



House of Commons

Committee of Public Accounts

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# Environment Agency: Efficiency in water resource management

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**Fortieth Report of  
Session 2005–06**

*Report, together with formal minutes,  
oral and written evidence*

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## The Committee of Public Accounts

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### Committee staff

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## Summary

The Environment Agency regulates the abstraction of water by farmers, industry and water companies to check water levels and to monitor impacts on the local environment. It recovers the full cost of this water resource management, some £114 million in 2003–04, through abstraction charges levied on its licence holders. Improvements in efficiency reduce the licence fee and, ultimately, could result in lower costs to consumers. The Agency has kept the annual increase in the licence fee below the rate of inflation each year.

Improvements in efficiency depend upon better cost management data. Agency staff undertake 147,000 site visits a year to retrieve data on water levels, and to maintain monitoring instruments on site. Better cost data would enable the Agency to prioritise such activities more effectively and to determine whether it is cost-effective to install automated equipment to reduce the number of visits required.

The need for better management information was identified by the Agency in 2001, but progress has been slow, and full activity based costing data are unlikely to be available until 2007–08. The Agency has attributed the delay to the need to improve finance and human resource systems first. The Agency's asset management strategy will not be implemented until April 2006, partly due to the time taken by the Agency to acquire the necessary expertise to oversee the project.

One impact of the weaknesses in management information is that the Agency has incorrectly apportioned between £650,000 and £1.7 million of its flood risk management activity costs each year to water resource management. Reallocating these costs correctly would reduce the licence fee costs by up to 55 pence per 1,000 metres cubed of water abstracted. The Agency has reallocated £300,000 in 2005–06 and expects to re-allocate a further £1 million in 2006–07.

Regulatory work needs to be risk based. The Agency has added 1,500 sites to its monitoring network in England in the last three years (a 12% increase) partly to be better prepared for flooding incidents. No one group within the Agency has, however, been responsible for controlling the size of the network in terms of reviewing the need for existing and new sites. The Agency now intends to appoint Area Environment Managers to oversee the network and the costs charged to water resource management.

On the basis of a Report by the Comptroller and Auditor General<sup>1</sup> the Committee examined the Agency's progress in managing costs and how it could minimise the charges levied on abstractors.

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1 C&AG's Report, *Efficiency in water resource management* (HC 73, Session 2005–06)

## Conclusions and recommendations

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1. **The Agency claims to have achieved efficiency savings of around 3% per year for the last three years, but is only now putting in place management information systems which will enable it to cost its activities more rigorously.** Without such information, the Agency cannot be well positioned to identify and implement efficiency savings, or to make sure that costs are apportioned appropriately between its activities.
2. **The Agency's implementation plans for activity based costing systems are likely to take two more years to complete, though the project to improve management information systems started in 2001.** The Agency is seeking to build capacity in the organisation and achieve cultural changes, but nevertheless the rate of progress is slow. It should set targets for completion of the project, and determine how the additional management information available will be used to streamline activities where appropriate.
3. **The Agency has also been slow to implement an Asset Management Strategy, despite being responsible for assets with a replacement value of over £20 billion and annual upkeep, maintenance and renewal costs of £400–£500 million.** The Agency should appoint someone with appropriate expertise to own and lead this important area of activity, with a brief to secure the savings which ought to be deliverable from better asset management.
4. **The Agency should streamline its water resource management activities by:**
  - vesting oversight of the network in a single team so that pressures to increase the number of monitoring sites receive appropriate challenge and there is clear consideration of whether other sites can be removed;
  - employing risk based techniques to determine the number of site visits needed; and
  - looking to automate such activities where it is cost effective to do so.
5. **Costs have been incorrectly allocated between water resource and flood management activities.** Where the costs of its activities are recovered through fees, the Agency should deploy rigorous cost allocation processes annually to avoid either over or under charging. The Agency should act promptly to reallocate to flood management any costs which have been incorrectly charged to its water resource management activities.
6. **There is a mis-match between licence fee charges and the availability of water in some regions of England.** The Agency should consider whether the current practice of cost recovery by region is appropriate or whether national cost recovery would be more equitable and efficient. The Agency should provide fee paying abstractors with information on the make up of their charges each year to provide greater transparency and impetus for making the service efficient.

# 1 Improving Cost Management

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1. Water companies, farmers and industry abstract, on average, around 36 million litres of water a day under licence from the Environment Agency. The Agency regulates this abstraction by visiting sites to check water levels and to monitor the impact on the local environment. The Water Resource Act (1991) requires the Agency to recover the costs of this regulation from the abstractors, and any reductions in the £114 million annual cost of this activity would have a direct impact on licence fees.<sup>2</sup>

2. The Environment Agency has reported efficiency savings of over 3% for each of the last three financial years, and the Agency believed it could make further savings of £4.1 to £4.5 million in the next three years. The Agency did not, however, have sufficient information to show how funds were spent across its different water resource management activities. The Agency had started from a situation of poor information technology systems, and cost information had been based on functions rather than activities. Following implementation of new computer systems to provide better information on finance and manpower, the Agency was developing an activity based costing system to apportion costs and people to activities rather than functions.<sup>3</sup>

3. The need for better information was identified by the Agency in 2001, but progress has been slow:

- Implementation of activity based costing had cost £600,000 up to December 2005, including £307,000 for consultancy. The Agency did not have a target date for introducing activity based costing, although it expected the project to take at least a further two years.
- The replacement value of the Agency's assets amounted to some £20 billion, and the Agency spent some £400 to £500 million per annum on their renewal, upkeep and maintenance. The Agency would not be introducing an asset management strategy, however, until April 2006. The direct costs of developing the strategy were expected to be £200,000 including consultancy. The Agency had improved its asset records, but the delay in completing the strategy was partly due to difficulties in recruiting someone with sufficient experience to oversee implementation. The Agency had appointed an independent consultant since June 2005, to support an internal staff member, as external recruitment had been unsuccessful.<sup>4</sup>

4. The introduction of better information systems should enable the Agency to manage its regulatory activities more effectively. Agency staff undertake 147,000 site visits a year to retrieve recorded data on, for example, flows, levels and precipitation; to check that instruments are working correctly; or to install, recalibrate or replace instruments. The frequency of visits varies, however, by region of the country. Visits to surface water flow continuous measurement sites, for example, range from an average of 18 a year in the North West Region to 33 in the Midlands Region (**Figure 1**). There was scope to reduce

