Corporate Environmental Reporting in the UK Water Sector - A Concise Review

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EXECUTIVE SUMMARY

Background

The publication of Corporate Environmental Reports (CERs) providing information about environmental management, objectives and performance is increasing, although the approaches, scopes, contents and styles vary considerably. The practice is of potential value to the Environment Agency in support of its regulatory work and wider responsibilities to foster improved environmental performance and promote sustainable development.

Objectives

To review CERs from the UK water industry, to identify similarities and differences in their scope and approach, to consider their potential value to the Environmental Agency and to make recommendations for improving their quality and comparability. Additionally, to consider the extent to which the findings are applicable to other sectors.

Method

Recent CERs from the ten large UK water utilities have been examined, and compared with each other, with CER guidelines and with a small number of CERs from other sectors.

Conclusions and Recommendations

1. The water sector is well advanced in terms of the percentage of its companies which publish CERs, but their content and detail vary widely. The most comprehensive compare reasonably well with those of many other major companies, though none is yet amongst the most advanced. The less comprehensive fall below the standards now becoming expected.

2. For the sector as a whole, the principal areas of weakness of CERs include: coverage, especially beyond water issues; quantification of non-water impacts; variation in performance indicators; lack of normalisation to outputs; traceability of conversion factors and comparative data; quantification and dating of targets and lack of sector benchmarking.

3. CERs do not give more information about regulated activities than is available elsewhere, but they do make compliance records accessible to a wide range of stakeholders. They also have the potential to help the Agency achieve its own regulatory objectives, through expressing corporate commitment and fostering good environmental practices.

4. CERs have a potential role in any move towards regulatory self-monitoring, though the primary issues here relate to verification for regulatory purposes, rather than to reporting.

5. Currently, CERs do not cover enough of industry to be a major data source for "state of the UK environment" reporting, though this may change in the medium to long term. However, in particular sectors - including water - there may be sufficient coverage for sectoral aggregation, provided that there is a suitable convergence of reporting practices. This could have potential benefit to the Agency in facilitating sectoral "State of the Environment" reporting and, potentially, to the sector itself for benchmarking purposes.

6. The production of CERs is a potentially powerful support for the Agency's wider objectives of fostering environmental improvement and promoting sustainable development. CERs are engines of environmental improvement through communication and concept transfer, not only to the primary intended readerships, but also to other companies.

7. Most existing CERs are not grasping the objective of sustainability in a convincing way. A useful first step for the water sector would be to consider what a sustainable water utility might look like, and then to assess how current performance compares with that ideal.

8. Published CERs from many sectors should be of value to the Agency as it develops its own reporting practices, covering the impacts of its own activities.

9. Given the potential support CERs offer, it would be appropriate for the Agency to consider how it might work in partnership to improve CER quality and value, and to help give them a higher profile amongst corporate stakeholders.

10. General guidance on CER production is widely available, but there is a need for more detailed guidance on a number of aspects of reporting which the Agency could help to meet.

11. Regarding the water industry particularly, the Agency should encourage a greater degree of consistency of CERs, to increase their usefulness as tools for benchmarking and performance improvement for the benefit of both the industry and all its stakeholders.

12. The Agency could also consider producing its own report for the water sector as a whole, using the information available from the companies and other sources, as a means to foster greater consistency and encourage consideration of sustainability issues.

KEY WORDS

Corporate Environmental Reports, CERs, Environmental Information, Environmental Performance, Environmental Performance Evaluation, Environmental Performance Indicators, Environmental Management, Water Industry

1. INTRODUCTION

Many large companies now publish Corporate Environmental Reports (CERs). As more companies develop Environmental Management Systems (EMSs), and join the EU Eco-Management and Audit Scheme (EMAS), the practice is likely to increase.

CERs all aim to provide interested parties with information about corporate environmental policy, impacts, management, objectives and performance. However, their approaches, scopes, contents and styles vary considerably. Several bodies have published guidelines on CER production, but none is very detailed.

The voluntary publication of CERs should support the Environment Agency's aims of:

- Fostering improved environmental awareness and performance.
- Promoting the goal of sustainable development.

It was therefore felt that a review of reporting practice in a large and environmentally significant UK industry sector would be of value, both in relation to that sector particularly and in highlighting issues for voluntary environmental performance reporting in general.

Most of the large UK water utilities now produce free-standing CERs, and the inherent similarity of their core activities of water and wastewater management encourages comparison of their environmental performance and its reporting. A short review has therefore been undertaken of CERs produced by the major utility companies in the sector, with the aims of:

- Identifying similarities and differences in their scope and general approach, regarding such issues as:
  - scope and coverage of impacts and issues;
  - general style and approach;
  - detailed approaches to reporting on major sector issues;
  - extent of quantitative reporting;
  - environmental objectives and targets.
- Examining the extent to which the findings regarding the water sector have more general validity, by comparison with a limited number of major company CERs from other sectors.
- Making recommendations for improving the quality and comparability of CERs, for consideration by the Agency.

This is the report of that review.

2. METHODOLOGY

The major water utility companies in England and Wales were requested to provide copies of all the CERs they have produced, although this report concentrates on the most recent (1996 or 1995), as shown in Table 2.1.

These reports have been examined in relation to:

1. Each other, in a comparative assessment.

2. Issues of environmental management and of environmental concern for the sector (see Table 2.2).

3. Existing guidelines and benchmarks for CER production - e.g. Advisory Committee on Business and the Environment (ACBE 1997), Confederation of British Industry (CBI undated, published 1994), the World Industry Council on the Environment (WICE 1994), Public Environmental Reporting Initiative (PERI 1994) and Sustainability/United Nations Environment Programme (Sustainability/UNEP 1996). (In the text, these publications will normally be referred to only by the organisation's name, but full descriptions are given in the list of references.)

4. On selected issues, a small cross-section of CERs from other sectors, including British Airways Annual Environmental Report 1996 (British Airways 1996), BP's HSE Facts 1995 report (The British Petroleum Company 1996), The Report on BT's Environmental Performance for 1995/96 (BT 1996) and National Power's Environmental Performance Review for 1995/96 (National Power 1996). (In the text, these reports will be referred to only by the company name, but full descriptions are given in the list of references.)

Many of the findings have been reported in detailed tables, because the comparison of 10 reports (each of about 30 pages or more) cannot be conveniently accomplished in any other way. However, several points should be noted:

1. The wide variety of reporting content and format necessitates that the tables be accompanied by clarifying footnotes.

2. Every reasonable effort has been made to ensure accuracy of summary and comparison. However, the time limits of the study, the amount of material being reviewed and the need to contain its results within a relatively short report will have resulted in simplifications and, possibly, omissions or other errors of detail in summarising the reports. The reader wishing to explore or use detailed comparisons in particular areas is therefore advised to refer to the individual reports examined.

3. Examination of the CERs has concentrated on data presented, rather than on discursive descriptions of plans and intentions not specifically identified as targets. This is in keeping with the (desirable) trend for CERs to provide quantitative data and information about past performance, and quantified and dated goals against which to judge future performance.

It also matches the Agency interest in leveraging its regulatory activity by making best use of specific voluntary initiatives within industry.

4. The review has also concentrated on coverage of the water utility operations, as that element is common to all the reporting companies, although attention has also been paid to coverage of other corporate activities.

The detailed tables of comparison (Tables A1 - A28) are all in Appendix A.

Table 2.1 List of water utility CERs examined

Company	Report Title and Date	Number in series *	Period Covered	Short Reference
Anglian Water	Environmental Report 1996	4th	1995/96	**A96**
Northumbrian Water Group	Second Environmental Performance Report 1994/95	2nd	1994/95	**N95**
North West Water	Safeguarding the Environment. Drinking Water and Environmental Quality 1995.	?	1995 (but some references to 1995/96)	**NW95**
Severn Trent plc	Stewardship 1996. Environmental Report.	4th ? ("entering the fourth year of ... reporting")	1995/96	**ST96**
Southern Water	Conservation and the Environment. The Report for 1995/96	?	1995/96	**S96**
South West Water plc	Enhancing the Environment. Environmental Report 1996	1st	1995/96	**SW96**
Thames Water	Environmental Review 1996	4th	Apr 1995 - Mar 1996	**T96**
Dwr Cymru/Welsh Water	Environment Report/Adroddiad ar yr Amgylchedd 1994-1995	3rd	1994/95	**CW95**
Wessex Water	Environmental Performance Report 1995/96	6th	1995	**W96**
Yorkshire Water plc	Environmental Protection and Stewardship 1996	?	1995/96	**Y96**

* As noted in the CER itself

Table 2.2 Major CER features examined

Subject	Section
Scope and background to activities	3.1
Top management commitment and policy statement	3.2
Environmental management system	3.3
Environmental impacts	3.4
Legislative and regulatory compliance	3.5
Objectives and targets	3.6
Financial aspects of environmental management	3.7
Support for external initiatives, and awards won	3.8
Reporting and verification	3.9
Stakeholder dialogue on the CER	3.10
Quantification	3.11
Data and information presentation	3.12
Benchmarking	3.13
The future and Sustainable Development	3.14

3. FINDINGS

3.1 Scope and background to activities

3.1.1 Scope

The intended scope and coverage of the CERs have been examined by:

- comparing the companies to which they refer with the subsidiary and associated companies and joint ventures listed under the "umbrella" company in "Who's Who in the Water industry" for 1995 and for 1996; and

- identifying whether or not drinking water quality and occupational health and safety are addressed.

The results are summarised in Table A1.

The reader should not infer that identification of subsidiary and associated companies and joint ventures in Table A1 means that they are necessarily covered in the same detail as the water utility operations. It simply means that the CER concerned refers to them, and therefore itself states - or could reasonably be taken to imply - that it is intended to cover them.

Some reports (e.g. North West Water, Southern Water Services) cover only the water utility operations, whilst the majority cover, or appear intended to cover, a wider range of Group or Company activities.

Actual coverage of subsidiary and associated companies, however, varies greatly in its depth from report to report. It also varies in the same report from company to company, the larger and more environmentally significant companies tending to receive greater attention, so far as can be judged from the descriptions of their activities.

For example, the Severn Trent report gives considerable attention to Biffa, in tables and graphs as well as in the text, and the Northumbrian report gives similarly detailed information about a number of the Group companies. The Thames report gives targets for a number of associated companies. The South West report covers the Haul Waste operation in some detail, that of Yorkshire the White Rose Environmental operations, and that of Dwr Cymru/Wales deals (largely descriptively) with the associated companies. The proportion of the Wessex report devoted to UK Waste is somewhat smaller - but the whole report is longer, because it also functions as the Conservation, Access and Recreation (CAR) report - see Section 3.4.).

So far as can be judged, reports covering major subsidiary and associated companies separate the impact and performance data from those pertaining to the water utility operation. This is, however, by no means clear in the cases of the (apparently) smaller subsidiaries and associates, and overseas activities, assuming that they are covered at all.

Occupational health and safety is addressed in only three reports - Northumbrian, South West and Wessex.

Regarding the water utility side, all include drinking water quality within the ambit of their CERs, and North West Water specifically refers to both Drinking Water and Environmental Quality in the sub-title of its report.

Thus, whilst the coverage of water utility CERs varies quite considerably, the great majority of them cover, or appear to be intended to cover:

- Group (or part Group) activities, not just water and sewerage services;
- Drinking water quality, but not occupational health and safety.

3.1.2 Background to activities

Table A2 summarises the information given as background to the activities of the company or Group.

Although there is noticeable variation in the degree of detail given, the most detailed descriptions bear comparison with those given in many CERs from other sectors.

3.2 Top management commitment and policy statement

As Table A3 shows, all the CERs contained an introductory statement by a Board Member - in almost all cases the Chairman, Chief Executive or Managing Director. All included their environmental policy statement, except North West which referred to an earlier statement in the 1995 Annual Report having been reviewed, but unaltered in "essential elements".

It is apparent that an increasing number of the companies are developing an independent Environmental Committee of some kind to provide an external view of corporate environmental matters, or a similar body which is not wholly independent but which may include non-executive directors.

Whilst it may seem that policy statements can be omitted, on the grounds that they are rather general and change but rarely, they are starting points for environmental management and their omission may mean that the reader (and especially the first time reader of a company's CER) is unaware of important aspects of policy scope or applicability. It is presumably for such reasons that all the major guidelines (CBI, PERI, WICE) refer to inclusion of the policy in the CER.

3 Environmental management system

Table A4 summarises information about environmental management systems and practices.

Six of the ten reports include the information that the company is piloting, working towards or already in part certified to, an EMS standard, and a seventh noted a deferred decision. There is also stated interest in EMAS.

Reporting on progress in developing, or applying, specific management system elements - whether incorporated within a formal, certifiable EMS or not - is quite patchy, as Table A4

also shows. Moreover, hard data on system performance measures (e.g. coverage of training and awareness programmes, frequency and coverage of auditing) is often lacking or limited.

It is arguable that, if a certified EMS is in place, reporting system performance measures is ultimately of less relevance than reporting impact and emissions/wastes performance measures, because the adequacy of the system is addressed by the certification. However, some or all of the major guides to CER production (CBI, PERI, WICE) refer to such matters as training, risk management, auditing and supplier assessment, and the PERI guidelines also suggest quantified information on the resources committed to environmental management.

In any event, given that most of the companies do not yet have certified EMSs covering the greater part of their operations, it might be considered appropriate to give more detailed information on system elements, in order to give readers a clearer picture of the extent of formal (if uncertified) management system components and their development.

