

NATIONAL RIVERS AUTHORITY

AN EVALUATION OF  
DISCHARGE AND CONSENT COMPLIANCE POLICY  
A BLUEPRINT FOR THE FUTURE

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February 1991

ENVIRONMENT AGENCY



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Environment Agency Information Centre Head Office Class No <i>N.R.A...Water...Q:</i> Accession No <i>AUXO.....</i>
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**DISCHARGE CONSENT AND COMPLIANCE POLICY  
A BLUE PRINT FOR THE FUTURE**

**1 INTRODUCTION**

**1.1 General**

Following publication of the Report on Discharge Consent and Compliance Policy in July 1990, the National Rivers Authority (NRA) invited comments on the report from selected parties, representing a number of dischargers. In order to assess the comments, the NRA commissioned Binnie & Partners to assist in summarising the responses and evaluating the possible costs to dischargers (see briefing letter in Appendix A).

**1.2 The work was split into two phases:**

**Phase 1**

The work in Phase 1 was centred on the possible cost implications and comprised two parts:

- (a) An assessment of the 33 recommendations of the report to identify those which had significant cost implications for dischargers;
- (b) A specific assessment of the cost implications for a discharger including the purchase, installation and maintenance of equipment required to fulfil the obligations arising from Recommendations 17, 24 and 26 (continuous monitoring).

**Phase 2**

Work in Phase 2 involved the comments made by the parties representing dischargers. The work was split into two parts:

- (a) A summary and categorisation of the comments received on each recommendation;
- (b) An evaluation of those comments which specifically referred to cost implications falling on dischargers.

**Preliminary submission**

**1.3 A submission was made to the National Rivers Authority in November 1990. The submission included preliminary versions of the tables, graphs and figures included with this report.**

**1.4 In January 1991 Binnie & Partners were asked to extend their evaluation and comment on the Water Services Association's letter with specific reference to the costs included for recommendations 8 and 14. Details are given in Appendix B.**

## 2 PHASE 1

### 2.1 Part 1A

An assessment of the cost implications to dischargers of each recommendation was made and is summarised in Table A.

Table A refers to a number of supplementary tables, graphs and figures. Each of these is used to illustrate the possible costs associated with a particular recommendation.

The nature of the recommendations and the number of discharges makes it impossible to make accurate cost predictions without considerable additional information. It is however, possible to make general predictions on the possible costs of a number of the more significant recommendations. These costs are presented in Tables 1.1 to 1.5.

#### Table 1.1

This table and associated graph show the predicted cost implications for Recommendation No 5 - Provision of standby facilities for marine outfalls. The graph also shows the cost of installing standby facilities at a later date.

The cost increases are generated from two existing installations and five theoretical works.

#### Table 1.2

This table and associated figure show the cost implications of the purchase and installation of continuous monitoring equipment (Recommendations 10, 11, 16, 24, and 26) at all sewage treatment works that have a numeric consent. Based on the system shown in Figure 1, the total cost could be as high as £1020 million. This cost could however be reduced if existing facilities can be re-used.

The cost of maintenance of this facility is difficult to assess. An indication of cost for personnel, chemicals, BT line leasing and other disposables could however be as high as £15,000 per annum per works.

#### Table 1.3

Recommendations 13, 18, 19, 30, 31 and 32 have cost implications associated with Liaison. These costs are difficult to quantify as the Liaison requirements are at present unknown, as is the salary of a designated person.

If however, a salary of £20,000 pa is assumed with half a day liaison per month per discharge, the total annual liaison cost is approximately £1000 per discharge. If this figure is then applied to 6500 sewage treatment works, the total cost to the Water Companies is approximately £6.5 million per annum.

#### Table 1.4

Recommendation 14 discusses the application of ammonia consents to all discharges. Table 4 summarises the costs assuming that 50% of sewage treatment works are changed from non-nitrifying to nitrifying and the average works population equivalent is 8,000. If this is the case then the total costs will be approximately £5700 million in capital cost with £137 million in annual operating cost.

Graph 4 illustrates these costs on a works basis for 3 differing ammonia consents.

## Table 1.5

This table shows the cost per visit incurred by a discharger when attending an NRA sampler on site. (Recommendations 17 and 25). The costs vary from £26 to £64 per visit. If one visit per week is assumed, then the total cost on the 6500 sewage treatment works is £8.8 to £21.6 million per annum.

### 2.2 Part 1B

A specific assessment of the cost implications of Recommendation 17, 24 and 26 (Continuous monitoring) has been made using Tables 1.2 and 1.5.

The costs of these recommendations are as follows:

**Recommendation 17** - Provision of access to the NRA at any time. The cost of this recommendation could vary between £26 and £64 per visit depending on the time of the visit. As illustrated above, this would equate to about £20 million per annum for dischargers.

**Recommendation 24** - Provision of continuous monitoring. Provision and installation of continuous monitoring equipment is estimated to cost the discharger £213,000 per discharge plus £127,000 per 10 discharges. If these costs are applied to the 4344 sewage treatment works with numeric consents the total cost is approximately £980 million.

Maintenance of the monitoring facilities is estimated at £15,000 per annum per facility, a total of £65 million per annum for 4344 STW's.

**Recommendation 26** - Independent Certification and dual monitoring of continuous monitoring facilities.

The costs of Independent Certification of equipment are not expected to be high. The cost of dual monitoring is estimated at £8,000 per works excluding NRA costs. The total cost based on 4344 works is £34 million to the dischargers.

## 3 PHASE 2

### 3.1 Part 2A

The comments made on the recommendations have been summarised and categorised in three tables.

Table 2.1 deals with the responses from each of the respondents.

Table 2.2 shows the information from Table 2.1 rearranged by recommendation or general type.

Table 2.3 consists of a series of histograms which display the number of responses to a recommendation and may be interpreted as an illustration of the level of disagreement.


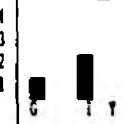
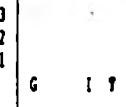
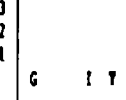
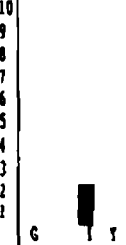
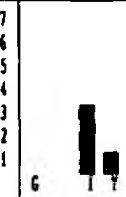

### 3.2 Part 2B

An evaluation of those comments which refer specifically to cost implications has been made. The estimated costs of these recommendations are covered in detail in Phase 1 and are summarised below:

Recommendation	Cost per average sewage treatment works (8000 population equivalent)
5	£174,000 to £609,000/works
6	not quantifiable at this stage
8	not quantifiable at this stage
9	not quantifiable at this stage
10	£226,000/works
11	£226,000/works
12	none assuming no additional restrictions applied
13	£1000/annum/works
14	£1,750,000 capital/works £42,000 operating/works
15	none assuming adequate correlation between determinants
16	£226,000/works
17	£26 to £64/visit
18	£1000/annum/works
19	£1000/annum/works
20	none significant
22	none unless more sampling is required
24	£226,000/works
25	£26 to £64/visit
26	£8000/works
27	no immediate costs
29	not quantifiable
30	£1000/annum/works
31	£1000/annum/works
32	£1000/annum/works

Some of the above recommendations have cost implications which though similar are not mutually exclusive. Where this is the case (eg recommendations 17 and 25) the full costs have been given against each recommendation.

