



Campaign to Protect
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Dear Sirs

25 August 2008

THAMES WATER'S DRAFT WATER RESOURCES MANAGEMENT PLAN 2008

1 Introduction

We refer to your consultation document "Thames Water's draft Water Resources Management Plan (dWRMP)", and specifically to the determination to build one of Europe's largest man-made reservoirs in the Vale of the White Horse, Oxfordshire.

We can fully support Thames Water's plans to ensure there will be sufficient water available to meet its customers' needs over the next 25 years, but we do not believe the proposed reservoir near Abingdon is essential to meeting these needs. We are deeply critical of Thames Water's rush to construct a reservoir of this scale before other options have been exhausted. We believe Thames Water must deliver on better management of existing supplies before it pushes ahead with giant engineering proposals which will have a dramatic impact on cherished landscapes. Landscape and environmental considerations must take equal place with financial factors in any review of these proposals.

Alternative proposals have been put forward by the Group Against Reservoir Development (GARD) which are more economic, more sustainable and more viable.

GARD's alternative proposals would prevent the disruption and destruction of a vast swathe of Oxfordshire's traditional landscape, including 3,500 acres of valuable farmland.

We can agree therefore with the aspiration to meet the growing water shortage in the South East, but we have substantial and grave concerns about the reservoir proposal and its siting in terms of economic merit and overall environmental impact.

CPRE South East has issued a comprehensive study of water supply in the South East (*A Water Resource Strategy for the South East*, July 2007). Inter alia, it calls for the government to recognise the environmental limits on water supply and for the water industry to increase water efficiency, including reuse and recycling of water. The report's main recommendations and conclusions are directly relevant to, and inform our response to this consultation. These include:

- *"...there is an increasingly strong case for a region wide, and indeed nation wide, strategy transcending water company boundaries ..."*
- *"There is a disproportionate emphasis on the creation of additional reservoir capacity which is unlikely to prove ...hydrologically or environmentally sustainable."*
- *"...adds weight to the case for urgent action on demand management."*
- *"There should be an urgent review of the decision by OFWAT against setting water company leakage targets at levels more challenging than 25% of Water into Supply".*
- *"We urge ...an early review of the potential of waste water re-use..."*

CPRE has worked closely with GARD, and has had full access to the Review commissioned by GARD from Mr Chris Binnie. In producing this response we have drawn heavily on the Binnie Review and have given paragraph references where appropriate. We would also commend the report submitted to the Vale of White Horse District Council on 13 August 2008, which is a document of public record. We are aware that all relevant parties will have had copies of the GARD response and the Binnie Review; we support their findings and have, accordingly, kept our response as concise as possible.

In summary, our view of the dWRMP is that Thames Water has overstated demand and understated supply, whilst ruling out or ignoring valid supply options in order to arrive at the solution most favourable to its shareholders. It should also be noted that the presentation in the dWRMP leads to the conclusion by Thames Water that implementation of their preferred schemes must start now; this is not the case, at least a further 5 years are available to ensure that the right decisions are taken. The consumer ultimately pays all the costs of the WRMP, the consultation process, inquiry and plan implementation, whilst Thames Water enjoys a risk free profit margin. This means that the higher the costs, the better for shareholders.

2 Water resources programme 2005 to 2010

Insufficient progress has been made on demand management and it is only recently that action on leakage has been relatively successful. Despite these shortcomings, current baseline supply demand balance could be said to be satisfactory taking into account the generous provision for headroom.

3 Current and future demand

Binnie (4,5,8,9) makes an extensive analysis and it is clear that the dWRMP has consistently overstated demand and under-provided on the means by which demand can be controlled. For example, there is an overstatement not only of the population and number of households but also, even more significantly, of household demand.

We note the apparent extreme overstatement of the figures for garden watering in London. In addition, approximately 26% of all leakage occurs on customer's premises and that metering rapidly reduces this problem to a manageable size. (It would appear, therefore, that a useful reduction in leakage will be achieved by compulsory metering making the dWRMP leakage targets achievable without much real effort.)