In practice, those water sector CERs which give the most information about environmental management system performance do not give markedly less information on such matters than do many CERs in other sectors. Thus, for example:

- the BT report gives details of site audits and environmental risk management programmes;
- the British Airways report describes a number of system elements, including its environmental champions system and environmental review and audit programme (but not in quantitative detail);
- the BP report gives only a very general summary of its environmental management systems, mentioning the chemical industry's Responsible Care programme and EMAS participation;
- the National Power report devotes two pages to general progress with EMS development, referring to BS 7750 certification of six operational areas and EMAS registration of one, together with information on arrangements relating to fuel management, land management, and ISO 14001 inclusion in overseas power projects.

3.4 Environmental impacts

3.4.1 Resource utilisation and waste management

Water Resources, Abstraction, Leakage and Demand Management

Tables A5 and A6 show the findings, with respect to Resources and Abstraction, and Leakage and Demand Management, respectively.

Given the position of water as the sector's principal raw material, it is to be expected that water utilisation issues would be treated comprehensively. Indeed, several factors enhance the relevance of water resources and their use at the present time, including the debate about water supply and conservation following the 1995 drought (see, for example, House of Commons Environment Committee 1996; Department of the Environment 1996; Office of Water Services

1996a and b) and the growing concern about water stress in Europe generally (European Environment Agency and United Nations Environment Programme 1997).

In practice, the coverage of water resources and abstraction is by no means consistent, as Table A5 shows.

The Northumbrian, Severn Trent and Southern reports say relatively little about the issue, and the Yorkshire report discusses environmental impact assessment of abstractions and work on a long term supply strategy. The Wessex report gives graphs of distributed volume by month and discusses demand, rainfall and groundwater and reservoir levels in some detail; there is also a section on work with the Environment Agency and others on three low flow rivers.

The Anglian, North West, South West, Thames and Dwr Cymru/Welsh reports give details of unlicensed abstractions, albeit in somewhat different ways. The Anglian report uses percentage of total abstraction, the South West report a fraction of a day's regional supply (for the one abstraction not compliant with its annual licence condition), and the North West and Dwr Cymru/Wales reports the number and percentage, respectively, of non-compliant abstraction licences/sites (Dwr Cymru/Wales in terms of annual licence conditions, and North West in terms of failures to comply "fully"). The Thames report refers to both exceedances of annual and daily limits, and gives the percentage exceedances for the two cases of compliance failure against the annual limit.

Again, only North West report quantifies drought orders, which are also addressed - but not quantified - in the South West and Yorkshire reports. The Dwr Cymru/Wales report also gives, however, details of the four OFWAT levels of service indicators relating to resources and supply in a table.

There are few instances of targets being set in relation to resources, and even fewer of true, quantitative and dated, targets - only Anglian (and, possibly, Thames if the same target as for the previous year for abstraction at a selection of sites is a continuing one - see problem of interpreting Thames' targets discussed in Section 3.6).

It is clear that in respect of their most fundamental resource, the companies often report abstraction issues in very different ways - in regard to measures, units and depth of attention. No doubt this reflects, in part at least, differences in the perceived importance of water resource issues within different parts of England and Wales.

It is interesting that the Water Bulletin, published by the Water Services Association itself, now contains a "Resourcewatch" table giving the following details for all the major water utilities:

- population affected by hosepipe or sprinkler ban;
- number of drought orders;
- reservoir resources as % of capacity, and the normal reservoir capacity for the time of year;
- groundwater levels on a descriptive scale (very low, low, normal etc).

A similar, if somewhat less variable, situation pertains in respect of the important and topical issues of leakage and metering, as shown in Table A6. Although coverage of these issues is

more uniform than that of resources and abstraction, it is far from even with the Northumbrian report giving the subjects no attention, the Dwr Cymru/Wales and Yorkshire reports addressing only leakage, and a variety of measures used to quantify leakage estimates. Again, presumably, differences in coverage reflect, in part at least, geographical variations in the perceived importance of the issue.

With regard to performance indicators, most of the reports that give figures quote leakage as a percentage of distribution input, with some also giving volume per day or per year, two using volume/household/day and one using volume/km/day. The recent House of Commons Environment Committee report on Water Conservation and Supply (House of Commons Environment Committee 1996) addressed this issue, and:

- drew attention to uncertainties in leakage data presented by different companies, describing the data as "... not comparable or clearly auditable.";
- noted that it was not clear if percentage losses referred to a percentage of the total put into supply, or whether estimated losses from customer's own pipes had been previously subtracted;
- considered that companies should not set leakage targets solely in percentage terms;
- recommended that both "litres per property per day" and "cubic metres per kilometre of mains per day" should be used in the definition of leakage targets.

In the context of these observations, it is worth noting that: the Anglian report makes clear that its leakage target relates to leakage from its own pipes; the North West report notes that its total leakage figure includes "... leakage ... from customers' own supply pipes, thought to account for about 20% of the total ..."; the Severn Trent report tabulates "Volume leaking and unaccounted" (presumably including customer losses and any uncharged water); the South West report targets reduction of "... our distribution leakage ..."; the Thames report targets "... leakage from our pipes ..."; the Dwr Cymru/Wales report cites an estimate of loss from customer's own pipes; the Yorkshire report refers to "... a reduction ... in leakage from company pipes ..." being reported to OFWAT.

3.4.2 Energy and fuel use

Tables A7 and A8 show reporting of energy and fuel for non-transport and transport purposes, respectively.

All but the Southern report address electricity use (and generation) to some degree, with Anglian, Northumbrian, Severn Trent and South West giving greatest detail. Again, there are considerable differences across the reporting group as a whole concerning the way in which the data are reported and the extent to which previous years' consumption is included.

For fuel use, and methane generation and use, the picture is even more patchy, with no data in the Anglian, Southern or Dwr Cymru/Wales reports and limited data in the South West, Wessex and Yorkshire reports compared with the others. The units of reporting also vary.

For transport related fuel, the extent of quantitative reporting is also extremely varied - as Table A8 shows. Detailed fuel use figures are given in fewer than half the reports, and some give very limited amounts of information about any aspect of transport.

3.4.3 Other resources

Table A9 summarises the information presented about other resources used, wastes arising and recycling.

The picture here is very variable; some reports give total waste figures by broad category, others give data for specific waste types (often in text rather than tables) but do not present data in a particularly coherent and integrated manner. Many discuss specific waste investigations and initiatives, but there is little evidence in many cases of a systematic investigation and reporting of materials used and wastes arising. In particular, relatively little attention is paid to the use of materials in treatment (e.g. chemicals for water treatment) and the management/minimisation of their use and handling of wastes arising, or to the use of resources in works construction, or in the distribution and sewerage systems.

This rather fragmented picture of material use and waste management contrasts with, for example, the more coherent and detailed treatment of wastes and their management presented in the BT and British Airways reports (BT 1996; British Airways 1996).

With regard to use both of resources and of energy and fuel use, the sector CERs as a whole are not as comprehensive as they could be, in areas which, in slightly different ways, are all included in the CBI, PERI and WICE guidelines.

3.4.4 Releases to air, water and land

Coverage of releases to air is addressed in Table A10. Releases to water and sludge to land are dealt with more conveniently under legislative and regulatory compliance (Section 3.5).

(Only the Anglian report appears to discuss the issue of contaminated land specifically, and landfill issues are addressed by Severn Trent, South West and Wessex in relation to their waste management companies).

As Table A10 clearly shows, very few of the CERs give details of estimated or measured air emissions.

The most complete are those of Severn Trent and Northumbrian. The Northumbrian report includes more types of emission, but unlike the Severn Trent report does not include carbon dioxide from biodegradation in its total carbon dioxide figure. (This is presumably carbon dioxide from effluent treatment predominantly, and in the case of Severn Trent represents 25% of group emissions of the gas). Both reports disaggregate data by company within the Group, for the major companies at least.

The Yorkshire report contains five tables giving reported annual releases and authorised releases for five incinerators (three sewage sludge and two clinical waste), and the North West report gives some data on incinerator compliance failures.

Comprehensive detail of air emissions is typically given in good CERs from other sectors. Although it is arguable that such emissions are often of greater relative importance in other sectors, a comprehensive CER should not ignore them. Moreover, the water industry's interest in the potential consequences of global warming argues that it should pay closer attention to its own emissions, as an example to other companies to do the same.

3.4.5 Conservation, Access, Recreation, Heritage and Architecture

This is an area which is difficult to summarise succinctly, because of the wide range of matters covered and the diversity of approaches to dealing with it, but an attempt to do so is shown in Table A11.

Under the Water Industry Act 1991, the companies are obliged to follow a Code of Practice relating to Conservation, Access and Recreation (CAR) matters, and to produce an annual CAR report. In some cases, the CER was stated to cover (Wessex), or appeared to but was not explicitly stated to cover (Southern), the requirements for CAR reporting, and this was evident in the number of pages devoted to the subject in those reports.

In most but not all of the other reports, reference was made to the CAR report, but not always in the section dealing with relevant matters (the reference often being included only in a general list of relevant publications at the back of the CER).

As Table A11 shows, there was a tendency for specific targets not to be set in the relevant areas, especially in the areas of access and recreation, and of heritage/archaeology/architecture.

In summary, treatment of these topics varies widely according to the practice of the companies regarding the production of CAR reports. Those (Wessex and Southern) combining, or appearing to combine, their CAR report with the CER give considerable prominence to CAR issues. Those which do not produce a combined report varied considerably in their treatment of the relevant issues within the CER - from fairly detailed summaries, with contextual references to the CAR report, to very limited discussion and reference to the CAR report only in a general list of publications.

It would seem sensible for companies, if they choose to combine CERs and CAR reports, to state explicitly that they are doing so (as does Wessex) - or present summary information in the CER and make explicit, contextual reference to the CAR report if they choose to keep the two types of report separate.

3.4.6 Nuisance

Nuisance here covers local impacts from odour, sewage, noise, dust, flooding and visual impact. Coverage of unsatisfactory Combined Sewer Overflows (CSOs) is also addressed in this table.

As Table A12 shows, treatment of these issues within the CERs varies very widely, with some addressing essentially all these issues and others dealing with just one, or a few.

Nuisance issues affect a stakeholder group likely to be targeted by CERs - neighbours, who will almost invariably also be customers. It is therefore surprising that more of the companies do not accord to it the same attention as does Anglian Water, for example. Of course, the general qualification applies, that the lack of a problem (or perceived problem) may account for the omission. However, if the sector were to seek a more uniform approach to CER content, the issue of nuisance is evidently one to which attention would be necessary.

3.4.7 Product stewardship

As the water industry's product cycle is relatively "closed" - inasmuch as the industry both supplies clean water and collects and treats the resulting wastewater - many of the conventional concerns about product stewardship (e.g. about product disposal) are effectively addressed in the relevant parts of Section 3.5 (on legislative and regulatory compliance) dealing with wastewater and sludge.

Under this heading, we shall therefore consider drinking water quality, the coverage of which is summarised in Table A13. The reader is cautioned, however, that this usage of the term "product stewardship" to address solely issues of product quality is unconventional.

At the level of overall compliance with regulations, the coverage is essentially complete though the reporting of previous years' figures varies considerably. Beyond that base level of compliance reporting, there is considerable variation. Some of the reports which are amongst the most comprehensive in other respects (e.g. Anglian, Severn Trent and Thames) give little further information, whereas others give a breakdown of compliance by determinand type or determinand.

A minority of reports address the issue of undertakings/relaxations, and even fewer do so quantitatively, and only about half of the reports set targets for drinking water quality.

Complaints about drinking water are addressed (and quantitatively) in two reports, and DWI notifications/incidents in four. Pipe replacement programmes are, however, addressed in many.

Surprisingly, in view of the fundamental comparability of drinking water compliance data (which the companies are obliged to supply to DWI), there were few instances of comparison of compliance performance with UK mean levels. This is a general topic to which we shall return under Benchmarking (Section 3.15).

3.5 Legislative and regulatory compliance

3.5.1 Prosecutions

Coverage of prosecutions is summarised in Table A14. All but the Southern report address the issue, giving the number of prosecutions, but in only half the reports are details given of fines and costs.

3.5.2 Wastewater consent compliance performance

Reporting of compliance performance for Sewage Treatment Works (STWs) is summarised in Table A15.

All reports give the subject some coverage, that of Southern being the least detailed in quantitative terms. Only Anglian gives details of both the number of non-compliant works and the equivalent population served by such works - the latter being the form reported by OFWAT - see Office of Water Services (1996b).

As with drinking water compliance, the picture with regard to details of compliance is less consistent, with fewer than half the reports giving details of compliance with the different types of consent condition.

As Table A16 shows, only the North West report gives details of wastewater non-compliance at Water Treatment Works (WTWs). It is not known if this reflects a lack of problems in the other companies (a difficulty that also arises in other aspects of performance reporting when a subject appears not to be addressed - see Section 3.12).

3.5.3 Trade Effluents

Trade effluent coverage is summarised in Table A17.

Coverage of this issue is very varied, some reports giving no data or information and those that do providing it in a variety of ways. Overall, about half of the CERs address the subject in any degree of detail.

3.5.4 Sludge

Coverage of sludge disposal is summarised in Table A18.

Most of the companies give a breakdown of disposal routes, but several give only total produced and others only refer to the agricultural outlet. Compliance with regulations (or DoE Code of Practice) is addressed in only four reports.