## TABLES

PHASE 1: COST IMPLICATIONS FOR DISCHARGERS (a) ASSESSMENT OF RECOMMENDATIONS		NOTE: Where NRA costs have been indicated cost implications have not been considered further.		Cost Responses G General or NRA I Implied cost Y Specific cost	
Recommendation	Cost implications to Discharger	Comments			
REC 1	The NRA should commit necessary resources to analysing and publishing data on the number of consents, the discharges they regulate, and the degree of compliance.		NRA costs.	5 4 3 2 1	
REC 2	The NRA should review layout and guidance of application forms for consents, so that the wording helps applicants understand what information is required of them. The form must also include a reminder that change of discharge character or quantity should be notified to the NRA.		Dischargers already have to complete forms and notify changes. NRA costs.	4 3 2 1	
REC 3	Numeric consents should contain a rubric to the effect that consents do not give statutory defence against pollution in respect of any constituent for limits which are not specified.		NRA costs.	3 2 1	
REC 4	NRA regional offices should prepare a leaflet on areas where septic tanks do and do not require consents.	No costs to the discharger, unless non - consented areas are required to have consents in the future.	NRA costs.	3 2 1	
REC 5	Non numeric consents must often be specific about the facilities and processes from which the discharge is to be made. This applies especially to marine outfalls.	Costs: Increased planning and design to provide the NRA with the data they require. Duty/standby facilities to ensure continuous compliance. Increased maintenance costs. Implies additional storm overflow facilities may be required.	Assume partial duty/standby facilities (only) exist. eg auto screening /bypass channel. See Table 1 and graph 1	10 9 8 7 6 5 4 3 2 1	
REC 6	For all types of consents maintenance obligations and the keeping of maintenance records should widely be standard conditions. Where necessary these obligations should cover the facilities associated with the discharge.	Costs: Setting up APPROVED maintenance practice and register. Training staff in the use of the register. Increased maintenance.	Costs cannot be quantified until specific details are known.	7 6 5 4 3 2 1	
REC 7	For simple descriptive consents it may be appropriate to include standard wording, so that a discharger recognises that any development likely to change the character or scale of discharge must be notified to the NRA.			4 3 2 1	

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REC 8	All numeric consents should include absolute limits for all relevant determinands.	Costs dependent on the relationship between the absolute limit, 95tile, 80tile and 50tile. The legal framework may have to recognise that the absolute limit may be exceeded on occasion despite the discharger having taken all reasonable precautions.	NRA costs. 95 - 80 - 50 percentile relationship is available (or can be made available) 95 percentile - absolute limit relationship is not. This relationship will vary for each discharge. Recommendation assumes no cost increases.	4 3 2 1	G
REC 9	For all environmentally significant discharges the NRA should promote the application of 80 percentile limits and where appropriate 50 percentile limits in addition to the absolute limits. These should be related to a clearly stated rolling time period.	See 8 above.	NRA costs. Define "Environmentally significant discharges" The choice of "rolling time period" may result in increased sampling frequencies. See 8 above.	6 5 4 3 2 1	G
REC 10	For discharges where the effluent or their constituents may build up in receiving waters, consents should include limits on loads. Conditions requiring discharger to maintain records of mass of substance discharged, and where appropriate notify the NRA when a stated proportion of total mass has been discharged, may be desirable.	Monitoring costs: - equipment - materials - labour - transport Other costs: - flow balancing - independent checks - maintenance	NRA costs. See Table 2 and figure 1.	7 6 5 4 3 2 1	G
REC 11	All numeric consents should include absolute limits for instantaneous effluent flow. Where flows are particularly variable it may be necessary to include additional limits to total volumes discharged over specified longer periods.	Monitoring costs: - equipment - materials - labour - transport Other costs: - flow balancing - independent checks - maintenance	NRA costs. See Table 2 and figure 1.	7 6 5 4 3 2 1	G
REC 12	Consents for discharges influenced by rainfall need to be as specific as possible in the nature of flows authorised for discharge under dry and wet weather conditions. Reference to design criteria for flows going to full treatment, storage and overflows should be explicitly mentioned in consents for new and refurbished overflows.	None to the Discharger assuming no additional restrictions are imposed.	NRA costs.	5 4 3 2 1	G
REC 13	The NRA should gather systematic data on pollution caused by temporary discharges which are unconsented. The NRA should then promote the need for discharges to be consented	Liaison costs. Then depending on requirements, possibly significant costs.	NRA costs. Charges for granting consents? Will there be additional requirements to protect receiving waters? See Table 3.	6 5 4 3 2 1	G
REC 14	In new and reviewed consents there should be consistent application of limits for ammonia in all discharges to which this is relevant.	Capital and associated costs for extension of non - nitrifying works to nitrifying. See graph.	Paragraph 77 implies some existing discharges will have ammonia consents imposed. No cost implications unless non - nitrifying works are required to nitrify. See Table 4 and Graph 4.	5 4 3 2 1	G

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REC 15	The NRA should gather systematic data necessary to evaluate the suitability of TOC and turbidity as new determinands for inclusion into consents in place of BOD and suspended solids.	None, assuming adequate correlation between determinands.	NRA costs. Surface water discharges with high flows may be affected. NB Continuous BOD monitoring equipment is now available.	4 3 2 1 G	
REC 16	For environmentally significant discharges of complex composition where not all important constituents can be individually identified and numerically limited, consents should specify a toxicity limit and appropriate toxicity test.	New testing costs: - equipment - materials - labour - transport	NRA costs. See Table 2 and figure 1.	8 7 6 5 4 3 2 1 G	
REC 17	The NRA should include in all relevant consents conditions to allow access and facilities for flow measurement and taking of samples by the NRA at whatever time it judges appropriate.	Costs may be incurred in providing access for the taking of samples by the NRA particularly when access is restricted by HSE requirements. Cost of staff to accompany NRA samplers.	NRA costs. See table 5.	6 5 4 3 2 1 G	
REC 18	Whilst the NRA does not generally inform the discharger of the results of samples, there should be regular dialogue between the NRA and the discharger covering satisfactory and unsatisfactory results.	Liaison.	NRA costs. Liaison requirements need definition. See table 3.	4 3 2 1 GY	
REC 19	Sampling programmes need to be economical but frequencies must be adequate for results to provide the basis for decision or enforcement. To promote efficiency, comparison between sampling cost and frequency will be made between regions from time to time.	Liaison. Possible increase in the number of samples and hence cost.	NRA costs. Liaison requirements need definition. See table 3.	8 7 6 5 4 3 2 1 G	
REC 20	In standard procedures for dealing with emergencies and accidents the obtaining of samples necessary for subsequent enforcement action should be explicitly included.	Not significant.	NRA costs.	4 3 2 1 G	
REC 21	Any type of sample, whether routine or investigational, may be used in assessing compliance with absolute limits.			4 3 2 1 G	
REC 22	Percentile limits must always be related to specified time periods. These need not always be 12 months, and in cases of discharges needing careful supervision periods of 6 months or less could be used.	None, unless more sampling is required.	NRA costs. Assuming the frequency of testing is not increased above present levels. A system of adjustments may be required to allow for seasonal variations.	4 3 2 1 G	

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REC 23	The counting of exceedences against percentile limits should be separate for each determinand having such limits. The NRA should adopt a standard form to put this beyond doubt in all consents that include percentile limits.		NRA costs.	4 3 2 1	G I Y
REC 24	The NRA should promote continuous monitoring of environmentally significant discharges where technology and circumstances make that possible with adequate reliability at reasonable cost. This could be done through voluntary arrangements or through consent conditions.	Continuous monitoring costs: - equipment - materials - labour - transport	Tests: - flow - total organic carbon - ammonia - suspended solids - pH (optional) - temperature (optional) See Table 2 and figure 1.	13 12 11 10 9 8 7 6 5 4 3 2 1	G I Y
REC 25	Monitoring directly by the NRA must continue as our independent check. The scale of this should be decided in local circumstances and on the basis of general policy on sampling frequencies.	Costs: Provision of access at odd times. Attendance. R65H requirements.	NRA costs. See Table 5.	7 6 5 4 3 2 1	G I Y
REC 26	Where automatic or continuous monitoring is required consents should usually indicate type of data needed and the degree of accuracy required rather than particular equipment to be used. Consents should provide for independent certification of equipment and accuracy at regular intervals.	Costs: Dual interrogation facilities. Independent inspection of monitoring equipment. Maintenance.	NRA costs to check equipment specifications. See Table 2 and figure 1.	7 6 5 4 3 2 1	G I Y
REC 27	The NRA should always be ready to indicate to dischargers which of the data they may be expected to provide has to appear on the register. The NRA should also indicate which data they will not rely on as evidentiary.	No immediate costs.	Continuous Monitoring may indicate the need for an additional consent in the future. This will have cost implications.	4 3 2 1	G I Y
REC 28	With the increased number of results likely to be flagged as exceedences on the public registers following the introduction of 80 and 50 percentile limits, the NRA should develop a clear and introductory note on the meaning and interpretation of percentile limits.		NRA costs.	4 3 2 1	G I Y

