

Mr Brian Duckworth  
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12 December 2002

## **INTERIM DETERMINATION**

On 12 September 2002 you made an application for an interim determination of your company's price limits under Part IV of Condition B of the licence. This was altered by your supplementary submission of 22 October 2002. Your Reporter, Jon Bateman of Halcrow Management Services Limited, submitted his report on your application on 13 September 2002 and has commented on your responses to our queries and on your supplementary submission.

Your application covers the additional costs resulting from the following seven items.

- Increased operating costs, additional capital expenditure and uncollected revenue resulting from the ban on disconnection.
- Changes to the requirements for treatment and monitoring for cryptosporidium.
- Additional costs arising from the EC Nitrates Directive affecting sludge disposal in nitrate vulnerable zones (NVZs).
- Measures to ensure continued protection of assets.
- A proposed programme for tackling sewer flooding problems.
- Charges levied by British Waterways Board (BWB) for discharges to canals.
- Additional costs of providing first time rural sewerage.

Your application also takes into account changes to requirements on plumbosolvency control and lead communication pipe replacement which have reduced your costs. We have taken account of this when determining your application.

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Mr Brian Duckworth  
12 December 2002  
Page 2

We sent you our draft decision on 6 November. You sent us your representations on 20 November and we discussed these on 26 November. Following your representations and those from others, including WaterVoice Central, we have looked again at the costs and made some changes to our determination. These include:

- the costs for BWB discharge consents following the completion of your negotiations on the level of charges for the period to 2005.
- an increase in the costs allowed for sewer flooding. This will allow 75 schemes to be addressed; and
- small increases in the capital costs resulting from the ban on disconnection, cryptosporidium treatment and protection of assets.

Annex A summarises your estimates of the changes to your costs and our final view of your costs. Our decisions are summarised in Annex B. We have provided you separately with some confidential explanatory notes expanding on Annex B.

The total impact of the relevant items on your costs is sufficient to exceed the materiality threshold set out in Condition B of your licence and we have therefore revised your price limits. The revised price limits set out in the attached table will apply from April 2003. In the final determination in 1999 we anticipated that the average household bill would remain broadly constant in real terms between April 2003 and March 2005. The revised price limits mean that it will now increase by £3 in 2003-04 and a further £3 in 2004-05 compared with the current (2002-03) bill. This means that for the whole of the period 2000-05, customers' bills will fall by £35 rather than the £41 we anticipated when we set price limits in 1999.

We are placing this determination in our library and also announcing it to the London Stock Exchange.

This letter and enclosures has been copied to John Ballard (DEFRA), Bob Macey (Welsh Assembly Government), Michael Rouse (DWI), Steve Morley (Environment Agency), Sir James Perowne, (Chairman of WaterVoice Central), your local Members of Parliament, Assembly Members and Members of the European Parliament.

**PHILIP FLETCHER**

## ANNEX A

<b>SEVERN TRENT WATER LIMITED</b>			
<b>FINAL INTERIM DETERMINATION –December 2002 – SUMMARY TABLE</b>			
Description		Company's Assessment (October 2002)	Ofwat's Assessment (December 2002)
<b>Item 1 – Loss of disconnection</b>			
1.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£3.8m	£2.3m
1.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£3.3m	-
1.3	Estimated net change in <b>uncollectable revenue</b> over the AMP3 period	£25.9m	£27.0m
1.4	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£74.3m</b>	<b>£61.8m</b>
1.5	Contribution towards <b>materiality threshold</b>	8.3%	6.9%
<b>Item 2 – Cryptosporidium – additional requirements for continuous monitoring and treatment.</b>			
2.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£6.2m	£7.7m
2.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£4.0m	£1.7m
2.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£15.2m</b>	<b>£11.5m</b>
2.4	Contribution towards <b>materiality threshold</b>	1.7%	1.3%
<b>Item 3 – Nitrate Vulnerable Zones</b>			
3.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£7.3m	-
3.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£7.5m	-
3.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£43.8m</b>	-
3.4	Contribution towards <b>materiality threshold</b>	4.9%	0.0%
<b>Item 4 – Protection of assets</b>			
4.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£14.4m	£12.9m
4.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£0.4m	£0.4m
4.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£16.3m</b>	<b>£13.4m</b>
4.4	Contribution towards <b>materiality threshold</b>	1.8%	1.5%
<b>Item 5 - Sewer flooding</b>			
5.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£25.2m	£20.9m
5.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	-	-
5.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£22.9m</b>	<b>£18.8m</b>
5.4	Contribution towards <b>materiality threshold</b>	2.6%	2.1%
<b>Item 6 – British Waterways Board discharge consents</b>			
6.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	-	-
6.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£14.1m	£11.3m
6.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£24.6m</b>	<b>£20.3m</b>
6.4	Contribution towards <b>materiality threshold</b>	2.8%	2.3%

