Annex 1

Summary of responses to 'RD05/02 – The approach to depreciation for the periodic review 2004'

In the consultation paper, we asked a series of questions on the main issues surrounding our approach to depreciation for the next periodic review.

We had 25 responses in total. Twenty from the water companies, three from WaterVoice committees, one from Water UK and one from the Centre for the Study of Regulated Industries. A full list of respondents is included in Annex 2.

The key issues on which we sought views were set out in questions 1 to 6 of the consultation paper.

In February 2002 Water UK published the Stone and Webster report 'Depreciation charges and broad equivalence at the 2004 periodic review – setting out a way forward'. We discussed the report with Water UK prior to issuing our consultation paper (RD05/02). Our paper reflects our response to a number of the issues the Stone and Webster report raised. We were unaware that Water UK had placed the report in the public domain and so did not refer specifically to it in RD05/02.

Most respondents agree that current cost depreciation (CCD) should be retained as a component of bills. The consensus of opinion is that a check is required on the overall level of depreciation but respondents do not want this to be applied mechanically. Respondents want us to be transparent about any methodology or adjustment we apply. The companies want to know what information we need in order for them to justify any 'gap' between CCD charges and non-infrastructure maintenance expenditure (MNI). Most respondents believe we should use company specific data rather than use comparative techniques. Questions 7 to 27 in the consultation paper explored these issues in more detail.

The views expressed at the depreciation workshop held on 22 April are also reflected below. Where comments do not specifically relate to a question raised in the consultation paper we have included them at the end of the questions. (Annex 3 lists the attendees at the workshop).

Q1 Do we need a check and challenge on the overall level of depreciation allowed in price limits?

The majority of respondents (21 out of 25) agree that there should be a check and that we have a duty to ensure that the CCD charge allowed in price limits is fair and reasonable. They believe the check should not be applied mechanistically but instead act as a consistency check. The reporters and auditors should check the data companies submit to us so we have confidence in the audited numbers provided. Therefore we should involve reporters and auditors early so they can

provide a full assessment of CCD and its component parts.

Three respondents consider that the need for a check is dependent upon the approach taken to assessing the level of asset consumption to be included in price limits (for example the use of accounting or economic based depreciation); and the level of subjectivity or estimation in the approach used. They also believe the check itself involves a considerable level of subjectivity.

Q2 Is the comparison of depreciation charges with long term maintenance expenditure a valid basis for the check?

The majority of respondents (23 out of 25) agree that this is a valid basis for the check. But 16 of these respondents believe there must be refinements to the methodology used for the periodic review in 1999. The main reasons given for this is the lack of a steady state of the asset base and the need for us to consider company specific apportionment of expenditure across asset lives.

Six respondents believe that a gap between CCD and MNI is inevitable because of the effect of technical progress which they believe creates a 'wedge' between forward looking CCD & MNI.

One respondent suggests we make allowances for the shortcomings of the checking process either through direct adjustment to the input data or by increasing the tolerance limit.

Concerns about the practical implementation of the depreciation check focus on the reasons for differences between CCD charges and MNI expenditure raised under question 3 below.

Q3 What are the valid reasons for differences in depreciation charges and maintenance expenditure projections?

Reasons given for differences in CCD and MNI are included in the following list.

- Lack of a steady state of the asset base.
- The inclusion of capital efficiencies in the MNI projections.
- The 23 year timeframe to be used for comparative purposes means that replacement of some assets will not occur within the period considered. Companies believe the ideal timeframe should be equal to the life of the longest asset (60-80 years) but recognise that it is not practical to project MNI expenditure over this length of time.
- MNI investment is 'lumpy', particularly in smaller companies, and projections are partly driven by the quality programme obligations that tend to take priority over MNI spend.
- The use of standard lives and apportionments rather than company specific numbers that are audited and reported in the

regulatory accounts and June returns.

- The impact of the allocation of maintenance expenditure to categories other than MNI expenditure results in accelerated CCD due to asset disposals and replacement. This results in 'front-end loading' of the depreciation charge. New assets may be different to those which they replace. The proportional allocation rules we impose mean MNI expenditure does not reflect the full cost of asset replacement.
- The changing mix of assets, with a tendency towards more shorter life assets.
- The asset lives applied to MEA values might not reflect the actual phasing of MNI spend in capital investment programmes.
- Lack of reliable data for the MEA valuation process.

Q4 What is your preferred approach to the assessment of depreciation that should be allowed in price limits?

Most respondents (17 out of 25) believe that using current cost depreciation is the most practical approach to assessing the level of depreciation to be allowed in price limits.