3.5.5 Bathing Waters

Coverage of bathing water compliance is summarise in Table A19.

As with overall drinking water compliance, there is considerable consistency of reporting with variations principally in relation to the extent to which previous years' data are included.

Several reports discuss the relevant standards in some detail, pointing out the potential influence of sources of non-compliance other than sea outfalls.

3.6 Objectives and targets

In this analysis we have restricted the term "target", so far as possible, to clear statements of intent - ideally quantified and with a completion date. However, total consistency was impossible because of the wide variety of statements of targets, objectives, goals and plans in many of the CERs. Thus, some statements of plans with intended completion dates, not identified as targets in a CER or in the tables, may be indistinguishable from statements labelled as targets in another CER, and treated as such in the tables.

Despite these difficulties, we consider that Tables A20 and A21 give a reasonable picture, at a broad level, of the extent to which formal targets are identified, and progress on them addressed, in the CERs.

3.6.1 When is a target not a target?

One of the principal findings in this area is that "targets" often lack one - or worse both - of the ideal characteristics of a target:

- Quantification of intended outcome;
- Date for achievement.

To paraphrase Oscar Wilde: "To lose the first of these characteristics may be regarded as a misfortune, to lose both looks like carelessness". Indeed, to lose the date element is to reduce a target to a general aspiration.

3.6.2 Dealing with longer term targets

Quite often, targets relate to the medium or long term - e.g. five years or more. In such cases, intermediate (milestone) targets should be given so that more useful progress information can be given than bald "on course" statements. In many CERs examined this was not done - presumably because choosing suitable milestones can be difficult.

Thus, a long term target to "Construct 3 new sewage treatment works in the Styx catchment by the year 2003" presents no problem to intermediate target setting if they are conveniently to be built one every two years. But if they are not, some other way to set intermediate targets must be found. This could be done, for example, by:

1. referring to specific stages of construction;
2. using the time schedule of planned costs.

The first is clear but technical (and stages meaningful to the reader may themselves not fall conveniently in time). The second can help overcome this difficulty, and gives a measure of progress which the non-technical reader can recognise.

(Setting targets in terms of sequential improvements in effluent load to the Styx is good in referring to the environmental benefit rather than to the means, but is unlikely to answer the problem posed, because the chronology of improvements will match that of construction.)

3.6.3 Targets and performance improvement

Targets in environmental management are best regarded as tools intended to manage improvement. If they are statements about a level of performance already achieved, which it is intended to maintain rather than improve, they are better seen as performance criteria.

On this basis, statements (both taken from CERs examined) like:

- "Respond to 95% of reported leaks within 24 hours",
- "Maintain >99.6% overall compliance with Drinking Water Regulations",

are performance criteria not targets - unless, in the first case, the current year's performance has been to respond to 90% of reported leaks within 24 hours, in which case the target should be written:

"Improve, by the end of March 1998, the response to leaks for the year from '90% within 24 hours' to '95% within 24 hours'".

However, as this distinction between "target" and "performance criterion" may be difficult to introduce, the alternative solution might simply be to identify separately:

1. new, revised or current performance improvement targets (with intermediate targets as appropriate);
2. continuing performance maintenance targets.

The absence of clear statements of progress upon targets may reflect the fact that target setting was not well (or perhaps at all) developed in the preceding year's CER; in the case of South West Water, for example, the CER reviewed is its first.

In the Yorkshire CER, "target" is used for statements of broad intent which would now be almost universally regarded as policy commitments, and "aim" for what are normally seen as targets (although they may lack, as in many of the other reports, both the ideal characteristics of a target). This is unfortunate in that it could appear to confer less significance upon the statements than if they had been seen clearly as elements of the corporate policy; it also tends to devalue the targets themselves, since "aim" is probably widely regarded as less definite than "target".

The Thames report gives prominence, in a table, to the 49 targets set in the previous year and to progress upon them, but does not identify - in a table, by symbol, by typeface or by the title "target" - new targets for the coming year. The Chairman makes the point, in his introductory statement, that "Although many of our targets are medium term we report progress against each here so that you can see how these are developing". However - and in common with others of the sector's CERs - many of the long-term targets are not given intermediate

milestones (a point made by the verifier of the Thames report). Moreover, although some targets are quantified, a number are not - another issue to which the verifier refers - and many are of the repeating kind ("Publish an externally verified review of our environmental performance at least once every two years").

The Anglian report specifically states that "We have stopped reporting some targets set out in previous reports where these referred to long-term objectives or on-going policy issues. We hope the targets set out below, which represent specific activities we intend to undertake in 1996/97, are more Specific, Measurable, Achievable, Realistic and Time-bound (SMARTer) than some we have reported hitherto."

3.7 Financial aspects of environmental management

Table A22 summarises information presented about financial aspects of environmental performance.

Considerable amounts of financial information are made available in many of the reports, but the size of the table reflects the wide variety of subjects and ways, rather than the inherent thoroughness of the treatment. In fairness, the same point could be made about most CERs. Indeed, the Anglian report specifically notes that it tries to begin to address recognised dissatisfaction with references to the financial aspects of environmental activity in CERs. It goes on to welcome the (then draft) ACBE guidelines on "Environmental Reporting and the Financial Sector" (Advisory Committee on Business and the Environment 1997), and commits the company to exploring how it might respond to them.

Certainly, in the water sector CERs, financial data are typically given in a relatively unstructured way, usually to convey the magnitude of investments in improving water, environmental and/or service quality, and sometimes the savings made by environmental measures, the fines and costs incurred through compliance failures, and the support given to external environmental initiatives.

The CBI guidelines refer to the inclusion of "...an indication of the amount of money spent on our environmental programme ...". Depending on what is meant by "programme" this could raise difficulty in trying to separate the environmental and "non-environmental" components expenditure, an action which might be thought to run counter to the general exhortation to make environmental management a routine part of management in general (see comments from the British Airways CER below).

It is perhaps for this reason that the PERI guidelines refer more specifically to the resources committed to certain specific types of environmental management activity, although even in these narrower areas the recommended integration of environmental management within overall corporate management may make separation difficult.

The Sustainability/UNEP Benchmark Survey also refers to "environmental spending", and like the WICE guidelines refers specifically to liabilities; it also refers to "market solutions, instruments and opportunities", including the amounts of "green taxes" paid and the "potential commercial opportunities" for market solutions to sustainable development problems. Again, separating out "green taxes" may prove problematic (perhaps particularly in the UK where

hypothecation of taxes has traditionally not been practised), and companies may not wish to identify environmentally-related market opportunities for commercial reasons.

The need to develop and apply a more structured approach to the way in which financial information is incorporated in CERs is widely recognised, and the ACBE guidelines mentioned above seek to begin that process. They deal to a considerable extent with the reporting of environmentally-relevant financial information in the Annual Accounts, but in respect of CERs they refer in particular to the needs for:

- cross references between the CER and Annual Accounts;
- quantification of the financial implications of reported performance measures.

As Table A22 shows, the former has yet to be done in water CERs, as in the majority of other CERs examined. The latter is more commonly undertaken, but coverage of financial implications is unstructured and incomplete.

For comparison, the treatment of financial matters in a number of CERs from a range of sectors is as follows:

- National Power's report (National Power 1996) gives limited financial data, covering investment in various types of cleaner generating plant since 1991, and the costs of a proposed scheme to convert Pembroke power station to burn emulsified hydrocarbon fuels such as Orimulsion.
- BP's report (The British Petroleum Company 1996) principally gives data on environmental releases and other aspects of environmental performance, with a summary table on environmental expenditure broken down into operating expenditure, capital expenditure, charge for environmental remediation and charge for decommissioning.
- British Airways' report (British Airways 1996) states that it is the company's aim to integrate totally environmental matters into its everyday management, such that "It could ... be considered inappropriate to isolate in financial terms those elements which are thought to be environmental ...", but goes on to provide a table identifying "... some costs, investments and revenues clearly attributable to environmental issues." The table lists about 30 issues, with associated financial figures ranging from £3.5 billion ("Acquisition of aircraft over next seven years ... significant part of the expenditure will relate to noise, emission and fuel efficiency ...") to £3000 ("Financial support for BAA's cycle challenge scheme."). The report also gives other financial information in the text - e.g. details of fines and costs.
- BT's report (BT 1996) includes very limited financial data - on its total procurement spend (£4.8 billion), support for external environmental projects and programmes (*ca* £1.2 million) and environmental fines and costs (£500 and £40, respectively). It does, however, discuss in some detail the work BT has commissioned and is undertaking on financial accounting and the environment, and offers a copy of a report assessing options for inclusion of more financial data in future reports (Tuppen 1996).

This examination of CERs from other sectors reveals that the water industry is not alone in its struggle to incorporate financial information in environmental reports in a coherent and useful

manner. The reader desiring further information on this topic is referred to the above-mentioned ACBE (Advisory Committee on Business and the Environment 1997) and BT (Tuppen 1996) publications, and also to The Body Shop's 1996 report (The Body Shop 1996) which contains an interesting exploration of an approach to assessing the environmental costs of the company's activities in relation to the value they add to the economy.

3.8 Support for external initiatives, and awards won

Table A23 summarises information presented about external initiatives supported by, and environmental awards won by, the companies.

All of the reports describe, in some detail at least, the external initiatives they have supported, many in some detail and with information about the nature and value of their inputs. Most refer to participation in conservation and habitat improvement programmes, and in educational and environmental citizenship initiatives - often, as might be expected, in the area of water.

With regard to awards won, a patchy picture emerges - though it is again not known if an absence of information relates to an absence of such awards, or to an omission of information.

In general, coverage of these areas typically compares similarly or well with that provided in CERs from other sectors, although quantification of support for external environmental initiatives is very variable.

3.9 Reporting and verification

Exactly half of the ten water utility CERs examined were externally verified, as shown in Table A24. This reflects the growing tendency for CERs in general.

It is important, however, to note that the nature of verification and the wording of verification statements varies from report to report, even with the same verifying organisation. Moreover, verification of CERs does not normally carry the same message as does external auditing of financial reports, because standardisation of report content and of verification has yet to develop as fully as in the financial sphere. In particular, relatively few verifications statements assure that the CER provides a "true and fair" picture of impacts and performance - although a number are moving towards providing such assurance, e.g. BT (1996).

That limitation is true of the verification statements in the water utility CERs reviewed here. Verifications typically address the accuracy of the presented data, and comment on the state of environmental information and management systems. They usually do not refer to possible omissions of significant impacts.

The verifier's report on Anglian's CER states that "We would welcome coverage of the issue of sea outfalls in the next report, in order to give a more complete picture of Anglian Water's operations and impacts", and is in that respect somewhat atypical. Outside the water sector, a somewhat comparable statement is made by a different verifier in relation to the BP CER (The British Petroleum Company 1996), and the verification statements (also by different verifiers from those of the water sector CERs) for BT (BT 1996) and National Power (National Power

1996) refer to "fair and balanced disclosure" and "statements and data ... are true and fair", respectively.

These observations are not intended as a particular criticism of CER verification, which is still in its infancy in comparison with external financial auditing (and which - unlike the latter - has to work with less well developed management systems in the environmental sphere). They are made to emphasise that verification does not always provide the CER reader and user with the assurance that the picture of environmental impacts presented is not only accurate, so far as it goes, but also adequately complete. In general, the verification statements for water industry CERs would appear to provide less assurance about the "fairness" (i.e. presumably completeness) of the coverage of significant impacts than do some of the statements in CERs from other sectors, but the extent of comparison and the use of different verifiers precludes a definitive comparison. Moreover, as environmental management systems and corporate reporting develop further within the sector, one might expect increasing assurance from the verification statements.

3.10 Stakeholder dialogue on the CER

Table A25 summarises the treatment of some basic aspects of stakeholder dialogue as they relate to CER production and use.

All the reports give a contact for feedback on the report, and the majority specifically invite it. A minority appear, however, to include a feedback form - though many of these are loose rather than detachable, giving rise to the risk that the form becomes lost.

The Northumbrian report very usefully includes two tear-out response forms, encouraging responses from multiple readers of the same report.

The overall conclusion is that the best examples within the sector fall only a little behind the most developed CERs in general - the BT report, for example, allows readers to request copies of other BT environmental publications, and to indicate their relationship to BT (BT 1996). However, the lack of feedback forms from the majority of water sector CERs is more significant than the possible improvements to the best.

Table A25 is not intended to cover all aspects of stakeholder dialogue addressed in the reports examined, but only those relating specifically and directly to the reports themselves. With regard to wider issues of stakeholder dialogue, it is noted that most of the reports refer to various forms of interaction with interested parties on aspects of corporate environmental performance. Thus, for example, the Wessex report refers to dialogue with the interest group Surfers Against Sewage, and many others refer to discussions with conservation bodies on relevant matters.

It would appear that only Anglian Water yet exploits the Internet as a medium for disseminating information on corporate environmental performance - or, at least, appears to be the only water company referring to this channel in its CER. The general popularity of this method of publishing and updating CERs is thought likely to increase quite quickly, though not to the extent of replacing paper reports (Sustainability/United Nations Environment Programme 1996).

3.11 Quantification

3.11.1 Quantitative presentation and traceability

It has been a common finding of this review that the same or similar impacts or issues are addressed quantitatively in different ways. The performance indicators may differ in terms of normalisation (see below), but the units of reporting even the basic data can also be different. Whilst this may not be a major problem in looking at, say, trends within a company, it makes comparisons and benchmarking - intra-sectoral and cross-sectoral - less straightforward.