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REC 29	The NRA needs to consider all relevant circumstances in deciding on prosecution in individual cases including the discharger's record of care. Where discharger has shown little or no care, or active contempt, this should be a factor in favour of prosecution. The NRA must not be regarded as reluctant to prosecute.	Additional costs may be incurred to achieve a good "record of care".	NRA costs.	5 4 3 2 1	G I Y
REC 30	Applications forms by corporate bodies should require the applicant to designate a manager to take a direct interest in the good operation of discharge in compliance with the limits which the consents will define.	Liaison.	NRA costs. See Table 3.	4 3 2 1	G I Y
REC 31	For many dischargers not subject to regular sampling, any billing system introduced for annual charges should include a section or enclosure where from time to time the discharger can notify any change in circumstances relating to discharge to the NRA.	Liaison.	What will be the basis of any changes? See Table 3.	4 3 2 1	G I Y
REC 32	The NRA should introduce a system of formal action warnings on lines indicated above, in addition to existing procedures for warning dischargers when their effluents are or threaten to be unsatisfactory.	Additional costs may be incurred to achieve compliance after issue of a formal action warning. Liaison.	NRA costs. See Table 3.	4 3 2 1	G I Y
REC 33	Much of the work of implementing our recommendations should go forward on a catchment basis with the sort of factors we have indicated influencing the priority of each catchment		NRA costs.	4 3 2 1	G I Y

END



Population	Ref	Cost of works	Inlet cost			Total increase in inlet cost over basic		
			Basic *	Basic + A *	Basic + B *	Basic	Basic + A	Basic + B
2400	1	968	150	180	255	0	30	105
8000	2	5538	870	1044	1479	0	174	609
50000	3	11172	1723	2068	2929	0	345	1206
100000	3	19144	2666	3199	4532	0	533	1866
200000	3	32247	4126	4951	7014	0	825	2888
500000	3	67963	7349	8819	12493	0	1470	5144
1500000	4	52831	4378	5254	7443	0	1751	6129

REFERENCE 1 Existing small works to be rebuilt. Basic cost multiplier 1.10, inlet works multiplier 1.50.

2 Small 'spreadsheet' works. Inlet works multiplier 1.5.

3 Theoretical 'spreadsheet' works.

4 Existing large works. New stream.

\* Basic

- Typical inlet or headworks.

Basic + A

- Typical inlet or headworks with full standby facilities installed during initial construction.

Basic + B

- Typical inlet or headworks with full standby facilities installed after initial construction is complete.

#### NOTE

This table gives costs specific to RECOMMENDATION 5

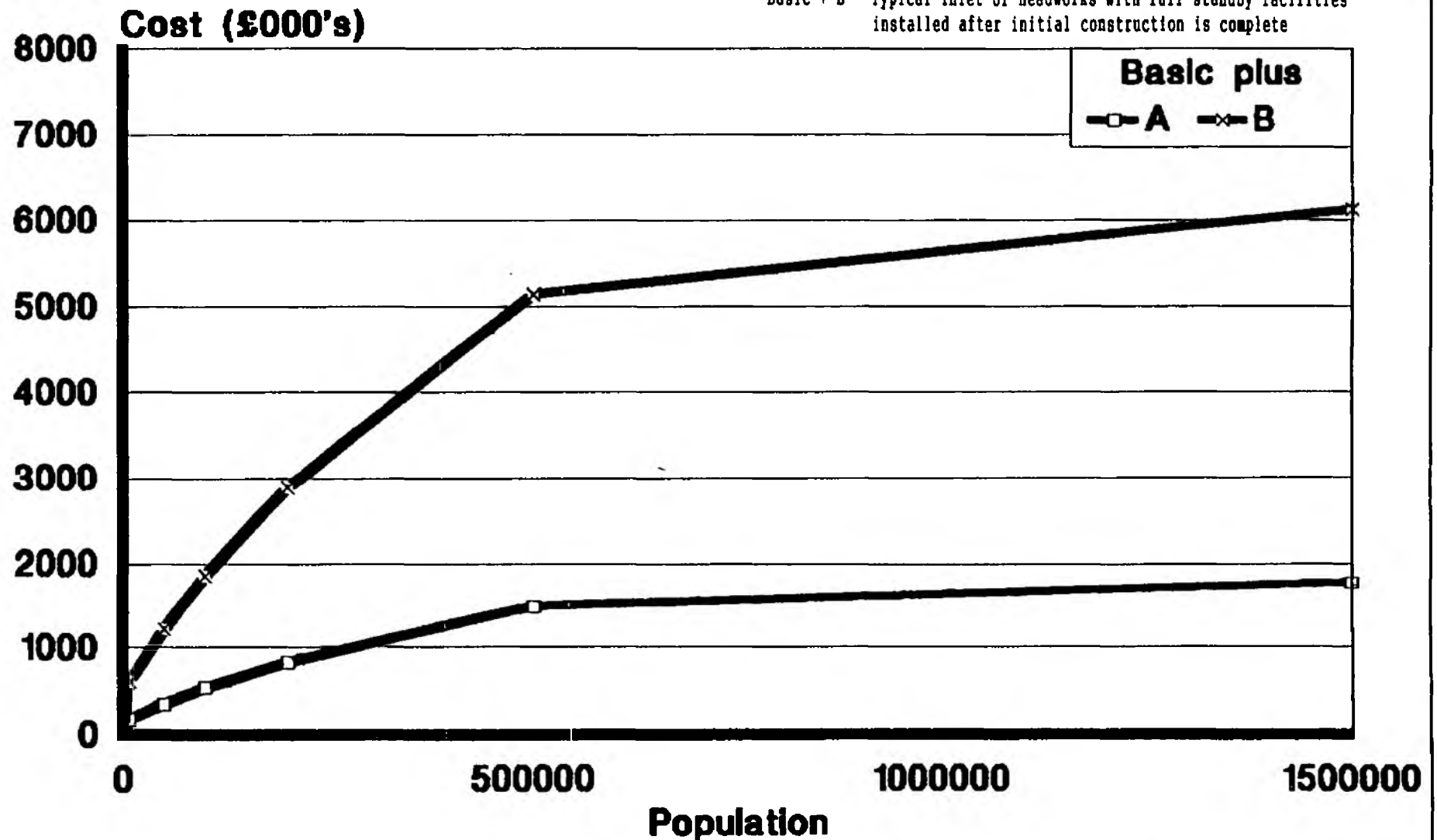
#### ASSUMPTIONS

- Costs are based on existing works which do not have full standby facilities.
- Continuous compliance can only be met by the provision of 100% standby facilities.
- Retro-fitting standby and storm facilities will require substantial rebuilding of the inlet or headworks.