One respondent suggests we use the Competition Commission's acquisition cost accounting model (with market to asset ratio adjustments). It suggests that this and the current replacement cost accounting model can be easily reconciled if a proper distinction is made between accounted net book value and the regulatory book value. As long as the cost of capital is realistic, then companies will be treated even-handedly whatever depreciation profile we choose in setting price limits.

Another respondent suggests that a better approach would be to assume that companies have an endowed asset base that is not in a steady state. A forward-looking approach should be taken based on the characteristics of the endowed stock. Companies will then be able to project forward the level of replacement expenditure. They suggest that this forward projection could then be compared with planned MNI expenditure.

Two respondents believe the renewals approach is the most appropriate method. One respondent prefers this approach for assets held pre-privatisation.

Two respondents believe that the depreciation charge allowed in price limits should be that shown in the audited business plan.

Two respondents believe the development of a thorough understanding of MEA values is the most appropriate approach, but recognise that this is not practical. The next best approach is the use of CCD.

One respondent believes the approach taken should allow for the correct level in cash terms of capital maintenance expenditure in price limits.

Q5 What is your view on our calculations at PR99?

The majority of respondents accept the basic principles of our approach at PR99, subject to us:

- using company specific apportionments; and
- increasing the transparency of the data used in the calculation of the 'gap' between CCD and MNI expenditure.

Four respondents comment that they do not feel they were given sufficient opportunity to challenge our adjustments at PR99 because the adjustments and the MNI expenditure projections used were not communicated to companies until after they submitted their final business plans in April 1999.

Three respondents believe that the tolerance limit was set too low.

Two respondents believe that we applied the check mechanistically, rather than using it as a starting point for further investigation. Two respondents feel that we suppressed MNI expenditure projections because of the quality programme obligations.

Q6 Should we continue to use standard lives and standard apportionment of capital expenditure to achieve consistency between companies in our determinations?

18 out of 24 respondents believe that we should use company specific apportionments. They consider that these are already subject to scrutiny and challenge by auditors and reporters.

The allocation of enhancement expenditure is dependent on company specific quality programmes and the solutions chosen. The allocation of MNI expenditure is also dependent on the nature of the refurbishment programme being undertaken and the level of short life expenditure that is driven by operating cost efficiency targets.

Three respondents suggest that we should calculate an industry average taken from recent June return data. Rather than applying this automatically to all companies it should act as a challenge when companies fall outside the standard. One respondent recommends consistency unless it is shown that the previous methodology is clearly inaccurate or unworkable.

Half of the respondents object to using standard asset lives. One company suggests that common operational assets have different lives in different companies because of operating conditions,

operational hours, levels of maintenance etc.

Those that do agree with the use of standard lives believe they will help achieve consistency across companies.

Q7 Do you agree, in general, with the approach proposed for PR04? If not, what approach should be adopted and why?

There is general agreement (22 out of 24 responses) with the approach proposed for PR04 but the following caveats are given:

- use company specific apportionments;
- improve transparency; and
- increase the tolerance limit.

One company does not agree 'in general' to the proposed approach because it leads to real and significant adjustments to prices. Another respondent believes we should use a cash based renewals accounting approach using company specific data.

Q8 Are any of the alternatives suggested in section 3.3 preferable? (This covered a detailed consideration of MEA values, a renewals accounting approach and an economic depreciation approach.)

Around half of the respondents (13 out of 25 responses) rejected the alternative methods suggested in the paper and suggest the retention of CCD provides consistency across periodic reviews.

One respondent prefers a forward looking approach based on endowed asset stock using company specific lives and apportionments, projected forward to identify the level of replacement expenditure. Another respondent suggests replacement cost accounting. Alternatively, another respondent suggests the use of the RCV indexed by RPI.

Three respondents believe the renewals approach is most appropriate because it is cash-based and is used by Ofwat for infrastructure assets. They do not believe there is any economic difference between infrastructure and non-infrastructure assets. However, one of these respondents suggests that although it is simple to apply it might not represent the true consumption of assets, and is a radical step away from statutory accounting rules. Another drawback would be that, for smaller companies, MNI expenditure is unevenly phased.

Two respondents suggest exploring the merits of economic depreciation, but others believe this approach will be difficult to apply in practice.

Four respondents believe we should explore the use of a more detailed approach using MEA values. But they recognise that this will mean a lot of extra work to understand the MEA revaluation

methodologies adopted by the companies.

Q9 What are the most significant reasons for differences between CCD and MNI projections?