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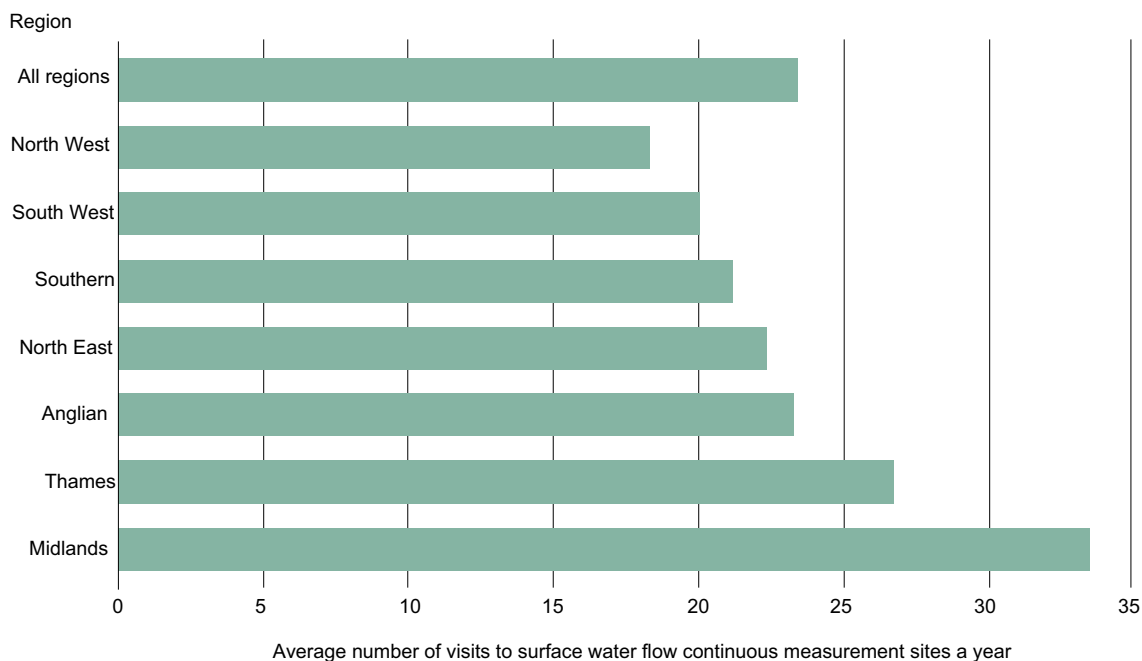
2 Q 43; C&AG's Report, paras 1.2–1.4

3 Qq 3, 10, 15–16, 40–41

4 Qq 11–16, 24–32; Ev 9

the frequency of visits, and be more risk based, but the same risk could not be applied to every site, as each had different purposes and degrees of criticality.<sup>5</sup>

**Figure 1: The variation in the average number of visits each year to surface water flow continuous measurement sites by each region**



Source: National Audit Office

5. New technologies could improve efficiency by recording and transmitting data automatically, reducing the frequency of site visits. Automation was not appropriate in all cases (for example, 18% of sites were simple rain gauges monitored by volunteers at no cost to the Agency), and technology was already used at some locations to record data and transmit the results automatically. Sufficient information on the cost of installing and running new technology at sites and on the potential cost savings from reduced site visits will be essential to deliver efficiency savings. In 2004 the Agency had established a Technology Evaluation Group to identify opportunities to further exploit existing technologies and to evaluate new technologies.<sup>6</sup>

5 Qq 5, 36; C&AG's Report, paras 3.12, 3.17

6 Q 6; C&AG's Report, paras 3.21–3.25

## 2 Reducing water abstraction licence fees

6. The Agency recovers the costs of water abstraction on a regional basis (**Figure 2**). The variation in licence fees in each region (from £10.03 per 1,000 cubic metres of water in Yorkshire to £23.57 in Northumbria) should therefore reflect the associated costs of regulating water abstraction. The cost varied according to the geological and hydrological features in each region which impacted on the number of monitoring sites and visits required. The unit charges in Southern, Wessex and South West also reflected the higher workload on water resource planning and management in those regions. The high unit charge in Northumbria was primarily attributable to the cost of the Kielder reservoir. Abstractors in adjacent regions pay substantially different abstraction charges. For example, abstraction charges in the Thames region are £11.91 per 1000 cubic metres, some 55% of the charge of £21.72 in Anglia.<sup>7</sup>

**Figure 2: Abstraction charges vary considerably between regions**



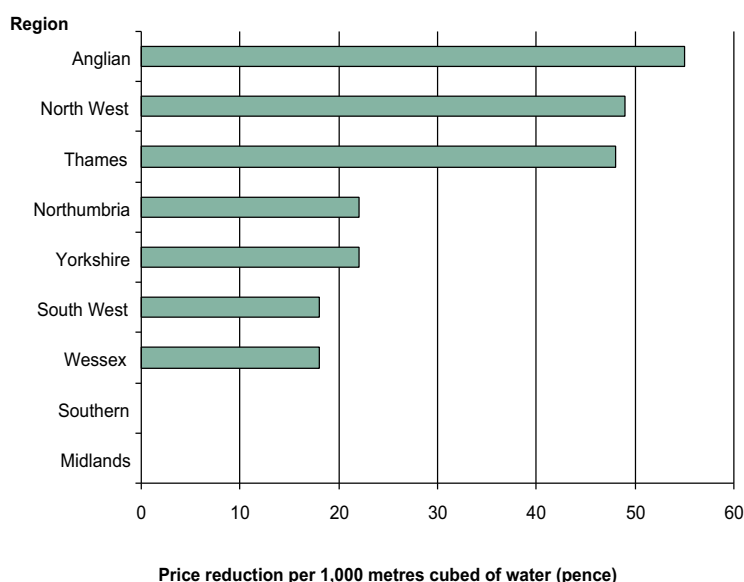
<sup>1</sup> The North East region is split into two areas; Yorkshire and Northumbria, for calculating abstraction charges.

<sup>2</sup> The South West region is split into two areas; South West and Wessex, for calculating abstraction charges.

Source: Environment Agency

7. The Agency's approach to recovering water abstraction costs from licence holders gives it little incentive to operate water resource management activities efficiently. The Agency had justified its licence fee to abstractors by keeping the increase each year below the rate of inflation, but abstractors have little information with which to challenge proposed fees or understand how they are calculated. The National Audit Office found that the Agency had apportioned incorrectly flood risk management costs of £650,000 to £1.7 million a year to its water resource management activities. Unlike water resource management costs, which are recovered from abstractors, flood management costs are borne by the taxpayer. If costs are incorrectly allocated they result in higher licence fees for abstractors and could ultimately result in water consumers paying more than necessary. Reducing water resource management costs by the sums identified by the National Audit Office would reduce the standard unit charge per 1,000 cubic metres of water in 2005–06 by up to 55 pence (**Figure 3**). The Agency has reallocated £300,000 costs from water resource management to flood risk management in 2005–06 and expects to re-allocate a further £1 million in 2006–07.<sup>8</sup>

**Figure 3: The price reduction per 1,000 cubic metres of water in 2005–06 when flood management costs are taken out of the cost recovery**



Source: Environment Agency

8. Minimising increases in the licence fee partly depends on an efficient regulatory approach. The Agency has added 1,500 sites to its monitoring network in England in the last three years (a 12% increase). Further increases might arise as the European Union Water Framework Directive was likely to require additional monitoring, and the number of sites had increased as a result of flood risk management. There is, however, no single individual or team within the Agency responsible for the network and for controlling charges to the water resources account. The Agency considered that it had processes at regional and national levels to assess the effectiveness of its monitoring network, and it now intended to make an Area Environment Manager responsible for the network in each region.<sup>9</sup>

8 Qq 7, 38, 42–44, 66–67; C&AG's Report, para 2.12; Ev 10

9 Qq 4–5, 36; C&AG's Report, paras 3.6–3.9, 3.11–3.12; Ev 10

# Formal minutes

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**Wednesday 19 April 2006**

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon

Greg Clark

Helen Goodman

Mr Sadiq Khan

Sarah McCarthy-Fry

Mr Alan Williams

A draft Report (Environment Agency: Efficiency in water resource management), proposed by the Chairman, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 8 read and agreed to.

Summary read and agreed to.

Conclusions and recommendations read and agreed to.

*Resolved*, That the Report be the Fortieth Report of the Committee to the House.

*Ordered*, That the Chairman make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned until Monday 24 April at 4.30 pm.]