# INLET/HEADWORKS CAPITAL COST

**Cost Base  
Q4 1990**

- Basic - Typical inlet or headworks
- Basic + A - Typical inlet or headworks with full standby facilities installed during initial construction
- Basic + B - Typical inlet or headworks with full standby facilities installed after initial construction is complete



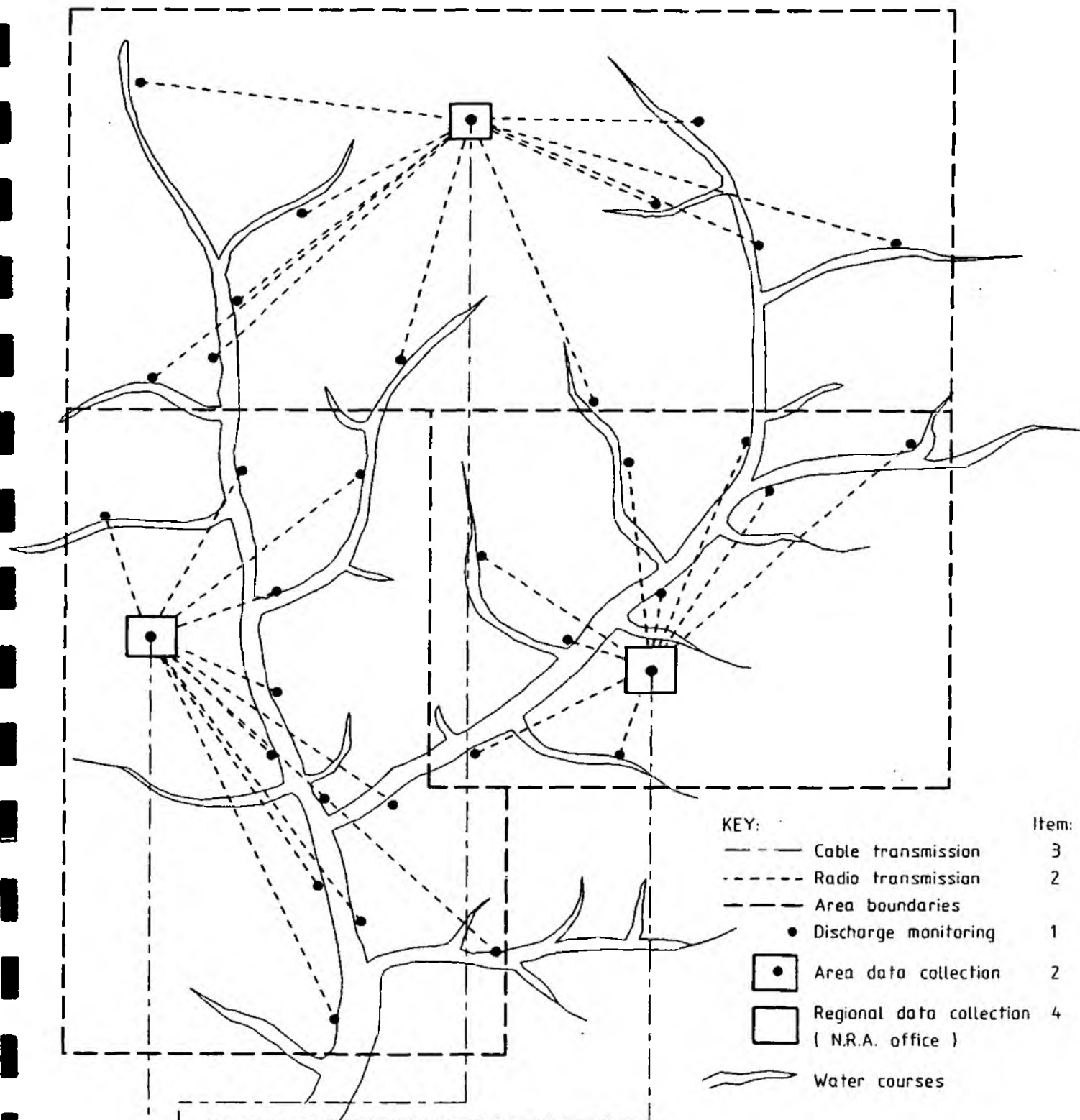
NATIONAL RIVERS AUTHORITY				DISCHARGE CONSENT AND COMPLIANCE POLICY: A BLUEPRINT FOR THE FUTURE									2/20/91	
BIRNIE & PARTNERS: JOB NO 3692				CONTINUOUS MONITORING COSTS CAPITAL RECOMMENDATIONS 10,11,16,24 and 26									COSTS £000's	
WATER COMPANY	Number of STW's	Number of numeric consents	Percent numeric consents	ITEM 1			ITEM 2			ITEM 3			ITEM 4	TOTAL
				Number	Rate	Amount	Number	Rate	Amount	Number	Rate	Amount		
ANGLIAN	1091	718	66	718	213	152931	72	127	9119	72	79	5672	500	160225
NORTHUMBRIAN	435	296	68	296	213	63048	30	127	3759	30	79	2338	500	69646
NORTH WEST	643	371	58	371	213	79023	37	127	4712	37	79	2931	500	87166
SEVERN TRENT	1063	771	73	771	213	164223	77	127	9792	77	79	6091	500	180606
SOUTHERN	393	285	73	285	213	60705	29	127	3620	29	79	2252	500	67076
SOUTH WEST	610	329	54	329	213	70077	33	127	4178	33	79	2599	500	77354
THAMES	399	358	90	358	213	76154	36	127	4547	36	79	2828	500	84129
WELSH	894	590	66	590	213	125670	59	127	7493	59	79	4661	500	138324
WESSEX	359	272	76	272	213	57936	27	127	3454	27	79	2149	500	64039
YORKSHIRE	637	354	56	354	213	75402	35	127	4496	35	79	2797	500	83194
TOTAL	6524	4344	68	4344	213	925272	434	127	55169	434	79	34318	5000	1019758

COST FOR CONTINUOUS MONITORING  
COST FOR DUAL MONITORING  
COST TO NRA

925272 + 55169 TOTAL 980441 £000's  
34318 £000's  
5000 £000's

NOTES	
ITEM 1 Local monitoring equipment	
Flowmeter	40
Multiple analyser	50
TOC Equipment	20
Trip - amps	2
Uninterrupted power supply	5
Cabling etc	3
Auto sampler	5
Building	63
Contingencies	10
Local data transmission	4
Optional monitoring pH, Temperature	11
Total per discharge	213
ITEM 2 Area data collection equipment	
Collecting equipment	6
Monitor and display equipment	39
Transmitting equipment	19
building	63
Total per 10 discharges	127
ITEM 3 Transmission equipment and line lease	
Retransmitting equipment	74
British Telecommunications line lease (Based on 100 km leased BT line)	5
Total per 10 works	79
ITEM 4 Central NRA monitoring	
Central SCADA system	500
Total per NRA office	500
All costs £000's Q4 1990	
Materials for tests etc not included	
Maintenance not included	
leasing costs included for 1 year only	
* Source - Company Reports	





- KEY:
- |       |  |         |
|-------|--|---------|
| —     | Cable transmission                         | Item: 3 |
| - - - | Radio transmission                         | 2       |
| —     | Area boundaries                            |         |
| •     | Discharge monitoring                       | 1       |
| □ •   | Area data collection                       | 2       |
| □     | Regional data collection ( N.R.A. office ) | 4       |
| ~~~~~ | Water courses                              |         |

Table of Costs

Item	Description	Cost (in £000's) approx
1	Local monitoring equipment	213
2	Area data collection equipment	217
3	Transmission equipment and line lease	79
4	Central N.R.A. monitoring	500

Local monitoring equipment includes:

Flow, Turbidity, Ammonia, pH,  
Total Organic Carbon (BOD),  
and Temperature

## Continuous Monitoring of Discharges

### Schematic

### Figure 1

(See table of cost's for details)

Note:  
Temperature and pH are optional, if not required  
deduct £11,000 from item 1.

