional rainfall events. The current practice for urban drainage is for new sewers to provide protection from storms with a probable frequency up to 1 in 30 years. Cost benefit analysis indicates that this is a reasonable level of protection where there is no threat to life and damage is limited to a single storey.
- 2.3 The likelihood of a recurrence of a storm is expressed as a 'return period'. This is the probability of it occurring or being exceeded in a certain timeframe, for example 1 in 50 years. This means that on average, the storm will be equalled or exceeded once every 50 years. It could however occur at any time and even in successive years without disturbing this statistical probability.
- 2.4 Ofwat requires sewage undertakers to report properties at risk of flooding at 1 in 20; 1 in 10; and 2 in 10 years. A programme for removing properties from the at-risk register is agreed between Ofwat and the sewerage undertakers every five years. Due to their age, the capacity of the vast majority of existing sewers is deemed satisfactory if they meet the 1 in 20 reporting standard.

- 2.5 The storm of 20 July 2007 exceeded the current practice for new sewer design.
- 2.6 The Department of Environment, Food and Rural Affairs (Defra) are responsible for policy and regulation of the water sector.
- 2.7 Ofwat's 2009 periodic review of service indicators for 2010-15, will include proposals from sewerage undertakers for dealing with the implications of climate change.

### **3. THE MEETING OF THE OVERVIEW AND SCRUTINY COMMITTEE ON THE PUBLIC REALM ON 30 JANUARY 2008**

- 3.1 Over 170 residents attended the meeting on the evening of 30 January. Cllr Taylor, the Chairman of the Overview and Scrutiny Committee chaired the meeting with a panel made up of:
  - Cllr Paget-Brown representing the Cabinet
  - Cllr Warrick
  - Mr David Owens, Chief Executive, Thames Water
  - Mr Bob Collington, Director Wastewater Services, Thames Water
  - Mr Pete Saunders, Sewer Flooding and Odour Manager, Thames Water
  - Ms Tot Brill, Executive Director Transport, Environment and Leisure Services RBKC
  - Mr Clive Chapman, Project Centre
- 3.2 The meeting received over 70 questions (see Appendix One), and some 20 questions were answered directly at the meeting. All those who wrote with questions will have them answered in full by the Council and Thames Water and we will post the complete set of questions and answers on the Council's flood webpages at [www.rbkc.gov.uk/flood](http://www.rbkc.gov.uk/flood).
- 3.3 Thames Water said that they do not want people in this area to be repeatedly flooded during extreme rainfall events and will be doing everything possible to put forward a well justified and good technical case to Ofwat as part of their next price review to deliver a long term solution to remedy the problems in the Royal Borough. In the meantime they will make every effort to fit short term mitigating measure to every resident who was flooded from the sewers where they believe such measures are appropriate.
- 3.4 But, to carry out a survey and decide the best way of reducing the risk of future flooding, they need residents who were flooded in July to log their details with Thames Water. Residents were frustrated that they had tried to give information to Thames water after the flood but had either given up because they were put on hold, or

discovered that Thames Water had mislaid their data. Thames Water apologised and took details from many of those attending the meeting.

- 3.5 Increasing the numbers of flooded properties on Thames Water's risk register will also strengthen their case in the next bidding round to Ofwat for major investment to increase the capacity of the main Counter's Creek Sewer in the Royal Borough.
- 3.6 As the meeting was not an ordinary meeting of the OSC no formal minutes were taken, but the contemporaneous notes of the meeting are attached as Appendix Two.
- 3.7 The full record of the meeting can be found in the webcast of the proceedings at <http://www.rbkc.public-i.tv/site/#pp13157>

#### **4. RESEARCH**

- 4.1 Officers commissioned research from two independent companies to better understand the causes of the July flooding, what the risk of future flooding might be, and how best to support and represent residents in negotiations with Thames Water and Ofwat.
- 4.2 The Council commissioned the Halcrow Group, a leading consultancy employing specialist drainage engineers, to investigate the capacity of the existing main sewers in the Royal Borough and their ability to cope in the event of storms, as well as to examine and cost possible flood alleviation schemes.
- 4.3 The Council also commissioned Climate Change Risk Management Ltd to explore the impact of future climate change on flood risk in the Royal Borough of Kensington and Chelsea. The Met Office was asked to quantify the magnitude of the storm and assess the probability of a recurrence of a similar storm.
- 4.4 The Halcrow Group reported that the most probable cause of the flooding was lack of capacity in the Counters Creek sewer to deal with a storm of the magnitude of that on 20 July 2007. As a result, the sewer surcharged which caused flooding of basements and basement courtyards. Halcrow considered that surcharge and backwater effects from downstream in the network might also have had a large impact on the local sewers.
- 4.5 Halcrow's modelling, which should be used for indicative purposes only, assessed that there was a flooding risk to basements in the vicinity of Holland Road between Napier Road and Addison Crescent from storms with a probable return period of 1 in 15 years. Basement properties at the southern end of Latimer Road were

assessed as at risk of flooding from storms with a return period of 1 in 20 years.

- 4.6 Halcrow also investigated the effect of Thames Water increasing the capacity of Counters Creek sewer by tunnelling a new deep level sewer underneath the existing sewer. Increasing the capacity of the sewer to give protection from a 1 in 100 year storm might cost in the region of £66 million. Protection from a 1 in 30 year storm could cost around £29 million. Halcrow's estimates are approximate and could increase by 40%.
- 4.7 Climate Change Risk Management Ltd assessed future flood risk for the next 100 years using global and regional climate models. They indicate that average rainfall in the south east of England is expected to increase on average, through the next century, by perhaps 10% to 540 mm. Their projections are for limited change to heavy rainfall events but with a lower number during the summer and a higher number during winter.
- 4.8 Using local media sources for the last 100 years, Climate Change Risk Management Ltd found no significant trends in rainfall and no evidence for strengthening seasonality of rainfall. However, their research showed that while the total amount of rainfall has not increased, it now tends to fall over a shorter period than before.
- 4.9 The Met Office evaluated the amount of rainfall in Kensington and the likelihood of a recurrence of a storm of a similar magnitude. The nearest rainfall monitoring station at the Chelsea Physic Garden, recorded 33.7mm of rainfall on 20 July 2007. St James's Park recorded 15.6 mm and Hampstead recorded 22.4 mm. From this and an assessment of rainfall radar data, the Met office estimated that 25.7mm of rain fell in Kensington in 30 minutes. From this data, the Met Office calculate that the probability of such a storm recurring is once every 37 years. However, we have reliable, but unverified data from a local expert that the rainfall in Pembroke Square was 46mm on July 20 2007. The differences in rainfall levels point to the localised nature of these extreme flood events.
- 4.10 DEFRA's precautionary guidance indicates that over the next 80 to 100 years, rainfall might increase by 30%. This could mean that rainfall currently predicted at 1 in 30 years could occur once in ten years by 2100.
- 4.11 The full text of both reports has been lodged in the Members' Library.

## **5 ACTIONS TAKEN AFTER THE FLOODS OF 20 JULY 2007**

- 5.1 The Emergency Planning Manager and the Street Line Manager have reviewed events following last year's flooding and made a number of improvements. They have provided a full debrief of events last year and the measures being taken to improve emergency planning and communications within the Council and to residents.
- 5.2 The emergency cascade system has been improved and call centre staff have scripts to help answer common questions. All calls to Street Line about flooding are now logged and contact details of callers are held so that they can be contacted later if it proves necessary. The capacity of the Out of Hours Service has been improved.
- 5.3 The Council's website has a new section on flooding which includes a forum for residents that is updated every week. New leaflets have been printed giving advice on flood precautions and what to do in the event of flooding and these have been distributed to the residents listed on the Council's data base. The Emergency Planning Manager has also put copies of the leaflets in the Borough Libraries, Kensington Town Hall and Chelsea Old Town Hall.
- 5.4 The Council's display vehicle has been made available to provide information to residents and provide refreshments in the event of flooding.
- 5.5 While the condition of gullies in the borough was not a cause of the flooding, the council has embarked on a rolling programme to reduce the backlog of gulley repairs.
- 5.6 The Council asked residents and businesses to tell it about flooding where it affected them. In addition, the W14 Flood Forum sent questionnaires to residents in streets affected by flooding. The Council now has an extensive database of properties affected by the 2007 flood. At the time of writing there are over 500 verifiable records on this database, with more still being reported to us each week. It is likely that not all those who were flooded are recorded on our database as some residents may be reluctant to have their properties included. The number actually flooded in the Royal Borough could well have been higher than 800.
- 5.7 Legal advice to the Council states that data held in the Council's database on flooding cannot be shared in detail with Thames Water. At the time of writing this report officers are preparing to write to all the residents listed on the Council database, enclosing a copy of Thames Water's form, urging residents who have not already done so, to register their details with Thames Water. We are also planning

to use borough wide publicity to encourage those residents and businesses who have not reported flooding to do so now.