## Witnesses

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**Monday 5 December 2005**

*Page*

**Baroness Young, Dr David P F King, and Mr Ian Barker,** Environment Agency

Ev 1

## List of written evidence

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Ev 8

## List of Reports from the Committee of Public Accounts Session 2005–06

First Report	Managing National Lottery Distribution Fund balances	HC 408 (Cm 6712)
Second Report	The regeneration of the Millennium Dome and associated land	HC 409 (Cm 6689)
Third Report	Ministry of Defence: Major Projects Report 2004	HC 410 (Cm 6712)
Fourth Report	Fraud and error in benefit expenditure	HC 411 (Cm 6728)
Fifth Report	Inland Revenue: Tax Credits and deleted tax cases	HC 412 (Cm 6689)
Sixth Report	Department of Trade and Industry: Renewable energy	HC 413 (Cm 6689)
Seventh Report	The use of operating theatres in the Northern Ireland Health and Personal Social Services	HC 414 (Cm 6699)
Eighth Report	Navan Centre	HC 415 (Cm 6699)
Ninth Report	Foot and Mouth Disease: applying the lessons	HC 563 (Cm 6728)
Tenth Report	Jobskills	HC 564 (Cm 6724)
Eleventh Report	Local Management of Schools	HC 565 (Cm 6724)
Twelfth Report	Helping those in financial hardship: the running of the Social Fund	HC 601 (Cm 6728)
Thirteenth Report	The Office of the Deputy Prime Minister: Tackling homelessness	HC 653 (Cm 6743)
Fourteenth Report	Energywatch and Postwatch	HC 654 (Cm 6743)
Fifteenth Report	HM Customs and Excise Standard Report 2003–04	HC 695 (Cm 6743)
Sixteenth Report	Home Office: Reducing vehicle crime	HC 696 (Cm 6743)
Seventeenth Report	Achieving value for money in the delivery of public services	HC 742 (Cm 6743)
First Special Report	The BBC's investment in Freeview: The response of the BBC Governors to the Committee's Third Report of Session 2004–05	HC 750 (N/A)
Eighteenth Report	Department for Education and Skills: Improving school attendance in England	HC 789 (Cm 6766)
Nineteenth Report	Department of Health: Tackling cancer: improving the patient journey	HC 790 (Cm 6766)
Twentieth Report	The NHS Cancer Plan: a progress report	HC 791 (Cm 6766)
Twenty-first Report	Skills for Life: Improving adult literacy and numeracy	HC 792 (Cm 6766)
Twenty-second Report	Maintaining and improving Britain's railway stations	HC 535 (Cm 6775)
Twenty-third Report	Filing of income tax self assessment returns	HC 681 (Cm 6775)
Twenty-fourth Report	The BBC's White City 2 development	HC 652
Twenty-fifth Report	Securing strategic leadership in the learning and skills sector	HC 602 (Cm 6775)
Twenty-sixth Report	Assessing and reporting military readiness	HC 667 (Cm 6775)
Twenty-seventh Report	Lost in translation? Responding to the challenges of European law	HC 590 (Cm 6775)
Twenty-eighth Report	Extending access to learning through technology: Ufi and the learndirect service	HC 706 (Cm 6775)
Twenty-ninth Report	Excess Votes 2004–05	HC 916 (N/A)

Thirtieth Report	Excess Votes (Northern Ireland) 2004–05	HC 917 (N/A)
Thirty-first Report	Northern Ireland's Waste Management Strategy	HC 741
Thirty-second Report	Working with the voluntary sector	HC 717
Thirty-third Report	The Royal Parks and the Diana, Princess of Wales Memorial Fountain	HC 644
Thirty-fourth Report	Returning failed asylum applicants	HC 620
Thirty-fifth Report	The refinancing of the Norfolk and Norwich PFI Hospital	HC 694
Thirty-sixth Report	Tackling the complexity of the benefits system	HC 765
Thirty-seventh Report	Inland Revenue Standard Report: New Tax Credits	HC 782
Thirty-eighth Report	Channel Tunnel Rail Link	HC 727
Thirty-ninth Report	Consular services to British nationals	HC 813
Fortieth Report	Environment Agency: Efficiency in water resource management	HC 749

The reference number of the Treasury Minute to each Report is printed in brackets after the HC printing number

# Oral evidence

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## Taken before the Committee of Public Accounts

on Monday 5 December 2005

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon  
Mr Sadiq Khan

Jon Trickett

**Mr Tim Burr**, Deputy Comptroller and Auditor General, National Audit Office, was in attendance.

**Mr Brian Glicksman, CB**, Treasury Officer of Accounts and **Ms Fiona James**, Leader of Treasury's Defra team, HM Treasury, were in attendance.

### REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

#### EFFICIENCY IN WATER RESOURCE MANAGEMENT [HC 73]

*Witnesses:* **Baroness Young of Old Scone**, Chief Executive, **Dr David P F King**, Director of Water Management and **Mr Ian Barker**, Head of Water Resources, Environment Agency, gave evidence.

**Q1 Chairman:** Good afternoon, welcome to the Committee of Public Accounts where today we are considering the efficiency of the Environment Agency in managing water resources and we are joined by Baroness Young, who is Chief Executive and Accounting Officer of the Environment Agency. Good afternoon.

**Baroness Young of Old Scone:** Good afternoon.

**Q2 Chairman:** Could you introduce your colleagues for us please?

**Baroness Young of Old Scone:** I have Dr David King, who is our Director of Water Management, and Mr Ian Barker, who is Head of Water Resources.

**Q3 Chairman:** Thank you very much for coming this afternoon. Could we start by looking at page 18 of the Comptroller & Auditor General's Report, paragraph 2.6, where it talks about delivering value for money. Your Agency does not have sufficient information to show how costs are spent across different water resource management activities. Why not?

**Baroness Young of Old Scone:** I think the point that the Report was making was the nature of the costs we have. We do have considerable cost information but it was very much cost information which was about functions rather than activities, and the NAO Report is encouraging us, as indeed we had already begun to do, to take a different approach to the way in which we cost things, so we focus more on individual activities rather than functions. We have been for some years now very much focusing on improving our management information about all of our activities. We have put in place a major computing system to produce better management information about both finance and manpower. We have introduced an activity based costing system which we are developing at the moment, which will allow us to apportion costs and people to activities rather than functions. We have also begun a major

programme of benchmarking this information so we can compare and contrast not only between our areas and regions internally but also externally with other organisations which do comparable activities. We have a major programme underway on improving our management information to managers right throughout the organisation, so they can begin to look at their activities and act on those. We have a performance management system too which allows us to review on a monthly basis how we are performing against a series of performance objectives which we agreed with Defra at the beginning of the financial year. So we have really got quite a major programme underway to improve our cost information and that has been underway for about three and a half years.

**Q4 Chairman:** Can you please look now at the monitoring side, page 29, paragraph 3.11. You seem to have a lot of monitoring sites, why do you not make savings by rationalising them?

**Baroness Young of Old Scone:** The number of our monitoring sites is reviewed regularly. They vary quite considerably between regions depending on the size and shape of the river system, the variability of the rainfall, the geology, the levels and types of abstraction. Two influences are really impacting on the number of monitoring sites. One is that we are being given additional duties under the Water Framework Directive, which will require additional monitoring, and we have, secondly, seen an impetus to grow the network of sites as a result of various successive reports on flood risk management. So those two impacts are making the number of sites grow, but we also have a process in place, both at regional and national basis, to assess the effectiveness of our monitoring network. That process will allow us to become more efficient in the way we monitor. So it will be difficult to know whether the number of monitoring sites will go up or

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down because those two conflicting processes will mask the effects of each but we will keep a close eye on that.