NATIONAL RIVERS AUTHORITY

DISCHARGE CONSENT AND COMPLIANCE POLICY: A BLUEPRINT FOR THE FUTURE

BINNIE &amp; PARTNERS: JOB NO 3692

LIAISON COSTS £

RECOMMENDATION 13,18,19,30,31 and 32

2/20/1991

TABLE 1.3

SALARY ASSUMED £	COMPANY OVERHEADS 100%	TOTAL £	DAILY RATE £	HOURLY RATE £	TOTAL ANNUAL LIAISON COSTS BASED ON X DAYS/MONTH			
					.50	1	5	10
10000	10000	20000	88	12	526	1053	5263	10526
15000	15000	30000	132	18	789	1579	7895	15789
20000	20000	40000	175	23	1053	2105	10526	21053
25000	25000	50000	219	29	1316	2632	13158	26316
30000	30000	60000	263	35	1579	3158	15789	31579

## NOTES

1 Assuming only one person is involved per company or organisation.

2 Rates given are based on liaison per discharge.

3 EXAMPLE 1 person, salary £20000/ annum

10 discharges

1 day/month/discharge

$$20 \times 1 \times £1053 = £21060$$

4 Rates given are based on: 5 day week.

25 days holiday/year

8 bank holidays

5 Hourly rates based on a 7.5 hour day.

NATIONAL RIVERS AUTHORITY				DISCHARGE CONSENT AND COMPLIANCE POLICY: A BLUEPRINT FOR THE FUTURE						20/ 2/1991		TABLE 1.4
BINNIE & PARTNERS: JOB NO 3692				CAPITAL COSTS OF CHANGE FROM NON NITRIFYING TO NITRIFYING (STW ONLY)						RECOMMENDATION 14		
COSTS £millions												
WATER COMPANY	Number of STW *	Number of non nitrifying works (1)	Percent non N works	NON - NITRIFYING WORKS			NITRIFYING WORKS			ADDITIONAL CAPITAL COST FOR NITRIFICATION	ADDITIONAL O&M COST FOR NITRIFICATION	
				Number	Rate	Amount	Number	Rate	Amount			
ANGLIAN	1091	546	50	546	3.79	2067	546	5.54	3022	955	23	
NORTHUMBRIAN	435	218	50	218	3.79	824	218	5.54	1205	381	9	
NORTH WEST	643	322	50	322	3.79	1218	322	5.54	1781	563	14	
SEVERN TRENT	1063	532	50	532	3.79	2014	532	5.54	2945	930	22	
SOUTHERN	393	197	50	197	3.79	745	197	5.54	1089	344	8	
SOUTH WEST	610	305	50	305	3.79	1156	305	5.54	1690	534	13	
THAMES	399	200	50	200	3.79	756	200	5.54	1105	349	8	
WELSH	894	447	50	447	3.79	1694	447	5.54	2476	782	19	
WESSEX	359	180	50	180	3.79	680	180	5.54	994	314	8	
YORKSHIRE	637	319	50	319	3.79	1207	319	5.54	1764	557	13	
TOTAL	6524	3262	50	3262	3.79	12363	3262	5.54	18071	5709	137	

# NOTES

All costs £ millions

All costs Q4 1990

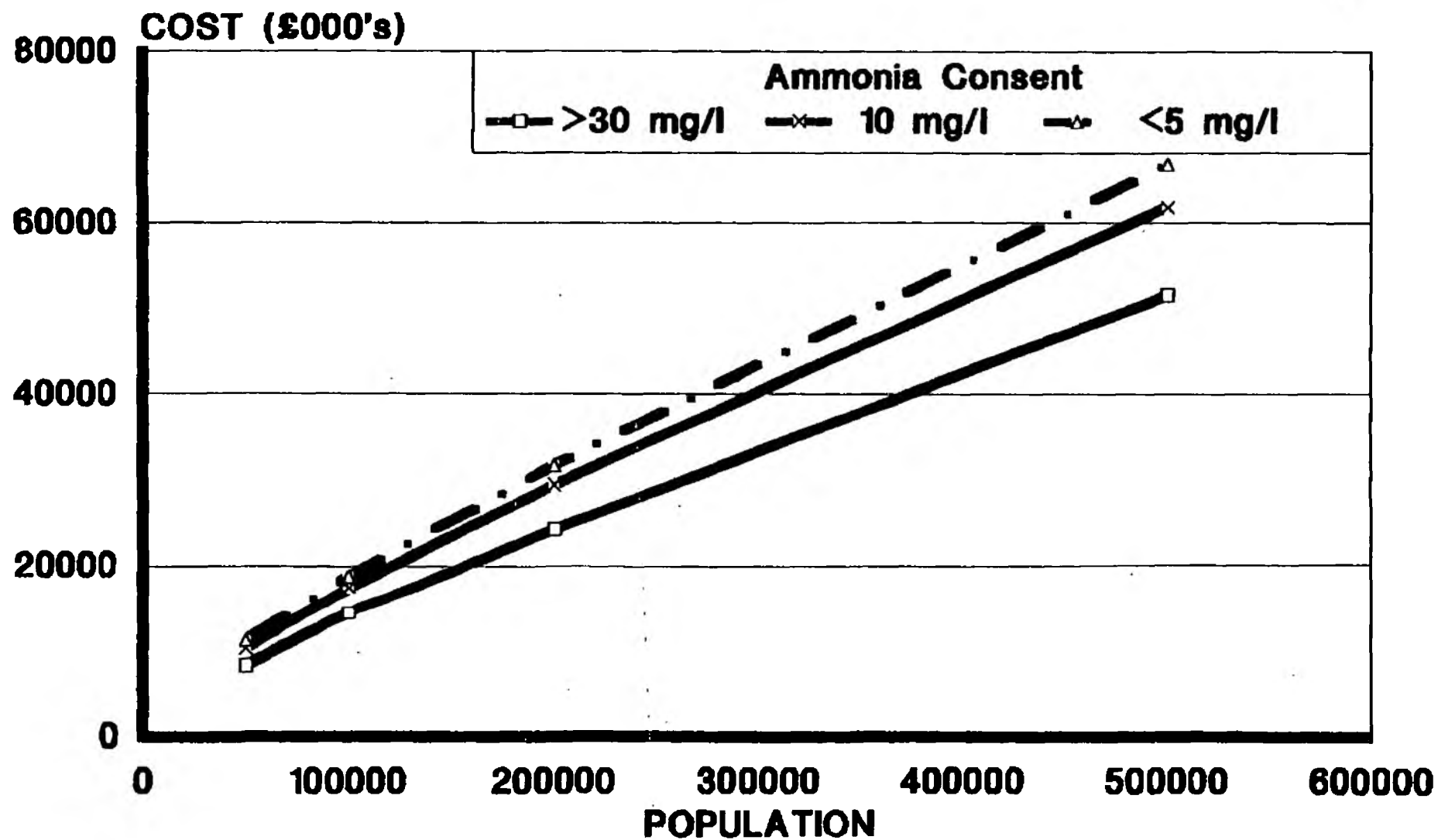
Based on an assumed average works serving a population of 8,000

Total population served:  
52192000

\* Source - Company Reports  
(1) Estimated

# TREATMENT WORKS CAPITAL COSTS (£000's)

Cost Base  
Q4 1990



Graph 4

STW OPERATORS SALARY £/ANNUM (ASSUMED)	COMPANY OVERHEADS 100%	TOTAL £	DAILY RATE £	HOURLY RATE £	OVERTIME MULTIPLIER	HOURLY RATE INC O/T £	TRAVEL at £0.14 PER MILE	TOTAL PER ACCESS VISIT £
9000	9000	18000	38.63	4.83	1.00 1.50 2.00	4.83 7.24 9.66	7.00	26.31 28.97 38.63
10000	10000	20000	42.92	5.36	1.00 1.50 2.00	5.36 8.05 10.73	7.00	28.46 32.19 42.92
11000	11000	22000	47.21	5.90	1.00 1.50 2.00	5.90 8.85 11.80	7.00	30.61 35.41 47.21
12000	12000	24000	51.50	6.44	1.00 1.50 2.00	6.44 9.66 12.88	7.00	32.75 38.63 51.50
13000	13000	26000	55.79	6.97	1.00 1.50 2.00	6.97 10.46 13.95	7.00	34.90 41.85 55.79
14000	14000	28000	60.09	7.51	1.00 1.50 2.00	7.51 11.27 15.02	7.00	37.04 45.06 60.09
15000	15000	30000	64.38	8.05	1.00 1.50 2.00	8.05 12.07 16.09	7.00	39.19 48.28 64.38

## NOTES

- 1 All salaries are assumed and subject to revision.
- 2 Company overheads are assumed to include provision of transport.
- 3 Daily rate based on: 5 day week  
20 days holiday/year  
8 bank holidays
- 4 Hourly rate based on an 8 hour day.
- 5 Travel costs based on an average round trip of 50 miles.
- 6 Total/access visit based on: (Hourly rate including overtime)x4 + Travel.  
eg company overheads are included.

## PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

## Column 1

Respondent codes:

\*\*\*\*\*

Total number of respondents: 50

A.1 Association of County Councils  
 B.1 Basildon District Council  
 B.2 The Brewers' Society  
 B.3 British Aggregate Construction Materials Industries  
 B.4 British Coal  
 B.5 British Effluent and Water Association  
 B.6 British Leather Confederation  
 B.7 British Nuclear Fuels  
 B.8 British Paper and Board Industry Federation  
 B.9 British Trout Association  
 B.10 Broads Authority  
 C.1 Chemical Industries Association  
 C.2 The China Clay Association (same response as E.1)  
 C.3 CIBA-GEIGY  
 C.4 Confederation of British Industry (CBI)  
 C.5 Country Landowners Association  
 D.1 Derbyshire County Council  
 E.1 ECC International (see C.2)  
 E.2 Envitech  
 F.1 Friends of the Earth  
 G.1 Great Yarmouth Borough Council (reply related to M.1)  
 G.2 Green Peace  
 H.1 Humberside County Council  
 I.1 Imperial Chemical Industries (ICI)  
 I.2 Institute of Fisheries Management (and National Federation of Anglers)

I.3 Institution of Water and Environmental Management (IWEM)  
 M.1 The Maritime Pollution Information Forum (see G.1)  
 N.1 Nature Conservancy Council  
 N.2 National Farmers Union (NFU)  
 N.3 National Power  
 N.4 National Rivers Authority (NRA), Wessex Region  
 N.5 National Rivers Authority (NRA), Yorkshire Region  
 N.6 The National Trust  
 N.7 Nuclear Electric  
 N.8 Natural Environment Research Council (NERC)  
 O.1 Office of Water Services (reply does not refer to NRA report)  
 P.1 Petroleum Industry Association  
 P.2 PowerGen  
 R.1 River Thames Society  
 R.2 Riverwatch  
 R.3 Royal Commission on Environmental Pollution  
 R.4 Royal Society for Nature Conservation  
 R.5 Royal Society for the Protection of Birds  
 S.1 South West Rivers Association  
 S.2 South West Water  
 S.3 Staverton Parish Council  
 W.1 Water Services Association  
 W.2 Waveney District Council  
 W.3 The Water Companies Association  
 W.4 Wessex Water

# KEY

## Column 2

Recommendations are numbered as in the "Discharge consent and compliance policy" report:

\*\*\*\*\*

REC 1 to REC 33

## Column 2

General comment subjects, where specified, are as follows:

\*\*\*\*\*

GEN CO	General comments relating to costs.
GEN CM	Consideration of communication between parties and of advertising.
GEN LE	Comments mentioning potential legal problems
GEN OT	References to other Bills, Acts, Directives and authorities.
GEN RE	Further recommendations suggested.
GEN ST	Comparison of STWs and industry.
GEN WQ	Comments relating to Water Quality Objectives or the environment in general.
GEN MS	Miscellaneous

## Column 3

(A) Agreement levels:

\*\*\*\*\*

Level 0	Recommendation not understood / more information required
Level 1	"Useful", "welcomed" etc
Level 2	Agreed in principle, but some reservations
Level 3	Concerned about implications
Level 4	Disagrees

(B) Type of response:

\*\*\*\*\*

Q Query

(C) Costing implications for the discharger:

\*\*\*\*\*

G	General mention of costs
Y	Specific reference to cost to discharger
I	Comment implies cost to discharger

## Column 4

Summarised comments:

\*\*\*\*\*

The comments are to be read in conjunction with the report recommendations.  
Comments are abbreviated: refer to letters for fuller details where required.  
Where no response is shown for a recommendation, no specific comment has been made, and general acceptance can be implied.

Selected abbreviations:

WSC: Water and Sewage Companies (referred to by W.I)  
HMIP: Her Majesty's Inspectorate of Pollution  
EQO: Environmental Quality Objective  
WQO: Water Quality Objective  
NP: National Power