- 5.8 Under reporting of flooded properties reduces the economic case that the Council, Thames Water and residents can present to Ofwat for funding for flood alleviation measures.

## **6 ALLIEVIATING FLOODING**

- 6.1 There are a number of measures that residents or Thames Water can take to alleviate individual flooding from sewage back-flow. The most widespread is the use of back flow valves. But, back flow valves on their own will not guarantee protection from the flow of sewage into premises. In some properties where roof water drains into the external basement area, a back flow valve may exacerbate flooding. Back flow valves, if properly maintained, may protect properties from sewage flooding due to the surcharging of the sewerage network, but in certain circumstances they may also increase the risk of other properties flooding further downstream.
- 6.2 Thames Water's proposed flood alleviation measures in the Norland Square / Addison Avenue area are scheduled for completion in 2009. Additionally, Thames Water are seeking approval for flood mitigation measures in the Holland Road area. These local flow storage measures will reduce the peak flows passing into to Counters Creek sewer, helping to mitigate the effects of the main sewer's lack of capacity.
- 6.3 Thames water told the OSC meeting of their intention to bid to Ofwat to increase the capacity of the Counters Creek sewer. Improving the sewer's capacity will require major works costing tens of millions of pounds and the agreement of Ofwat to those works. Thames water made it clear to the OSC meeting that this level of investment will require an increase in water bills.
- 6.4 Improvements to the Counters Creek sewer could alleviate flooding in the immediate area, as well as to residents near its tributary sewers in other areas of the Royal Borough. It could also benefit those residents of the London Borough of Hammersmith and Fulham in the sewer's catchment area.
- 6.5 Thames Water has to apply to Ofwat for the financing of flood alleviation measures which are regarded by the regulator as optional rather than mandatory. Ofwat has to balance the need for service improvements against the benefit and acceptable increase in service charge.

## **7 FINANCIAL IMPLICATIONS**

- 7.1 There are no financial implications in this report.

## **8 LEGAL IMPLICATIONS**

8.1 There are no legal implications in this report.

## **9 PERSONNEL IMPLICATIONS**

9.1 There are no personnel implications in this report.

## **10 EQUALITIES IMPLICATIONS**

10.1 There are no equalities implications in this report

## **11 RECOMMENDATIONS**

11.1 Members of Cabinet are recommended to:

- 1 Note the contents of this report
- 2 Offer their support to Thames Water in making a bid to Ofwat to increase the capacity of Counter's Creek Sewer
- 3 Encourage Thames Water to deliver on their promise made at the Overview and Scrutiny Committee on the Public Realm's meeting to respond to all the questions sent by residents to the OSC meeting; and to investigate the drainage systems of all those flooded from the sewers on 20 July 2007 and offer appropriate remedies.

Tot Brill

Executive Director, Transport, Environment and Leisure Services

## **12 Background Papers Used in the Preparation of this Report:**

- **Floods report, Halcrow Group Ltd.** - Commissioned by The Royal Borough of Kensington and Chelsea, January 2008
- **The impact of future climate change on flood risk in the Royal Borough of Kensington and Chelsea**, Climate Change Risk Analysis Ltd, Commissioned by The Royal Borough of Kensington and Chelsea, January 2008
- **20 July Flash Floods and their Aftermath** - Report to Cabinet 27 September 2007

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# APPENDIX ONE

## QUESTIONS TO THE MEETING OF 30 JANUARY 2007

Questions in *italics* were asked and answered at the meeting. All others will be answered by Thames Water and the Council by the end of February 2008 and sent direct to questioners. All questions and answers will be posted on the Council's flooding website.

## Thames Water

### Sewers

1. Following the flooding which has occurred in 2004, 2005 and 2007 (in all cases due to sudden heavy rainfall), and Thames Water's undertaking in 2005 to the W14 flood forum to do significant upgrade work to the capacity of the main drainage system to cope with such events, what work have TW done to date to upgrade the main drain, and what work will be done by when to prevent a recurrence?  
*P. K. Elsham Rd, W14*
  
3. What has been done in the sewers' drains to ensure water doesn't rise up and flood again? Have they been enlarged/ unblocked/ dredged?  
*E. K. Upper Addison Gardens, W14*
  
4. When is the Holland Road storm drain capacity going to be increased to allow for the new shopping complex in Shepherd's Bush's waste as well as frequent inclement weather?  
*G. E. Elsham Terrace, W14*
  
- 11. *Who is responsible for regular maintenance of Thames Water drains and storm tanks?***  
  
***How regular should this maintenance be?***  
***J. and R. F. Stoneleigh Street, W11***
  
12. When are you going to put in extra sewer capacity, in view of the new watermains, with increased capacity, surely a Victorian sewer cannot take this increase in water supply and therefore the sewer should have been replaced at the same time or before?  
*S. M. (Holland Park West Residents Association) Elsham Road, W14*

- 14a. What steps are Thames Water taking to improve the sewerage systems in the affected areas so as to prevent such flooding occurring in future, and when will this work be undertaken?  
*C. J. St. Ann's Road, W11*

- 36. *By far the greatest number of properties reporting flood damage as a result of 20 July 07 are in the mid west side of RBKC NW of Holland Park south to Ken High Street. Piecemeal solutions for small areas are inappropriate: i.e. Addison Avenue, Napier Road are now too local.***

***A radical solution is now required for the whole of this area to renovate water drainage and sewage backflow. What is Thames Water's detailed plan to achieve this including how it will be financed?***

***D. E.-S. St James's Gardens, W11***

37. Will the repair and upgrading of sewers outlined in a map issued by Westminster Council which does not include the very nearby area of Portobello and the Colville area which suffered greatly on July 20 last year which no 23A Lonsdale endured effect this area. Is there a plan for this area?

I suffered a further flood in November and my basement flat was afloat. Both took several weeks to dry out. Does this affect my health - in particular my arthritis? There is still mildew around in this privately rented property. Is this healthy? My landlord has spent considerable amounts of money on drains and repairs.

*D. A.-H Lonsdale Road, W11*

- 42.b What is TW doing to upgrade the archaic sewer system in the W14 area which is clearly not fit to cope with extreme weather conditions? It is unacceptable to be flooded almost on an annual basis.

*P. and P. B. Addison Road, W14*

45. When will the drains be overhauled to prevent the kind of flooding we experienced last summer?

*Mr A. Apollo Place*

51. What is Thames Water's timetable for remedial work on the sewers and what criteria will be used to judge whether works have been successful and how will TW ensure that the results are carefully monitored and further remedial action taken if necessary?

*Councillor W. L.*

54. As stated by Thames Water it is acceptable that a flood occurs every 10 years due to adverse weather conditions. I would firstly like to point out that my property has been flooded twice in the past 6

years, once during Sep 2004 (not sure if this year is correct but it was definitely after 2002 and in the month of Sep) and last in July 2007. This means that Thames Water is not providing an adequate service and I am interested in what explanation is available. Also, because adverse weather is not so adverse any more with heavy rains becoming more frequent with global warming etc. what is Thames Water doing to tackle this serious problem?

Surely it would be recommended to start enlarging the drainage pipes so that they could cope with heavy rains in the future?

Some background information to the cause of the floods - because of the torrential downpour that occurs in a very short time the drainage pipes could not cope with the amount of water and contaminated floodwater flows back through foul sewers causing flooding inside the property.

*R. F.*

58. When is it intended to construct defences to ensure the sewers do not overflow into the homes here in Queensdale Place?

*D.S Queensdale Place, W11*

68. *(also asked of RBKC)* On July 20, the basements of all ten houses comprising Alma Terrace were flooded with 'clean' water. Inkerman Terrace immediately opposite remained dry. This suggests that the flooding of Alma Terrace was due to broken drains and/or blocked gulleys. In spite of correspondence and conversations with Thames Water representatives and with RBKC's Planning Dept. and the Transport, Environment and Leisure services (Tot Brill) both Thames Water and RBKC have 'no plans' to carry out either an inspection or investigation of our drains and gulleys.

The question is WHY? How can either body justify their position?

*Lord and Lady M. Alma Terrace, Allen Street, W8*

### **Non- Return Valves**

- 2.a. As a result of the 20 July 07 flash floods, the basement area of Palace Place Mansions was subjected to a back flow of sewage which stagnated in the building for some ten days before clearance was effected at the cost of the freehold company, Palace Place Mansions (Kensington) Ltd.

What steps can be/have been taken to prevent a recurrence of the situation, e.g. installation of non-return valves?

*J. .B. D. Kensington Court, W8*

- 5.a. Will Thames Water pay for non-return valves at the properties affected?