<b>Item 7 – Lead – changes to the compliance programmes</b>						
7.1	Estimated <b>capital expenditure</b> on confirmed lead programme over the AMP3 period	£10.3m	£7.4m			
7.2	Estimated <b>operating expenditure</b> on confirmed lead programme over the AMP3 period	£3.1m	£2.2m			
7.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£19.3m</b>	<b>£13.6m</b>			
7.4	Contribution towards <b>materiality threshold</b>	2.2%	1.5%			
7.5	Reduction in <b>capital expenditure</b> compared with that assumed in the 1999 final determination	(£50.2m)	(£46.2m)			
7.6	Reductions in <b>operating expenditure</b> compared with that assumed in the 1999 determination	(£0.9m)	-			
7.7	<b>Materiality amount</b> (NPV of total net change in costs)	<b>(£53.5m)</b>	<b>(£46.5m)</b>			
7.8	Contribution towards <b>materiality threshold</b>	(6.8%)	(5.2%)			
<b>Item 8 – First time rural sewerage schemes</b>						
8.1	Estimated net change in <b>capital expenditure</b> over the AMP3 period	£4.2m	-			
8.2	Estimated net change in <b>operating expenditure</b> over the AMP3 period	£0.1m	-			
8.3	<b>Materiality amount</b> (NPV of total net change in costs)	<b>£4.5m</b>	-			
8.4	Contribution towards <b>materiality threshold</b>	0.5%	0.0%			
<b>OVERALL ASSESSMENT</b>						
5	<b>Materiality amount</b> (NPV of total net change in costs)	£167.4m	£92.9m			
6	Severn Trent Water turnover for 2001-02 used in materiality test	£893.2m	£893.2m			
7	<b>Materiality test</b>	<b>18.7%</b>	<b>10.4%</b>			
<b>PRICE LIMITS</b>		2000-01	2001-02	2002-03	2003-04	2004-05
8	<b>Current price limits</b> (as set in November 1999)	-14.1	-1.0	-1.0	0.0	1.0
9	<b>Revised price limits</b>	-14.1	-1.0	-1.0	2.1	2.2
<b>Notes:</b>						
1. Additional costs are shown as positive, savings are shown as negative.						
2. The appropriate discount rate used is 6.79%.						
3. <b>Materiality test</b> – Result must be greater than ±10% to trigger a change in price limits.						
4. All monetary values are stated in September 2002 prices. Totals may not add due to rounding.						

**SEVERN TRENT WATER LIMITED  
FINAL INTERIM DETERMINATION – DECEMBER 2002  
SUMMARY OF OFWAT'S ASSESSMENT**

**INTRODUCTION**

1. We have followed a four stage assessment of your application in accordance with the terms of Condition B of your licence.
2. You included eight changes in your application.
  - Increased operating costs, additional capital expenditure and uncollected revenue resulting from the ban on disconnection.
  - Changes to the requirements for treatment and monitoring of cryptosporidium.
  - Additional costs arising from the EC Nitrates Directive affecting sludge disposal in nitrate vulnerable zones (NVZs).
  - Measures to ensure continued protection of assets.
  - Additional costs of providing first time rural sewerage.
  - A proposed programme for tackling sewer flooding problems.
  - Charges levied by British Waterways Board (BWB) for discharges to canals.
  - Changes to the requirements on plumbosolvency control and lead communication pipe replacement.
3. We issued a counter notice in respect of changes to the requirements for lead communication pipe replacement which you reflected in your application.
4. Our assessment of your application and the counter notice is summarised below. This does not include the additional costs of providing first time rural sewerage. Condition B of your licence requires us only to consider non-trivial items. We explained in MD178 'Interim Determinations 2002' that we will only include additional provision in price limits if the net present value (NPV) of a specific change is greater than 1% of the company's turnover for the last reporting year. As the additional costs in your application of providing first time sewerage fall below the triviality limit, we have not considered these further.

**STAGE 1 – CONFIRMATION THAT THE CHANGED REQUIREMENTS ARE RELEVANT CHANGES IN CIRCUMSTANCE OR ARE COVERED BY SPECIFIC NOTIFIED ITEMS**

**Item 1 – Loss of disconnection**

5. We set out a notified item in the 1999 price determination to protect you from the consequences of increased levels of bad debt and costs of debt recovery arising from the loss of the power to disconnect domestic customers for non-payment of bills.