Graphs and tables - though used extensively and well in a number of reports - are not used to the optimal extent in many, leaving the text to carry quantitative information in a rather unstructured way, difficult for the reader to assimilate and compare. Sometimes this seems to arise where data are limited (across a range of activities, or over time) and may therefore tend to improve as more complete data become available, particularly for the "non-water" issues.

Units were sometimes found to be missing from graphs and tables, or likely to be unclear (especially to a non-technical reader), headings could sometimes be more informative and at least one table did not clearly show that two of its rows summed to a third.

It is difficult, and usually impossible, to see from the reports themselves what conversion factors have been used to calculate derived data - e.g. emissions to atmosphere from fuel and energy use. In one case where data are apparently sufficient to work backwards, the Severn Trent report, it would seem that the factor used to convert consumption of pool electricity to carbon dioxide emission might have been of the order of 200 g C per kWh. A figure about 15% smaller - at least - might have been appropriate to the year in question, as the change in generation mix, including the move to Combined Cycle Gas Turbines (CCGTs) has reduced the carbon emissions per unit of generated power progressively and significantly since the beginning of the decade.

The same problem of changing emission factor has arisen in the Body Shop report, in which a reduction, of 15.5%, in the factor used has been noted for 1994/95 compared with previous years (though the earlier figures would also have been affected, as the change of 15% in emissions has not arisen over a single year).

The size of this difference is potentially significant in relation to possible carbon dioxide reduction targets, and illustrates a more general issue of the suitability and contemporaneity of the wide range of conversion factors and comparative data used in CERs from all sectors.

The Body Shop report includes not only a glossary of terms, but also a list of the bases for performance indicators (i.e. normalising factors) and the conversion factors which the company used in, for example, deriving emissions to atmosphere from electricity and fuel use. The Body Shop report is the only such example known to the author, and the practice is most valuable and should be emulated appropriately in other CERs.

3.11.2 Normalisation

Normalisation is the process by which a performance indicator incorporates a measure of output suitable to the environmental impact or resource use being indicated. Thus, a simple fuel consumption figure is a normalisation of litres of fuel used by kilometres travelled.

Normalisation is important in allowing for changes in outputs to be taken into account. Although the total levels of, say, emissions to atmosphere are important, levels of corporate activity and output fluctuate, so that normalised measures have a role to play (alongside un-normalised totals data) in providing data which can allow more meaningful comparisons to be made, both within a single organisation over time, and between organisations.

- For example, the Body Shop's report (The Body Shop 1996) provides both basic data and uses a number of normalising factors, such as
  - tonne manufactured (for bulk manufacturing), 1000 bottles filled (for production);
  - child day (for a family centre), employee (for offices);
  - m^3 treated (for waste water treatment).

Similarly, the British Airways CER (British Airways 1996) uses normalising factors which include:

- Available Tonne Kilometres (ATKs) - number of tonnes of capacity available for the carriage of revenue load (passengers and cargo) multiplied by the distance flown. (used for normalising the fuel efficiency of, and emissions from, aircraft, and also the total ground energy consumption.)
- Longhaul passenger out of London Heathrow (used to normalise water consumption for catering).

In virtually none of the water sector CERs examined is normalisation applied to such data as fuel use or air emissions - only in the Wessex report was a figure given for electricity use normalised to the volume of water supplied.

Normalisation (often through simple percentages) was practised in some areas, such as leakage and sample or works compliance. These two examples illustrate some important issues.

Firstly, the choice of normalisation factor may not be straightforward, as the earlier discussion of leakage in Section 3.4.1 indicated, with some companies using only percentages and others normalising variously to km (of mains)/day or to household/day.

Secondly, the reports do not seem to make much use of normalising approaches and performance indicators used in OFWAT levels of service reporting (Office of Water Services 1996b). Thus, for example, only Anglian Water uses the Equivalent Population (EP) basis for reporting sewage treatment works compliance failures, and only Welsh cites OFWAT performance indicators on water resources and supply. One potential value in using OFWAT (and DWI) indicators where they are appropriate would be the availability - over a run of years - of national and company comparative data collected and processed in a defined way.

3.11.3 Year-on-year comparison

There is considerable variation in the extent to which past years' data are given, both within and between the CERs. As a generalisation, data on the compliance of drinking water quality and sewage treatment works effluents is frequently given for up to six years (i.e. to privatisation in 1989), whereas data on such matters as energy use, transport and air emissions are often given for only the year in question (or a few years) if they are given at all. In only a few of the most complete reports are data on energy use and/or emissions given for 4-5 years.

Practice in other sectors regarding the presentation of past years' data varies quite widely. The Body Shop report (The Body Shop 1996) typically gives figures for the reporting and previous year, but also shows the percentage change, positive or negative. In the BT report (BT 1996), data for 3-4 years previous to the reported year are included for a number of indicators. In the British Airways report (British Airways 1966), data is often given for 4-5 years prior to the reported year (and occasionally even longer), and - as with the Body Shop - the percentage improvement or deterioration over the last year is given in the main table of indicators.

Presenting long runs of indicator data does give the reader an indication of the progress made over a period of years (provided a suitable performance indicator is used), and this is important when major investment and improvement programmes require periods of years for their completion. However, in areas where demanding targets are set for rapid improvement, greater emphasis on showing short-term improvements is logical. Showing percentage movements up or down in the last year, as do the Body Shop and British Airways reports, is helpful - especially if simple symbols are used to show progress with targets at a glance.

3.12 Data and information presentation

A common problem in conducting this review is the uncertainty as to whether the omission of an impact or issue means that it has been overlooked, or that it is considered not to be significant - or, in the case of (say) a DWI prosecution record, if there are no relevant entries.

It is recommended that all potentially relevant issues and impacts be addressed explicitly, even if the report goes on to state that the matter is considered not to be significant (with the reasons for that judgement) or that there are no relevant entries (e.g. because there have been no prosecutions). In that way, the reader is in no doubt as to the true position.

3.12.1 Readability and accessibility of information

A recent survey by the company C21 has criticised the readability of CERs (Becket 1997; C21 1997). It assessed ten reports (none from the water sector) by applying Fry's Readability Scale to three randomly selected passages of 100 words from each. All but two of the CERs required "the equivalent of a university degree to be able to understand the content easily".

In this review, five passages (average aggregate length 562 words) were taken from the continuous text of each CER. They came from selected pages, roughly equally spaced through the report from a randomly selected start page. They were analysed using the grammar checker of Microsoft Word v6.0, in terms of their Flesch Reading Ease scores. (The Flesch scores use the same basic measures as does the Fry Readability Scale.)

The individual results are not reported here, because the variability of scores from the five passages within each report precludes detailed examination of the differences between reports (a subject not discussed in the C21 study). However, the results for the 50 extracts as a whole show that water industry CERs, like those of other sectors, are not an "easy read":

Readability	Number of Extracts
Very Difficult	14
Difficult	19
Fairly difficult	14
Standard	3

(For illustration, the following paragraph rates as "difficult".)

What ultimately matters is not the absolute readability of CERs, but that their intended readers should understand them. Here lies a potential conflict: the need to transmit complex information to the most demanding readers, against the desire to make the CER accessible to wider groups - including the widest group of all, the General Public!

Approaches to resolving this conflict, and making the report more attractive, include:

1. Putting data tables in an annex to the main text.

2. Using simple graphs such as bar and pie charts.

3. Using symbols/font changes/panels to highlight targets and topics.

4. Breaking up the text with images.

5. Leaving plenty of "white space" around the text.

Table A26 shows that the first four of these techniques are used in water industry CERs, but there is further room for improvement.

For example, wider use of simple graphs would benefit many - the Severn Trent report is probably the best in this respect. Similarly, better use of space to make the text less daunting would also improve many of the reports - the Anglian report is a good example.

The potential conflict between conveying information and avoiding bulkiness is particularly acute for Dwr Cymru/Wales, which needs to produce a bilingual CER. The report resolves the problem well, but at the expense of "white space". A change in the balance between whole-page photographs and simple graphs could help, as the text has to carry much data despite the tables at the end.

3.12.2 Style

The style of CERs varies widely. At one end of the spectrum are those with many photographs; at the other, those with none at all - e.g. British Telecom and The Body Shop. Each approach has perceived advantages - summarised crudely as "interest" versus "seriousness".

As Table A26 shows, only the Northumbrian report follows the "plain" route, with just simple but interesting background designs. All the others, to varying degrees, use photographs. Many restrict photographs to operations, plant, staff, countryside and wildlife - although these can sometimes be large and take up much of the available space (e.g. Dwr Cymru/Wales and Yorkshire). Those which also serve as CAR reports - Wessex and Southern (?) - include people in recreational situations; again, some of those in the Southern report are large.

The development of the plain style helped distance serious, fact-rich CERs from "greenwashes". As the latter disappear there may be less perceived pressure to shun photographs. However, if these do not add significantly to an appreciation of the subject matter they may still attract adverse comment. ("We know what a river/heron/child/bather looks like, use the space to tell us more about your effluents/leakage/energy use".)

"Dull Uniformity" or "Bright Variety"

A desirable trend to comparability of content could result in dull and uniform CERs - giving the data needed by the most serious users, but repelling others. This is, however, a challenge for designers to use layout and visual material (photographic or other) to reinforce corporate identity and distinctiveness.

3.13 Benchmarking

The environmental data presented in CERs can be used in three main ways :

1. To compare with standards, to check compliance with legislative and regulatory requirements.

2. To compare with targets, and with equivalent corporate data for previous years, to examine performance trends and progress.

3. To compare with equivalent data from other companies (usually in the same sector), to compare performance (or trends in performance) in similar areas of activity and impact.

As legislative and regulatory checks are performed by regulators, there is little need to include data for the first of these purposes alone. Thus, trend examination and intra-sectoral comparison represent the most important potential uses of the environmental performance data presented in CERs. Indeed, unless stakeholders use them to make such comparisons, CERs are likely to become extinct - as would befit expensive white elephants.

It is therefore instructive to ask to what extent the producers of the reports make such comparisons themselves. With regard to targets and trends within the company, the findings of Sections 3.6 (targets) and 3.11.2 (year-on-year comparison) are germane. In this section we

consider the extent to which the reports themselves include elements of intra-sectoral comparison or "Sectoral Benchmarking".

As Table A27 shows, the answer is "not much". Only Anglian Water attempts to do so on a sustained basis, including "Industry Norm" figures in a number of its tabulations of performance. Wessex does the same with a table of bathing water compliance data only and, while there may be one or two isolated cases of comparisons in the text which are not included in Table A27, the overwhelming conclusion is that sectoral benchmarking is not practised to a significant extent.

This is perhaps rather surprising, for at least two reasons:

1. Many of the companies have produced CERs for several years.

2. Sectoral performance comparisons are a feature of DWI and OFWAT reporting, and include some comparative data on environmental performance (see, for example, OFWAT 1996; pp 39-40).

In future years, more of the CERs may include sectoral comparisons. This will, however, require a greater convergence of content, performance indicators and reporting practices if it is to be really effective.

3.14 The future and Sustainable Development

Table A28 summarises the references made to sustainability.

It is very difficult to identify and summarise information which reflects effectively the extent to which a CER addresses this issue. Indeed, the measures used in Table A28 do little more than indicate whether or not the concept of sustainability is acknowledged in the reports.

This does not represent a particular problem in practice, however, because treatment of the subject is limited even in those of the water sector CERs which give it most attention - the water industry, like many others, is evidently still at an early stage of its thinking about the implications of the concept for its operations in the medium to long term.

What one might hope to see, in the not too distant future, is a discussion - in some of the sector's more developed CERs, at least - of what a sustainable water and sewerage system might look like. The corresponding concept has been touched upon in the BT CER (BT 1996) in respect of a sustainable telecommunications system, which:

> "... might result in a network powered by renewable energy sources, non-oil derived polymeric conductors in place of metal, and a growing use of light as the transmission medium, leading eventually to all optical communication networks."

This glimpse of a possible future BT is followed by the words "Clearly, BT, like most of society, has much to do!", and a discussion of the ways in which technological developments have occurred in the telecommunications industry, and can be expected to make major contributions to sustainable development in future. In particular, the discussion considers how

the industry may help others towards sustainability through "dematerialisation" - e.g. the paperless office - and through teleworking.

A water industry environment manager might smile ruefully at this ability to harness such a concept as dematerialisation, given the activities of his industry in collecting, storing and pumping enormous volumes of water - all too material! - to the points where it is needed from the points where it falls to earth (often rather far apart). However, the point of considering here the BT report's treatment of the sustainability concept is to emphasise the need for the industry to explore "sustainable water and sewerage system" scenarios, in order to gain insights into the changes which the industry might instigate - or be pressured to make - as society moves in the direction of greater sustainability.

Exploration of "sustainable scenarios" might, for example, involve considering the extent to which moves away from fossil fuels and resulting higher energy, and therefore water, costs might change such factors as:

- the balance between "one pass" water use and recycling, and between local collection and use of water for certain purposes and the current "centralised" collection, treatment and distribution system;

- water consumption itself, and patterns of consumption, resulting from changes in travel costs and increased distance working.