*C.A. St James's Gardens, W11*

- 14.b Can non-return valves or similar anti-flooding devices be installed in the meantime to protect homes? Will Thames Water be arranging for these to be fitted to affected homes, and when? I have heard that non-return valves can cause problems because sometimes they close when they are not supposed to, hence causing a back up of sewage. Is this correct and, if so, how common is this problem?  
*C.J. St. Ann's Road, W11*
- 16.b Can they (Thames Water) fit "no return" valves to the drains in these homes (those that have been flooded twice in two years)?  
*J.C. Elsham Road, W14*
22. Is there a possibility of installing one-way valves to prevent liquid flowing into the waste water system - namely the toilets?  
*F.G.C. Queensdale Road, W11*
- 26.b As a short-term measure, will Thames Water install back-flow valves in all properties flooded on July 20/07?  
H.B. Lower Addison Gardens, W14**
27. What is Thames Water's attitude to the fitting of non-return valves at the sewer entry point of a domestic property?  
  
Will Thames Water cover or contribute to the cost of this?  
*C.R. Addison Road, W14*
32. We live in a basement flat. Flooding here is due to the inability of the main drainage system to take excess rainwater. This excess causes a back flooding, entering the flat through the toilet and bath. The only way to prevent this is to fit back flooding valves. This is urgent. How soon can you begin this work? We have now suffered 3 floods in separate years. It will continue!  
*J.W. Kensington Square, W8*
44. Did those properties with existing non-return valves flood on 20th July? If so what else will Thames Water do to protect our homes and what do they recommend we do internally?  
*C.G.S. Elsham Road, W14*
- 55.a Following the heavy rainfall that caused flooding in 2005 non-returnable valves were fitted in spring 2006. Many of these devices did not work during the heavy rain on 20th July 2007 when many properties, including our own (Basement 144 Holland Road), were flooded for the second time in less than two years (and more seriously this time). We still are waiting to receive feedback from Thames Water regarding why the device didn't work and what assurances can be provided that when we next experience very heavy rain the non-returnable valve will function correctly?  
*A.H. and C.L. 144 Holland Road, W14*

61. Does Thames Water intend to install non-return valves in drains of flooded areas (or to assist residents to install such valves) to protect residents against the ingress of sewage from the drains?

*M.J.L. Upper Addison Gardens, W14*

- 62.a The flood of last July clearly demonstrated Thames Water's insufficient systems, especially with regard to the drainage systems that did not prevent backflow of water from drains, and resulted in flooded basements in all our street.

I found an interesting leaflet on Thames Water's website on the day of the flood. It states that active drainage systems that prevent backflow from rain sewers can be arranged for and installed by TW at no cost to the user. So why is TW refusing now to have any responsibility? and why the interesting brochure cannot be found any more on TW web site?

*A. and G. S. Queensdale Road, W11*

71. The flash flood incident appears to be judged as a "force majeure" (act of God) unique occurrence and as such reparation has become the responsibility of individual householders' insurance companies.

However a re-occurrence could be averted by the judicious installation of a flap valve or valves which prevent contra surge of water and sewage.

If it happens again, say in the next ten years, it might no longer be accepted by insurers as a freak "force majeure" event and would it not be tantamount to council negligence when it owed a duty of care to its residents to expedite a relatively cheap course of action to eliminate this particular risk?

*D.T. St James's Gardens, W11*

### **Other prevention measures**

- 28.c I want flood guards put in the basement of my house - will Thames Water do this and when?

*Mrs C C. Napier Road, W14*

- 55.b Following the flooding to properties in 2005 and 2007 what additional mitigating devices are you planning for Kensington and Chelsea in addition to the non-returnable valve that was fitted and did not protect many of these properties in July? We understand from various sources that you are funding flood doors in other areas of London and wanted to know whether you would be doing the same in Kensington and Chelsea.

*A.H. and C.L. Holland Road, W14*

**Specific areas/streets**

9. Will the new sewer proposed for Queensdale Road run the whole length of the road or only a section of it?  
*I.P Queensdale Road, W11*
19. What will be done to eliminate the flooding risk in Napier Road? The events of 20 July were devastating and need urgent attention by all parties involved - how will this be arranged?  
*R.V. Napier Road, W14*
- 20. *Having seen the proposals for flood relief works in the Norland area:***
- a) when are these likely to start?***
  - b) how long will they take to complete?***
  - c) what local disruption (noise, dirt, traffic diversion and congestion) is anticipated?***
  - d) what steps will be taken to minimise disruption?***
- I.T. Norland Square, W11***
21. We have been advised by the Met Authorities that London should expect 2 to 3 storms of similar severity to the July 07 storm. What steps are you taking to prevent water damage through back up of storm drains in the Redcliffe Square area?  
*P.O. Redcliffe Square, SW10*
23. I would like to be assured that steps are being taken to ensure that the flooding of Queensdale Road by surface water on 20/7 will not recur - I have had to move out of my house for 3 months while extensive works have been carried out as a result. What is the likely timing of the works?  
*A.McK. Queensdale Road, W11*
25. Given that my property has flooded twice in 3 years due to the insufficiency of the sewerage system I would like to know how far the scheme proposed by Thames Water (to cut off Norland Square from the main drainage system etc) has progressed since locals were invited to view plans in the autumn. Has planning been granted and when will work commence?  
*N.D. Norland Square, W11*
- 26.a Does Thames Water intend to upgrade the drains in the Holland Park area so that there cannot be a repeat of the 'drain surge' of July 20 2007?
- When will the renovations begin and how long will the process take?  
*H.B Lower Addison Gardens, W14*
- 28.b What is the date for Thames Water to install non-returnable valves in Napier Road as promised?

*Mrs C. C. Napier Road, W14*

- 30. How soon will Thames Water start work in Upper Addison Gardens on "renewing your Victorian sewers/water mains"? They have already completed the work north of Holland Park Avenue, namely in Addison Avenue, St James's Gardens, Penzance Place. In view of the flash flood of 20<sup>th</sup> July 2007 can they schedule this work in Upper Addison Gardens as soon as possible?**

***Mrs C. J. D. L. Upper Addison Gardens, W14***

34. My property was offered a non return valve installation in 2005 (we signed and return contract to TW) but this was subsequently withdrawn (why?), yet we have since discovered several similar properties in W14 had these devices installed in 2005.

We are currently being offered a FLIP - mini pumping station - but there are operation problems with this apparently and we cannot be given any information from any current identical installation to reassure us that this would be of any benefit.

Also in relation to flood mitigation devices, who is responsible for their upkeep, as breakdown of operation seems to create more problems than not having one at all.

Also why is it that the flood mitigation devices illustrated on Thames Water's sheet issued in 2005 with the promise of free installation to every customer are not now available?

*T.W. Colville Road, W11*

- 38. At a meeting on 21<sup>st</sup> December 2007 Steve Shine (Chief Operating Officer of Thames Water) and Bob Killington (Director of Wastewater Services) committed to me that Thames Water will:**

- 1. Send forms to all the residents of Napier Road giving Thames Water authority to install non-returnable valves;**
- 2. Install by 21<sup>st</sup> April 2008 the non-returnable valves for those Napier Road properties that filled out the forms;**
- 3. Send residents of Napier Road a list of things that they could do to reduce the risk from rainfall entering into the sewers, and the backflow from toilets and other drains, both upstream of the non-returnable valves;**
- 4. Help the Napier Road residents get onto Ofwat's priority register for flooding events at risk more frequently than once in every ten years;**

5. ***Complete by March 2008 Thames Water's plans for the new sewage system for the Counters Creek sewers;***
6. ***In April 2008 explain to residents of Napier Road Thames Water's plans for the Counters Creek sewage systems, and how it is progressing in the application to Ofwat; and***
7. ***Improve Thames Water's Customer Services performance.***

***What similar commitments will you make to the other residents affected who are here today?***

***T.S. Napier Road, W14***

39. Following the basement flooding with sewage on 20/7/07 - the engineer assigned by Thames Water to assess the situation told us and also wrote a report to TW that we needed a non-return valve added to the pipes in the overflow system. Now 6 months on Thames Water contest that flooding will not re-occur and no non return valve will be required - will they please put that in writing to our insurance company as requested - if not, why not?  
*C.H. Clareville Grove, SW7*
- 42.a We understand that there used to be non-return valves on the junction of the private and public sewers, but in many places these have either deteriorated or are missing altogether. Apparently the non return valve outside our property is missing, but we have been told by Thames Water they cannot replace this due to Health and Safety concerns as the sewer is only 0.9m high at that point. As an alternative, is it not possible for TW to dig through the road and gain access that way? We have been flooded 3 times in 4 years and want to ensure everything possible is being done to prevent further flooding.  
*P. and P. B. Addison Road, W14*
47. On behalf of nearly 200 residents in Norland Ward who were flooded, namely in St James's Gardens, Norland Square, Queensdale Road, St Ann's Villas, Royal Crescent, St Ann's Road, Addison Avenue, Darnley Terrace, Holland Park Avenue, Queensdale Place, Blenheim Crescent, Bramley Road, Clarendon Road, Cornwall Crescent, Ladbroke Grove, Lansdowne Road, Norland Road, Stoneleigh Street and Vantage Place, can you give the Norland Ward Councillors an undertaking that within three months your senior engineers will –
  1. Meet with them, the affected households and/or the street representatives, to report on the specific reasons that caused each street to flood?