6. We confirm that the increases in your bad debt and costs of debt recovery have triggered the notified item.

**Item 2 – Cryptosporidium - additional requirements for continuous monitoring and treatment**

7. When we set price limits in 1999 the extent of the new requirements to deal with the risk from cryptosporidium was uncertain. Only work which had been identified and received technical support from the DWI was included in price limits. This did not include any requirement to carry out continuous monitoring but did incorporate work to satisfy the recommendations of two expert committees (the Badenoch and Bouchier recommendations).
8. The DWI issued a programme of regulatory monitoring dated 31 July 2000 under regulation 23A of The Water Supply (Water Quality) (Amendment) Regulations 1999. This set out the steps you must take to comply with the requirements of regulation 23B. The DWI has since written to you on 7 August 2002 updating the programme of work to meet the cryptosporidium regulations.
9. The statement of intent issued by the DWI on 30 November 2000 set out the agreed AMP3 programme of improvement works you were required to carry out under regulation 41 of the Water Supply (Water Quality) Regulations 2000. This included activity towards satisfying Badenoch and Bouchier recommendations, particularly turbidity monitoring and control improvements, and the installation of particle analysers.
10. We have received confirmation from the DWI that the work set out in your application, with the exception of continuous monitoring at three sites (Coombe Springs, Hatton/Haseley, and Llanwrin), is necessary to meet your obligations under the cryptosporidium regulations.
11. In the letter to your company dated 26 October 2002 the DWI has confirmed that it considers the revised risk assessments for the Bigwell and Newent sites have been carried out satisfactorily. Your assessments concluded that there is now a significant risk of cryptosporidium oocysts in water supplied from these works. In the letter to your company dated 28 November 2002 the DWI supported in principle your proposal to install membrane treatment at these two sites. We understand that the DWI will provide formal support shortly.
12. We made allowance when we set price limits in 1999 for some of the work that you have included in your application to satisfy Badenoch and Bouchier recommendations. This work, relating to five sites, is not therefore a relevant change of circumstance. With the exception of continuous monitoring at Coombe Springs, Hatton/Haseley, and Llanwrin we consider that the remaining monitoring and treatment requirements are a relevant change of circumstance under Condition B paragraph 13 of your licence.

### **Item 3 – Sludge disposal in nitrate vulnerable zones**

13. We have considered your application and your representations on our draft determinations carefully and have concluded that the Nitrates Regulations do not represent a relevant change in circumstance under Condition B paragraph 13 of your licence. Our reasoning is set out in Annex C.

### **Item 4 – Protection of assets**

14. DEFRA has recently instructed companies to accelerate planned programmes of work to ensure the ongoing protection of assets. This brings forward work which is required under the existing code of practice.
15. Such a change is a relevant change of circumstance under Condition B paragraph 13 of your licence.

### **Item 5 – Sewer flooding**

16. In March this year we published a consultation paper 'Flooding from sewers: A way forward'. As part of our consultation we invited views on proposals for tackling sewer flooding in the period up to 2005. We confirmed in MD180 'Flooding from sewers' (September 2002) that we are willing to consider proposals for companies to address more problems.
17. Where, as a result of a proposal from a company we establish a revised set of regulatory outputs to deal with sewer flooding and a company is making an application for an interim determination (because of other changes to its costs and revenues), we believe it is appropriate to take account of the increased costs to deal with sewer flooding in any interim determination.

### **Item 6 – British Waterways Board discharge consents**

18. Following a ruling by the Court of Appeal on 21 March 2001, British Waterways Board can, for the first time, charge sewerage companies for surface water discharges to its canals.
19. The Court of Appeal's ruling includes a reinterpretation of law. This change is a relevant change of circumstance under Condition B paragraph 13 of your licence.

### **Item 7 – Lead – changes to the compliance programmes**

20. In 1999 we allowed in price limits for a work programme to comply with the new lead standards. This assumed a lead communication pipe replacement programme and a plumbosolvency control programme. During the 1999 periodic review the DWI stated that it would review the most effective means of delivering compliance. Plumbosolvency control is now the preferred initial approach.

21. The DWI has confirmed that the provision made in the 1999 final determination for meeting the new lead standards was only for the purpose of setting prices. The programme of work set down in the DWI's letter to you dated 12 July 2001 'Water Supply (Water Quality) Regulations 2000: Regulation 41 – Approval of Programmes of Work' replaces the letter of support provided for the periodic review process. The DWI wrote to you on 6 August 2002 setting down a modified programme of work.
22. The DWI has advised that it will not be possible to determine whether a programme of lead communication pipe replacement will be required until the effectiveness of plumbosolvency control has been assessed.
23. We have received confirmation from the DWI that the work set out in your application is necessary to comply with the new lead standards. We consider that the change in the lead compliance programme is a relevant change of circumstance under Condition B paragraph 13 of your licence.