The metering programme is supported by us, but is not sufficiently ambitious – it should extend to blocks of flats and a 90% coverage of London households by 2020, with the consequent further reductions in demand and leakage. In addition, tariffs should be introduced between 2020 and 2030 as a cost-effective means of controlling demand.

Non-household demand is forecast to remain stable, whereas the evidence points to a gradual reduction. Didcot A Power Station is due to close in 2015 and, even if replaced (probably with a new gas-fired plant), the new unit would use significantly less water (Binnie 18).

Education of consumers is vital, both locally and nationally.

It is clear that the future baseline demand forecasts are considerably higher than the likely outcome, before making allowance for Target Headroom. Our estimate would be that the overstatement of demand is at least in the order of the yield from the proposed Abingdon reservoir, even without the 30 ml/d surplus arising from the replacement of Didcot A.

4 Current and future supply

See Binnie (14, 15, 16, 17). All the evidence leads to the conclusion that the dWRMP is understating deployable output. In particular, we note that the mid case effect of Climate Change has been allowed for in calculating Deployable Output (DO) but has possibly been overstated by a factor of two.

5 Allowing for risk and uncertainty

Thames Water is using much more conservative risk factors than other water companies, whilst ignoring practical steps which could be used to mitigate risk (Binnie 11, 13). We can see no justification for this approach, particularly when baseline demand is already overstated and supply is understated.

Climate Change and its effects are a risk, not a certainty. Allowance is made for the mid case effect in assessing DO, which we accept. What we find unacceptable is that an additional level of cover is a substantial – and increasing – component of Target Headroom (dWRMP, Vol 2, page 104, fig 22).

6 Baseline supply demand balance.

The dWRMP is at variance with the Environment Agency which, in 2007, stated that there would be spare water resources in Thames Water's supply area in 2020 and 2035.

7 Appraisal of supply demand options

7.1 Water resource options.

Binnie (18 – 29 incl) reviews the options considered in the dWRMP as well as schemes not included by Thames Water. The principal options are:-

1. Waste water re-use. The arguments used by Thames Water to reject re-use schemes are not robust and rely upon criteria which need proper investigation. The costs attributed to, for example, Deephams, are based on the introduction into the process of what appear to be unnecessary complexities. Re-use is a sustainable climate-proof resource; Thames should follow the lead taken by several other water companies in this area, notably Anglia Water. Binnie and GARD have developed two re-use schemes, one for SWOX based on Sandford STW (output 40 MI/d) and the other for London based on Deephams, Mogden and HogsmillA/B STWs (output total 340 MI/d). It will be seen that these schemes alone give an output similar to the reservoir at a much lower capital cost and, like the reservoir, they can be operated on demand. We note the survey on re-cycling/effluent re-use by South East Water (dWRP08, Table 1 page 12) which showed that only 4% of respondents were opposed.
2. Abingdon reservoir. The operation of this facility would depend on abstraction from the Thames, whose catchment area is already over-stressed. We do not believe that Thames Water has made a proper hydrological analysis, particularly taking into account the possible effects of climate change. Furthermore, the cost calculations in the dWRMP are subject to question. No economic cost has been placed on the loss of 3,500 acres of farmland.
3. Severn/Thames transfer. Water has to be considered as a national, not just a local or regional resource. The principle of transfer from the Severn to the Thames is attractive because the Severn has a much greater catchment area, a much higher flow rate and the climate cycles are likely to be different, thus reducing risks for the Thames area. Three schemes have been in the public domain for several

- years: Columbus transfer, Craig Goch reservoir and Longdon Marsh reservoir. The Columbus scheme is considered in the dWRMP but Binnie (27) finds the adverse analysis not to be robust, particularly in view of the benefits to both zones. Craig Goch is rejected because the reservoir would be in an SAC for birds of prey, which is accepted. What we find amazing is that Thames Water has not even considered the Longdon Marsh scheme, which has been a possibility since before the Abingdon reservoir. Binnie (28) finds Longdon to have 60% of the capital/operating cost of the Abingdon reservoir, and concludes that Abingdon cannot be considered except alongside Longdon. Whilst we do not consider that either scheme is necessary in the near future, we agree with this conclusion.
4. Oxford Canal transfer. This has been rejected on the grounds of OPEX, which appears to have been overstated by a factor of 10. We consider that this should be re-analysed and re-considered.
 5. Didcot A power station. See Section 3 above, final para.
 6. Desalination. The Beckton plant has been approved, but its potential output, equal to 45% of the Abingdon reservoir, has not been included in the dWMP. The plant will be expensive to operate, but it is a significant back-up facility which should be taken into account in any assessment of overall resources.