Most respondents stated that the most significant reason for the difference is the lack of a steady state of the asset base. Additional reasons are included in the responses to question 3.

Q10 How should the adjustment, if any, to the depreciation charge be calculated?

Two respondents agree with the calculation set out in our paper.

Eleven out of 19 respondents to this question, consider that there is no specific answer. Any check must not be mechanistic and we should be transparent about our approach at PR04. The tolerance limit set for PR99 was too low. We should use company specific apportionments. When Aquarius 3, the financial model, is released it should show all calculations with no offline adjustments being made.

One respondent suggests if, a company's projected level of depreciation cannot be justified, then the proportion of CCD that has not been satisfactorily explained should be excluded from price limits.

Five respondents believe that we should not 'cap' depreciation and should use company numbers based on company specific schemes, lives and apportionments.

Six respondents out of 25 did not make any specific comments on this question.

Q11 Should we continue to use the industry standard mode for asset lives?

Half of the respondents agree with the use of industry standard lives, but of these, five believe that they should only act as a guide for us to challenge the outliers. The remainder believe that company specific lives should be used because there are genuine reasons why companies have different asset lives.

Q12 Do you expect the asset lives reported and used at PR99 of 5, 10, 20, 40, and 60 years to change significantly for PR04? If so, why?

Eighteen responses were received to this question and none of the respondents believe that asset lives have changed significantly since PR99. Nine respondents expected a reduction in the average life of

the very short and short life categories. The main reason given was technological change. (Also see responses to question 26).

Q13 Should we continue to allocate expenditure between infrastructure and non-infrastructure assets on a company specific basis?

We received 22 responses to this question. All said 'yes', because infrastructure enhancement expenditure will vary significantly between companies, depending on their capital programmes.

Q14 How different should the apportionments for MNI expenditure and capital enhancement expenditure be?

Q15 Should we use a different apportionment for water only companies?

Q16 Assuming standard apportionments are retained, should we use the same method for PR04?

The majority of respondents suggest that apportionments for both MNI expenditure and capital enhancement expenditure should be company specific.

However, five respondents, four of which are companies, accept and support the use of standard apportionments if they are used as a guide to assess the outliers. The outliers should explain why they are different.

Seven respondents comment that MNI expenditure apportionments will include a greater proportion of shorter life assets such as computers, vehicles, Instrumentation Control & Automation (ICA), etc.

Four respondents believe that if company specific apportionments are not used we should make a distinction for water only companies. This could be based on the water apportionment of water and sewerage companies (WaSCs). However none of these respondents were water only companies.

Q17 Is the 1992-93 asset base an appropriate starting point for the comparison of CCD and MNI expenditure? If not, what base should we use?

Q18 Should we bring the start point forward to include more of the asset base constructed after 1992-93? Is 1997-98 an appropriate starting point for PR04?

The majority of respondents do not believe that the asset base was in a steady state in either 1992-93 or 1997-98. However of the 17 respondents that have a preference, 12 prefer 1992-93 as a starting point.

Four prefer to use 1997-98 because their asset registers produce more reliable data from this point. Also because some MNI is required in the period 2005-10 for replacement of enhancement (very short and short life) assets purchased after 1992-93.

Two of the 17 respondents suggest we should perform sensitivity analysis on the use of the 1992-93 and 1997-98 start dates. Respondents suggested the advantages and disadvantages of using each starting point are as follows.

- The 1992-93 asset base is more likely to be in a steady state than that of 1997-98.
- A 1992-93 start date includes more data in the comparison.
- A 1992-93 start date will include the impact of advanced maintenance or maintenance holidays because of the quality programme; also the treatment of backlog maintenance should be considered if using this start date.
- Asset register information is more reliable since 1997-98.
- 1997-98 is more representative of the current asset position of the industry.

One respondent believes that a start date of 1 April 1990 is more reflective of the high level capital expenditure spent during the following two years (1990-91 and 1991-92).

Q19 Over what period do you think we should compare CCD and MNI expenditure?

Q20 Do you agree that the time period over which we make the comparison should be extended to match the capital maintenance planning horizon?

Thirteen out of the 20 responses to these questions suggest the comparison should be between 20 and 25 years. Of these 13, five agree that the comparison period should match the capital maintenance planning horizon.

Three respondents said the comparison should be over the life of the longest asset (60 years) but recognise the impracticalities of this approach. One respondent thinks we should use the 10 years from 1992-93 to 2002-03 for the comparison period, as only actual data will be included. One respondent believes that we should use the same timeframe adopted for infrastructure renewals accounting (15 years).