2. Having determined the causes of the flooding and where it falls to Thames Water to repair such service failures, undertake that a schedule of works will be put into place immediately and residents affected will be kept informed?

*Norland Ward Councillors and Councillor J. C.*

**50.a At a meeting in this Town Hall with Thames Water in 2005, W14 Flood Forum were told that Ofwat were aware of the problem in this area and have provided funds for a one in 130 year flood event. We were told that there was funding to alleviate the flooding. Given that TW has been aware of the catchment area affected by heavy rainfall and committed themselves to remedial actions in December 2005, we would like to know the results of:**

- i) Their detailed study of the flow monitoring which TW carried out during the period 2005 – 2007;**
- ii) Whether they investigated W14 Flood Forum's enquiry as to whether the pumping station at bottom of Elsham Road could be re-activated;**
- iii) What decisions TW has made on additional storage tanks to improve capacity on the Holland Road sewer;**
- iv) Where are the regular up-dates that the Forum was promised by Thames Water on the long term solution;**
- v) And how can the residents of Napier Road who were given similar assurances by TW 5 weeks ago feel confident that these plans will be carried out?**

**Further, we would like to know when TW will have completed implementing the upgrade work to the Holland Rd sewer to prevent a recurrence and protect the substantial numbers of properties affected from yet another repeat flooding, which seems to be happening every 2 years. Given OFWAT's guidelines (sewer guidelines 260307),**

**"The company should contact the customer regularly to update them on the progress towards the completion of a capital scheme",**

**please provide a firm update on work programme and scheduled completion date.**

**Joint W11 W14 Flood Group Forums**

- 52.a All the basements in Alma Terrace (on the west side of Allen Street) were flooded on 20 July 2007. In correspondence with Thames Water I have asked them to inspect the drain to see if there is any blockage or other reason - apart from its design capacity - why the flooding occurred. They have given no indication that they will do so. Instead they have repeated that blockage in the gulleys - for which RBKC are responsible - could have been a cause.

Why will Thames Water not undertake a simple inspection of the drains?

*D. C. Alma Terrace, Allen Street, W8*

**53.b We are told the proposed underground storage system in Addison Avenue will not benefit Queensdale Place and many others of the roads that were flooded. Will this plan be reviewed?**

***J. and M. F. Queensdale Place, W11***

60. Why could the mains rain drain which serves the south side of Cornwall Gardens between no. 87 and Gloucester Road not carry away the rainwater on 20<sup>th</sup> July?

Our front basement forecourt (patio) backed up nearly to the door of Flat 87A - clean water, not other kinds of drain contents. The water simply could not escape. Another separate drain in that same patio, which services kitchens on the upper floors of no. 87, did not back-up. Only the rain water accumulated and flooded the patio and bin room (under the steps down to the patio) and ran off - but not far enough to prevent flooding of the patio main floor - under the doors into the three ex-coal stores under the pavement above, the floor level of which has been lowered (in recent years) by several inches and left without hard flooring. Any run-off into these coal stores would have easily been absorbed into the turned earth or at least contained in the now lowered area. The flooding stopped when the rain stopped, which indicates the problem was not with the drain of no.87. The water level in the rain drain gully emptied immediately when the rain stopped. I noticed several other front basements between no. 87 and Gloucester Road had also flooded.

*Lady S. Cornwall Gardens, SW7*

70. What of the future? What will be done (by the Council and/or Thames Water) to ensure no repeat of the flooding of our basements in Queensdale Place, which took place on 20 July 2007?

After half an hour of heavy rain and the water draining away, the level suddenly started to rise (evidently via the sewers) and flooded my basement from both the garden side and the front area. I watched it happen! At the drop-in session in St James's Church, on 11 September, Thames Water gave some details of the new underground storage sewer planned for Addison Avenue, Norland Square and Queensdale Road, but I was informed by TW staff that this would give no benefit to Queensdale Place (where nearly all the houses have basements). Surely this is not the best course? Can the plan be changed to include Queensdale Place, please? Until proper provision is made, what advice (and/or financial help) is available to deal with (perhaps inevitable) future flooding?

*J. W. P. Queensdale Place, W11*

## **General**

7. I have been flooded three times in four years. What is Thames Water able to do so that this does not happen again?  
*F. W. Pembridge Villas, W2*
- 8. What are Thames Water doing to ensure this doesn't happen again?**  
***J. L. Queens Gate Gardens, SW7***
10. What will Thames Water do to prevent a recurrence of the situation?  
*E. G. P. Royal Crescent, W11*
- 16.a What precisely are Thames Water doing to prevent flooding again in this borough and can they give priority to the areas that have been flooded twice in two years?  
*J.C. Elsham Road, W14*
- 17.a What has been done to prevent a repetition of the 20th July flood?  
*R M B. Upper Addison Gardens, W14*
24. What is being done to ensure that this does not occur again?  
*C.M. Holland Road, W14*
31. What is being done to prevent a recurrence?  
*Dr I. M. M.-L. St James's Gardens, W11*
33. I do not know why my home was flooded and am worried about the future. What steps can I, the Council and Thames Water take to try and ensure this does not happen again? I am, by the way, in temporary accommodation with drying and rebuilding work barely started and no knowledge of when I may be able to move back in. The anxiety, stress and disruption are huge and ongoing problems.  
*S.R.*
35. What was the cause of the flash flood which occurred on the 20<sup>th</sup> of July 2007?  
  
What measures have Thames Water put in place to avoid/reduce the likelihood of a flood in future?  
*F.V. St Ann's Road, W11*
- 43.b Do you have clear answers yet on what caused the flooding? Was it poor maintenance of the sewers, too many properties being connected to the sewers, or just bad luck that so much rain fell that no normal sewage system could cope?**  
***H.S. Wetherby Gardens, SW5 - Editor and Publisher, Garden Square News***

46. When will Thames Water take the necessary action to prevent sewage contaminated surcharge and floodwater from entering individual premises in the Borough?

*R.T. and M.S. Darnley Terrace, W11*

50.b I understand from the Consumer Council for Water that Thames Water has a statutory duty to "provide an effective public sewerage system throughout their area". Indeed, Thames Water's 'Taking Care of Water' draft 25 year plan describes sewer flooding as "one of the worst service failures" and that Thames Water "shares the view that sewer flooding inside customers homes is unacceptable", (quote unquote), Given the apparent failure to provide this service, what will Thames Water do, and by when, to offer a permanent solution to this, and to offer interim protection?

*Joint W11 W14 Flood Group Forums*

53.a Like all houses in Queensdale Place with basements we were flooded for the first time since living in the house for 19 years. The water /waste came up the drains outside and sinks and toilets inside for approximately 30 minutes then stopped as if someone had opened a gate to release or redirect the water. Does Thames Water have any control of the drainage system to ease the pressure during heavy rain?

*J. and M.F. Queensdale Place, W11*

57. We sustained £60k worth of damage in the 20<sup>th</sup> July flood. Within 20 minutes a bathroom in the basement had filled with 3ft of sewage (it spewed out of the loo and shower drain). Luckily no-one was hurt but we could have had a child there who could conceivably have drowned. One neighbour also said that they had a manhole in their basement blow. Surely you agree that at worst these situations are extremely dangerous, and at best they are vastly unsanitary and needlessly costly. The other three sides of our square seemed to incur very little damage, so clearly there is a weakness in the system on our side of the square as in other damaged streets in London, and these isolated weak points in the sewers need to be addressed. What can the Council and Thames Water do to prevent a repeat or worse happening in the future?

*L.G. Kensington Square, W8*

### **Development**

**13. Many households in this area are digging out basements. How concerned is Thames Water about this?**

**S.I. (Chairman, Old Church Street Association) Old Church Street, SW3**

28.a I have lived at the above address for 41 years and at that time leaflets from the Water Board would be put through the letterbox,

warning householders of the dangers of flooding, due to the position of the drains and sewers under the surface of the road. However, the first flood did not occur until 1994 - the worst being on the 20<sup>th</sup> of July last year.

Why has nothing been done to remedy the situation during all this time? The extensive building in this area, which has gone on over the last year, has greatly added to the risk of flooding.