7.2 Managing demand

Thames Water's demand estimate of 165 l/p/d by 2030 is materially higher than the government's target of 130 l/p/d and Thames Water is one of the few companies forecasting significant growth in personal consumption. We have already mentioned above (Section 3) the significant overstatement of garden watering in London and the dWMP appears to ignore recent evidence from Thames Water itself of a reduction in use for baths, showers, washing machines and other indoor equipment. There is no evidence in the plan to show how the demographic trends have been developed. Education of the consumer must be an important element of demand management. We see no reason why the government target of 130 l/p/d in 2030 should not apply to Thames Water, particularly when Target Headroom includes a contingency for demand.

7.3 Managing leakage.

As discussed above, compulsory metering will have a significant impact on leakage, particularly if the metering target is increased to 90% in London by 2020; we estimate savings of 27 Ml/d by 2020. We find Thames Water's targets for leakage to be unsatisfactory, particularly after 2020. Rates of water loss in the Thames area remain far too high and there can be no purpose in the expensive construction of a new source of supply only to waste the product through leakage. Leakage needs to be significantly reduced with far tougher targets starting from 2010 on.

7.4 Metering and tariffs.

The dWRMP proposals do not meet the Environment Agency's expectations and we suggest that the London metering target should be increased to 90% by 2020. We would encourage further early research and trials on tariffs and the introduction of smart meters.

7.5 Water efficiency.

The dWRMP contains insufficient back-up data to support the figures used. We would judge that Thames Water has been undemanding in assessing the benefits of water efficiency. A great many lessons can be learnt from countries faced with far more arid conditions than we currently experience here, and remarkable results can be achieved through creative public education and advertising campaigns.

7.6 Other comments.

None

8 Programme appraisal

We do not object to the methodology of the programme appraisal, but rather to the way it has been used with inaccurate and unreliable data, and without including all viable supply options – see also 9 below.

9 Preferred supply demand programme

We consider that the relevant targets are not sufficiently ambitious. In addition to the effect of unambitious demand management and leakage targets, we find that the consistent overstatement of demand and understatement of supply, together with the omission of certain options and the rejection of others on spurious cost and environmental grounds, invalidates the method used to select the preferred supply schemes. Target Headroom is over-conservative, particularly in the light of the figures used for base levels of supply and demand.

We therefore reject the preferred programme

10 Sensitivity testing

The whole process of sensitivity testing as applied in the dWRMP has been invalidated because, as discussed above,

- Future demand has been overestimated.
- Insufficient action is being taken to manage demand.
- Insufficient action is being taken to reduce leakage.
- Future supply has been underestimated.
- Valid resource schemes have been omitted altogether.
- Target headroom is high.

We are in favour of the principle of sensitivity testing but it is not possible to reach any proper conclusions when the basic parameters are not correct. For example, we note that there is high sensitivity to growth in either population or water use; whilst this points at obvious sets of data to test, these are two areas where the dWRMP already has figures which are too high.

11 Summary of main elements of the preferred programme

We find it odd that, almost without exception, the dWRMP uses targets and figures which have an adverse effect on the baseline supply demand balance. This leads to an impression of panic; “unless we start digging a reservoir now, we are going to run out of water in a few years”. This is not correct, as Binnie and GARD have successfully demonstrated. Valid supply options have either been omitted from consideration at all, or rejected on incorrect or insufficient evidence. The dWRMP does not contain anything like enough back-up data to validate Thames Water’s conclusions, and they seem unprepared to release further information. We find it difficult to see how any of the statutory bodies who are to review the dWRMP can come to any different conclusions.