## **STAGE 2 – ASSESSING THE APPROPRIATE NET ADDITIONAL COSTS/REVENUE LOSSES ATTRIBUTABLE TO EACH CHANGE**

### **Item 1 – Loss of disconnection**

24. We have carefully assessed the information submitted in your original application and your supplementary submission. We have also requested further clarification from yourselves and your reporter.
25. In your application you explained that:
  - the amount of debt which you cannot collect; and
  - the costs of collecting debt have increased since the implementation of the Water Industry Act 1999. We accept that, overall your costs have increased.
26. Your application sets out changes to your procedures for recovering debt from customers. Prior to the Water Industry Act 1999 you used the threat of your power to disconnect domestic customers widely. You established contact with a significant number of non-paying customers as a result and obtained payment from most of those customers. Having lost this power you have undertaken a review of your credit management system and introduced a number of new initiatives including tailoring your approach to meet the circumstances of individual customers, use of dedicated teams focused on credit management and increased use of external credit agents. These do not secure payment in as many cases. Where payment is secured it is not recovered as quickly.
27. We accept that as a result of these changes:
  - the amount of debt which the company is unable to collect has increased; and
  - where debt is recovered it now takes the company longer on average to do so. Financing costs increase because of this.

28. In order to assess the impact of the ban on disconnection on companies' financial positions we look at the changes in levels of debt and costs of debt recovery since 1998-99 (the last year in which companies could disconnect domestic customers for non payment of bills).
29. In your supplementary submission you assessed the amount of revenue which you are unable to collect based on an analysis of the change in revenue outstanding which is between 36 and 48 months old
30. We set out our methodology in RD12/01 'Notified Item for bad debt' (August 2001). This looks at the change in the level of debt written off over the same period. We have followed the approach we set out in RD12/01. This accounts in part for the difference between your claim and our assessment.
31. You also argued that changes in your procedures have caused your operating costs to rise over the period from 1998-99 to 2000-01. These costs are mainly the result of higher employee and outsourced debt recovery costs. In 2001-02 however your operating costs associated with debt recovery fell from the level you reported for 2000-01 to a level comparable with 1998-99. We have, therefore, assumed no increase in the level of debt recovery costs going forward.
32. In addition, you explained that the actions taken as a result of your review of your credit management system required additional capital expenditure. We have reduced your claim where we were not persuaded that the investment was related to debt recovery or would not have been undertaken by your company as part of your normal programmes to maintain an effective information technology system. Following your response to our draft determination we have reconsidered those investments that have been excluded from your claim, and increased the amount of capex in the final determination to include one of the four excluded items.

## **Item 2 – Cryptosporidium - additional requirements for continuous monitoring and treatment**

33. You have chosen to deal with the requirements of the cryptosporidium regulations by carrying out continuous monitoring at 13 sites, improving the treatment process at one other site (Campion Hills) and installing new treatment at two other sites (Bigwell and Newent). The reporter has commented that your decisions are reasonable.
34. You informed us on 21 October 2002 of your intention to install membrane treatment at Bigwell and Newent. Your estimate of the costs for installing membrane treatment at these two sites was not included in your original application. They are included in our assessment.
35. The DWI has confirmed your risk assessments for these two sites and has supported your proposed actions in principle. We understand that formal support will follow shortly, and we have therefore included cost estimates for this work in our final determination. We have assumed that you will install membrane filters to treat all the current design flow at Bigwell and Newent,

and that the DWI will not require regulatory monitoring for the presence of cryptosporidium oocysts. We have also assumed that the processes will be installed and fully operational by 31 March 2005.

36. We have reviewed your costs for meeting the requirements for all cryptosporidium monitoring and treatment, and considered the reporter's report. We have also looked at market prices for this type of work reported by other companies.
37. We compared your additional operating costs for carrying out continuous monitoring for cryptosporidium with a benchmark and found them to be high. We reduced your submitted costs for 12 sites to an appropriate benchmark. This is consistent with the approach we have taken for interim determinations in the past. We did not include the costs for Llanwrin because the requirement is not a relevant change of circumstance.
38. Continuous monitoring and testing for cryptosporidium is still in its infancy. We believe that the unit costs of materials will fall and there will be significant improvements in efficiency for this labour intensive procedure as the learning process continues. We have assumed a future efficiency of 2.5% per annum for operating expenditure.
39. Your additional capital expenditure for continuous monitoring equipment is higher than the benchmark. The costs of installing this equipment should be broadly similar for all sites. In our assessment we reduced the costs for 12 sites by 75% of the difference between your submission and the benchmark cost. This is consistent with the approach we have taken for interim determinations in previous years.
40. You have also included in your submission the capital costs of turbidity monitoring and control improvements and providing particle analysers at 13 sites. We made an allowance in the 1999 final determination for Badenoch and Bouchier improvements at five of these sites, Bamford, Draycote, Frankley, Melbourne and Trimley. We did not therefore include the expenditure at these works in our assessment.
41. We reduced your claim for the capital expenditure for turbidity and particle size monitoring at the other eight sites by 11%. This is the assumption we made in 1999 about the catch-up improvement for capital enhancement procurement for water service non-infrastructure.
42. We reduced by 11% your submitted capital expenditure for treatment enhancements at Campion Hills and for installing new treatment at Bigwell and Newent on the same basis.
43. We have assumed a future efficiency of 2.1% for the additional operating expenditure associated with cryptosporidium treatment at Campion Hills, Bigwell and Newent.