*Mrs C. C. Napier Road, W14*

- 41. *Is the present sewer capacity becoming overloaded because of the loss of open unpaved areas which provide water-holding capacity resulting in quicker flow-off - more building and gardens paved over, not helped by "global warming" storms?***

*H.B. Selwood Terrace, SW7*

- 48. *Will Thames Water give this OSC an assurance that the extensive shopping site due to open at Westfield has installed its own independent sewerage and rainwater drain away systems so that it does not put additional pressure on Counters Creek?***

***Will Thames Water give an indication as to whether it is intended that the Westfield developers, and indeed future large developers in this area, will be asked to contribute to the cost of the new sewer which, as Thames Water has indicated, needs to be fitted under the existing Holland Road sewer, and when such funding negotiations will complete and work begin on the installation of the new sewer pipe?***

***Councillor J.M.***

- 66. In view of recent events what is Thames Water's position on deep basement excavations which require the use of sump pumps connected to the local authority drainage system?**

*C.A. Albert Place, W8*

- 67. Efficient drainage for all the properties located between Addison Road and Kensington Olympia Railway Station depends on the Holland Road sewer system which under normal circumstances can only just cope. What plans has Thames water to cope with the extra effluent in this sewer once the White City shopping development opens and the Warwick Road 'Eco Village' comes into being?**

*S.H. Russell Road, W14*

- 72. I would like to add a point which may not have been addressed, that of the effect of a change in the water table. Over the past few years there has been a considerable increase in subterranean developments. These major excavations are deep and cover a**

substantial area of the gardens involved and so must be having an effect on the water table as well as reducing the area for the rainwater to be absorbed back into the ground i.e. increasing the rate of 'run off'.

*L.E.*

### **Compensation**

- 2.b Are any costs incurred recoverable from RBKC/Thames Water?

*J.B.D. Kensington Court, W8*

- 5.b Will there be a discount in the water bills for the properties affected? As residents we can expect significant increases in our insurance premiums.**

*C.A St James's Gardens, W11*

- 14.d Will Thames Water be compensating those householders affected by flooding for the inconvenience, upheaval and disruption caused, which in many cases has required people to move out of their homes for extended periods of time to alternative premises whilst repair works are undertaken?**

*Although insured householders who were affected by the flood will have received payments under their insurance policies for damage caused to their homes and their contents, most insurance policies are subject to a "policy excess" which insurance companies do not pay out. Will Thames Water be reimbursing householders the amounts of these "policy excesses"?*

*C.J. St. Ann's Road, W11*

15. What help and advice can Thames Water and RBKC provide to affected residents in cases where, because of insurance claims made as a result of flash floods, insurers are refusing to continue flood cover or even any building cover at all?

Through no fault of the residents the effect on their properties, in particular basement flats, is disastrous for all the many obvious practical, legal and financial reasons - not least confusion and argument over who should pay for what in the absence of insurance cover.

*A.J. Addison Road, W14*

- 17.b If this (the July flood) affects the resale value of our property will Thames Water offer compensation?**

*R.M.B. Upper Addison Gardens, W14*

40. Because of serious floods to the lower ground flat our insurance rates are £7500 + with £10,000 excess. There is now a question whether we can be insured in 2008.

Thames can compensate us? Why shouldn't Thames be "out of pocket"?

*D.C.C. Addison Road, W14*

- 62.b Finally, shouldn't TW be held accountable for all the troubles caused by such backflow of waters from the drains/rain sewage? We weren't even offered the reimbursement of the water bills paid to TW!!

*A and J.S. Queensdale Road, W11*

65. What is the process and timing for obtaining compensation for damage caused by the flash flood and also the earlier incident when a leaking pipe in the middle of Lansdowne Road was left to flood the area for two weeks?

*Mrs J. K. Lansdowne Road, W11*

### **Misc**

18. In the past 6-7 years, Thames Water has been taken over by at least 3 foreign companies. German utility company RWE - in 2001. Kemble Water Ltd December 2006 a consortium led by Australian bank Macquarie European Infrastructure Funds. The deal included both Thames Water Utilities Ltd, the regulated entity and a number of non-regulated businesses including a 20 per cent stake in London Underground maintenance company Metronet. Veolia Water UK, August 2007. Veolia Environment. French?

What percentage of the profits are fed back into modernising and repair of the disintegrating structure/system before the "bonuses" and shareholders dividends are creamed off? And is appropriate Corporation Tax paid into UK or abroad?

*T.S. St Ann's Villas, W11*

29. What is the policy of Thames Water with regard to Flood Prevention Safety levels?

To explain: at a meeting organised by Thames Water in St James's Church on 11th September one of their representatives explained to me that a flood once in every 10 years was acceptable. In other words, us getting flooded once every 10 years was not only acceptable to them but was a successful implementation of their policy. I would like to point out that this is NOT acceptable to us. After over 5 months we still have to live in emergency quarters and it will be another two or three months and about £100,000 later before we can move back. Following the flooding no doubt our insurance cost will go up and I bet Thames Water will increase their charges to carry out 'improvements'. We already pay our increased

water and sewage charges and I would like to know why Thames Water thinks it does not have to carry out the services we pay for.  
*K. and H.M. St. James's Gardens, W11*

43.d Lastly, I strongly feel that Thames Water should supply every household with a sewer report for their street. It should spell out the age and condition of the street's sewer, the date it will be upgraded if necessary, and the risk of flooding on that street.  
*H.S. Wetherby Gardens, SW5 - Editor and Publisher, Garden Square News*

**59. Will Thames Water give an assurance that the Lots Road Pumping Station will be properly staffed in future? The station was unmanned until 12 noon on 20 July and pumping did not commence until 12.30pm, by which time both the basements at 46 Lots Road and 19 Ashburnham Road were under 8 inches of water.**  
***M.S Lots Road, SW6***

63. The 20 July flooding was not from the River Thames. On 16 January this year the Environment Agency issued nine flood warnings and 61 areas on flood watch. The Met Office stated that ground across large parts of England was already saturated and rain water would most likely not drain away. Luckily there was no flooding in the Kensington area that day. All 9 of the warnings and the 61 watches related specifically to rivers. It appears that all concerns are centred on the rivers and flooding of our sort is not of a priority. Is there any coordination between the Environment Agency and Thames Water on non-fluvial flood warnings? And what measures do you have of warning residents and businesses of potential flooding from storm water sewers such as Counters Creek?  
*A.F. Kensington Society*



## RBKC

### Gullies

6. *I have asked the Council several times when the street drain/gully outside no 20 St James's Gardens was cleared PRIOR TO JULY 20<sup>th</sup> and have not received any response - except to tell me when it was cleared AFTER July 20<sup>th</sup>.*

*Is it true, as I have been told by someone working for the Council, that only 1 or possibly 2 men are responsible for looking after all the drain hole/gullies in RBKC?*

*S.M. St James's Gardens, W11*

- 52.b *And will RBKC please confirm to Thames Water that the gulleys (in Alma Terrace) are not and were not blocked so that this red herring can be eliminated?*

*D.C. Alma Terrace, Allen Street, W8*

68. On July 20, the basements of all ten houses comprising Alma Terrace were flooded with 'clean' water. Inkerman Terrace immediately opposite remained dry. This suggests that the flooding of Alma Terrace was due to broken drains and/or blocked gulleys. In spite of correspondence and conversations with Thames Water representatives and with RBKC's Planning Dept. and the Transport, Environment and Leisure services (Tot Brill) both Thames Water and RBKC have 'no plans' to carry out either an inspection or investigation of our drains and gulleys.

The question is WHY? How can either body justify their position?

*Lord and Lady M. Alma Terrace, Allen Street, W8*

69. In Royal Avenue we suffered little. However, we would like to know how often the Council cleans out the drains/drain manholes because these do not clear quickly in heavy downpours.

*M.H. F. Royal Avenue, SW3, Chairman Royal Avenue Residents*

### Development

64. To what extent does the current increase in underground construction for swimming pools, games rooms, parking etc, where previously there was undisturbed sub soil, limit the ability of the K & C land area to absorb heavy rain?

*M.Y.*

### **Clear Up**

- 28.d When I phoned the Council to ask for sewage sodden items to be collected from outside my house I was threatened with Court action for obstructing the pavement!!! I hope this person has been sacked.  
*Mrs C. C. Napier Road, W14*

### **Misc**

- 43.a Will there be a detailed flood map available to the public so that people who want to buy a house in the flood-prone area can see which homes flooded on July 20th? If this map is available, will it be presented at the meeting on Jan. 30th?

**2 Will home sellers in the flood-hit areas be legally required to disclose what happened to their home on July 20 to potential purchasers?**

- 3 Any local resident looking out the window on the morning of July 20 could see that the Royal Borough was about to have serious problems, yet Emergency Planning officer David Kerry seemed unprepared. Was he out of town that morning? If not, how does he account for his failure to assess the situation more quickly?