SEA Environmental Report.

a Relevant Environmental and Social Impacts

The requirements of the Environmental Report are set out in Article 5 of the European Directive for Strategic Environmental Assessment (SEA), and include “...*the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives...are identified, described and evaluated.*” Thames Water’s report does not include the reasonable alternatives given in 7 above and, particularly in respect of the proposed reservoir, there is no attempt to consider the flora and fauna which would be destroyed or displaced. The dWRMP only considers statutorily protected sites as relevant, which invalidates the overall process.

The proposed reservoir would take up 3,500 acres of farmland and wild-life habitat with dramatic environmental and social impacts, which have not been given sufficient weighting or prominence in the report. The correct approach would have been to have a full Environmental Impact Assessment of the site as part of the dWRMP and the consultation process.

In this context CPRE is especially concerned with any alteration to the fabric, character and quality of the existing landscape, and with changes in the character and quality of available views for the people living in that landscape. The proposed Abingdon reservoir is located in a flat open landscape within the valley of the River Ock at the eastern end of the Vale of White Horse. To the south the land rises towards the Ridgeway within the North Wessex Downs AONB, and to the north the land rises to the North Vale Corallian Ridge (formerly designated as of High Landscape Value). The whole landscape forms a single topographical unit forming one “spectacular whole”. We strongly concur with the Vale of White Horse District Council’s policy that “development in the Lowland Vale will not be permitted if it would have an adverse effect on the landscape, particularly on the long open views within and across the area”. Given the scale and nature of Thames Water’s proposed reservoir, there is little doubt that such an adverse outcome will occur to a dramatic degree.

b Use of information

The programme assessment in the case of the reservoir is faulty and misleading in many respects. We note that practically every item in the construction process is ‘perceptible or significant adverse’. What is not considered is the added impact of the timescale of the programme which Thames Water presume to be 10 years; 10 years of purgatory for local residents and mayhem on the A34 trunk road..

The assessment of the impacts once the reservoir is in operation is inadequate and misleading. Several items have been given an unjustifiably favourable assessment and an undue weighting in the conclusions,

- We would rate the effect on aquatic biodiversity as ‘negligible’, not ‘perceptible beneficial’, and any effect would be more than offset by our re-rating of terrestrial biodiversity to ‘significant adverse’, not ‘perceptible beneficial’.
- Flooding is already a major problem, both in the immediate area of the reservoir and at Abingdon. We note that the flood risk will be ‘significant adverse’ during construction and the dWRMP accepts this without significant comment. In addition, the Flood Plain map used by Thames Water does not accord with those prepared by the Environment Agency in 2007, with the result that the flood risk in Steventon, East and West Hanney, Marcham and Abingdon is seriously understated, both during construction and in operation. The area close to and within the reservoir area provides a vital flood plain for water coming off the Ridgeway hills. Thames Water gives no effective analysis as to how this flood plain will be replaced and how the run-off from the reservoir banks will be channelled to safety. We foresee major problems for the area and particularly for Abingdon.
- We have to query the claim that the terrestrial biodiversity of a reservoir be ‘perceptible beneficial’ once in operation.
- The Transport effect is rated as ‘negligible’ in operation. This will not be so if there is any recreational use, which would attract extra traffic onto the already over-loaded A34 and through the village of Steventon.
- The loss of the Steventon to Hanney road will tend to isolate the Hanneys and other villages to the west, as well as leading to longer journeys and added congestion on the alternative routes.
- Nuisance cannot be rated as ‘negligible’ in the light of the comments above.

CONCLUSION

From all the above comments it is clear that we have serious concerns about Thames Water’s draft Plan, and in particular strongly disagree with its main proposition that a massive built up reservoir should be constructed in the Vale of White Horse in Oxfordshire.

We believe that the Secretary of State at DEFRA when considering all the responses to this consultation, and Thames Water’s subsequent comments on the issues raised, will want to call for a Public Inquiry to further analyse and elaborate on points of contention so that a fully considered conclusion can be reached. Indeed we would urge that this Public Inquiry is called at the earliest opportunity in order to ensure the forthcoming National Water Strategy can be based on the soundest principles and facts.

Yours faithfully

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(Chairman)
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