**Q5 Chairman:** If you look at paragraph 3.19 on visits, why do you not save time and energy by prioritising site visits?

**Dr King:** Undoubtedly, we would agree there is scope to reduce the frequency of visits to our sites, and indeed be a risk-based approach, which is at the heart of what we do in our monitoring programmes, but you cannot apply the same risk-base to every site because the sites, as Baroness Young has just pointed out, are for different purposes and have different degrees of criticality. However, we are looking to see how we can reduce the frequency of visits. Just picking up both in terms of the number and frequency of visits, if you think about any data set which is derived from a monitoring programme, there is a spatial and a temporal facet to it, and we have recently introduced a new archiving system which enables us to look at the data set and to apply spatial analysis and interpolation statistics, and then to make a judgment as to how much you can squeeze both in terms of the number of sites and the frequency of visits.

**Q6 Chairman:** That's okay. Thank you very much. Let us look at automated monitoring now which is dealt with in paragraph 3.25 on page 33. Is automated site monitoring more effective than sending a team in?

**Dr King:** Technology and automation is not a panacea and again you need to look at the nature of our monitoring sites. For example, 18% of our sites are simple rain gauges and we collect that data through volunteers, and that is something which has served the Agency and indeed our predecessors well for over a hundred years, so it does not make sense or would not be cost effective to automate. Likewise, on some of our sites, because of the up-front costs, we may only require data once every month and again it would not be cost effective, but where it is cost effective we certainly apply the technology.

**Q7 Chairman:** On the general principle of how this has been funded, can you look at paragraph 2.10 on page 19 of the Report? Could you explain to me why abstraction licence payers are subsidising your flood risk management work?

**Baroness Young of Old Scone:** We are clear that there are areas where we do need to adjust the cross-charge between water resources and flood risk management. There are a variety of reasons why just recently in the last few years the increase in the use of, particularly, the hydrometric programme and some of the monitoring programmes has increased the amount it does for flood risk management as a result of the successive number of big floods we have had which have caused public concern. We now need to adjust to reflect the fact that the network is being used more for flood risk management than traditionally it did in the past. We have from this financial year re-allocated about £300,000 from flood risk management towards water resources as a

cost, and we are looking at in excess of a million pounds in 2006 and 2007. We have not yet set an absolute level for that re-allocation because we want to use the methodology that the NAO has suggested in their Report but we want to validate that on a regional basis.

**Q8 Chairman:** That leads me on to my last question. When will you be able to realise the savings identified in this NAO Report? What further savings are possible once you have better cost and management information?

**Baroness Young of Old Scone:** I think the issue of the savings in the Report are that some of them are indeed efficiency savings but some of them are re-allocations of funding which will save money for water resources charges but will create costs in our flood risk management budgets. So the amount of real savings in the Report are comparatively small, and quite small when you take account of some of the other water resources savings we are already delivering or planning to deliver. We have a sustainable abstraction process review underway which will start to deliver benefits next year, and that should create benefits of £3.5 million *per annum* in total once it is implemented, which it will be in three years' time. That kind of dwarfs the rather small real savings which are in the NAO Report. Likewise, our hydrometry archive project has already delivered £700,000 savings in this year and will deliver another £1 million next year. We have also produced savings from combining some of our teams on the grounds, our hydrometry and our telemetry teams.

**Q9 Chairman:** I will have to stop you there. Everybody on this Committee is time-limited and I will have to ask for short answers.

**Baroness Young of Old Scone:** The short answer is that there were very useful pointers in the NAO Report but on-going programme savings on resources rather dwarfs them.

**Q10 Mr Bacon:** Lady Young, the basis for managing any organisation is knowing how much you spend on different things, how much different things cost, and yet as you said to the Chairman in one of your earlier answers you have still some way to go and you have processes in train to improve your management information systems. It also says in the Report that your activity based costing is several years away from completion; that is paragraph 2.7. Why does it take several years to implement activity based costing?

**Baroness Young of Old Scone:** I think we should start by making it clear that we do have information about costs but they are on a functional basis rather than on an activity basis. The ground was prepared for moving towards being able to cost on an activity basis by the implementation of our major enterprise-wide system for finance and human resources, and that was a major programme of £20 million-worth of investment, and it takes time just to get the basic system right. Prior to that, we had a rather aged finance system which was getting to the end of its life. That then allowed us to have the underpinning

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information which would allow us to do time recording and apply costs to those times, and both of those elements are necessary for an activity based costing system. So it has been very much a process over the last five years of identifying what we needed by way of technology to create these systems, but we are able now to begin to get activity information at a high level and are using the activity information we have got. In terms of it being completely embedded in the system and all our planning, budgeting and performance management being based on an activity cost, it will take another couple of years before we have got the systems that will deliver that.

**Q11 Mr Bacon:** When was it first decided you should move to activity based costing?

**Baroness Young of Old Scone:** It must be about three years ago that we identified that. We identified that as part of our efficiency programme under our strategy which we put in place in 2001.

**Q12 Mr Bacon:** In 2001?

**Baroness Young of Old Scone:** Yes.

**Q13 Mr Bacon:** So four years ago?

**Baroness Young of Old Scone:** The strategy was completed at the end of 2001.

**Q14 Mr Bacon:** Was there reference in the strategy in 2001 to activity based costing?

**Baroness Young of Old Scone:** There was reference in the strategy to the fact we needed to systematically look at our efficiency, and one way of doing that of course is through activity based costing.

**Q15 Mr Bacon:** So by the time it is actually delivered, assuming you are correct that it is within two years, it will be six years from the decision in the strategy you needed to have something to do that and actually delivering it?

**Baroness Young of Old Scone:** I do not think we should hold our breath waiting for our activity based costing system, because I think the important thing is to make sure we deliver programmes of efficiency as we go using whatever technologies we have got, and we have been successful in achieving that. We have achieved in excess of 3% efficiency savings year on year for the last three years and will continue to do that and, hopefully, our activity based costing system will allow us to improve these.

**Q16 Mr Bacon:** It sounds good to say 3% savings year on year but if you are able to do it year after year after year, it suggests there is rather a lot of fat to be cut away. What I am interested in, and this

relates to my first question, why is it still going to take you several years to implement activity based costings? This is not a new concept. It has been around quite a long time, there are plenty of firms out there who could help you do it, why is it still going to take several years to do it?

**Baroness Young of Old Scone:** We were starting from a base where we had very poor information technology systems, they were at the end of their life span and they were very inadequate for the task of supporting our efficiency drive. The large scale IT programmes which underpin these, as government knows well, need to be taken in a way which makes sure they do deliver the benefits they are going to achieve, and we were particularly clear that the £20 million which the Treasury gave us under a modernising government initiative was actually spent in a way which delivered the outcomes we wanted, and that was the underpinning we had to put in place before we could move forward further. The important thing I think is not that we sat there like rabbits in the headlights waiting for new kit to arrive, we have actually tackled the efficiency process through a whole variety of other management information systems and our knowledge of how the business works, and produced substantial levels of efficiency improvement over the years. So the ABC process will help us move into the more difficult areas but we have not stood still in the meantime.