- 4 Could the Council (or Thames Water) please supply a sample diagram showing the difference between "gullies" and "sewers" on a typical street? I can't picture how the two connect.

*H.S. Wetherby Gardens, SW5 - Editor and Publisher, Garden Square News*

49. The Council seems to be making a distinction between fluvial flooding and sewerage flooding. However, is the Council certain and has it taken professional advice that Norland and Holland Wards, in particular, may indeed have been so severely affected due to a combination of both fluvial flood waters through the canal system at Counters Creek and its tributaries, as well as the inability of the general sewer system to cope with the rainwater run-off from the surrounding areas?

If this is the case, what other measures, e.g. pumping stations or holding reservoirs, ought to be under construction to ensure the risk of flooding, or of actual flooding itself, is brought under control?

*Councillor J.M.*

56. Is the Council aware that some insurance companies are now imposing a 5-10% premium on premises in this area to cover the flood risk, despite the steps that Thames water and the Council are taking or have already taken (e.g. on Lower Sloane Street) to mitigate the flood risk?

*Sir D.T. Lower Sloane Street, SW1*

- 14.c Are there any other measures which the Council or householders can take to minimise the effects of future flooding?

*C.J. St. Ann's Road, W11*

**For Other Bodies**

- 43.c What have the police done to make sure that their CAD reporting system doesn't crash in a similar flood in the future?

*H.S. Wetherby Gardens, SW5 - Editor and Publisher, Garden Square News*

## Questions received after the deadline

73. The flood on the 20<sup>th</sup> July was the first that I have experienced in the 29 years that I have owned this house, but I have noted minor incursions since.

Evidently we are entering a period of climate (not to say climatic) change which we look for the responsible authority to recognise and adjust their procedures to allow for.

Would Thames Water agree that they have a statutory obligation in this respect? Or is it their view that world climate conditions are not changing?

*J.G. L. St James's Gardens, W11*

74. When did Thames Water last carry out / when will they complete routine maintenance survey of west side of Hereford square - Drains and Supply?

*C.H and C.N. M. Hereford Square, SW7*

75. How do Thames Water and RBKC view the incremental effects of individual subterranean developments on rising ground water levels and flashing flooding in the light of climate change (particularly in the north of the borough)?

Do they see the Ove Arup report as an adequate basis for Environmental Impact Assessments on London Clay in this context?

*R.R. Elgin Crescent, W11*

76. Are Thames Water and K + C council fully aware of the problems/flooding experienced by No. 15, 16, 17, 18, 19 Stoneleigh Street on 20<sup>th</sup> July?

Why was the tank not maintained over the last 20 years (since responsibility was handed over to Thames Water from K + C)?

\*\* A tank was installed in the road 20 years ago to deal with such events as 20<sup>th</sup> July \*\*

*E.H. Stoneleigh Street, W11*

# APPENDIX TWO

Notes of the 30 January OSC meeting

## **OSC ON THE PUBLIC REALM PUBLIC MEETING ON FLOODING - 30 JANUARY 2008**

### **Introduction**

Cllr Taylor explained that the meeting was being filmed for a webcast which will be available on the Council's website. People attending the meeting are in effect agreeing that their image can be recorded and used for the webcast. People asking questions from the audience should wait until they have the microphone, and everyone should try to keep background noise to a minimum.

The Council had received 460 questions from residents, many of which asked the same thing and therefore have been put together into one question. The list of questions had been distributed, with priority questions highlighted in red. The residents listed would be called to read their question but if anyone is not here then Cllr Taylor will read the question.

Cllr Taylor, Chair of the OSC Public Realm, and Chair of this public meeting, introduced officials from the Council and Thames Water, including:

- **Sir Malcolm Rifkind**, MP for Kensington and Chelsea
- **Cllr Nicholas Paget-Brown**, Cabinet Member and representing the Leader of the Council
- **Mr Clive Chapman**, Engineer, Project Centre Ltd
- **Mrs Tot Brill**, Executive Director for Transport, Environment and Leisure Services
- **Cllr Paul Warrick**, Vice Chair of the OSC Public Realm
- **Mr David Owens**, Chief Executive, Thames Water
- **Mr Bob Collington**, Director of Wastewater Services, Thames Water
- **Mr Pete Saunders**, Sewer Flooding and Odour Manager, Thames Water
- **Mr Ivor Quinn**, Senior Governance Administrator

### **Cllr Paget-Brown:**

Ladies and Gentlemen, good evening. Thank you Madam Chairman. I am here at the express request of the Leader of the Council and I am the Cabinet Member for Environmental Policy. Thank you for this special meeting to understand better the problems identified by

the flooding last 20 July, to respond to questions that members of the audience put to us, and to identify actions to prevent a recurrence. Anyone at the Cabinet meeting to discuss the flooding was left in no doubt about the stress and distress of the people whose properties were flooded and contaminated with sewage. In West Kensington it was not the first occurrence, and there were more than 450 properties flooded in the borough.

I hope tonight we learn about storm water. Since September Halcro has looked at the capacity of the sewers, flood alleviation, climate change, risk management and the impact of future flood risks in the borough, the areas damaged last July and the likelihood of a similar storm, current capacity of the Counters Creek sewer and residential properties, a long-term plan of action with Thames Water and Ofwat as regulators. With regard to the sewer, we hope to put pressure on Ofwat to make investment. As a Council, we are dealing with the aftermath of the floods. This was not our finest hour. I apologise and confirm we have made a full review for the areas where we are responsible, eg Streetline switchboard, emergency planning office, out of hours services and waste collection services. Management are taking measures to link services effectively, to communicate better and listen more. We have a database of those affected, 464 records. Residents need to report incidents directly to Thames Water too as there are legal complications about sharing our database with others. Information is on our website what to do if you experience flooding. The solution is investment in the infrastructure, to put residents, the Council and Thames Water in 21<sup>st</sup> century London, with 19<sup>th</sup> century engineering.

**Mrs Tot Brill:**

It rained heavily on 20 July and flooded right across the borough, from Southern Row in the north to Danvers Street in the south. The majority of the flooding was around Counters Creek sewer. Counters Creek did not just serve people in Holland Road. There are big and small solutions, it is worthwhile to run through them. The paper on your seats is a summary of two reports and sets out the responsibilities of each organisations involved. Thames Water is responsible for sewerage and the Council is responsible for street gutters and the gulley pots immediately under gratings, and emergency relief, back-up for those who have no-where else to go. We did not do as well as we should have, in future we will act quickly, with compassion and with humanity. The paper takes us through possible climate change and draws on the past. There is no evidence of increasing rainfall, but there is some evidence, but only a little, that large amounts of rain now fall over a shorter period and is therefore heavier. Climate change organisations say it is likely that London will have more, heavier more frequent weather events, in future years towards the end of the century. Engineers have

looked at the cause of flooding. They believe that the capacity of the sewers is not big enough to take the amount of rain that fell in such a short time. Both large scale measures to increase the capacity of the sewers and smaller measures like back flow valves are needed. Back flow valves sometimes work, but not in all cases. You may want to ask Thames Water if they will support fitting these valves throughout the borough.

**Mr David Owens:**

I am delighted to have the opportunity to talk this evening about this issue. We are aware of the distress and misery this event caused. First of all I would like to take the opportunity to apologise for events in July 2007 and talk about what we are putting in place to alleviate such events, and to explain the challenges to try and eradicate this problem. We will speak to you face to face, some people think we are a faceless organisation, that it does not care, but this is not the case. My job, since a year last December, is to deal with the difficult challenges that affect people on a day-to-day basis. I want to try and solve the problems, we want to be accessible and explain what is going on, what we can do and what will take longer. If you think Thames Water is a highly profitable organisation – yes, we make something like £900 million profit. But that is only one measure of a company's success. We will invest £1 billion this year to invest in infrastructure and a total spend of £4 billion on renewing infrastructure for this investment period. It does not help you unless we have a solution. This area will be long-term resolution; we need to tackle it together, to promote to our regulator Ofwat. The next period begins in 2010 to renew and refurbish the infrastructure. We are currently consulting where we know feedback from Ofwat on services that are needed for customers. We have a strategic direction statement on how we plan to invest our money over the next 5+ years. In this way we get support from people here to address the problem of sewer flooding, we need to spend X amount of money to be successful, I am certain we can solve the problem in this regulatory period. We have taken 50% off the flood risk register but events keep cropping up. To put the various work phases in place under long-term investment plan, my experts will explain what we need to do. (1) Accessible – take my business card after this meeting, or my name and contact details are on the website, (2) Ability to solve problems and understand the process and technicalities.

