

# REGENERATION, COMMUNITY AND CULTURE OVERVIEW AND SCRUTINY COMMITTEE

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## **WATER SUPPLY IN MEDWAY**

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### **Summary**

This report responds to the committees request to review the current water supply position in Medway against the findings of a scrutiny task group in 2007 and the recommendations included for Southern Water. It takes account of the drought orders issued in Spring 2012 and recent engagement with Southern Water concerning its Water Resources Management Plan.

### **1. Budget and Policy Framework**

1.1 This report is a matter for the Committee and does not have any direct budget implications.

### **2. Background**

2.1 The minute of the meeting of the Committee held on 3 April 2012 includes the following:

*“A Member raised the matter of the drought orders shortly to be imposed by Southern Water and asked the committee to review a previous scrutiny task group’s recommendations from 2007 in relation to the recommendations to Southern Water at that time and also in relation to where the council stood with regard to future development in the area.”*

2.2 It will be recalled that in the spring, following two exceptionally dry winters and no rainfall in March, Southern Water (along with other water companies in the region and beyond) received permission to impose drought restrictions on domestic customers. This was accompanied by substantial media interest and growing speculation that further water saving measures would be required if there was a dry summer.

- 2.3 In the event there was exceptional rainfall over the following months, leading to the withdrawal of the drought restrictions much earlier than expected. Although this respite was welcome it is important that the seriousness of the situation that existed in the spring is fully understood and lessons learned as necessary.
- 2.4 Southern Water is responsible for the provision of drinking water to virtually all of the Medway administrative area. In discharging this function it is regulated by OFWAT and the Environment Agency (on behalf of Department for Environment, Food and Rural Affairs [DEFRA]). The company is under a legal duty to supply water and OFWAT deals with competition and consumer issues, including regulating prices. The Environment Agency, in addition to a general responsibility, enforces the European Water Framework Directive concerning water quality in the natural environment. In effect this regulates how much water Southern Water can extract from groundwater sources and from rivers to meet the needs of its customers.
- 2.5 The last two winters in and around Medway saw record low amounts of rainfall. Yet this is the season during which aquifers normally recharge and rivers attain their maximum flows. As such it is regarded as crucial for renewing capacity for domestic water supplies. Normally rainfall during the spring, summer and autumn is of little value to the water company as the great majority is lost through evaporation and transpiration.
- 2.6 The result was that, by the end of March 2012, the general threshold for a drought had been breached (two successive dry winters) and water levels were so low that if a third dry winter occurred an unprecedented situation would arise. Given this the Government declared drought conditions and approved associated demand reduction measures – effectively a hosepipe ban on domestic consumers.
- 2.7 The fact that rainfall since then has been exceptionally high does not alter the fact that if further dry seasons had occurred a serious situation would have arisen.
- 2.8 In 2006/7 the South East Plan was being prepared and was proposing exceptionally high levels of development across the region. This led, very understandably, to local concerns over the future availability of water. At that time Medway was described as the most stressed part of the most stressed region as far as water supplies were concerned. In response a scrutiny task group was established to investigate the matter and the Committee and the Cabinet approved the resulting report in July 2007. This is available at:  
[http://www.medway.gov.uk/pdf/provision\\_of\\_water\\_to\\_meet\\_medway\\_s\\_future\\_needs-2.pdf](http://www.medway.gov.uk/pdf/provision_of_water_to_meet_medway_s_future_needs-2.pdf)

2.9 The report made a number of recommendations that affected Southern Water.

### **3. Advice and analysis**

3.1 Each of the recommendations arising from the review is set out in a table below but in considering them now it is also important to have regard to some significant changes in the water industry that have occurred since 2007. These include:

- approval for Southern Water to introduce universal metering with coverage in the Medway supply zone being completed by 2015. This is expected to lead to a 10% reduction in demand as consumers become more aware of their water use
- substantial investment in transfer capacity within and between water supply zones. This allows bulk transfers and improved resilience to drought conditions. The bones of a regional network are also now emerging
- the continuing operation of the Water Resources in the South East Group and considerable progress made towards a shared water resources strategy for the region. This brings a much needed strategic steer to water resource planning. This is not on a statutory footing but it is being supported by all relevant parties because of the clear value it brings
- much closer cooperation between the water companies that includes sharing of bulk transfer infrastructure and 'water trading' – effectively companies selling spare capacity to one another.