**Q17 Mr Bacon:** Who is advising you on the implementation of ABC?

**Baroness Young of Old Scone:** We have a number of processes for looking at best practice in other organisations.

**Q18 Mr Bacon:** Have you got external consultants?

**Baroness Young of Old Scone:** We have been using some external consultants across our efficiency programme but, to be frank, one of the things I think we need to be sure about is that we build capacity within the organisation. One of the key issues in delivering an organisation that is going to be efficient in the future is really enabling our own people to think through these issues and work with them, having seen best practice elsewhere, and that is one of the important cultural changes we need to achieve.

**Q19 Mr Bacon:** Is it possible you could write to the Committee setting out, since the start of this, whom you have been using to advise you and how much has been spent on this so far?

**Baroness Young of Old Scone:** I should say also that we have created a new directorate within the Agency called the Directorate of Performance and Innovation and have recruited staff to it afresh, as it were, mostly from business and from the external world, aimed particularly at driving this through.

**Q20 Mr Bacon:** If you could send us a note<sup>1</sup> with details about what you have done externally and also internally and how much that has cost, that

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<sup>1</sup> Ev 8

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would be very helpful. Paragraph 2.22 refers to the project to complete the business process re-engineering and build the new computer system, which is due to be completed in 2008. Which consulting firm or computer firm or firms do you have helping you with that?

**Baroness Young of Old Scone:** Sorry, could you direct me to the paragraph?

**Q21 Mr Bacon:** This is paragraph 2.22 on page 23. It says, “The project to complete the business process re-engineering and build the new computer system is due to be completed in 2008.” Which computer consultancy or computer firm is helping you with that?

**Baroness Young of Old Scone:** This is SAP, is it?

**Mr Barker:** It is consultants called SciSys.

**Q22 Mr Bacon:** How much is that going to cost?

**Mr Barker:** The total cost both for the IT and taking account of all the staff costs is just under £9 million.

**Q23 Mr Bacon:** Is it possible you could send us a note with more detail and a break-down of that?<sup>2</sup>

**Mr Barker:** By all means.

**Q24 Mr Bacon:** Baroness Young, can you say when your asset management strategy is likely to be completed?

**Baroness Young of Old Scone:** We have made good progress with our asset management process though we still have more to do on getting ourselves to the point where we are in the next stage, which is to create the next part of the strategy. We have been working on asset management since 2002, we have documented the condition of our assets and cleaned up the data surrounding our assets. We have allocated clear responsibility both at national and regional level to all asset management and asset maintenance and operation. We have introduced a training and development programme to improve asset management at all levels in the Agency, and we have also improved our asset management processes and put in place a number of performance measures so we can judge how we are getting on with that. We have put in place a range of efficiency targets in asset management and we are now moving on to the next stage, which is to deliver our asset management strategy by the spring, together with an implementation report and a detailed business case for the next stage of the improvements. We found it very difficult to recruit skilled asset management expertise from the outside world but we are glad we now have a proposition in place to be able to take that forward.

**Q25 Mr Bacon:** Did you say “Proposition in place” or “person in place”?

**Baroness Young of Old Scone:** “Proposition”.

**Q26 Mr Bacon:** It says in paragraph 3.10, “The Agency does not yet have a date for completion of its Strategy, nor a person responsible for it.” I am wondering how you can look after assets of this size if you have not got a person responsible for it.

**Baroness Young of Old Scone:** We have done considerable work to clarify who is responsible at each level and we have now been able to recruit someone who is taking forward the development strategy and it will be ready by the end of March.

**Q27 Mr Bacon:** Was the need for somebody to be in overall charge of asset management identified in your strategy from 2001?

**Baroness Young of Old Scone:** No.

**Q28 Mr Bacon:** When was it first identified?

**Baroness Young of Old Scone:** The importance of our assets was very clear in terms of particularly our flood risk management assets, and we had already put in place considerable work since 2002 on the cleaning up of our asset data in preparing for this.

**Q29 Mr Bacon:** When did it first become clear to you that you needed a person in overall charge of your asset management?

**Dr King:** In order to get a step change in the way we approached asset management, we identified a need in 2004. As Baroness Young has pointed out, we had real difficulty with recruitment. We went out to recruitment, were unable to recruit from the outside—

**Q30 Mr Bacon:** What was the restriction? You were not paying enough? There are plenty of people who do asset management, most of them in the City, of course.

**Dr King:** If you look at asset management in water utilities, which would be the closest to us, they operate at director level and their salary range is significantly outside that of the Agency.

**Q31 Mr Bacon:** Are you prohibited from hiring at whatever you need to pay to get the person you need?

**Dr King:** We are not prohibited but clearly one has to have regard to the salary structure you have in place and to the salaries of other directors. What we did put in place was we were able to get someone internally and support them by use of an outside consultant who had a lot of experience in the water utility field.

**Q32 Mr Bacon:** How much did the outside consultant cost?

**Dr King:** It is on a part-time basis.

**Q33 Mr Bacon:** I did not ask whether it was on a full-time or a part-time basis, I asked how much it was. Could you send us a note with the total expenditure on this consultancy?<sup>3</sup> If you are going to spend a

<sup>2</sup> Ev 9

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huge amount of money on an external consultant, you might as well put the extra on paying somebody what is needed.

**Baroness Young of Old Scone:** Perhaps I could challenge that—

**Q34 Chairman:** Thank you. Time is limited, I am afraid.

**Baroness Young of Old Scone:** I would like to challenge—

**Chairman:** Members are time-limited, I am afraid.

**Q35 Mr Khan:** Can I say first that it really does help if the answers are short. My first question is by way of comment, to congratulate the Agency on, in the words of the NAO, “providing a well-managed and professional service”. At the outset I wanted to make that comment. Could I ask your views on the NAO Report’s conclusion about there being four potential areas which could lead to savings of between £1.4 and £2.5 million, for example, by adopting a risk based approach?

**Baroness Young of Old Scone:** We believe the savings identified by the NAO in some cases are genuine savings, in some cases are transfers of funding between water management and flood risk management, and therefore although there may be savings on water management they are still a cost to our budget on flood risk management. Sorry, the particular one you identified was?

**Q36 Mr Khan:** Adopting a risk based approach to site visits.

**Baroness Young of Old Scone:** I think Dr King has already spoken about the fact we have got a number of sites where a risk based approach will be appropriate and we have got others where, quite frankly, we already have a very cost effective way of taking the data.

**Q37 Mr Khan:** Reducing regional variations in hourly charges?

**Baroness Young of Old Scone:** We have looked at those regional variations and, alas, the idea that somehow the lowest charge if applied across the board would produce savings, does not hold water, because in correcting the methodology and making it more standard between our regions we have in fact come to the point where the charges vary remarkably little between regions and are above the £20–24 per hour rather than the £13 per hour, which is the minimum level looked at by the NAO. So we have made more standard the costing methodology and the result is there is very little variation between the regions.

**Q38 Mr Khan:** More consistent cost allocations?

**Baroness Young of Old Scone:** We are clear that more consistent cost allocations are important, and we have commented on how we will therefore take money away from water management costs and put it into flood risk management costs, but in overall terms to the Agency it does not save money, it simply reallocates it to a different head.

**Q39 Mr Khan:** For those potential cost savings you have agreed with the NAO, what is your timetable for achieving them?