**Mr Bob Collington:**

Thames Water has a number of regulators. Ofwat is the economic regulator. Every five years we submit a business to with proposed levels of investment. After a period of consultation and dialogue with key stakeholders Ofwat sets the level of investment and the increase to customer bills for the investment period. We are in the 2005-2010 period and Thames Water will spend £320 million in

sewer flooding. We want to do more in the next five years and need your help and support. There are a few basic facts that we need to make you aware. There is no standard design criterion for sewers in the country, each Water Company determines its own standard, following a Code of Practice that suggests a design standard that should be met. The design capacity of a sewer are based upon 1 in 20 years, 1 in 30 years, 1 in 40 years flood event, the average is 1 in 30 years flood event. On 20 July rainfall exceeded the capacity of the design capability of a standard sewer by a large margin, the average sewerage system cannot cope with this level of water. We have a choice about the infrastructure to make. Often under extreme rainfall the sewerage system cannot cope. In a combined system the foul water and surface water is discharged into one pipe and then taken to Sewage Treatment works. New development requires separate sewerage systems for surface and foul through independent pipes. When the sewerage system is inundated with rainwater and exceeds the capacity of the pipe, it causes floods. In Kensington and Chelsea we have received reports of flooding 3 years out of the last four years. The majority of properties that experienced repeat flooding are basement dwellings in the W14 area. Extreme weather events in August 2004, September 2005 and July 2007 the rainfall exceeded the design standard of the sewerage system by 2 to 3 times. The 20 July was a combination of many factors – the summer had been wet with period of heavy periods of rain, the ground was saturated and the river levels were very high were high. On 20 July we experienced many hours of heavy rains to the west of our catchment – Swindon and severe storms to the east of our catchment – West London. The rainfall was prolonged and lasted over several hours resulted in one of the largest events and major incidents for a long time. Over 100 mm of rain fell in one day, which equals one month's rainfall. At the peak of the event we were receiving 20 calls per minute at our Customer Centre – an average call rate would be 3 calls per minute. Over the following days we attended 6,500 activities relating to internal and external flooding to properties. In one week we handled the equivalent of one year's work. Putting things into perspective, it was a major event for us. The extreme weather events of 2004 and 2005 affected a number of roads in Kensington and Chelsea – list of road. During these events some customers have contacted us about flooding and some have not contacted us. The best way for us to justify investment with the regulator is for everyone to complete a questionnaire and report to us to be included on the database. If you don't report it, it makes the case hard to justify. We need to receive the reports of flooding not just the RB Kensington and Chelsea. Finally, in 2007 the W14 area was impacted again by extreme weather. It is difficult to explain the concept of rainfall return periods. It is a technical term to quantify the intensity of rainfall, duration and how often it occurs. The investment for sewer flooding is based upon a prioritisation process to those properties



that are at risk of flooding in a 1 in 10 year event. Rainfall return periods allows us to allocate the risk of flooding to a property and hence whether it will attract investment funding to develop solutions, eg to have an increased sewerage pipe or tanks store water until the rain has passed and then return water back into the sewer. A number of schemes are underway in the area. With respect to Counters Creek sewer, this serves not only Kensington and Chelsea but Hammersmith and Fulham too. It is the largest catchment we have in the company and runs from the Wormwood Scrubs in the north down to the River Thames, 10 miles of a 2½ m pipe. Therefore a solution on how to resolve the issue of flooding would be a big engineering task. Therefore we need to work closely with you to make sure we have the investment for a solution.

Note that Thames Water's email address and postal address will be added to the Council's website so that residents can request a copy of the questionnaire if they have not already completed one, and send it to Thames Water.

Mrs Brill will write to people on the Council's database to send them a form.

Mrs Taylor said it was important to let Thames Water know about your flooding, not just the Council. The list of questions on your chairs, was published on 16 January.

**1. J and R F, Stoneleigh Street: Who is responsible for regular maintenance of Thames Water drains and storm tanks and how regular should this maintenance be done?**

**Mr Collington:** Thames Water is responsible for maintenance of public sewers and storm drains. There is 65,000 km of sewers. There are three main issues that cause flooding. Firstly and by far our main issues is a blockage within the sewerage system. These arise from a build up of in appropriate material discharged to the sewerage system, e.g. fat solidifies over time and this builds up and causes a blockage. We deal with 100,000 blockages a year. Our second major issues will be collapse of the fabric of the sewer where the pipe blocks itself. These occur on a regular basis around 400-500 times a year. The third and at by far the most devastating is when there is too much water for the size of the pipe. Areas that are prone to flooding we term as hotspots eg land may be low lying. Once these areas have been identified we regularly inspect these areas, as they are more prone to blockages. We undertake regular inspections of sewers using Close Circuit Television (CCTV). We inspect around 1,500 km of sewer each year. Areas identified in poor state of repair that could collapse are repaired. That is how the system works. In Kensington and Chelsea we have had 107 blockages in the last 10 years, about 10 a year. The problem in the

Holland Park area is a capacity issue, not blockages. The majority of sewers that we have undertaken CCTV or taken pictures there is not much debris or material in them to block pipes.

Cllr Taylor asked residents to email further details to Thames Water.

2. **D E-S, St James's Gardens:**

**By far the greatest number of properties reporting flood damage as a result of 20 July are on the mid-west side of the borough, NW of Holland park and south to Kensington High Street. Piecemeal solutions for small areas are inappropriate, ie Addison Avenue, Napier Road are now too local. A radical solution is now required for the whole of this area to renovate water drainage and sewage backflow. What is Thames Water's detailed plan to achieve this, including how it will be financed?**

**Mr Collington:** Two things, a piecemeal solution is not a long-term solution for flooding, but piecemeal is better than no solution at all. Currently we need to adhere to the regulatory mechanism and commission work on the basis of that process. What happened in July is outside the current regulatory framework and requires a strategic review of how we are going to deal the issue of flooding long term. We have set up a study into what the long-term solution. We are in the process of doing this. The information will predict and test which properties could flood in a certain conditions and rainfall return periods. We will then compare real information against the theoretical model. The next challenge is where to build another sewer in the Royal Borough as the strategic scheme is a huge undertaking and will take a long time. The strategic solution will require significant investment. All this will be dependant on the company's regulators to agree. We will have discussions with Ofwat this year to establish their view. Because of the scale of the project it will take at least 5 years to undertake this from 2010.

**Mr Owens:** We are putting business plans together now for different projects and we will present this to Ofwat later this summer. We need to negotiate our investment opportunities with Ofwat and our stakeholders. £4 billion will be spent this investment period, this money not for shareholders. If we have all your support it backs our proposals. If we could persuade Ofwat that we need £6 billion, that will impact on bills, no escaping this. Average spend is £300 a year per household on Thames Water bills and is the lowest combined charge in the country but the bills will go up to fund investment.

3. **H B, (not present at meeting) Lower Addison Gardens, W14: As a short-term measure, will Thames Water install back-flow valves in all properties flooded on 20 July 2007?**

**Mr Collington:** Cannot say categorically yes. Every single case needs to be investigated by our sewerage engineers. Back-flow valves don't work in all cases; they do not provide 100% guarantee that a property will not flood. These units reduce the risk of flooding. The risks can be some properties experience self-flooding when a valve is in place. The back flow vale does not prevent normal operation of the private drainage system. We can undertake a flow survey to assess internal private drainage. There are changes you can make to drain pipes and property to help prevent internal flooding. This might be more complicated. If you have been flooded we will investigate. In 2005 we promised Holland Park residents back flow valves and we fitted these devices. We will listen to individual circumstances.

4. **I T, Norland Square, W11: Having seen the proposals for flood relief works in the Norland area (a) when are these likely to start? (b) how long will they take to complete? (c) what local disruption is anticipated? (d) what steps will be taken to minimise disruption?**

**Mr Saunders:** I became involved with the W14 Flood forum after 2005 floods, which resulted in several meetings. As we developed the Norlands Square project we considered whether Holland Road (North) and neighbouring roads could be included in the scheme too. The Norlands Square/Addison Ave scheme was extended to include Holland Road (North)., Elsham Road & Elsham terrace. The project is now in a position to do a final ground investigation works and this should be completed by March 2008, in conjunction with highway approval for the RB Kensington & Chelsea. The work on the project will start late spring/early summer this year, and take about 12 months to complete. It is a big engineering project, there will be noise especially when drilling shafts, earth will need to be excavated and traffic/parking issues will be dealt with in conjunction with the the RB Kensington & Chelsea. Most of the work will be done in underground shafts, not at street level.