The path towards Sustainable Development is no doubt served by many of the measures being taken by the water and other industries to reduce energy consumption and waste, but none of the reports yet discusses what the larger and longer term consequences of following that path could be for the water sector. (In this respect, they are probably not different from typical CERs from other sectors.) Although the results of an attempt to do so would no doubt be highly speculative and uncertain - and arguably even more difficult to derive than for a company like BT - they would surely be of considerable interest and value both to their stakeholders and to the companies themselves.

4. DISCUSSION

4.1 The water sector CERs

4.1.1 Coverage

All ten large water companies in England and Wales now publish CERs, and at least four of the other water companies have just started to do so (The Water Businesses of the General Utilities Group 1997). The UK water sector is therefore well served in this respect, probably with a better percentage coverage than most other industry sectors (except perhaps the other utility sectors).

However, the environmental coverage of those CERs is less satisfactory, in that it ranges from a broad examination of environmental impacts to a narrow focus on water-related issues. The more narrowly focused and less comprehensive CERs fall some way below the emerging *de facto* standards of best corporate environmental reporting practice. By contrast, the more comprehensive reports compare reasonably well with those of many other major companies, though none is yet amongst the most advanced group of CERs worldwide, judged by comparison with those of, say, BT and the Body Shop.

4.1.2 Quality of reports

Considering CERs across the sector as a whole, the principal areas of weakness are as follows.

- Scope of coverage, especially beyond water issues (e.g. air emissions)

  Only two of the reports contain extensive data on emissions to atmosphere, and there are differences between them regarding the sources and substances included. Only one report appears to address the emission of carbon dioxide from wastewater treatment. Of those reports which do not contain comprehensive air emissions data, a number give data on fuel and energy use, from which air data could be derived.

- Quantification of non-water impacts

  As one might expect, water-related issues are dealt with more comprehensively and, most importantly, more quantitatively. Whilst it might be argued that quantification of air emissions, say, is of less importance to the water industry than to some other sectors, it should be borne in mind that (i) as conventional water impacts (e.g. sewage effluents) are improved, stakeholder focus may shift to other impacts and (ii) with its concern about the potential effects of global warming on water resources, the industry should set an example to others in assessing and reporting its contribution to greenhouse gas emissions.

- Variation in performance indicators and lack of normalisation to outputs

  Even for water-related impacts, there is considerable variation in the performance indicators chosen and reported - e.g. regarding leakage and compliance with standards. In wider

environmental areas, the variation (where indicators are actually reported at all) is even greater, and normalisation to output measures is very limited.

- Traceability of data and conversion factors

  It is not often clear what conversion factors have been used to obtain derived performance data, and none of the CERs has yet adopted the Body Shop practice of including a section on conversion and comparison factors used in the report. (The Northumbrian report refers to a publication available free of charge describing the calculations of environmental effects included in the CER itself, but this was out of print when requested.)

  The issue of the appropriateness, contemporaneity and traceability of conversion and comparative data is one of relevance to all sectors' CERs, as few appear to provide much detail on the values they have used.

- Specificity, quantification and dating of targets

  This is an area of some weakness, across the sector as a whole, referred to as such in more than one verification report. Again, however, it is also an issue for many other CERs from other sectors.

- Lack of comparison with overall sector performance

  In parallel with the limited use of output normalisation, there is little evidence (outside the Anglian report) of any systematic comparison of performance with the peer group of water utilities.

- Clarity of presentation

  Whilst many reports are well laid out and interesting, many do not make sufficient use of tables and graphs and thus make the text carry too much data. This may be related to the lack of historic and/or comprehensive data forcing a rather haphazard inclusion of available data, rather than better structured quantitative reporting.

  It would seem sensible for water companies, if they choose to combine CERs and CAR reports, to state explicitly that they are doing so (as does Wessex) - or present summary information in the CER and make explicit, contextual reference to the CAR report if they choose to keep the two types of report separate. When reports are combined, it is important that coverage of wider environmental matters is not impaired by the need to address CAR issues in greater detail than would be done in a conventional CER.

- Financial aspects of reporting

  In common with other CERs, inclusion of financial information is variable and often poorly structured, and increasing attention to this matter is to be expected across all sectors.

- Sustainable Development

  At one level, all environmental improvements reported should - in principle, at least - move towards the goal of sustainable development; in that sense, all the reports address the issue of sustainability.

  At a more specific level, not all the CERs even mention the concept and none yet develops, in any detail, a discussion of its potential longer term consequences for water industry operations. In fairness, the same is true of virtually all other CERs which the author has read, though some are beginning to do so.

4.1.3 Future development

The CERs make clear the commitment of the companies to their continued production and improvement. Thus, it is to be expected that their omissions and limitations will be addressed in future.

4.2 Relevance of CERs to Environment Agency Responsibilities and Activities

4.2.1 Regulatory duties

It might be argued that, because CERs are unlikely to contain much more information on such matters as compliance and prosecutions than is available through public registers and other public domain sources, their production has limited potential to impact upon the Agency's activities in such areas such as issuing and enforcing consents, authorisations, and licences.

The finding that the coverage of compliance and prosecution issues in water industry CERs is highly variable in scope and depth might support such a view. Indeed, even if all the CERs were to address these matters in the manner of the most detailed in each area, they would still contain less data than are available in the public domain - simply because the presentation of detailed statistics is turgid and inimical to the intention of CERs to present relevant information in a readable way.

However, it is not the extent of detail but the breadth of the readership which determines the potential importance of CERs in this area - that is, the fact that they should, at their best:

- make known the company's record of compliance with legislative and regulatory requirements to stakeholders who are unlikely to read the public registers or many of the other public domain sources;

- provide the opportunity - and spur - for the company to provide information on the steps taken to prevent repetition.

Thus, even though relevant compliance data and information are already in the public domain, their presentation in the CER can provide support for the Agency's regulatory function by making them more widely available.

Additionally, however, by focusing attention upon environmental management systems and practices in general, and providing the framework for reporting upon their development and efficacy, CER production should foster the development of measures which underpin Agency work on fostering good practice in pollution prevention - e.g. in such areas as spill prevention.

4.2.2 State of the Environment reporting

The Environment Agency has a responsibility to produce a state of the environment report, and in many of its other responsibilities the collation and use of environmental data and information have key importance. The question arises, therefore, of the extent to which information in CERs assists the Agency in these tasks.

The first point to make is that much of the data and information presented in water industry CERs is the same as, or a summary of, that which it must present to its various regulators - including, principally, the Agency itself, OFWAT and DWI. In such regulated areas, therefore, the production of CERs does not add to the stock of information already in the public domain and available to the Agency.

This is of course also true for other industry sectors which are subject to extensive environmental regulation, but it is noteworthy that the water sector is subject not only to environmental regulation by the Agency, but also to product quality regulation by DWI, to conservation, access and recreation regulation and reporting by DoE, and to customer service and financial regulation by OFWAT - all of which have environmental relevance. In the case of OFWAT particularly, this has been clearly demonstrated in the continuing debate on water supply and conservation in the aftermath of the drought of 1995.

Thus, because of the industry's regulatory status, history and evolution, much information on - for example - the financial aspects of its environmental improvement programmes is both clearly identified as such, and in the public domain. In this respect, it is not a particularly good model for other sectors in which environmental regulation is not accompanied by similar product and performance regulation, which are more subject to direct market forces.

However, it is also apparent that in the broader context of environmental impact and the aspiration towards sustainable development (however that may be defined in detail), the provision in CERs of data and information on non-regulated matters (e.g. resource consumption, including particularly energy consumption and consequent emissions to atmosphere) is of potential importance and value. However, for that value to be realised - for the benefit of the companies themselves in benchmarking, and to the wider stakeholder interest - data and information on such issues need to be more widely available within the sector, and more consistently collated, evaluated and reported. In this respect, the CERs of the water industry are not unrepresentative of those of other sectors, in which similar problems prevail.

4.2.3 Fostering good environmental performance and promoting sustainable development

If the current scope is limited for the Agency to use CERs in the regulatory and state of the environment reporting arenas, there is a much greater potential for their use to help meet wider

Agency goals to foster good environmental performance and promote the goal of sustainable development. In this respect, CERs perform a number of relevant functions.

They encourage the development and maintenance of sound environmental management techniques and environmental improvement technologies. They do so within the reporting companies themselves, and by example, in other organisations as well. For it must be borne in mind that readers of CERs are likely to include the financial sector, suppliers, customer companies - and also competitor and other, possibly unrelated, organisations which are probably not always considered as stakeholders.

CERs are therefore - actually and potentially - effective channels not only for the dissemination of information about environmental management practices and technologies, but also powerful means for the spreading of concepts and standards - formal and informal.

4.2.4 Managing and reporting on Environment Agency environmental performance

Finally, it must not be forgotten that the Environment Agency itself has both indirect and direct environmental impacts, and that this review of CERs, the CERs themselves, CERs from other sectors and the various other documents cited in this report may be helpful to the Agency in developing and maintaining its own infrastructure for environmental management and performance reporting.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General

- The UK water sector is well advanced compared with many others in terms of the percentage of its companies publishing CERs, with the ten large water companies of England and Wales now all doing so, and at least one group of the other water companies recently beginning to do so.

- The coverage, content, detail, performance indicators and style of the water sector CERs vary considerably. Coverage ranges from a broad examination of environmental impacts and resource usage to a narrow focus on water-related issues, with the scope of the broader reports being generally comparable to the CERs of major companies in other sectors.

- The most comprehensive water sector CERs compare reasonably well with those of many other major companies, though none is yet amongst the most advanced group of CERs worldwide. The less comprehensive reports fall some way below the CER standards now becoming expected.

- Taking the sector as a whole, the principal areas of weakness are:

  - scope of coverage, especially beyond water issues (e.g. air emissions);

  - quantification of non-water impacts;

  - variation in performance indicators;

  - lack of normalisation to outputs;

  - traceability of data and conversion factors;

  - specificity, quantification and dating of targets;

  - lack of comparison with overall sector performance;

  - clarity of presentation; and

  - financial aspects of reporting, which is still a problem for CERs in general.

- The commitment of the companies to producing and improving their CERs is clear, however, and it is to be expected that these issues will be addressed in future reports. Indeed, the evolution of CER production in the water sector specifically, and across reporting companies in industry generally, shows that once companies begin to produce CERs their further development is often very rapid. Indeed, some of the more comprehensive reports within the sector are only the first or second produced by the companies concerned.

5.2 Relevance to Environment Agency activities

5.2.1 Regulatory duties

- CERs do not provide more information about regulated activities than is available to the Agency through the conduct of its regulatory functions. However, they do make regulatory compliance records accessible to a wide range of stakeholders who do not normally obtain this information from the public registers.

- CERs are public expressions of commitment and intent. By giving them greater attention, the Agency would be leveraging that commitment to improved performance (including compliance), and thereby helping to forward its own regulatory objectives.

- By encouraging the development and maintenance of environmental management technologies and techniques within reporting companies, and providing the framework for reporting upon their development and efficacy, CER production should help the Agency foster good practice measures for pollution prevention.

- There is a potential role for CERs in any move towards the development of self-monitoring for regulatory purposes, though the primary issues here relate to assuring that the suitability and consistency of verification activity for regulatory purposes, rather than to reporting particularly. There is currently considerable variation in the coverage of, and statements of, verification in the water sector reports examined (of which 50% are externally verified). Greater consistency of approach towards report verification may be expected under the Eco-Management and Audit Scheme, EMAS.

- CERs may also be useful to the Agency in providing background to specific facilities; although site-based reporting is not a feature of water sector CERs, for good reasons, it is much more common in other sectors (e.g. the chemical industry).

5.2.2 State of the Environment reporting

- Across the UK economy as a whole, the current state of Corporate Environmental Reporting would not appear to allow sufficient aggregation of information for CERs to be a major data source for overall "State of the UK Environment" Reporting. A limited number of companies produce CERs, and there are considerable variations in the content and detail of reporting. However, the situation may change in the medium to long term as more companies produce CERs, especially as those that do so tend to be large organisations in sectors having considerable impacts.

- In particular sectors (such as water) there may be sufficient coverage for sectoral aggregation, provided that there is a suitable convergence of content, performance indicators and reporting practices. This could have potential benefit to the Agency in facilitating more detailed "State of the Environment" reporting across a sector (and, potentially, to the sector itself for benchmarking purposes - see below).

5.2.3 Fostering good environmental performance and promoting sustainable development.

- The production of CERs is a potentially powerful support for the Agency's wider objectives of fostering improved environmental awareness and performance, and promoting the goal of sustainable development.

- CERs, in addition to encouraging sound environmental techniques and technologies within reporting companies, are mechanisms of communication and concept transfer. They perform this function not only to the primary intended readerships, but also to those charged with environmental management in other companies, who might not always be regarded as stakeholders. Thus, they are important as engines of environmental improvement outside, as well as within, their originating companies.

- Existing CERs are not grasping the objective of sustainability in a convincing way. A useful first step would be to consider what a sustainable water utility might look like, and then to assess, as quantitatively as possible, how current performance compares with that ideal.

5.2.4 Managing and reporting on Environment Agency environmental performance

- The CERs reviewed here, and others from different sectors, should be of value and relevance to the Environment Agency itself in developing its own environmental management and reporting practices, covering the impacts of its own activities.

5.3 Environment Agency roles in reporting

- Given the potential support CERs offer to the Environment Agency in the achievement of its goals, it would be appropriate for the Agency to consider how it might work in partnership with industrial, commercial and public sector reporters (and potential reporters) to improve their coverage and quality, and therefore value.