### **Item 3 – Sludge disposal in nitrate vulnerable zones**

44. This is not a relevant change of circumstance. Please see paragraph 13 above.

### **Item 4 – Protection of assets**

45. We have reviewed your estimate of the costs of accelerating the programme of work to ensure ongoing protection of assets, and considered the reporter's report. We did not reduce your estimate of operating costs, but assumed a 2.1% per annum future efficiency from 2003-04. We reduced your estimate of the capital expenditure by 11%. This is the assumption we made in 1999 about the catch-up improvement for capital enhancement procurement.
46. In your application and the associated documentation you set out the capital work that you plan to carry out. We have assumed that all of this work will be completed by 31 March 2005.

### **Item 5 – Sewer flooding**

47. We said in MD180 that we would consider proposed programmes for additional work to address sewer flooding where these are based on a system for prioritising schemes that has been developed in consultation with the relevant WaterVoice committee. The prioritisation process must be based primarily on an overall assessment of the severity and frequency of the problems faced by the customers concerned. WaterVoice Central supports more work to reduce sewer flooding. You have provided a revised proposal for the completion of 83 schemes at a projected cost just over £25m.
48. We have considered your latest proposal and, taking account of WaterVoice Central's comments, concluded that there are eight schemes at a total cost of £4.2m which should be excluded. This is because either:
- the schemes, as you acknowledge, have high projected costs compared to their projected benefits; and/or
  - the schemes are driven by the delivery of environmental benefits rather than sewer flooding alleviation.
49. Further work to understand these problems, and development of the likely solutions and costs, could provide a clearer view of the costs and benefits for these schemes. They may then be suitable for consideration within an application to log-up additional expenditure at the 2004 review.
50. We have also considered the unit costs you have provided as part of your application. Where estimated costs are based on a unit cost approach we have applied a lower unit cost of £74,000 per internal flooding problem based on your recently reported costs and the advice of your reporter. For external flooding problems we have applied your benchmark unit cost of £72,000 per problem.

51. The proposed programme which we have included consists of 75 schemes with an average cost of around £75,600 per problem addressed. (Total cost £20.9m). The programme will alleviate:
- 87 problems where customers' properties are flooded; and
  - 189 problems where customers' gardens are flooded.

This programme will also alleviate 124 internal or external flooding problems that are at risk of occurring less frequently than once in 10 years.

#### **Item 6 – British Waterways Board discharge consents**

52. In our draft determination, we excluded the costs associated with British Waterways Board (BWB) discharge consents because:
- the total number of discharges was still to be confirmed; and
  - the level of charges remained highly uncertain until your negotiations with BWB were complete.

We concluded that the costs attributable to this item were not sufficiently certain for us to make an allowance in our draft price limits.

53. Since our draft determination you have reached an agreement with BWB about the total amount payable in respect of the period to 31 March 2005; a lump sum of £11.25m. You have provided us with a signed copy of this agreement. As you have now agreed with BWB that this amount represents your full liability for that period, we have reflected this in our final determination.
54. In order to calculate the contribution to materiality, for the period from 2005-06 onwards we have applied an efficiency assumption of 1.4% per annum to your projections. This is consistent with our assumption of general efficiency at the 1999 review.
55. Your current agreement has been reached without prejudice to any agreement on future charges. We understand that you are continuing your negotiations with BWB about the charges after this date. In order for us to take account of any future charges at the periodic review in 2004, they will need to be based on:
- discharges which have been agreed as crossing BWB land or entering a BWB canal; and
  - cost reflective charging principles.

#### **Item 7 – Lead – changes to the compliance programmes**

56. The DWI stated in Information Letter 13/98 that the provision made for meeting the new lead standards was solely for the purpose of estimating costs for the periodic review. The Information Letter made it clear that allowance in price limits was subject to companies agreeing specific programmes of work with the DWI once the criteria for action had been agreed. After the final

determination, the DWI set out in Information Letter 12/2000 the criteria for action, which resulted in more emphasis on treatment to reduce plumbosolvency than was assumed in the final determination.