5. **Mrs De L, Upper Addison Gardens, W14: How soon will Thames Water start work in Upper Addison Gardens on 'renewing your Victorian sewers/water mains'? They have already completed the work north of Holland Park Avenue, namely in Addison Avenue, St James's Gardens, Penzance Place. In view of the flash flood of 20 July, can they schedule this work in Upper Addison Gardens as soon as possible?**

**Mr Owens:** We do not have a scheme to address the flooding issues. The work referred to water leakage in London. This project is to replace Victorian mains pipes, £300-400 million to replace

mains. We met our leakage target for the first time this year because mains have been renewed.

6. **T S, Napier Road, W14: List of actions promised to residents of Napier Road by Thames Water. What similar commitments will you make to the other residents affected who are here today?**

**Mr Collington:** We give the same commitment to everyone who is flooded and how often we need that information. On 20 July we received 180 contacts and the Council received over 400. (No-one answered Thames Water telephones.) I apologise if people were not able to contact us. (Forms have not been received.) Tony Denton will take your name and address tonight but I assure you that some people did not report the flood, as they are concerned about insurance and value of their property. We will visit personally if necessary and listen to your circumstances, and send our teams to your streets. In the same way we did for Napier Road. (Thames Water should take the initiative, rather than residents.) We need the basic information from residents. We have to prioritise our investment, whether floods are once in 10 years, twice in 10 years or once in 20 years, will indicate priority. Sessions like this help us to put together the information and justify investment. We will offer to reduce the risk of flooding by mitigating procedure and find a solution for Counters Creek to include in our strategic business plan by summer 2008.

**Mr Owens:** You have our attention. Customer Services was poor. We have 1,000 people in the call centre, but after the flooding service was poor, unsatisfactory. We have up-dated technology and training to cope with the telephone calls, etc. We need to be proactive to help you when these circumstances occur. In the short-term you will have our email addresses and contact details and we will speak to you face to face about your particular problems.

7. **Joint W11/W14 Flood Forums: At a meeting with Thames Water in 2005 you were aware of the problems in this area and funding was available to fix it. What decisions have been made about storage tanks, where are the regular up-dates we were promised by Thames Water and how can residents feel confident this will be carried out?**

**Mr Saunders:** As I mentioned earlier I have been involved with the W14 Flood Forum since 2005 and attended my last meeting late 2006. During the time we were working with residents we sent questionnaires. We tried to encourage residents in Holland Road and neighbouring roads to complete the questionnaires and report flooding. We have completed the flow survey work and amalgamated the Holland Road (north) area into the design work for

Norland Square/Addison Ave scheme. The Pumping station sited at the end of Russell Road is operational and will be refurbished as part of the Norlands Square/Addison Ave scheme. The solution for the Holland Road (north) area will be the diversion of the sewer to the Russell Road Pumping station. I apologise that since I have attended the any meetings since late September 2006 communication and up-dates have lapsed. We will fix this now. It could be that nothing major happens for six months but we will update the W14 Flood Forum on a more frequently.

**Mr Collington:** We will do what we said for Napier Road, forms, surveys and non-return valves, by April and follow-up the outcomes of studies. You can hold me to that.

**8. J and M F, Queensdale Place, W11: Will underground storage be reviewed?**

**Mr Saunders:** There is a large network of sewer feeding into the Counters Creek main sewer. My analogy is imagine the sewerage network is like underground network, each tunnel has the same route but they interlink with other tunnels/routes at various stations but the tunnels end or start at different locations. The sewer serving Queensdale Place and Queensdale Road drain under gravity in the opposite direction the Norland Square/Addison Ave drainage configuration

**9. J L, Queens Gate Gardens, SW7: Can Thames Water ensure it does not happen again?**

**Mr Collington:** Basement properties can be at the same level as the public sewer. We need to look at individual events street by street. Sometimes there are no local solutions to the flooding problem only a strategic view. We have offered to arrange a survey to review the configuration of your drains to minimise potential of flooding. Basements need pumped drainage system rather than gravity based systems. The pumped based system often sent the wastewater into the top of a sewer. (Where does the water go?) In general pumps do work but not in all cases.

**10. H S, Wetherby Gardens, SW5: Do you have clear answers yet on what caused the flooding? Was it poor maintenance of the sewers, too many properties being connected to the sewers, or just bad luck that so much rain fell that no normal sewage system could cope?**

**Mr Collington:** Lack of capacity with the sewers, there were no blockages. Any issues with maintenance will be fixed. Development

& growth is an issue, the population of London has grown and puts additional pressure on the capacity of the systems.

**Mr Owens:** Take the trouble to look at the footage when we inspect the sewers. We are trying to deal with this in an open and honest way.

- 11. S I, Old Church Street, SW3: Many households in this area are digging out basements. Does this put pressure on the system? I wonder if this is a planning question. How concerned is Thames Water about this?**

**Mr Collington:** Thames Water is concerned about the number of basements being developed; it does increase risk of flooding at low points on the sewerage system. We are not consulted on planning applications so we cannot prevent development for occurring. Where we are asked, we would provide information to planning authority. We have recently discussed with Local Authorities what we should do to give advice about using basements as dwellings.

- 12. H B, Selwood Terrace, SW7: Is the sewer capacity being overloaded by loss of open unpaved areas, more buildings, gardens paved over?**

**Mr Collington:** That is a factor. 'Urban creep', paving areas, paths, driveways, etc does not allow water to naturally drain away and this contributes to flooding. How big a problem in relation to other things, climate change, etc, it is certainly a factor. People are looking at porous forms of concrete.

**Mr Saunders:** there use to be information on the LB Ealing website.

- 13. Cllr Julie Mills: Will Thames Water give us an assurance that the shopping site at Westfield has installed its own sewerage system? Will Westfield and future developers be asked to contribute to sewer costs?**

**Mr Collington:** Discussions have happened. We have no powers to prevent development, but we can advise that the development is delayed until sewerage infrastructure is upgraded to cope with any increased capacity and we do ask developers to contribute to the costs. In this case, we have been in touch as part of the planning process and they have undertaken to fit storage tanks to deal with rain water flow. We are satisfied that the volume will allow flow to be controlled.

- 14. C A, St James's Gardens, W11: Will there be a discount in bills for affected properties that expect significant increases in insurance?**

**Mr Owens:** Under our licence arrangements we can charge customers what we agreed with Ofwat, we cannot vary charges. Therefore there will be no reduction in Water Services charge. However, our customer guarantee scheme, we have provision to refund the sewerage charge if flooded internally with sewerage, if reported and we have validated the event. The scheme can be suspended in accordance with Ofwat guidance if flooding occurs as a result of in an extreme weather event. We will have another discussion with the Consumer Council for Water on how to deal with customer distress from sewer flooding. We will look to compensate those who have flooded with sewage, as a Thames Water initiative.

- 15. C J, St Ann's Road, W11: Will Thames Water compensate those affected by flooding, for the inconvenience, upheaval and disruption of having to move out of their homes? Will Thames Water reimburse the insurance policy excess amounts paid out?**

**Mr Owens:** No. Take this issue up with us on a one to one basis. We consider each instance on its own merits.

- 16. R M B, Upper Addison Gardens, W14: If this flood affects the value of property, will Thames Water offer advice on selling properties, or compensation?**

**Mr Owens:** We are having an independent survey done to reassure residents about the impact on value of property. Our experience to date shows little impact on the sale value of a property.

- 17. M S, Lots Road, SW6: The Lots Road pumping station is not turned on when rain starts. No-one arrived until 12.10 pm on 20 July, both basements flooded. Kept getting a recorded message when it is an emergency.**

**Mr Collington:** We are aware of the issues of Lots Road, which is an unmanned pumping station, as the majority of them are. Pumps are over 50 years old, the building is listed, as is the equipment inside. They are some of the largest pumps we have and it's not easy to prime them and maintain them. We are looking how to refurbish this station. The size and scale of finding suitable replacements pumps is not easy. When the pumps are operational water is discharged to the river. (It was too late that day.) We will look at this again but the issue is old equipment. We need a new control system to automate the station. (You need to send someone to start the pump when rain is forecast.)

- 18. S M, St James's Gardens: Asked the Council when the street drain/gully was cleared before 20 July? I have been told that only 1-2 people clear the gullies in the borough.**

**Mrs Brill:** I apologise for not responding quickly. Records of gully cleaning done by contractors, show most recent in March 2006, January 2007 and October 2007. Sita uses a two-man gully cleaning machine and they are confident that gives enough capacity for the borough.

- 19. D C, Alma Terrace, Allen Street, W8: Will the council confirm that the gullies are not and were not blocked, so that this red herring can be eliminated?**

**Mrs Brill:** There is no record of gullies in Alma Terrace being blocked in any way, outlets running freely.

- 20. Do we have to tell potential buyers about the flood?**

**Mrs Brill:** everyone will have a reply to their questions if not covered here tonight. Our Legal Department advise that homeowners will need HIPs, and those have a question on sewerage. If you are asked directly if your property was flooded last year you must answer truthfully.