- The Agency should give clear attention to the reports and work to give them a higher profile amongst corporate stakeholders. This would provide support to reporting companies - and a stimulus to those not currently publishing CERs to do so, and to be open about their environmental performance and committed to its continual improvement.

- Good general guidance on CER production is already widely available, and there already exist surveys of, and awards for, CERs. There is, however, a need for more detailed guidance on a number of aspects of reporting - particularly in regard to the derivation and use of performance indicators - and the Agency could consider ways (sectoral and cross-sectoral) in which it might encourage, and participate in, measures to fill this gap.

- With specific regard to water industry CERs, lack of consistency limits their usefulness as tools for benchmarking and performance improvement - for the benefit of both the industry and its stakeholders, including the Agency. The Agency should seek to encourage an appropriate measure of consistency, an endeavour which the industry itself may well

consider timely, in the light of its commitments to environmental performance (see, for example, The Water Services Association 1997).

- The Agency could also consider producing its own environmental report for the *water* sector as a whole, using the information available from the companies and other sources. This would help to achieve the objective of greater consistency amongst the sector CERs themselves, and encourage the companies in their own consideration of sustainability by presenting an Agency view of what a sustainable water utility might look like, and in what directions the industry might need to move to more closely approach that ideal.

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The prompt provision of copies of their Corporate Environmental Reports by the companies identified, both within and outside the water sector, is also much appreciated.

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Note: The Water Utility CERs examined are listed in Table 2.1, and are not referenced again here.

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APPENDIX A DETAILED TABLES OF FINDINGS

General key to main tables

- Y - indicates "Yes, subject addressed in CER" (if qualified, by "Y1" etc - see below).
- A blank indicates "No".
- Notes to tables are indicated "1, 2" etc. If a row refers to a number (e.g. of pages devoted to a subject in the CERs) no note is given in that row so no confusion should arise.
- Notes may refer to several cells in a CER column; if so, the different sub-notes are separated by a semi-colon.
- Years are given variously as 95, 00, 93/94 etc. Dates beyond 2000 are given as "03" etc, so no confusion with notes should arise.
- Hierarchies in rows are indicated by indentation.

Bold row descriptors are headings for subsequent rows, and the corresponding row boxes are blank but do not signify "No".

Table A1 Broad scope of water utility CERs

	Intended Coverage		Issues Addressed		Remarks
Report	**Water Utility**	**Other Operations**	**Drinking Water Quality**	**Health & Safety**	
A96	Yes	Anglian Water International	Yes	No	Appears to cover Group (though coverage of all Subsidiaries and Joint Ventures unclear - e.g. Alpheus Environmental, Grafham Carbons, Gibb Anglian, American-Anglian).
N95	Yes	Northumbrian Environmental Management; Entec Europe; The Montec Group	Yes	Yes	Appears to cover entire Group (though coverage of all Subsidiaries & Joint Ventures unclear - e.g. Analytical and Environmental Services (AES) and IMASS).
NW95	Yes	None	Yes	No	Appears to be restricted to utility operation
ST96	Yes	Biffa Waste Services; Severn Trent Water International; Severn Trent Property; Severn Trent Technology; Severn Trent Systems	Yes	No	Appears to cover entire Group.
S96	Yes	None	No	No	Emphasis on Conservation - effectively a CAR report with some additions.
SW96	Yes	Haul Waste; ELE Group; T J Brent	Yes	Yes	Appears to cover entire Group (though coverage of all Subsidiaries, Associated Companies and Joint Ventures unclear - e.g. Peninsula Properties, Pell Frischmann Water, Societa Italo-Brittanica del Aqua Srl (SIBA)).

continued

	Intended Coverage		Issues Addressed		Remarks
Report	**Water Utility**	**Other Operations**	**Drinking Water Quality**	**Health & Safety**	
T96	Yes	Thames Waste Management; Brophy; Morgan Collis Group; Simon Hartley; T M Products; PCI Membrane Systems; Ashbrook and Leopold; Thames Water International	Yes	No	Appears to cover entire Group (though coverage of all Subsidiaries, Associated Companies and Joint Ventures not clear - e.g. Thames Water International).
CW95	Yes	Welsh Water Information Technology Services; Welsh Water Transport Services; Hamdden; Welsh Water Industrial Services	Yes	No	Covers Water Services Division, but not Engineering Services Division and Infrastructure Services Division, of Welsh Water plc.
W96	Yes	UK Waste	Yes	Yes	Appears to cover entire Group (though coverage of Wessex International Water Services is unclear).
Y96	Yes	Yorkshire Environmental	Yes	No	Appears to cover entire Group (though coverage of some Subsidiaries is unclear - e.g. Babcock Water Engineering).

Table A2 Background information

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Group business										
Sales/Turnover		Y		Y3			Y			
Employees		Y								
Business structure								Y		
Water utility business										
Map	Y	Y			Y	Y			Y	Y
Area					Y					Y
Sales		Y		Y3						
Employees		Y								
Water services										
Population served	Y	Y	Y2	Y	Y	Y	Y		Y	Y
Properties served	Y		Y2		Y	Y				
Number of works	Y		Y		Y	Y				Y
Length of mains	Y		Y		Y	Y				Y
Average distributed volume	Y		Y	Y	Y	Y			Y4	Y
Sewerage services										
Population served	Y	Y	Y2	Y	Y	Y	Y		Y	Y
Properties served	Y		Y2		Y	Y				
Number of works	Y	Y1	Y	Y	Y	Y	Y		Y	Y
Length of sewers	Y		Y		Y	Y			Y	Y
Average volume			Y		Y	Y				Y
Other businesses										
Description	Y	Y		Y		Y	Y	Y	Y	Y
Geographical spread	Y	Y		Y		Y	Y			Y
Sales		Y		Y3						
Employees		Y							Y	

Notes:

1 "Major" ones listed
2 "Household customers" assumed to be same as "population served"
3 With sales back to 92/93
4 Graph with average, maximum and minimum daily volumes, by month

Table A3 Top management commitment and policy statement

Issue	Report									
	A96	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Policy Statement	Y	YL	R	Y	Y	Y	Y	Y	YP	Y
Top Management Commitment	MD & CBEC	C	QD	C & CE	MD	C & DTEA	C	MD	C	C
Environment committee *	YB	YU		1					YIB	YIB

Notes:

*	Various titles
B	Board
C	Chairman
CBEC	Chairman of Board Environment Committee
CE	Chief Executive
DTEA	Director of Technical and Environmental Affairs
IB	Independent Board or equivalent
L	Lengthy
MD	Managing Director
P	"Principles"
QD	Quality Director
R	Reference to policy in previous report, "... essential elements ... unaltered"
U	Unspecified
1	Independent Board Environment Advisory panel to be set up

Table A4 Environmental management

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
EMS (BS7750/ISO14001)	YP	YCW		YCW		YTW	ND		YP	YW
EMAS	YD	YT					ND		YP	
ISO 9000 series	YCW	YW				YW		Y	YP	
NAMAS		YCW				YC				
Audit/review programme		Y	Y	Y					Y	Y5
EIA on new developments	Y1	Y2			Y	Y		5	Y	Y5
Emergency procedures							Y			
Supplier assessment		Y2	Y3		4	YT		Y		Y
Employee awareness/training	Y	Y	Y	Y		YT			Y	Y
Suggestion/award scheme	YT			Y		Y	Y			

Notes:

P Pilot or trial
T Target
D Defer decision
C Certification/registration obtained for some part
W Working towards certification/registration for some part(s)
1 Target to produce modified procedure
2 Audit of new investment screening/conservation planning arrangements described; lack of progress on, and future plans, for supplier assessment discussed
3 Initiatives on environmental purchasing policy commenced
4 Mention of policy commitment on environmental aspects of purchasing and of "briefs and specifications" to suppliers
5 Mention of environmental database to assist assessment by employees; reference to auditing in Policy; environmental assessment of water sources

Table A5 Water resources and abstraction

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Total volume abstracted						Y				
as % of licensed volume						Y				
Average distributed volume	Y		Y	Y	Y	Y			Y4	Y
Total into distribution	Y								Y	
Unlicensed water										
Volume	Y					Y				
as % of total abstraction	Y					Y1	Y2			
No. abstraction licences			Y				Y2	Y3		
No. non-compliant			Y			1	Y2			
% non-compliant								Y		
Previous years - to	90/91						94			
No. of sites with drought orders			Y			1				5
Progress on target	Y						Y2		4	
Target set							Y2			5

Notes :

1 Compared with one day's regional supply; drought orders mentioned but not quantified

2 % compliance with annual limits on groundwater and surface water abstractions tabulated; % exceedances in two cases of non-compliance given in text; text notes that daily limits exceeded at some sites but no further details given; targets set for certain identified abstractions, and met, but believed to be continuing targets

3 Number of abstraction points; tabulates OFWAT levels of service indicators on water availability (DG1), low pressure (DG2), unplanned supply interruptions (DG3) and water use restrictions (DG4)

4 Graph with average, maximum and minimum daily volumes, by month; discussion of actions on three low flow rivers

5 Drought orders mentioned but not quantified; reference to environmental assessments of abstractions; targets to continue the assessments and to complete and consult on a long-term strategy for supplies

Table A6 Leakage and demand management

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Leakage rate stated	Y		Y	Y	Y	Y	Y		Y	Y
as % of distribution input	Y		Y	Y	Y	Y	Y		Y	
compared with UK mean	Y									
as volume/yr				Y						
as volume/day	Y		Y							Y
as volume/household/day			Y			Y1				
as volume/km/day								Y		
shown in table/graph	Y		Y	Y	Y	Y				
Previous years - to	90		92/93	92/93	89	92/93		93/94	Y3	Y4
Progress on leakage target	Y		Y	Y	Y					
New leakage target	Y		Y	Y	Y	Y	Y2		Y3	Y
Customer "Leakline"			Y	Y	Y		Y			Y
Number of leaks repaired			Y						Y	Y
Response time to leaks			Y							
Progress on response target										
New response target							Y2			
Progress on metering target	Y		Y							
New metering target	Y					Y				

Notes :

1 Target in % input and in volume/household/day
2 Long-term target to halve leakage against October 1995 baseline in text but not in table of targets; targets for both response and repair given, both being redefined
3 Compared only to rate at privatisation
4 Compared to previous year only

Table A7 Energy and fuel, non-transport

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Electricity used	Y	Y1	2	Y3		Y4	Y5	Y6	Y7	Y8
Electricity generated	Y	Y1	Y2	Y3		Y4	Y5		Y7	Y8
from sludge digestion	Y	Y1	Y2	Y3		Y4	Y5	6	Y7	Y8
from other sources		Y1	Y2	Y3		Y4		6	Y7	Y8
Fuel oil used		1	2	3			Y5			
Kerosene used							Y5			
Natural (mains) gas used		Y1	2	Y3			Y5			
Methane produced		1	2	Y3		4	5		7	8
Methane used		1	2	Y3		4	5		7	8
Energy target(s) set	Y	Y				Y	Y			Y

Notes:

1 Total energy use, believed to refer to electricity only, broken down by major businesses of the Group; total energy consumed broken down between external and (total) internal sources (e.g. hydroelectric and CHP plant at seven sewage treatment works); "gasoline" and "diesel" assumed to refer only to road transport fuel; planned energy from waste schemes described

2 Data on total of energy from 18 CHP plants powered by methane from sewage sludge digestion and four hydroelectric plants (and increase - from previous year?); details of decrease in overall energy consumption in previous year (absolute and percentage), followed by details of increase in the year under report (absolute and percentage), attributed to additional pumping during drought

3 Data on electricity use and own generation broken down by business and use; data on energy sources for own generation (biogas, landfill gas and hydroelectricity); use of natural gas broken down by business; use of electricity and natural gas given for 1992/93, 1993/94, 1994/95 and 1995/96

4 Data on electricity use broken down by business and use; data - data (amounts and numbers of sites) on own energy generation broken down by type (biogas, hydro and landfill gas); plans for wind generation described

5 Data on electricity, gas, fuel oil and kerosene use by Thames Water Utilities Limited for reported year and previous year; details of energy from CHP plants (assumed powered by methane from sewage sludge digestion) at 23 sites, for years 191/92, 1992/93, 1993/94, 1994/95 and 1995/96 with percentage increases from 1991/92 baseline

6 Total energy usage for 1992/93, 1993/94 and reported year 1994/95, with note of 2% increase over 1993/94; numbers of sites using other sources (CHP, digester gas, solar, wind, water) but not amounts; note that Welsh Water Industrial Services manages hydro-electric turbine site generating the equivalent of 3.5% of Dwr Cymru's "contracted capacity", and plans for other sites

7 Electricity used for water supply and sewage treatment given for current year; notes that both increased but no data for previous years; figures for sewage treatment exclude some local authority agency sites returned; total electricity generated from sewage sludge fermentation gas, but no data for previous years; data on electricity generated at UK Waste landfills (installed capacity and energy produced in reporting year only) but not on total use by UK Waste

8 Electricity purchased (presumed for entire Group) and data on non-fossil generation (by CHP and windpower) tabulated for 1990/91, 1991/92, 1992/93, 1993/94, 1994/95 and report year 1995/96; numbers of sewage works with CHP and of turbine generator sites given, with total non-fossil output as percentage of total consumption