3.2 The result is considered to be an improvement to the position in 2007 but there are still a number of concerns:

- although the investment in transfer capacity is welcome, there has been little investment in 'new' capacity such as the upsizing of Bewl Water or progressing a new reservoir at Broad Oak, near Canterbury. The cause of this would appear to be with OFWAT as much as Southern Water
- current drought plans are based on past actual events – hence the current definition of a drought being two drier than normal winters. However there appears to be increasing volatility in weather patterns associated with climate change and the situation in March was close to a serious drought. Indeed many individual groundwater sources crossed this threshold. Accordingly drought plans may need to be prepared on a different basis in the future
- Southern Water, like many companies, has made good progress on leakage control and mains renewal. However, a point is approaching where the law of diminishing returns is reducing the cost/benefit of such investment. As a result very little additional capacity is likely from this source to meet future demand.

3.3 Otherwise Southern Water is currently working to a Water Resources Management Plan covering the period 2010 to 2035, which was completed in October 2009. It envisages investment in the Medway water resource zone as summarised in the following table.

<b>Schemes to be Implemented within 5 years</b>	<b>Company only investment beyond 5 years</b>	<b>Regional schemes beyond 5 years</b>
Universal metering	Renewal of C522 scheme bulk supply to South East Water	Aylesford wastewater recycling scheme
Asset improvement schemes for groundwater sources (10.25 MI/d peak, 8.75 MI/d average)	Licence variation to the River Medway Scheme	Raising Bewl Water
Optimisation of inter-zonal transfers (to Kent Thanet)	Licence variation of S271 groundwater source	An assumption that these will enable the following: <ul style="list-style-type: none"> <li>• Bulk Supply from Bewl Water to South East Water</li> <li>• Bulk supply from Burham to South East Water</li> </ul>
	6.5 MI/d of further leakage reduction	

It should be noted that the Medway supply zone covers most of North Kent from Dartford to much of Swale and that adjoining areas are supplied by South East Water.

3.4 Against this context the 2007 review recommendations are set out in the table below, together with a summary of the current situation.

<b>No.</b>	<b>2007 Recommendation</b>	<b>Current Position</b>
1	Request that further consideration and research is undertaken on the re-use of treated waste water and that Southern Water considers a request to work with the University of Greenwich and Medway Council on a trial on the re-use of treated waste water back into the mainstream supply (see paragraph for University of Greenwich below)	No collaborative work undertaken but Southern Water now seriously considering a number of waste water re-use options as part of its new Water Resources Management Plan
2	Recommend that Southern Water, together with Regulators and Government, ensure adequate and justifiable headroom allowances (approximately 10-12%) are included when reassessing the target headroom allowances as part of considering	Southern Water continuing to work to a nominal 5% headroom or contingency allowance within each water resource zone, despite evidence this is no longer adequate. Currently less than

No.	2007 Recommendation	Current Position
	future risks and uncertainties in preparing the new water resource plans. (Same recommendation to OFWAT/Defra/SEERA)	5% in the Medway zone. However a higher allowance requires the approval of OFWAT, which appears to regard the capital cost of a higher allowance as not being justified in terms of consumer bills. It also works on the basis of a national average situation that is not necessarily representative of the southeast
3	Ask if the current water resource plan has under-estimated the number of new developments due to be built in Medway (as indicated by the EA) and, if this is the case, where the additional water supply will be found to meet the needs of Medway	Final plan based on South East Plan figures and Southern Water has subsequently been consulted at each stage on the preparation of Medway's core strategy
4	Voice the Committee's concern that the raising of Bewl Water reservoir and the implementation of a reservoir at Broad Oak may not happen, especially as river flow rates are below average and decreasing and the EU Directives mean that less water is able to be abstracted than at present and that no contingency plans were forthcoming	Neither project is currently within a firm programme but Bewl is the more likely of the two. Instead Southern Water has been concentrating on a range of other measures to both reduce demand and increase flexibility of supply
5	Request that Medway Council is made a statutory consultee for the next water resource plans	No legal requirement has been introduced but Southern Water have committed to early and continuing involvement in the preparation of their next water resource management plan
6	Formally propose a service level agreement with Medway Council for the use of the warden service to monitor illegal use of hydrants and hosepipes	No agreement but improved monitoring possible with the introduction of smart meters
7	Offer, as part of the possible service level agreement, to advise Southern Water, in future, at the point when the Council is notified of a change of use to housing multiple occupation so that they can pursue their statutory powers with regard to water metering	Southern Water receive the weekly list of planning applications and are anyway introducing universal metering
8	Letter to University of Greenwich requesting: that serious consideration and research is undertaken, in consultation with Southern Water and	See 1 above