**Baroness Young of Old Scone:** In two of the examples where the NAO gave us targets, in fact they were illustrative recommendations. They said, “If you were able to . . .”, for example, “. . . reduce the cost of asset management by 5%, it would save X amount of money.” Similarly, “If you adopted a risk based approach to site visits which reduced site visits by 5%, it would save 5% of the cost”. These were merely illustrative figures. In fact the work which has gone on to look at the scope for, for example, risk based visits has shown where we can and cannot take a risk based approach, and of course because the visits are very different at different sorts of sites, a straight read-across from a 5% reduction in visits to a 5% saving does not necessarily follow. What we are involved in now is looking at the capacity for making savings in the areas where genuine savings are possible and have either got savings underway that used the NAO methodology or else are looking at what the potential is.

**Q40 Mr Khan:** Forgive me if this sounds rude, but if you want to give us further evidence, please send a memo; for the purpose of the oral evidence it is really important you be concise because we have lots of questions. Of the estimated savings identified by the NAO, between £1.4 and £2.5 million, you have explained you do not necessarily agree with the top level of that bracket, how much of that do you think you can achieve according to your own assessment of NAO targets versus savings?

**Baroness Young of Old Scone:** We believe we can save somewhere between £4.5 million and £4.1 million, but that would not be simply on the NAO recommendations. That is on the programme of efficiencies we already had in place in water management.

**Q41 Mr Khan:** Over what period of time?

**Baroness Young of Old Scone:** Over the next four years—three years in total, 3½ years bearing in mind we are half way through the financial year.

**Q42 Mr Khan:** Do you think one of the reasons why there may have been a delay in making the savings is because the cost of the water resource management is met completely by the charges on holders of the abstraction licences? Would that be a de-motivating factor to you in making savings?

**Baroness Young of Old Scone:** I am sorry, I did not catch that.

**Q43 Mr Khan:** The cost of the water resource management, as I understand it, is met completely by the licences. Is that correct?

**Baroness Young of Old Scone:** The aim should be that the cost of water resource management should be met by licence charges, yes.

**Q44 Mr Khan:** That has no bearing on the apparent delay in making the savings identified in the Report?

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**Baroness Young of Old Scone:** Clearly where there is cost recovery, one of the important things for the Agency is to make sure it is able to demonstrate to chargepayers it is efficient, and every year we have been able to show our charges have gone up at a rate less than inflation as a result of our efficiency programmes.

**Q45 Jon Trickett:** Paragraph 2.12 seems to indicate that at least two-thirds of £1 million and possibly nearly £2 million a year is being funded by the taxpayer which should be funded by those who are doing the water abstractions. Is that right?

**Dr King:** If you are referring to the component that is currently owned by water resources but it in fact should be re-charged to flood risk management, so that is correct, and that has been addressed.

**Q46 Jon Trickett:** So there is no longer a single penny paid for by the taxpayer which should be paid for by the licence holders?

**Dr King:** It would not be correct to say there is not a single penny because what we have done, we already made adjustments but we will continue to iterate that as we get better information.

**Baroness Young of Old Scone:** In fact, it was the other way round. The charge payers were paying for things the taxpayer should have been paying for.

**Q47 Jon Trickett:** That is what I said. I wonder whether you consider the statutory duty which you have that the entire cost of water abstraction should be paid for by the licence holders. That is a statutory duty, is it not, on the organisation?

**Baroness Young of Old Scone:** Yes, and in fact, the licence holders were over-paying in the past and we have now adjusted that so that more of the charges fall on the flood defence budget.

**Q48 Jon Trickett:** Yes, that is right but the point is that it seems that the entire cost of the abstraction should be borne by the licence holders. You were charging more than it was costing. Is that right?

**Baroness Young of Old Scone:** Yes, and we have now adjusted that.

**Q49 Jon Trickett:** Yes, on the average. When it comes to the regional differences, there must be some cases where the taxpayer is providing a subsidy and other cases, because the variation is so large, where it is the reverse, and it is only in the aggregate across the whole country that the charge is too high. So, for example, in the North East region, in Yorkshire, it is £10 roughly per 1,000 metres cubed, whereas in Northumbria, which is part of the same region, it is £23 for the same item. Can you explain the wide regional differences? Are they all accurately based upon the actual costs incurred?

**Baroness Young of Old Scone:** Many of the variations are completely justifiable and understandable, things like, for example, Northumbrian, which has the large charge for Kielder.

**Q50 Jon Trickett:** I can read that. I did not ask you why they were occurring. I asked you are all of these variations justified?

**Baroness Young of Old Scone:** The vast majority of the variations are justified. There may be one or two where, as we learn more about activity costs and as we standardise the charging system across our regions, we will be able to produce a more accurate process, but it will be minor items within it, not substantial ones. There will still be substantial differences because of the difference in capital assets, in geology, in the nature of the abstractions.

**Q51 Jon Trickett:** Yes, there are always differences, but are you required by statute to charge different amounts per region? Why do you not just charge a standard charge across the whole country, since we all consume water?

**Mr Barker:** Our scheme of abstraction charges is approved by the Secretary of State.

**Q52 Jon Trickett:** So I see.

**Mr Barker:** It is a scheme which is regionally based and the charges within each region are set to recover the cost of—

**Q53 Jon Trickett:** Why is it regionally based? Why is it not simply a national aggregate and then charged as a standard charge across? It strikes me that you must have an extremely complex management system and costing system to have to break it down by region.

**Baroness Young of Old Scone:** I think the water companies would be very unhappy if they were having to pay a standard charge, because they would be cross-subsidising. I know that the economic regulator would be very unhappy and it would fly in the face of cost recovery, which on a regional basis—

**Q54 Jon Trickett:** Why are you charging cost recovery on a regional basis? Why?

**Baroness Young of Old Scone:** Because their costs are very different. If they were all very similar, I think it would be less of an issue.

**Q55 Jon Trickett:** We all pay tax though, do we not? Our tax is not charged regionally according to how well our schools function or our roads are maintained or whatever. Why on earth should this be one?

**Baroness Young of Old Scone:** Environmentally, part of the charge is also an encouragement for the efficient use of resources and we—

**Q56 Jon Trickett:** By your Agency?

**Baroness Young of Old Scone:** No, by the water companies and other abstractors, and the polluter pays principle does very much support the idea that the real costs of water abstraction ought to be borne by the people who can have an influence on whether they abstract as much or not. If it were a standard charge, there would be less of a real cost signal to these abstractors.

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**Q57 Jon Trickett:** Are your regional boundaries coterminous then with the water companies?

**Baroness Young of Old Scone:** They are not, but we calculate this on the water company boundaries, not the regional boundaries.

**Q58 Jon Trickett:** So, for example, in parts of Yorkshire which are being served by different water companies, are you telling me that were there to be two companies within Yorkshire, for example, they would charge two separate fees?

**Mr Barker:** Our regional boundaries are contiguous with those of the ten water and sewerage companies and if there were two companies within one region, for example, if you take our Midlands region, there is Severn Trent water and there is South Staffordshire Water. They both pay the same charges because they both belong in one region.

**Q59 Jon Trickett:** So are you saying they are both equally efficient in every respect?

**Mr Barker:** Both the companies are taking water from within that region and—

**Q60 Jon Trickett:** But I thought you were just saying that they were charged by the efficiency with which they were operating.

**Baroness Young of Old Scone:** No, I was not saying that they were charged by efficiency. I was saying—

**Q61 Jon Trickett:** The record will show that that is what you said.

**Baroness Young of Old Scone:** Giving them a true price signal is an incentive for them to use water more efficiently, so if it is an area with a very expensive water charge, they need to understand just how expensive that water charge is.