Table A8 Energy and fuel, transport

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Petrol used		Y2		Y4		Y5	Y6			9
Diesel used		Y2		Y4		Y5	Y6			9
Gas used		Y2								
Fleet size	Y1	2				Y5	Y6			
Mileages	Y1			Y4		Y5				9
Transport emissions		Y2		Y4						
Other	1	2	3	4		5	6	7	8	9

Notes:

1 Figures for total commercial vehicle fleet, and percentage of diesel vehicles in total fleet (cars and commercial vehicles); information on fleet reduction, driver training and possible use of compressed natural gas (CNG) as alternative fuel

2 For Northumbrian Water Limited, all commercial vehicles stated to use diesel and be subject to engine and exhaust analysis, no lease cars use leaded petrol, and percentage given of lease cars using diesel; figures for emissions (for Northumbrian Water Limited and principal subsidiaries) from transport of carbon dioxide, nitrogen oxides and sulphur dioxide (and possibly for hydrocarbons and, for some subsidiaries, VOCs) apparently included in total emissions but not separately quantified; trials of low fuel tipper and biodiesel fuel mentioned

3 Mention only of "commenced initiative" regarding transport policy

4 Group use of fuels, breakdown by fuel type, and mileages and diesel use broken down by business; figures for emissions (for Severn Trent Water and Biffa combined) from transport of carbon dioxide, nitrogen oxides and sulphur dioxide thought to be included in total emissions but not separately quantified; mention of large Biffa fleet and programme to reduce fuel use

5 Total fleet mileage, breakdown of fleet by vehicle and fuel type, total use of leaded and unleaded petrol, and diesel; possible reversal of trend to diesel; research on RME ("biodiesel") mentioned

6 Total fuel use broken down by fuel type, fleet size broken down by vehicle and fuel type, all with current and previous years' figures; reduction in use of super unleaded petrol noted

7 Brief details of fleet fuel types, description of tyre re-moulding/re-grooving and of oil and battery recycling, description of five measures to reduce mileages

8 Mention of regular servicing and of trials of "green diesel"

9 Mileage and average fuel consumption, details of achieved and further potential savings of diesel fuel from waste compaction, and of servicing and satisfactory emissions testing, all for White Rose Environmental only; mention of pilot projects on homeworking and possible resulting travel reduction

Table A9 Other resources

	Report									
Issue	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Chemicals						4				
Sheets A4 used								Y		
Sheets A3 used								Y		
Computer paper used								Y		
Total waste arisings *			Y2				Y			
Paper						Y4				
Office				Y3						
General solids		Y								
VOCs (POCP)		Y1								
Liquids/Oils		Y1								
Plastics		Y1								
Recycling data Total				Y3				Y6	7	8
Office waste			2	Y3						
Paper		Y1					Y	Y		
Plastics		Y1					Y			
Oils/Solvents		Y1	2					Y		
Printer/toner cartridges						4	Y			
Plastic cups							Y			
Recycling schemes	Y							Y6		
Waste audits	Y									
Progress on waste/use targets	Y						Y5			Y
New waste/use targets						Y4	Y5			Y
No. of employees on E-mail								Y		
Homeworking										Y8

Notes:

* Wastes from corporate operations, not wastes handled by waste management companies in the Group

1 Group data - slightly different details for individual companies

2 Total waste arisings thought to include sludge; total disposal cost given; various waste disposal routes and initiatives, but not quantitative data on most of them

3 Data on group office waste, including amount recycled; also data on waste recycled by Biffa; data back to 92/93

4 Note about investigations into more effective coagulants; paper use broken down by businesses; note on toner cartridge recycling; investigation of waste minimisation/recycling and development of action plan; various initiatives for waste reclamation by Haul Waste

5 Progress on various waste initiatives reported, some targets are, or are believed to be, continuing

6 Various waste recycling investigations/schemes discussed

7 Various recycling schemes discussed and guidelines to managers mentioned

8 Discussion of resource conservation and recycling plans

Table A10 Releases to air

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Carbon dioxide		Y1		Y3						
Nitrogen oxides		Y1		Y3						Y4
Sulphur oxides		Y1		Y3						Y4
Methane		Y1		Y3						
Hydrocarbons		Y1								
Chlorinated solvents		Y1								
VOCs		Y1								Y4
Other		1	2							Y4

Notes:

1 "Potential and actual emissions" broken down by major businesses of the Group, but not by type and source (e.g. direct from transport, indirect from electricity use); chlorinated solvents ODP (Ozone Depleting Potential) and VOCs POCP (Photochemical Ozone Creation Potential) figures given but not clear if figures are total masses or actual depletion and creation potentials; also figures for HCFC (ODP) "sealed in"; Entec targeted to produce report in 1995/96 explaining basis of calculations (target date not given)

2 Data only for incinerator compliance failures (for hydrogen chloride, hydrogen fluoride and VOCs), and description of some future plans relating to sludge incineration

3 Total emissions (including both Severn Trent Water and Biffa activities) of carbon dioxide, nitrogen oxides, sulphur oxides and methane broken down by source - e.g. carbon dioxide from "fuel, oil and gas" use (not separated), methane burning, indirect from electricity use, biodegradation and incineration); presumably "gas" excludes own methane used as fuel; change in carbon dioxide, nitrogen oxides and sulphur oxides figures from previous year, with explanations of changes

4 Reported annual releases of particulates, heavy metals, cadmium, mercury, hydrogen chloride, hydrogen fluoride, sulphur dioxide, nitrogen oxides, volatile organic carbons and dioxins and furans given for three sewage sludge and two clinical waste incinerators, and of carbon monoxide for two sewage sludge and two clinical waste incinerators; carbon dioxide equivalent of windpower energy usage also given

Table A11 Conservation, access recreation, heritage and archaeology

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
No. of pages on subjects	1	1	2		9	4	1	2	13	2
CAR Report referenced	Y1	Y2	Y2	Y2	YTR?	Y2	Y	Y	YTR	
Regional maps										
Conservation					Y				Y	
Access and recreation					Y				Y	
Heritage/archaeology					Y					
Summary tables										
Conservation	Y					Y4		Y	Y	
Access and recreation					Y3		Y		Y	
Conservation										
Management plans	Y		Y						Y	
Wildlife initiatives	Y	Y	Y		Y	Y	Y	Y	Y	Y
Progress on targets				Y			Y			
Targets set		Y	Y			Y	Y5			Y
Access and Recreation			Y		Y	Y	Y	Y	Y	Y
Progress on targets							Y			
Targets set							Y5			Y
Heritage/architecture	Y				Y	Y4	Y	Y	Y	
Progress on targets	Y						Y			
Targets set	Y					Y	Y5			

Notes :

TR The report also serves (or appears to serve) as the Conservation, Access and Recreation (CAR) Report

1 Also reference to Guide to Heritage publication

2 In general list of publications, not referenced in text

3 Under Reservoirs and Access; tabulated material on access and recreation for one reservoir

4 Under Environmental stewardship; table giving numbers of specific sites of conservation, landscape and cultural interest

5 At least some of the targets seem to be continuing ones

Table A12 Nuisance

	Report									
Issue	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Abatement notices served							Y			
Reason for notice							Y			
Status of notice							Y			
Sewage odour	Y	Y	Y			Y		Y	Y	
Numerical data	Y1	Y2				Y1		Y10		
Sewage nuisance	Y									
Numerical data	Y1									
Noise	Y							Y		
Numerical data	Y1	Y								
Dust							Y			
Numerical data							9			
Foul flooding - property	Y	Y	Y	Y				Y		Y
Numerical data	Y1	Y3		Y4,5				Y11		Y12
Foul flooding - other	Y	Y4	Y4	Y6	Y	Y7				
Numerical data	Y1	Y4	Y4	Y6		Y7				
Visual impact	YP					YP8			YP	

Notes:

1 Numbers of written complaints

2 Numbers of complaints, works and "persistent" works

3 Percentages of properties deemed at risk from surcharged sewers, and numbers of properties affected by a severe storm period, with company response

4 Number of Combined Sewer Overflows (CSOs) and details of programme and investment to improve

5 Number of properties flooded by sewage

6 Numbers of CSOs - total, unsatisfactory at year end, improved in year, details of programme to improve

7 Numbers of CSOs - total, unsatisfactory, improved in last two years, numbers in programme to improve over 1995-2000

8 Numbers of sites subject to major landscaping work in year

9 Details of prosecution for breach of abatement notice

10 Numbers of written complaints, number in previous year, number of plant improved in year

11 Number of properties deemed at risk of internal flooding from inadequate sewers, equivalent number for previous year

12 Targets for reduction in "number of properties flooded due to sewer blockages or equipment failure".

P Management programme described

Table A13 Drinking water quality

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
"Overall" compliance % *	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Previous years - to	91/92	92	90	90	93	90	91	93	89	90
Shown in table/graph	Y	Y	Y	Y	Y	Y	Y		Y	Y
Compared with UK mean	Y								Y	
Microbiological compliance		Y	Y		Y			Y	Y4	Y
Number of determinands		2	1		Av			2	2	1
Previous years - to			90		93			92	91	90
Shown in table/graph		Y	Y		Y			Y	Y	Y
Compared with UK mean					Y					
Phys-Chemical compliance		Y	Y		Y	Y		Y	Y4	Y
Number of determinands		23	3		Av	5		17	10	1
Previous years - to			90		93	94		92	91	90
Shown in table/graph		Y	Y		Y	Y		Y	Y	Y
Compared with UK mean					Y					
Undertakings/relaxations	Y	Y				Y			Y	
Number	Y								Y	
Subjects									Y	
% supply covered	Y									
Discussion of standards		Y1								
Drinking water targets set	Y	Y				Y	Y3	Y	Y	
Complaints						Y			Y	
Number						Y			Y	
Subjects						Y			Y	
DWI incidents/notifications			Y			Y			Y	Y
Number			Y			Y			Y	Y
Outcomes/prosecutions				2		Y			Y	Y5
Pipe replacement	Y	Y	Y		Y	Y		Y	Y	Y
Target	Y				Y	Y		Y		

Notes :

* Percentage of all tests compliant

Av average only

1 Discussion also of issue of oestrogenic substances

2 No heading, but might consider under table of convictions, and no drinking water cases?

3 Some at least of the relevant targets are continuing or long term

4 Failures at customer taps; determinands not specifically mentioned said to comply

5 Note that there was none

Table A14 Prosecutions - pollution

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Section in contents list		Y				Y				Y
Section with own heading	Y	Y	Y	Y		Y	Y		Y	Y
Tabular layout	Y			Y		Y	Y		Y	
Number of prosecutions	Y	Y	Y1	Y		Y	Y	Y	Y	Y
Prosecuting Agency	Y	Y	Y						Y	
Date	Y	Y		Y		Y			Y	Y
Court	Y									
Nature of offence	Y	Y	1	Y		Y	Y		Y	Y
Fines	Y	Y				Y	Y		Y	Y
Costs	Y	Y				Y	Y			Y

Notes:

1 Breakdown of number and general nature of "pollution incidents" and of numbers of regulatory cautions, and of outstanding cases.

Table A15 Wastewater consent compliance performance - sewage treatment works

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Shown as table/graph	Y		Y	Y3		Y	Y	Y	Y	Y
No. of sewage works	Y	Y		Y		Y	Y	Y	Y	Y
Equiv. population EP	Y									
No. with numerical consents		Y	Y2				Y	Y		
No. non-compliant	Y	Y	Y2	Y3			Y	Y	Y	Y8
% non-compliant	Y				Y4	Y5	Y	Y7	Y	Y8
EP non-compliant	Y									
% of EP non-compliant	Y									
Previous years to	90/91	93/94	89		Y4	93/94	94/95	92/93	89/90	94/95
Compared to UK norm	Y1									
Compliance overall	Y		Y	Y3		Y5	Y	Y	Y	
LUT			Y			Y5		Y	Y	
UT			Y			Y5		Y	Y	
DS			Y				Y		Y	
DC						Y		Y		
Consented loads - List 1		Y								
Consented loads - List 2		Y								
Storm tanks compliance			Y							
Progress on targets	Y	Y					Y		Y	
Target set	Y	Y		Y3		Y5	Y6	Y7	Y	7

Notes:

EP Equivalent population
LUT Look-Up Table, sanitary determinands
UT Upper Tier or Absolute Limits, sanitary determinands
DS Dangerous Substances
DC Descriptive Consents

1 In terms of % of works non-compliant
2 Figures given separately for Look-Up Table compliance and Dangerous Substances compliance
3 Compliance figure in text thought to refer to % works compliant, but not absolutely clear; graph (back to 1990) shows "proportion of sewage works effluent samples meeting standards"; target is for tighter standards at a given number of works by the year 2000
4 Current compliance compared with that for 1989/90 only
5 % "sanitary" compliance assumed to represent combined LUT and UT compliance; overall compliance also compared with percentage of "satisfactory" works pre-privatisation in 1989; target set in terms of % works compliance by stated month and year
6 Some targets long term and some believed to be continuing
7 Overall works compliance also compared with 1989/90; target in terms of % works compliance over the next five years
8 Compliance calculations by previous company method and by now-adopted Environment Agency method; "target" is undated commitment to produce satisfactory treated effluent at works through investments and improvements

Table A16 Wastewater consent compliance performance - water treatment works

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
No. of works			Y							
No. with numerical consents			Y							
No. non-compliant			Y							
% non-compliant			Y							