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
A.1	REC 1	1		Welcomed.
A.1	REC 3	1		Welcomed.
A.1	REC 4	1		Identification of problems will enable a preventative approach.
A.1	REC 6	1		Welcomed.
A.1	REC 8	1		Welcomed.
A.1	REC 9	1	Q	Define 'environmentally significant discharges'
A.1	REC 9	1		Include criterion for desirability of water quality improvement.
A.1	REC 10	1		Welcomed.
A.1	REC 11	1		Will make controls more meaningful in ecological terms.
A.1	REC 13	1		Welcomed.
A.1	REC 14	1		Set ammonia consents for all environmentally sensitive situations.
A.1	REC 15	2		Concerned about ease of measurement of TOC and turbidity.
A.1	REC 16	1		Complementary to other monitoring.
A.1	REC 17	2	G	Welcomed, but dependent on adequate NRA staffing and resources.
A.1	REC 18	2	G	Welcomed, but dependent on adequate NRA staffing and resources.
A.1	REC 19	2	G	Welcomed, but dependent on adequate NRA staffing and resources.
A.1	REC 20	2	G	Welcomed, but dependent on adequate NRA staffing and resources.
A.1	REC 22	1		Welcomed.
A.1	REC 23	1		Welcomed.
A.1	REC 24	1		Continuous records are a 'vital tool' for assessment of compliance.
A.1	REC 25	1		Tripartite sampling 'essential'.
A.1	REC 26	1		Essential.
A.1	REC 27	1		Agreed.
A.1	REC 28	1		Agreed.
A.1	REC 29	1		Agreed.
A.1	REC 30	1		Agreed.
A.1	REC 31	1		Agreed.
A.1	REC 32	1		Agreed.
A.1	REC 33	2		List of priority areas should account for necessity of environmental improvement.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
B.1	GEN 07			Would like a Rec. promoting regular dialogue between NRA, discharger and local authority.
B.1	GEN WQ		Q	What effect will the Rec.s have on the ecology of rivers?
B.1	REC 9	0	Q	Recommendation requires elucidation.
B.1	REC 13	0	Q	Is control of illegal discharges from septic tanks etc being considered?
B.1	REC 14	1		Welcomes the view to set national standards.
B.1	REC 15	0	Q	How will comparisons be made between the old and new determinands?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.2	REC 1	2	Q	G	Who will pay?
B.2	REC 2	1			Very useful.
B.2	REC 3	2			Also useful to indicate the type of substance (e.g redlist) as an appendix.
B.2	REC 6	3		I	Time-consuming. 'Widely' indicates inconsistency.
B.2	REC 8	1			Brings STWs in line with industry.
B.2	REC 9	3		I	Complying with increasing complexity will be onerous for the discharger.
B.2	REC 10	3		Y	On-site storage and mixing expensive.
B.2	REC 10	3	Q	I	Will discharger have to close operations when certain mass reached?
B.2	REC 11	3		Y	Telemetry and storage equipment expensive; who will pay?
B.2	REC 12	0			Assumed to refer to STWs.
B.2	REC 13	1			Agreed.
B.2	REC 15	2			Properly assess the parameters.
B.2	REC 16	2		Y	Expensive but sensible.
B.2	REC 16	0	Q		Clarify 'environmentally significant discharges'.
B.2	REC 18	1			Dialogue sensible and important.
B.2	REC 21	2			Time periods need consideration.
B.2	REC 23	0	Q		Guidance from NRA would be useful.
B.2	REC 24	3		Y	Expensive; who will pay?
B.2	REC 26	3		Y	Expensive; who will pay?
B.2	REC 28	1			NRA guidance of interpretation of 'exceedence' important.
B.2	REC 29	1			Agreed.
B.2	REC 32	2	Q		Agreed, but further details required.
B.2	REC 33	0			Unable to comment on relevance of recommendation.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 1	3			Concerned that publication of degree of compliance could be misleading.
B.3	REC 2	1			Plea for forms to be kept as simple as possible.
B.3	REC 3	2			Concerned about constituents already in water and the need to identify these.
B.3	REC 4	0			As the principle of septic tanks is to provide the means whereby final overflow is pollution free, we see no reason for NRA consent.
B.3	REC 8	2			Absolute limits should allow for worst case.
B.3	REC 10	2			Imposition of limits should recognise the ability of water to redress the balance.
B.3	REC 12	3			Potentially complex and must be capable of practical application.
B.3	REC 13	3			Concerned about naturally occurring substances already in the water.
B.3	REC 13	3	Y		Concerned that the prescribed solution could be very costly.
B.3	REC 15	3			Unsure about comparative appropriateness of BOD or TOC.
B.3	REC 15	3			High SS caused by sand extraction is likely to be of same composition as river bed.
B.3	REC 17	2			Visits should not be so unpredictable that staff safety is endangered. Strongly discourage out of hours visits.
B.3	REC 18	3			Discharger should be notified of results as and when they occur.
B.3	REC 19	1			Welcomed.
B.3	REC 20	1	Y		Should be possible for discharger to request further sampling at his own cost.
B.3	REC 24	2	I		Should not be based on polluters ability to pay but on seriousness of pollution.
B.3	REC 25	4	I		Many dischargers have neither facilities nor expertise to carry out monitoring.
B.3	REC 27	0			Unclear as to meaning of recommendation.
B.3	REC 29	1			Plea for uniformity across country and between companies.
B.3	REC 30	3			Formal actions by NRA should be directed through proper company channels.
B.3	REC 32	3			Warnings should not appear on register.
B.3	REC 33	1			Welcomed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
B.4	REC 6	2	Discharger, rather than NRA, is best able to judge maintenance intervals.
B.4	REC 8	3	Limits should be given due attention, not translated from present 95thile limit.
B.4	REC 9	3	The percentile concept should be limited to major discharges such as sewage works.
B.4	REC 11	4	Not realistic to impose limits on instantaneous flow which is influenced by rain.
B.4	REC 12	2	Principles of this recommendation apply to all discharges influenced by rainfall.
B.4	REC 15	4	TOC is inappropriate to mining effluents. Turbidity measures a different influence on water quality.
B.4	REC 17	2	Some warning is needed to ensure safety of NRA and British Coal staff.
B.4	REC 23	2	Short rolling time periods could introduce seasonal influences.
B.4	REC 24	3	Difficulties expected on remote sites & spoil tips where vandalism is a problem.
B.4	REC 24	3	Equipment to monitor effluent may not be available.
B.4	REC 24	2	Continuous monitoring only on major discharges which could influence river quality.
B.4	REC 27	3	Difficult to see how NRA would decide which data to put on public register.
B.4	REC 27	3	The discharger incurs the cost of continuous monitoring and NRA saves supervision costs. Reduction in charges would be reasonable.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.5	REC 1	1			Very helpful if summary data could be published in waterfacts.
B.5	REC 2	1			Helpful if reminder could be repeated on any annual invoice.
B.5	REC 3	3			Most dischargers are unlikely to have resources to assess the impact of their effluent.
B.5	REC 4	1			Welcomed.
B.5	REC 5	2			When a consent imposes specific facilities on the discharger it is assumed that the NRA will be responsible for any design faults.
B.5	REC 9	2			Majority of numeric consents will require modelling; requiring huge manpower and material resources.
B.5	REC 6	1			Welcomed. Pleased to discuss maintenance obligations to be written into consents.
B.5	REC 10	3	Y		Costly as intensive flow and load monitoring would be required in most cases.
B.5	REC 12	1			BEWA pleased to discuss techniques for removing solids from storm overflows. Storm water flow modeling has resource implications.
B.5	REC 15	1			TOC unlikely to be discharger friendly. Surprised that SS is not amenable to continuous monitoring.
B.5	REC 30	2			Regular checking by NRA of changes in designated person may be necessary.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.6	REC 6	2			Different criteria needed for large & small dischargers. Small discharges should have a simplified, more tolerant system.
B.6	REC 15	3			Correlation between TOC & BOD for STW may have little relevance to industrial discharges.
B.6	REC 24	0	Y		Cost of supplying resources for continuous monitoring may not be justified.
B.6	REC 29	3	I		Industry may transfer to other countries with a more relaxed attitude to limits.
B.6	REC 10	1			Supported. Recommend that occasional excursions outside limit should be acceptable.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.7	GEN WQ				Para 47: Consents set in terms of separate concentration, flow limits, instead of load, will not encourage water conservation.
B.7	GEN WQ				Discusses points to consider when setting limits.
B.7	REC 1	2			Collection and presentation of compliance and consent data should be done in an equal manner across the country.
B.7	REC 3	2			Limits must be considered very carefully. Concentrations at levels below those of environmental significance must be acceptable.
B.7	REC 8	2			Welcomed. Limits should be set to protect environment & allow site operation. Para: See no reason why abs.limits could not be set in different ways
B.7	REC 9	4			No comment due to lack of statistical argument supporting 80%ile limits.
B.7	REC 10	2			Agreed, but where load limits apply, there is no call for 80 or 50%ile limit.
B.7	REC 10	1			Welcomed. Encourages industry to conserve water.
B.7	REC 11	3			Numeric limits may not automatically need absolute limits for instantaneous flow.
B.7	REC 15	1			Agree with need for long data gathering period.
B.7	REC 16	3	0		Category of discharges to which this applies could be made clearer.
B.7	REC 21	3			Para 101: Apparent contradiction, tripartite samples needed for prosecution.
B.7	REC 22	3			Large numbers of samples over 3 month period would be needed to judge compliance.
B.7	REC 23	1			Fully endorsed.
B.7	REC 28	1			Fully endorsed.