**Q62 Jon Trickett:** It is not a measure of their efficiency. It is a measure of your inefficiency, is it not?

**Baroness Young of Old Scone:** I do not think it is anything to do with our inefficiency.

**Q63 Jon Trickett:** The charges relate to your costs and not to the costs of the water authority, do they not?

**Baroness Young of Old Scone:** The charges are related to some of the very real, underlying elements of the cost, including things like capital assets, the differences in geo—

**Q64 Jon Trickett:** It is nothing to do with their efficiency whatsoever then, is it, really? It is to do with your efficiency and the historical pricing, is it not?

**Baroness Young of Old Scone:** I am merely trying to outline how truly reflective costs can often help drive efficiency and use of resources. This is a fundamental principle of environmental charging.

**Q65 Jon Trickett:** No, but the fact of the matter is you are not convincing the Committee at all, since the costs in Northumbria, for example, are the highest in the whole country, table 10, and do not at

all reflect the efficiency or otherwise of the water company. They reflect the historical fact that Kielder reservoir is there and regulating the flow down the Tees and the Tyne, does it not?

**Baroness Young of Old Scone:** But in fact, when you look at the Northumbrian charge, the amount that we charge Northumbrian in respect of Kielder is paid back to them by an equal and opposite amount that they get from us for the services that they provide for Kielder, so in fact, the vast majority of that unit charge to Northumbrian is simply a book entry in respect of the Kielder settlement that was made in the past.

**Q66 Jon Trickett:** Paragraph 2.9 begins with the statement “An inconsistent approach to cost allocation means that water resources are unintentionally subsidising flood risk management work.” That is written in the present tense, and you have signed this Report off. I think you are now telling the Committee that that is not accurate, because you are saying this is a historical statement and it should be in the past tense. Is this still a correct statement or is it not?

**Baroness Young of Old Scone:** The work to produce this Report was, of course, in 2003–04.

**Q67 Jon Trickett:** So is it still a correct statement or not?

**Baroness Young of Old Scone:**—and we have now adjusted £300,000 in 2005–06 and will be adjusting something in excess of £1 million in 2006–07.

**Q68 Jon Trickett:** That accounts for paragraph 2.12, with which I started these questions then. That is just over £1 million. The figure which I quoted at the beginning of my questioning was between two-thirds of £1 million and £1.7 million. Is that the same money?

**Baroness Young of Old Scone:** Certainly, for the transfer of contributions from the water resource budget to the flood risk management budget, we are saying something in excess of £1.3 million and possibly more. We have not yet finalised that figure.

**Q69 Jon Trickett:** If I can just get a final question in then, because my time has expired, would the regional variations be smoothed out by this one point odd million pounds that you have taken out? No?

**Dr King:** No.

**Jon Trickett:** I wonder if you could provide us with a note as to what the regional variations will be once this efficiency process has been completed.<sup>4</sup>

**Q70 Mr Bacon:** I would like to ask about East Anglia. Land owners in my constituency, which is immediately south of the Broads in Norfolk, the

<sup>4</sup> Ev 10

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River Yare between Norwich and Yarmouth defines the north-eastern border of my constituency, have been approached by the Environment Agency, with the Agency seeking to buy land in order to flood it. Can you tell me why you are trying to reduce the land area of my constituency?

**Baroness Young of Old Scone:** I can assure you it was not a personal thing. Very often, flood risk management is more efficiently carried out by producing areas where waters can be directed at times of floods and held in order to protect other areas. This is as efficient a way of providing flood risk management protection as building, for example, a wall or—

**Q71 Mr Bacon:** It is basically letting the sea come inland rather than dealing with it at the coast, is it not?

**Baroness Young of Old Scone:** In many cases, we will be looking quite extensively at where a softer sea defence is a more effective one than a harder one, and that may mean some coastal areas do reduce their land.

**Q72 Mr Bacon:** You are basically giving up on defending the coast, are you not?

**Baroness Young of Old Scone:** We are not giving up on defending the coast because there are many national assets on the coast, economic assets, towns and villages and other installations. For example, not very far from your constituency we have a nuclear power station. We certainly will not be giving that up to the sea.

**Q73 Mr Bacon:** No. You are talking about Sizewell, are you?

**Baroness Young of Old Scone:** Yes.

**Q74 Mr Bacon:** North of there, which is where I am talking about, slightly north of Great Yarmouth, as I understand it, I was actually boating on the Broads this summer and someone pointed out to me a bridge where they said the Environment Agency's soft defences begin, and it is miles and miles inland. I just wonder why it is that we are not committed to protecting the existing land area. Do you think that in Holland they would be prepared so easily just to give up areas of land like that?

**Baroness Young of Old Scone:** We are looking right along the coast at what the most effective flood defence measures will be and in some cases—

**Q75 Mr Bacon:** Do you think Holland would be prepared to give up areas of land as easily?

**Baroness Young of Old Scone:** Much of Holland's land is artificially created and they have taken a very different strategy from ours, but you have seen in the past, and indeed, the Dutch themselves are beginning to worry about the huge vulnerability if there is substantial land below sea level behind their flood defence, which is fine as long as the flood defence is not overtopped, but if it is overtopped, it is catastrophic. So we have to look at the most robust and sustainable way of defending people and property right down the east coast.

**Mr Bacon:** Is it possible you could send the Committee a note about this?<sup>5</sup> Particularly with reference to East Anglia, but I think generally it would be of interest as well. Thank you very much.

**Chairman:** Mr Bacon's colleagues have been trying to get rid of him for years. Thank you very much. That concludes our questioning.

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<sup>5</sup> Ev 10

### Supplementary memorandum submitted by the Environment Agency

#### *Questions 19–20 (Mr Richard Bacon): Activity Based Costing*

The Environment Agency has worked to improve its efficiency and effectiveness since its formation. The Agency's inherited financial and human resources (HR) systems inhibited efficiency and provided inadequate financial and human resources management information.

Spending Review 2002 provided the financial resources to replace the previous ageing systems. The Agency in 2002 developed a business case for replacing the finance and HR systems with an integrated enterprise suite of finance and HR resource systems (known in the Environment Agency as "IBIS"). The implementation was to proceed on a phased basis with the most significant elements of finance functionality being introduced in March 2005. This provided the basis to cost activities and outputs known as Activity Based Costing (ABC).

The core systems were provided by Oracle with the ABC system provided by another supplier (Prodacapo), due to a gap in Oracle's provision. The following summarises the key areas questioned:

#### *Timing*

The ABC component of the IBIS project lasted 15 months (including the procurement phase) and transitioned to being part of normal business at the end of March 2005. The gap between identifying the requirement for ABC and implementing it was due to the need to first implement IBIS financials which provides the necessary Time Recording and Cost data to create the ABC information.

### Cost

The total cost of the ABC system implementation was £600,000. Pricewaterhouse Coopers were commissioned as external consultancy support for specialist advice on system selection and procurement strategy based on their knowledge of the marketplace, at a cost of around £10,000. Tribal Government Consulting provided an external IT and project management service at a cost of around £307,000.

### Status

Following the gathering of time and cost information from April 2005, managers in the Environment Agency have now received their first set of ABC information. This is providing baseline data from which to analyse improvement opportunities and track benefits from change. Work is underway to identify and realise efficiency benefits in a number of areas. These benefits will be implemented systematically in the next two years and beyond.

### *Question 23 (Mr Richard Bacon): Streamlining Abstraction Processes*

Streamlining Abstraction Processes is a business process change project that has developed new IT systems which will deliver efficiencies in the core regulatory activity of abstraction licensing and reduce burdens on business.