57. You have chosen to install new treatment at 43 sites. You are also optimising existing treatment at four other sites.
58. The methodology we used for separating the costs and savings in expenditure arising from the confirmed lead programme differs from yours. Consequently the costs and savings for lead set out in Annex A should only be compared on a combined basis.
59. In our assessment we compared the volumetric output of the works in the notional plumbosolvency programme assumed at the 1999 final determination (around 20% of total output) with the volumetric output of the works in the confirmed programme (around 70% of total output). We have taken into account only the proportion of the costs associated with the net additional volumetric output of the confirmed programme.
60. We compared your operating costs with cost information from other companies. We consider that your additional operating costs for plumbosolvency treatment are reasonable, and we have made no adjustment to your submitted operating costs. And we have assumed no future efficiency reduction in operating costs.
61. We used your submitted capital costs for plumbosolvency treatment in our assessment. But we have assumed an estimate of 1.4% per year for future efficiency. This is consistent with the approach we have taken at interim determinations in previous years.

**STAGE 3 – MATERIALITY TEST – IN AGGREGATE DOES THE SUM OF ALL THE CHANGES EXCEED THE MATERIALITY THRESHOLD SET OUT IN THE LICENCE?**

62. Condition B of the licence sets a materiality threshold for consideration of interim determinations. A revision of price limits is triggered if the present value of the net additional costs and revenue losses arising from the changes is greater than 10% of the turnover of the appointed business in the latest financial year for which accounting statements have been delivered to Ofwat. For the purpose of this calculation, capital costs are calculated up to 31 March 2005 and operating costs and revenue losses are calculated over 15 years.
63. The results of our analysis, based on the revised assumptions set out above, are summarised in Annex A. This shows that the materiality threshold has been satisfied.

**STAGE 4 – IMPLICATIONS FOR PRICE LIMITS IF THE MATERIALITY THRESHOLD IS EXCEEDED**

64. Because the materiality threshold has been met we are required by Condition B of your licence to review and revise your price limits. Our assessment of your company's application is that price limits for the charging years 2003-04 and 2004-05 should be revised as set out in the table in Annex A.

**SLUDGE DISPOSAL IN NITRATE VULNERABLE ZONES - DIRECTOR'S DECISION**

1. The European Council adopted the Nitrates Directive (Directive 91/676/EEC) on 12 December 1991. The Nitrates Directive has the objective of “reducing water pollution caused or induced by nitrates from agricultural sources, and preventing further such pollution”. For the purposes of realising this objective, member states had to establish action programmes in respect of designated vulnerable zones (“NVZs”).
2. The Nitrates Directive was originally implemented in England and Wales by The Protection of Water Against Agricultural Nitrate Pollution (England and Wales) Regulations 1996 (S.I. 1996 No.888) (“1996 Regulations”) and The Action Programme for Nitrate Vulnerable Zones (England and Wales) Regulations 1998 (S.I. 1998 No.1202) (“1998 Regulations”). The 1996 Regulations set out 68 NVZs, which represented approximately 8% of the land area in England. The 1998 Regulations impose legal requirements on the occupiers of any farm all or part of which is in an NVZ. They have to ensure that a detailed action programme is implemented in relation to any land which is part of the farm and in the NVZ. The action programme in particular places restrictions on the amount of nitrogen fertiliser which can be applied to the farmland, and when this can happen. Nitrogen fertiliser is defined to include sewage sludge and other organic wastes.
3. Following infraction proceedings initiated by the European Commission, the European Court of Justice ruled in December 2000 that the UK Government had failed to implement correctly the Nitrates Directive. The Nitrate Vulnerable Zones (Additional Designations) (England) Regulations 2002 (S.I. 2002 No.2525) (“2002 Regulations”) were therefore introduced. The 2002 Regulations set out additional NVZs, which now represent approximately 55% of the relevant land area. Under the 2002 Regulations, approximately 90% of your authorised area will be affected by the restrictions placed on occupiers of farms within NVZs. You have explained that this will translate into increased costs relating to, for example, transporting sludge cake over a longer distance to new agricultural sites.
4. Paragraph 13.2(1)(a) of Licence Condition B states that a legal requirement includes, “any enactment or subordinate legislation to the extent that it *applies to the Appointee* in its capacity as a water undertaker or sewerage undertaker [...]”. Similarly, the relevant sub-paragraph of the definition of a relevant change of circumstance in paragraph 13.1 refers to “*the application to the Appointee* of any legal requirement”. But the relevant Regulations (together “Nitrates Regulations”) apply to agricultural producers who occupy all or part of a farm. The operative legal requirement under the 1998 Regulations is regulation 3, which provides:  
  
“(1) The occupier of any farm all or part of which is in a nitrate vulnerable zone shall ensure that the action programme set out in the Schedule hereto is

implemented in relation to any land comprised in the farm and in the nitrate vulnerable zone.