Table A17 Discharges to sewer

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Number consented						Y				
Total volume treated			Y1			Y				
Loads consented - List 1		Y								
Loads consented - List 2		Y								
No. of samples taken						Y			Y	
No. failed						Y			Y	
% compliance										Y
Previous years						94/95			89/90	90/91
Prosecutions brought			Y				Y2		Y	
Previous years									89/90	
Cautions/warnings issued			Y						Y	

Notes:

1 With breakdown of COD by industrial sector

2 With details of fines and costs

Table A18 Sludge

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Total amount produced	Y	Y		Y	Y	Y	Y		Y	Y
Previous years to	90/91			92/93					90/91	91/92
Breakdown of disposal	Y		Y	Y		3	Y	Y5	Y	Y
Farmland	Y		Y	Y		Y	Y	Y	Y	Y
Landfill	Y		Y	Y					Y	Y
Sea	Y		Y				Y		Y	Y
Incineration	Y		Y	Y					Y	Y
Dedicated/sacrificial sites	Y									
Land reclamation				Y						
Other			Y				Y		Y6	
Previous years to	90/91									91/92
Compared to UK norm	Y									
% of sludge treated	Y			Y		3				
Previous years to										
Compared to UK norm	Y									
% Compliance with Regulations or DoE Code				Y1			Y	Y	Y	
Previous years to							91/92	93/94	Y6	
Progress on targets	Y	Y					Y		Y	
Target set	Y	Y			2	Y3	Y4		Y	Y

Notes:

1 No figure, but statement that "Our latest analytical data show that we comply with the high standards required"

2 No formal targets but extensive discussion of future strategy and plans

3 Detailed breakdown by sludge type (digested liquid, digested cake, undigested liquid, undigested cake, pellets); target relates to reducing vehicle travel for sludge handling

4 Continuing target

5 Implication that all goes to agriculture

6 Other includes "Biogran" product, for which use breakdown given; reference to 100% compliance "as in previous years"

Table A19 Bathing waters compliance

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Number of bathing waters	Y	Y	Y	2	Y	Y	2	Y	Y	Y
Number compliant (or not)	Y	Y	Y	2	Y3	Y	2	Y5	Y	Y
% compliant (or not)	Y	Y	Y	2	Y3	Y4	2		Y6	
Previous years - to	90/91	90	90C	2	93	93	2	93/94	89	
Details of improvement works	Y	Y1	Y	2	Y	Y4	2	Y	6	Y
Discussion of standards		Y1		2			2			

Notes:

C Compliance histogram (numbers of beaches complying only)

1 Mention of Marine Conservation Society's Good Beach guide raising questions about bacterial standards and target to publish brochure in 1996 explaining the issues

2 Believed to be no designated bathing waters in area

3 Compliance tabulated against both EU mandatory and guide standards

4 Percentage compliance quoted for 1995 and 1993 only; number of unsatisfactory outfalls abandoned in 1995/96 quoted

5 Number of coastal waters designated under the EC Bathing Water Directive "... judged at risk of failing mandatory directive standards because of our outfall discharges"; reduction in this number since previous year; describes voluntary joint venture to sample 75 non-designated waters; total numbers of sea outfalls and numbers of unsatisfactory sea outfalls tabulated for current and two previous years

6 Comparison with England and Wales percentage compliances; discussion of possible causes of two observed compliance failures other than treated sewage effluent discharges, of further Environment Agency investigations, of research by Forum for the Future on behalf of Wessex Water which will include consultations with Surfers Against Sewage and other interested parties

Table A20 Existing objectives and targets and progress against them

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Section in contents list	Y	Y		Y			Y			8
Section with own heading	Y	Y		Y			Y			8
Reference to/from text	Y									
Identified by symbol or style	Y	Y							Y	
Many quantified?	1	2	3	4	5		Y		7	
Dated (at least to year)	Y1	Y	3	Y			Y		7	
Status/progress clear?	1	Y	3	4	5		Y6		7	

Notes:

1 Many targets relate to such matters as investigations, evaluations and systems/procedures development, and are therefore not quantified; some have deadlines beyond the year but no intermediate targets for the year; no simple (e.g. symbolic) representation of status/progress - e.g. reader has to infer that the leakage reduction target was not met

2 Many targets relate to such matters as investigations, evaluations and systems/procedures development, and are therefore not quantified; status/progress indicated by symbols

3 Relatively few targets; some reference to long-term targets without intermediate targets for the year

4 Most targets not quantified, even when required company to "Increase" or "Reduce" some measure of performance; outcomes were often quantified, however

5 Very few targets; some reference to long-term targets without intermediate targets for the year

6 Most clear, but some uncertainties - e.g. leakage targets stated as "being redefined" but no details of performance against original targets

7 Very few targets; some reference to long-term targets without intermediate targets for the year

8 "Targets" in "Commitments and Targets" section consist of what would normally be considered policy elements, rather than performance targets

Table A21 New/continuing objectives and targets

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Section in contents list	Y	Y		Y		Y	Y7			10
Section with own heading	Y	Y		Y		Y	Y7			Y10
Reference to/from text	Y1	Y				Y	7			10
Identified by symbol or style	Y	Y				Y		8	9	Y
Many quantified?	1	N	3	Y	5	6	7	8	9	10

Notes:

1 Targets in text and in own section; many relate to such matters as investigations, evaluations and systems/procedures development, and are therefore not quantified; some have deadlines beyond the year but no intermediate targets for the year

2 Many targets relate to such matters as investigations, evaluations and systems/procedures development, and are therefore not quantified

3 Relatively few targets; some reference to long-term targets without intermediate targets for the year

4 In contrast to the previous year, a substantial number of targets quantified

5 Very few targets; some reference to long-term targets without intermediate targets for the year

6 Many targets relate to such matters as investigations, evaluations and systems/procedures development, and are therefore not quantified

7 Same table as that giving progress on previous targets; Chairman makes point that many are medium term but that interim progress is given; however, many lack intermediate milestones and many are not quantified (points noted by the verifier); although a number of specific dated targets are marked as achieved, there seems to be little or no reference to new ones, although some are clearly continuing

8 About five clearly identified targets, all relating to water and wastewater matters, and most for a five year period with no intermediate targets by year

9 Very few targets; some reference to long-term targets without intermediate targets for the year

10 See previous table regarding use of the term "targets"; for the next year "aims" (essentially "targets" in the sense most widely used) given at ends of sections - many relate to such matters as investigations, evaluations and systems/procedures development and are therefore not quantified

Table A22 Financial aspects

	Report									
Area	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Refs. to annual accounts										
Capital/investment spend	Y	Y2		Y			Y	Y	Y	
figures to	90/91	90/91	95	89	95/96	Priv	89	94/95	95/96	
Maintaining service levels	Y									
Enhancing service levels	Y									
Supply/demand balance	Y									
Quality improvements	Y									
Management/general							Y			
Sewage treatment							Y	Y		
Sewage biosolids							Y			
Sewerage							Y	Y		
Water resources							Y			
Water treatment							Y	Y		Y
Water distribution & leakage							Y			
Drinking water		Y			Y	Y		Y		
Waste water		Y2	Y			Y				
Landfills									Y	
Future investment details										
Meeting increased demand	Y									
Improving levels of service	Y									
Maintaining assets	Y									
Higher environment standards	Y									
Leakage reduction							Y			
Investment plans	Y							Y	Y	
Total amounts to	95/96							00	00	
Operating costs										
Energy						Y				
Waste management			Y							
Sewer screenings								Y		
R&D spent in reported year	Y			Y		Y				
Environmental fines & costs	Y					Y	Y		Y	Y
Environmental savings										
Energy generation							Y			
Waste management/recycling							Y			
Customer, from water saving										Y
From incinerator heat recovery										Y
Of electricity, from new IT				Y						

Continued

	Report									
Area	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Specific programme costs										
Water quality improvement			Y			Y				
Coastal sewage treatment					Y			Y5		Y
STW improvement for RQOs	Y									
STW improvement									Y	Y
CSO improvement		Y	Y							
Restocking after pollution							Y			
Ex gratia flooding payments		Y								
Drought measures						Y				
Leakage						Y				Y
New reservoir					Y					
Water infrastructure changes							Y		Y	Y7
Water treatment plant										Y
Lead pipe replacement								Y		
Water mains rehabilitation			Y							
Sewer network			Y							
Estuary improvement		Y								
Sludge treatment		Y								
Reed bed STWs	Y									
Laboratory upgrading									Y	
Customer-led improvements									Y	
Incinerator upgrading										Y
Other environmental improvement	Y									
Liabilities										
To landfill tax	Y		Y3						Y3	
To contaminated land	Y									
Support to external environmental projects	Y	Y2					Y4		Y6	
Environmental accounting initiatives	Y	Y		Y						

Notes:

Priv Water industry privatisation

1 Quality improvements for drinking water and waste water separately

2 Principally for water utility business, but some figures for investment in Northumbrian Environmental management; figure for sewerage investment broken down further; some financial details of external support

3 General mention only of landfill tax

4 Spend by company and by company plus external partners on habitat enhancement schemes

5 Note that most of next five years' investment to go on coastal sewage treatment

6 Fines only; numbers of, and average contributions to, supported external initiatives

7 Total values of some improvement schemes quote, but timescales not given

Table A23 External initiatives and awards

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
External initiatives										
Conservation and habitat	Y	Y			Y		Y	Y	Y	Y
Regeneration/heritage		Y			Y				Y	
Litter							Y	Y		
Environmental management		Y		Y						
Education/citizenship		Y	Y	Y		Y	Y	Y	Y	Y
Hazard campaigns				Y						
Specific initiatives:										
Going for Green							Y			
Business in the Environment				Y						
Groundwork Trust							Y		Y	Y
CBI EBF					Y					
Global Action Plan							Y			
ICC BCSD		Y								
MIBE Forum		Y								
Agenda 21 programmes		Y								
RSPB										Y
Local/Regional Initiatives								Y		Y
Awards won										
Number	Y						Y			
Subjects:										
Education							Y			
Recycling	Y									
Aesthetic design							Y			
Conservation					Y		Y			Y
Groundwork partnership							Y			
Conservation publication					Y					
Environmental report	Y									
Energy use	Y						Y			
Access							Y			
Regeneration/heritage	Y						Y		Y	Y

Table A24 Verification

	Report									
Impact Area	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Verification	Y			Y		Y	Y	Y		
Verifiers	ASP			ERM		PA	ASP	ERM		
Recommendations	1			2		3	4	None		

Notes:

ASP Aspinwall and Company
PA PA Consulting Group
ERM Environmental Resources Management
1 Refine targets and cover issue of sea outfalls
2 Complete implementation of previous year's recommendations, especially for better documentation of data collection and reporting process, extend auditing programme
3 Use data to prioritise impacts and focus on most important targets and plans in the "non-compliance areas" (believed from context to refer areas where compliance is not the issue, not to areas of compliance failure), and progress environmental management systems
4 Qualitative medium/long term targets to have specific interim performance measures, targets should be quantifiable and their achievement capable of annual review

Table A25 Stakeholder feedback on the CER

	Report									
Issue	**A96**	**N95**	**NW95**	**ST96**	**S96**	**SW96**	**T96**	**CW95**	**W96**	**Y96**
Contact name(s)	Y	Y	Y	Y	Y	Y	Y	Y	TO	YC
Contact address	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Contact telephone		Y		Y	Y		YG	Y		
Contact fax		Y						Y		
Contact E-mail/Website	Y									
Feedback Invitation	Y	Y	Y	Y		Y	Y	Y		YC
Feedback form	Y	YA	Y	Y						

Notes:

A Attached tear-out
C Only Chairman's name and invitation in his Foreword
G General, charged
TO Titles only

Table A26 Presentation and style

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
List of Contents/Index	Y	Y	Y	Y	Y	Y	Y		Y	Y
Simple graphs	Y	Y	Y	Y		Y	Y	Few	Few	Y
Tables	Y	Y	Few	Y	Y	Y	Y	Y	Y	Y
Tables in annex	Y			Y			Y	Y		Y
Symbols/font changes	Y	Y				Y	Y	Y	Y	Y
Photographs/pictures *										
None		Y								
Operations/plant/staff	Y		Y	Y	Y	Y	Y	Y	Y	Y
Customers			Y	Y						Y
Sludge use(rs)					Y			Y		Y
Countryside/wildlife	Y		Y	Y	Y	Y	Y	Y	Y	
Children **, celebrities, bathers					Y				Y	

Notes:

* Excluding covers

** Other than in identified context of corporate awareness/educational activities

Table A27 Benchmarking

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Sector comparisons	Y1				2				3	

Notes:

1 For some performance data; many "Industry Norms" stated "Not known" or "No meaningful comparison can be made"

2 UK comparisons on drinking water quality

3 Percentage bathing water compliance in England and Wales for years 1989 to 1995 given with Wessex figures

Table A28 Sustainability

Issue	Report									
	A96	N95	NW95	ST96	S96	SW96	T96	CW95	W96	Y96
Mention	Y1	Y2		Y3		Y4				Y5
Discussion of implications		Y2		Y3						5

Notes:

1 Reference in Foreword and Policy

2 Numerous references

3 Reference in Introduction; reference to helping towards sustainability through partnerships with communities, businesses and regulators; verification statement headed "Our indicators of sustainability"

4 Reference in Introduction

5 Reference in Policy; Advisory Panel aim to link sponsorship more directly to sustainable water management