The two main strands of this work are business change and IT development. Two consultants are assisting us in these changes, Logica CMG for the business change and Science Systems (SciSys) delivering the generic IT regulatory tool across all of the modernising regulation projects.

Logica CMC are contracted until February 2006 at a total cost of around £66,000.

The Environment Agency has awarded SciSys a three-year contract to provide core services in support of the development and enhancement of key regulation systems in England and Wales. £15 million is being budgeted for by the Environment Agency to provide technological enhancements to enable improved and streamlined delivery of regulation processes for delivering the whole of the Modernising Regulation IT infrastructure, to include the SAP project.

Our business case identified costs of £8.8 million over the three years of the project, with benefits rising to at least £3.5 million per annum following completion and bedding in the of the new processes. We are currently preparing detailed plans for implementation following recent approval to proceed with the project.

### *Question 33 (Mr Richard Bacon): Asset Management Strategy*

Following a review of the Environment Agency's asset management policies and procedures, the Agency is taking forward a more integrated and strategic approach to Asset Management. This will identify modern asset management techniques to deliver significant efficiencies to the Agency.

The Environment Agency operates physical assets to the value of £20 billion, and spends some £400–500 million per annum on their renewal, upkeep and maintenance. There is potential for significant savings to be achieved, by looking at the way in which these assets are currently managed, by identifying appropriate standards of maintenance, and by analysing ways of providing such maintenance.

In developing the strategy we have learnt from the experience of others in successfully introducing asset management in comparable businesses.

The strategy will be prepared by April 2006 and will demonstrate how more efficient asset management will be developed in the Environment Agency, including ways to deploy staff and reduce costs whilst ensuring an acceptable standard of maintenance of assets. The project is developing a detailed business case for a preferred option setting out the likely benefits, costs and risks.

To construct the right strategy for the Environment Agency we needed to access skills and experience in our current business practices, recent developments and operating risks. This internal knowledge needed to be complemented with experience of delivering cost savings through the implementation of modern asset management techniques in a similar large, complex organisation.

The external specialist support is provided by an independent consultant who worked in several operating roles (including Director of Operations) during a 12 year period whilst asset management practices were developed and embedded within Wessex Water.

The approved budget for the project of developing the asset strategy is £200,000 in direct costs. It is due for completion by the end of March 2006.

During the past two years we have made improvements in asset management. We now have solid records of asset condition, held in a national database. This work was initially focussed on flood risk management assets and has now been widened to navigation and water resource assets. The improved information of asset condition has helped us to target capital, maintenance and operational funding to best manage risk and optimise whole life costs. We have initiated a substantial programme of improvements to our navigational assets.

*Question 69 (Jon Trickett): Cost re-allocation between Flood Risk Management and Water Resources*

We have recalculated 2005–06 standard unit charges for abstraction to show the impact of adjusting for the NAO recommendations which will be taken forward (principally the reallocation of hydrometric costs from water resources to flood risk management).

It should be noted that a number of important other factors will bear upon the actual unit charges which we will be proposing for 2006–07 (including pay and price inflation, changes in workload, changes in the fixed asset infrastructure affecting cost of capital charges, and other efficiency improvements).

Nevertheless, the table below isolates the impact of reallocation in line with the NAO Report based on 2005–06 charges rates:

<i>Region</i>	<i>Standard Unit Charges per 1,000 metres cubed</i>		
	<i>Actual</i>	<i>Adjustment for</i>	<i>Revised</i>
		<i>Reallocations,</i>	
		<i>etc</i>	
	£	£	£
Yorkshire	10.03	–0.22	9.81
Thames	11.91	–0.48	11.43
North West	11.98	–0.49	11.49
Midlands	12.76	—	12.76
Southern	16.71	—	16.71
Wessex	18.34	–0.18	18.16
South West	18.34	–0.18	18.16
Anglian	21.72	–0.55	21.17
Northumbria	23.57	–0.22	23.35

As explained in the NAO Report and reinforced at the PAC hearing, unit abstraction charges are fixed on a regional basis to recover the Environment Agency’s water resources costs incurred in the particular regions.

The variations in regional unit rates reflect the major differences in infrastructure costs and workload, which exists between the regions. For example, the high unit charge in Northumbria is primarily attributable to the section 20 charges for Kielder, while the unit charges in the Anglian region reflects the high cost of capital charges for the supporting infrastructure, including the major Ely—Ouse transfer scheme. The unit charges in Southern, Wessex and South West reflect the higher workload on water resource planning and management in those regions.

The development of activity based costing and use of benchmarking between regions will help us to isolate the efficiency component from other cost elements in unit charge variations and to inform and drive further efficiency improvements.

*Question 75 (Mr Richard Bacon): Sea Defences*

North Norfolk District Council has lead on the production of a second generation Shoreline Management Plan (SMP) covering the area between Kelling Hard and Lowestoft on the Norfolk coast, called the Norfolk SMP. The first SMP for this stretch of coastline was produced in 1996. All of the current SMPs are now due to be reviewed, in line with Defra guidance. The Norfolk SMP was one of three pilot SMPs using the revised Defra guidance.

Policies set in the first SMP document have not been universally applied. Their initial inclusion was motivated by local politics or public opinion, whether or not the measures were demonstrably economically or physically sustainable. For example, a policy of “hold the line” for Happisburgh could not be sustained by North Norfolk District Council owing to the costs involved and in consequence there has been continued erosion of the coastline. The second generation SMP contains policy options that work towards a long-term vision over three time frames, 0–20 years, 20–50 years and 50–100 years, although there is no evidence that unpopular but sustainable options will be any easier to achieve second time around.

The proposed short-term policies for the new SMP provide a high degree of protection for existing communities against flooding and erosion. The preferred long-term policies set out in the new plan promote greater sustainability of the shoreline, and one more in keeping with the natural character of the coast. However compliance will be difficult where unpopular choices are made even though the actions to be taken may be some years away.

Continuing to defend the shoreline in a manner similar to today would produce a significant alteration in the nature of the coast, with large concrete seawall structures and few beaches. This might maximise protection to property and land, but would be both difficult and very expensive to sustain.

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The SMP has been split into four management units. For unit three, Eccles to Great Yarmouth, the preferred policy is minimal intervention. The position of the existing hard defences are preventing the natural movement of sediment and structures will become increasingly difficult to maintain or justify over time as the coastal system retreats. This whole length of coast is reliant upon sediment eroded from the cliffs of North Norfolk for beaches to provide natural defence, which has been supplemented in recent years through beach recharge along the Eccles to Waxham frontage. The reefs at Winterton will defer problems for up to 50 years but it is recognised that beyond that time continuing to apply this measure may become increasingly difficult to sustain. The impacts upon areas further down coast may also be significant, if this position continues to be held long-term, as they will receive no natural sediment, which will deplete beaches and accelerate erosion. The preferred policy for this area is to investigate the potential for change whilst still defending, with a view to longer term set back of defences.

At the southern end of this section, Great Yarmouth is a location that justifies full protection on economic grounds against erosion or flooding. With the exception of the northern and southern extremities of the town, the beach provides ample protection, provided that sediment supply is maintained. The presently defended areas of Caister and California will continue to be defended for some time. If such a policy continued to be applied into the long-term, there would be a significant impact on sediment supply, potentially interrupting sediment transport to Great Yarmouth. Therefore the longer term Plan should allow for some realignment of the shoreline to take place north of Caister Point to enable improved material movement along this coastline.

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