Q21 Is the 3% tolerance limit sufficient to account for all of the differences that could result from the issues highlighted in this section of the paper?

Q22 If not, what level of tolerance is appropriate?

Of the 19 responses to these questions, 16 think the 3% tolerance limit is too low for the following reasons.

- It does not allow company specific factors to be considered.
- 90% of companies had a depreciation adjustment at PR99 signifying that either most companies projections were too high or that the tolerance limit was set too low.
- It relies heavily on forecast figures for both CCD and MNI and is subject to estimating errors.
- The 3% limit does not appear to be linked to the rest of the depreciation adjustment methodology.

Two respondents do not think that a tolerance limit is required if we accept company specific apportionments.

One respondent believes we must not predetermine a limit.

Respondents made the further comments noted below:

- The tolerance limits should be increased to 5% (three respondents), 10% (two respondents), 15 – 20% (one respondent), and 30% (one respondent).
- We should use a tolerance limit that identifies outliers rather than the majority.
- Any tolerance limit above 20% will invalidate the test.
- The tolerance limit should not be based on turnover when neither CCD or MNI relate to sales, but are driven by the asset base. Each company will have different ratios between sales and asset values. Companies with a high ratio of turnover to asset values will have an advantage over those in the reverse position. The tolerance limit should look at the percentage of the CCD charge as reported in the audited accounts.
- The greater the uncertainty over the calculation, the higher the limit will have to be.

Q23 Do you consider that our approach has resulted in an unacceptable intergenerational effect?

Most respondents (14 out of 19) believe an intergenerational effect has probably occurred. Of these 14, nine specify what type of effect. Six of the nine state that future customers will pay for current asset consumption. Three of the nine say broad equivalence favours future generations at the expense of present day customers. One respondent believes that customers have implicitly accepted the effect. Three respondents comment that given only two small companies referred the outcome of PR99 to the Competition Commission this may indicate that the effect is acceptable. Respondents believe that prices should be 'cost-reflective' of the system as it exists to deliver the service received by the customer today.

One respondent suggests that because the inflation part of the return on capital is 'trapped' within the RCV (which is increased by inflation

year on year), not all the return is returned to investors. It suggests that the 'trapping' of regulatory returns is not just an issue for investors' cash flows. It says that, in the long run, the 'return on' and 'repayment of' RCV is funded by future customers creating an intergenerational subsidy.

Five respondents do not consider that there is an unacceptable intergenerational effect because the amounts in question are too small.

Q24 Will the comparison of MNI projections, before future efficiency adjustments are made, result in a fairer comparison?

Q25 Should we use MNI projections excluding our assumptions about general efficiency or should they exclude both general efficiency and the catch up target for the less efficient companies?

All respondents to these questions believe that MNI projections should exclude future efficiency adjustments (both general efficiency and catch up targets), as comparisons with CCD should be made on a like for like basis. If the efficiency elements are not excluded this will increase the intergenerational effect and companies will face a higher risk of non-remuneration for capital expenditure.

One respondent stresses that whatever method is used to compare CCD and MNI it should be kept simple and understandable. They say that companies will not want to provide data, with and without the effects of efficiency.

Respondents stress that this will not remove all the expected 'gap' between CCD and MNI streams.

Q26 What evidence could be provided to demonstrate a justifiable trend towards shorter life assets?

Eleven out of 19 respondents suggest that company specific data in the audited June returns (tables 32 and 34) over recent years will provide evidence of a trend towards shorter life assets. Eight respondents believe practical examples will demonstrate a justifiable trend towards shorter life assets. One respondent suggests that these practical examples will form part of its asset enhancement and maintenance strategies and its reporter will test the whole life costings for both of these strategies.

Examples of the reasons for a trend towards shorter life assets are listed.

- Technological improvements in IT, specifically telemetry (most respondents gave this example).
- Regulatory and government uncertainty means that a company

might opt for a short term solution in case obligations in the future render existing plant useless (one respondent).
- Current manufacturing standards are lower than in previous years (one respondent).
- The uncertainty of the impact of competition means that a company will not purchase long term solutions for current problems (one respondent).
- There is an increase in the number of meters being replaced (two respondents).
- Increased maintenance of telemetry and water quality monitoring systems due to the short life of these assets (one respondent).

Q27 To what extent do you think that expenditure allocated to categories other than MNI expenditure results in the replacement and renewal of the asset base? Please give examples where possible.

All 17 respondents to this question agree that expenditure allocated to categories other than MNI expenditure results in the replacement and renewal of the asset base to some extent. Some respondents suggest that we should work towards achieving a better definition of functional expenditure categories.