No.	2007 Recommendation	Current Position
	Medway Council as a Medway project, to the re-use of treated waste water back into the mainstream supply, as there is already a cost of treating and pumping it out to sea	

- 3.5 The current Water Resources Management Plan commenced in 2010 but it is reviewed at least every 5 years. Southern Water is already progressing its next review and is involving stakeholders, including the Council, in that process. As part of this, the Planning Policy and Design Manager attended a 'Planning and Options Workshop' on 13 July 2012. This considered the general approach being followed for the review, recent research and modelling results and the initial evaluation of options. The company has given an undertaking to continue to work with stakeholders ahead of publishing a draft plan for formal consultation in April 2013.
- 3.6 This approach is very welcome and much more open than that employed in the past. Southern Water is being very transparent in sharing the results of its modelling and research. Many options for future capacity are being considered but these fall into the following broad categories:
- Supply side measures:
    - Traditional resource schemes; abstraction, storage
    - Artificial recharge/Aquifer Storage and Recovery (ASR)
    - Wastewater recycling
    - Transfers
    - Desalination.
  - Demand side measures:
    - Metering and tariffs
    - Leakage
    - Water efficiency.
- 3.7 The evaluation of specific options will be complex but those chosen for inclusion in the revised plan are likely to reflect the following:
- a first preference for incremental increases in capacity. This is because major projects, such as upsizing Bewl Water or constructing a new reservoir at Broad Oak near Canterbury, have a very high capital cost but also introduce a large amount of new capacity in one step and at a scale that may not be needed for many years. It is also apparent that OFWAT will critically assess such options due to their impact on customer bills
  - a new willingness by Southern Water to consider wastewater recycling. This was strongly supported by the Environment Agency, the Campaign to Protect Rural England (CPRE) and the Task Group in 2007 but resisted strongly by the company at that time

- the current Water Resources Plan begins to reflect regional considerations but the revised plan can be expected to more fully reflect wider considerations, including the development of some form of regional water grid. This should ultimately greatly improve resilience across the region.
- 3.8 Southern Water is also committed to working with local planning authorities over future growth assumptions. Engagement on this should go beyond formal responses to the Local Development Framework and should explore a range of options.
- 3.9 It may be concluded from this that some progress has been made since 2007 but also that there is still some way to go before sufficient capacity and resilience can be assured over the long term. However, to illustrate what progress has been made, Southern Water has stated that, should a similar drought to that in 1976 occur now, only minimal restrictions would be needed because of improved infrastructure.

#### **4. Risk Management**

- 4.1 There are no specific risks arising directly from this report but water companies, together with the regulator and the Environment Agency, use risk assessments to test supply arrangements.

#### **5. Financial and legal implications**

- 5.1 There are no direct legal or financial implications arising from this report.

#### **6. Recommendations**

- 6.1 That the report be noted and officers continue to engage with Southern Water over the company's next Water Resources Management Plan.
- 6.2 That OFWAT is informed of this review and the importance of ensuring that company resource plans have adequate headroom, reflecting local climactic conditions.

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#### **Background papers:**

2007 Water review available at:

[http://www.medway.gov.uk/pdf/provision\\_of\\_water\\_to\\_meet\\_medway\\_s\\_future\\_needs-2.pdf](http://www.medway.gov.uk/pdf/provision_of_water_to_meet_medway_s_future_needs-2.pdf)

Southern Water Final Water Resource Management Plan, October 2009

available at:

<http://www.southernwater.co.uk/Environment/managingResources/publicConsultation.asp>