“(2) For the purposes of paragraph (1) above, the occupier of a farm shall not cease to be the occupier of the whole of the farm by reason of another agricultural producer using part of the land comprised in the farm”.

5. The Nitrates Regulations may apply to certain farmers on whose land you dispose of sludge. This may well affect your business. But they do not apply to you in your capacity as a water undertaker or sewerage undertaker. The Nitrates Regulations do not therefore represent a relevant change of circumstance under Condition B paragraph 13.2(1)(a) of your licence.
6. The fact that the Nitrates Directive and the Nitrates Regulations cannot amount to a relevant change of circumstance for the purposes of an interim determination does not, of course, mean that costs related to them cannot be taken into account at the next periodic review. As you have acknowledged in your submission, interim determinations were never intended to allow full pass through of every change in costs or revenue faced by water and sewerage undertakers. The underlying legislative intention behind interim determinations was that any interim adjustments to the charging limits set at periodic reviews should be exceptional and closely defined events.
7. This is confirmed by two letters (together “the DoE Letters”) sent by officials at the Department of the Environment (“DoE”) in 1989 which indicate the intentions at the time the interim determination mechanism was being introduced. Lucy Robinson at the DoE sent the first letter on 7 July 1989 to the chief executives of the then water authorities. The second letter was sent by Richard Dudding of the DoE on 25 October 1989 to the then Director General of Water Services. This letter was copied to all Appointees, the Water Services Association and the Water Companies Association. The DoE Letters set out in some detail items for which it was intended cost pass through should be available, and some for which it was not. Annex A to the letter from Richard Dudding also points out (at paragraph 3, headed “New or Changed Legal Requirements”) that, “In all cases the intention was to confine eligibility to those requirements which applied to water and sewerage undertakers by virtue of the fact that they were water and sewerage undertakers, and to exclude requirements, such as general health and safety legislation, which would apply to any type of company. The decision was taken that NRA charges fell within this last category and should therefore be excluded. (As they might have been included within the wording of the definition they were specifically excluded for the avoidance of doubt).”
8. In addition, one of the papers attached to the letter from Lucy Robinson expressly stated that, “In general cost pass through is not available for [...] legal requirements which are not *directly binding* on the Appointee eg designation of new bathing waters under the EC Bathing Waters directive (but any revisions to consents consequent on such designation would be eligible)” [emphasis added]. Of course, the obligations imposed on farmers under the Nitrates Regulations do not *directly bind* you (in your capacity as a water or sewerage undertaker).

9. You submitted that this interpretation of paragraph 13.2(1)(a) would lead to absurdities that could not have been intended. You said that it was difficult to see why the provision should apply in relation to the small parcel of land actually *owned* by you but not in relation to other land owned by others and *used* by you for the same purpose. But, insofar as you operate as a *farmer* on the land that you own (as you maintained in your submission that you do), the NVZ action programme still does not apply to you *in your capacity as a sewerage undertaker*. There is accordingly no difference, for present purposes, between farmland owned by you and farmland which is not owned by you.
10. You also said that if the Director was prepared to allow through the increased costs incurred in complying with a permit granted for the purpose of allowing sludge incineration to take place (please see our comments in paragraph 17 below), he should also allow the costs of the more environmentally-friendly method of sludge disposal engaged in by you. However, the application of the interim determination rules cannot depend upon considerations such as whether a particular form of activity, which has been (indirectly) rendered more costly as the result of legislation such as the NVZ action programme, is judged more or less “environmentally-friendly”.
11. You also expressed concerns that you might be exposed to additional costs under the EC Water Framework Directive (2000/60/EC) (“WFD”) between periodic reviews in circumstances where the changes would also not represent relevant changes of circumstance under paragraph 13.2(1)(a) of Condition B because the WFD might be implemented through legal requirements that did not directly bind you.
12. The WFD does not have to be transposed into national law until 22 December 2003. It appears to us unlikely that the industry will be required to undertake major programmes of capital works specifically to fulfil the requirements of the WFD at least until the periodic review in 2009. And, as you have pointed out, there is still considerable uncertainty about the definition of the environmental objectives and the measures to be taken. However, the decision to exclude NVZs from this determination does not mean that the WFD would also be excluded. Under the terms of Condition B of your licence there are different ways in which a change in legislation might amount to a relevant change in circumstance.
13. As an example of that approach, both the DoE Letters cited Directive 86/278/EEC (“Sewage Sludge Directive”) as a change which would amount to a relevant change of circumstance under paragraph 13.2(1)(a). Specifically, paragraph 28 of an annex to the letter dated 7 July 1989 from Lucy Robinson states that “Costs associated with regulations on agricultural disposal of sewage sludge to implement the provisions of Directive 86/278/EEC should be reflected in initial K. If costs are incurred in the future as a consequence of adoption by Council [sic] of amendments to this Directive cost pass through provisions would apply”. This is also reflected in the letter dated 25 October 1989 from Richard Dudding.