Examples where this occurs are set out.

- Quality and other obligations can change the asset base, prior to the end of its expected useful life, giving rise to 'early replacement' investment in categories other than MNI.
- The rationalisation of a small sewage treatment works where new quality drivers may result in a closure of the site and the transfer of flows, or new technology may allow a complete rebuild of the site, e.g. the use of package plants, rather than an add-on treatment process. Additional examples are early replacement of assets due to the introduction of an additional treatment process to a site, or the combination of several existing sites as a result of the quality programme obligations.
- Reactive operating expenditure (planned and unplanned).
- EA sustainability reductions if a compensation resource is built elsewhere.
- Supply demand balance advanced metering technology.
- Enhancement expenditure can reduce the medium term need for replacement and mean that existing assets are reconfigured, e.g. where higher consent standards necessitate a new sewage treatment process, such as a change from biological treatment to activated sludge. If the existing process needs replacement within, say 5 to 10 years, then the medium term maintenance requirement is reduced. Companies with larger enhancement programmes need less maintenance expenditure.

Other issues raised at the workshop

Additional views expressed at the depreciation workshop concerned MEA revaluations. Companies believe that they are time consuming, expensive and, for the purpose of calculating CCD, do not necessarily measure any technological progress between each five year periodic review. Companies suggest full MEA revaluations should be completed every ten years. Also, companies have different approaches to MEA revaluation depending on their size. Some companies believe five years is too frequent for revaluing the MEA and it adds to regulatory uncertainty.

Annex 2

LIST OF RESPONSES TO RD05/02 – 'THE APPROACH TO DEPRECIATION FOR THE PERIODIC REVIEW 2004'

1. Anglian Water
2. Bournemouth & West Hampshire Water
3. Bristol Water
4. Cambridge Water
5. Centre for the Study of Regulated Industries
6. Dŵr Cymru – Welsh Water
7. Folkestone & Dover Water
8. Mid Kent Water
9. Northumbrian Water
10. Portsmouth Water
11. Severn Trent Water
12. South East Water
13. South Staffordshire Water
14. South West Water
15. Southern Water
16. Sutton & East Surrey Water
17. Tendring Hundred Water
18. Thames Water
19. United Utilities
20. Water UK
21. WaterVoice Eastern
22. WaterVoice Southern
23. WaterVoice Thames
24. Wessex Water
25. Yorkshire Water

Annex 3

LIST OF ATTENDEES AT THE DEPRECIATION WORKSHOP ON 22 APRIL

1. Robert Adams	-	Wessex Water
2. Richard Allison	-	Mid Kent Water
3. John Bateman	-	Halcrow
4. John Brindley	-	WS Atkins
5. Chris Charlton	-	Severn Trent Water
6. Jigna Chheda	-	Robson Rhodes
7. Peter Cranleigh-Swash	-	Three Valleys Water
8. Barry Daniels	-	United Utilities
9. Alan Day	-	Portsmouth Water
10. Andy Dearsley	-	Bournemouth & West Hampshire Water
11. Barrie Delacour	-	Southern Water
12. Kevin Dewhurst	-	United Utilities
13. Bill Dovey	-	Bournemouth & West Hampshire Water
14. Paul Edwards	-	Welsh Water
15. Robert Eveson	-	Arthur Andersen
16. David Guest	-	Dee Valley Water
17. Martin Hall	-	Three Valleys Water
18. Jeremy Hawkins	-	Halcrow
19. Mark Hazelwood	-	South Staffordshire Water
20. Elaine Higman	-	South West Water
21. David Hinton	-	South East Water
22. David Holt	-	Bristol Water
23. Jenny Hornby	-	Sutton & East Surrey Water
24. Steve Hulbert	-	Yorkshire Water
25. Martin Huttly	-	Northumbrian Water
26. Phil Kinch	-	Thames Water
27. John Lawes	-	Cambridge Water
28. Helen Lofthouse	-	Tendring Hundred Water
29. Rowan Loh	-	South East Water
30. Jeremy Long	-	Binnie Black & Veatch
31. Louise Madden	-	KPMG
32. Mike Morrod	-	Anglian Water
33. John Owen	-	Severn Trent Water
34. Julian Rabjohn	-	Welsh Water
35. Andrew Reid	-	Cambridge Water
36. Andrew Snelson	-	Anglian Water
37. Geoff Usmar	-	Mid Kent Water
38. Robert Weeden	-	Water UK
39. Martin White	-	South West Water
40. Crawford Winton	-	Northumbrian Water
41. Stephen Wood	-	Southern Water