14. The purpose of the Sewage Sludge Directive is “to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man, thereby encouraging the correct use of such sewage sludge”. It was implemented by The Sludge (Use in Agriculture) Regulations 1989 (S.I 1989 No.1263) and The Sludge (Use in Agriculture) (Amendment) Regulations 1990 (S.I. 1990 No.880) (together “Sewage Sludge Regulations”).
15. A number of distinct obligations arising under the Sewage Sludge Regulations apply directly to “sludge producers”. “Sludge producers” are persons who manage plants at which sludge is produced for disposal, including above all the sewerage undertakers. Regulations 6 and 7 of The Sludge (Use in Agriculture) Regulations 1989 create duties for sludge producers as respects maintaining a register and supplying information. Schedule 1 creates significant obligations for sludge producers as respects the testing of sludge at regular intervals, and Schedule 2 creates additional obligations for sludge producers as respects the testing or assessment of agricultural soil. In contrast to the obligations arising under the Nitrates Regulations (which apply to *agricultural producers* in that capacity), the Sewage Sludge Directive was implemented through legal requirements that directly bound sewerage undertakers. These legal requirements could therefore amount to a relevant change of circumstance under paragraphs 13.1 and 13.2(1)(a) of Licence Condition B.
16. Alternatively, if the WFD were implemented through new licences, concerns, or authorisations, the changes might represent a relevant change of circumstance under paragraph 13.2(1)(c) of Licence Condition B. For example, Yorkshire Water Services Ltd’s application for an interim determination included additional costs arising from Waste Incineration Directive (Directive 2000/70/EC) (“WID”). The WID was adopted by the European Parliament and the Council on 4 December 2000 and introduces tighter emission limits than those in existence at present together with a requirement for continuous monitoring of emissions. It will be implemented in such a way that Yorkshire Water will have to apply for a permit to operate each of its incinerators confirming that it has met the revised requirements. We have confirmed that the WID will therefore amount to a relevant change of circumstance under paragraph 13.2(1)(c).
17. You have also raised some general concerns about what you saw as an overly narrow interpretation of paragraph 13.2(1)(a). The Director explained his interpretation of this paragraph in Annex D of his interim determination addressed to South West Water Ltd dated 14 December 2001. In that Annex the Director considered whether an obligation to pay the climate change levy could amount to a relevant change of circumstance. He concluded that the point of the particular specification in paragraph 13.2(1)(a) of Licence Condition B (that any qualifying legal requirement should apply to the Appointee “in its capacity as a water or sewerage undertaker”) was “precisely to show that the provision relates to *water-specific* legislation, i.e. concerning the handling or treatment of water or waste water”. He also concluded that this “water specific” interpretation “does not mean that the only legislation that

will necessarily qualify is legislation applying *only* to the water and sewerage companies” [emphasis added].

18. But the DoE Letters might be taken to suggest that the intention was to limit eligibility under paragraph 13.2(1)(a) to legal requirements that apply *exclusively* to water and sewerage undertakers as such. Thus one of the papers attached to the letter from Lucy Robinson expressly stated that, “In general cost pass through is not available for [...] obligations which apply generally to all types of companies (*ie not to water and sewerage undertakers in particular*) [...]” [emphasis added]. The extract quoted above from Annex A to the letter from Richard Dudding also might also be seen as pointing to this “pure interpretation”, where it states that, “*In all cases the intention was to confine eligibility to those requirements which applied to water and sewerage undertakers by virtue of the fact that they were water and sewerage undertakers [...]*” [emphasis added]. This extract also suggests that the intention of the proviso at the end of paragraph 13.2(1) of Licence Condition B (which refers back to sub-paragraphs (a) to (g) of that paragraph) was to insert a “for the avoidance of doubt clause”, and nothing more significant than that.
19. In light of the above, it is arguable that the interpretation of paragraphs 13.1 and 13.2(1)(a) of Licence Condition B currently adopted by the Director is favourable to undertakers and that the ‘pure’ interpretation which appears from the DoE Letters might be preferred by a Court or appeal body. However, NVZs would not represent a relevant change of circumstance either under the “water specific” interpretation (as set out above and in Annex D of South West’s interim determination) or the “pure interpretation”, because the Nitrates Regulations do not apply to you in your capacity as a water or sewerage undertaker.