B.7	REC 29	2			Para: Clarity types of samples accepted as evidence, and status of types of limits with respect to prosecution.
B.7	REC 30	2			Nominated person should not be liable for any breaches by corporate body.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.8	GEN MS				"Equating emission limits to equal competitiveness is overstating the position, not least as the water environment is not uniform internationally"
B.8	REC 1	1			Existing consents have to be identified and future agreements considered.
B.8	REC 12	4		I	Unrealistic to design plant capacity for all surface run-off situations.
B.8	REC 15	4	Q		Question relevance of turbidity and TOC as practical measures.
B.8	REC 15	2			Already involved in similar exercise with the European Commission.
B.8	REC 16	3		I	Concerned about identification of low levels of toxic substances.
B.8	REC 16	3		I	Concerned that very low levels of toxic substances may lead to refusal of discharge consent.
B.8	REC 16	2		I	Support Red List approach, although practicalities are difficult.
B.8	REC 24	1			Supports the use of continuous monitoring using load based criteria.
B.8	REC 24	1		I	Some mills are 'moving in this direction' to provide information which will aid in discussions with local communities.
B.8	REC 30	2			Must indicate whether person is only a contact or has corporate responsibility.
B.8	REC 33	2		I	State the environmental objectives and timescales, and agree programmes with the dischargers.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.9	GEN CO			Y	Compare charges with other EC countries.
B.9	REC 1	2			Public register should make clear when pollution incidents are proved guilty.
B.9	REC 5	3			REC.5 imply imposition of of manditory working procedures. Are NRA staff qualified in fish farming.
B.9	REC 8	2			Water inflow contains high BOD and SS already. This should be taken into account.
B.9	REC 9	2			The tile limits are more applicable for continually monitored discharges.
B.9	REC 15	4			BOD and SS are more relevant to water quality than TOC and turbidity.
B.9	REC 17	3			Unpredictable visits may be dangerous as they could be mistaken for poachers.
B.9	REC 18	3			All results should be communicated to discharger.
B.9	REC 19	2		Y	NRA should follow the comment "sampling programmes need to be economical".
B.9	REC 24	3		Y	Continuous monitoring is desirable for sewage works/chemical factories but not fish farms. Inappropriate for fish farmers to pay when they are not
B.9	REC 24	3		Y	significant polluters.
B.9	REC 30	2			Responsibility for any failure should be with the corporate body .
B.9	REC 32	2		Y	Concerned that intended charges are inappropriate to the requirements to be satisfied.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation	See key			Summarised comment
	(A)	(B)	(C)	
B.10 REC 3	1			Welcomed.
B.10 REC 4	2			Use of prohibition notices should be reviewed according to vulnerable areas.
B.10 REC 6	2			Adequate staff resources and training required.
B.10 REC 8	1			Welcomed.
B.10 REC 9	2			Desirability of water quality improvement should be a criterion.
B.10 REC 10	1			Welcomed. Particularly relevant to Broads.
B.10 REC 11	1			Welcomed. Help make controls more meaningful in ecological terms.
B.10 REC 13	1			Welcomed.
B.10 REC 14	1			Numeric cosents levels should be set for all environmentally sensitive areas.
B.10 REC 15	2			Parallel assessment over four years to evaluate suitability is welcomed.
B.10 REC 16	1			Toxicity test is believed to be complementary to other monitoring checks.
B.10 REC 17	2	G		Adequate NRA staff resources required.
B.10 REC 18	2	G		Adequate NRA staff resources required.
B.10 REC 19	2	G		Adequate NRA staff resources required.
B.10 REC 20	2	G		Adequate NRA staff resources required.
B.10 REC 22	1			Welcomed. Reduction of time period is welcomed.
B.10 REC 23	1			Welcomed.
B.10 REC 24	1			Provision of continuous recorders is a vital tool to the assessment of compliance.
B.10 REC 25	1			Essential.
B.10 REC 26	1			Essential.
B.10 REC 27	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 28	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 29	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 30	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 31	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 32	1			Welcomed as it will make dischargers aware of their obligations.
B.10 REC 33	2			Priorities include areas where improvements are required for environmental reasons.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
C.1	GEN WQ		Surprised that WQOs and EQSs are not mentioned in executive summary.
C.1	GEN WQ		Para 22: Environmental acceptability needs to be defined.
C.1	GEN MS		More discussion needed on types and ranges of tests.
C.1	REC 1	1	Agreed.
C.1	REC 2	2	Some guidance on what constitutes a change in scale or character of effluent would help.
C.1	REC 3	1	Agreed.
C.1	REC 4	1	Agreed.
C.1	REC 5	0 0	Before we comment we need more detail on intentions of NRA.
C.1	REC 6	1	Agreed.
C.1	REC 7	1	Agreed.
C.1	REC 8	2	Consents should include an upper limit which must not be exceeded and an average limit to be achieved. The way in which limits are derived needs further discussion.
C.1	REC 8	2	
C.1	REC 9	1	Agreed. The way in which limits are derived needs further discussion.
C.1	REC 10	2	Careful definition of limits and their justification is necessary.
C.1	REC 11	1	Agreed.
C.1	REC 12	1	Agreed.
C.1	REC 13	1	Agreed.
C.1	REC 14	1	Agreed.
C.1	REC 15	3	Turbidity could be a contentious issue as it is difficult to define.
C.1	REC 16	2	Happy to discuss with NRA as we have some reservations about some tests.
C.1	REC 17	1	Agreed.
C.1	REC 18	2	NRA should inform dischargers of details to be placed on public register.
C.1	REC 19	2	Guidance should be extended to sampling techniques and analytical methods. Sampling techniques etc could be included on the consent.
C.1	REC 20	1	Agreed.
C.1	REC 21	4	Need proper quality control. Single samples should not be used to assess compliance.
C.1	REC 22	1	Particularly relevant in case of continuous monitoring.
C.1	REC 23	1	Agreed.
C.1	REC 24	2	Continuous monitoring should be a management tool only.
C.1	REC 25	1	Agreed.
C.1	REC 26	3 0	What validation procedures will be used? How will the results be handled on public registers?
C.1	REC 27	0	We wish to discuss this issue with you.
C.1	REC 28	2	Comments on reliability of instrumentation should be placed on public register.
C.1	REC 29	1	This is a reasonable statement.
C.1	REC 30	1	Dialogue between NRA and discharger is welcomed. See considerable sense in nominating a contact.
C.1	REC 31	1	Agreed.
C.1	REC 32	1	Agreed.
C.1	REC 33	1	There is a need to coordinate activities to ensure consistency of approach.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
C.2	REC 1	3		NRA should not publish ESTIMATES of degree of compliance.
C.2	REC 3	2		We consider it essential that any determinand should be clearly specified in consents.
C.2	REC 9	2		Such a statistical approach should be supported by a statement concerning sampling.
C.2	REC 10	2		Limits should be set with regard for the ability of the receiving water to accommodate discharge.
C.2	REC 13	2		Consents should not extend to substances that would otherwise be released from ground.
C.2	REC 15	4		Turbidity is not a satisfactory measure for consent conditons for mineral workings.
C.2	REC 17	2	Y	No unreasonable costs should be imposed on industry to allow for this.
C.2	REC 17	2		Sampling should not endanger NRA or quarry staff.
C.2	REC 24	2	Y	This is reasonable provided NRA has full regard of the cost.
C.2	REC 27	3		Concerned that prosecution could follow our own monitored data passing to public domain.
C.2	REC 29	1		Welcomed.
C.2	REC 30	4		Not suited to management systems in the industry. Day to day management is shared by number of managers.
C.2	REC 32	3		Warnings to be given in normal correspondence between NRA and discharger.
C.2	REC 33	1		Strongly support.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
C.3	REC 2	2		Application should not be only form of dialogue before consent is finalised.
C.3	REC 2	2		Change of scale and character of discharge needs to be clearly defined.
C.3	REC 6	3		Concern about inclusion of maintenance conditions in consent.
C.3	REC 8	2	Q	Clarify level infringement where there is continuous monitoring. 1 secsecond 1 hour etc.
C.3	REC 9	2	Q	Define 'environmentally significant discharges'.
C.3	REC 10	2		Careful definition of limits and a justification for same is necessary.
C.3	REC 15	2		A sufficient period of parallel assessment is needed to test new parameters.
C.3	REC 16	2		A range of tests should be considered and there should be early dialogue.
C.3	REC 18	3		Discharger needs to know what details are put on public register. Must know of out of compliance samples before the public.
C.3	REC 19	2		Sampling methods, strategies and analytical methods need careful consideration.
C.3	REC 21	2		Any sample used for assessing compliance must be taken by accepted methods.
C.3	REC 22	2		There should be consultation on how results should be interpreted.
C.3	REC 22	2		Guidelines on level of deviation required before a prosecution would be considered appropriate.
C.3	REC 33	2		The introduction of a catchment basis can only be forseen when policy agreed nationally.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
C.4	GEN CO			Y	Monitoring techniques and compliance standards should be feasible and practical to implement at an acceptable cost.
C.4	GEN MS			Y	NRA should set achievable limits and time scales so that industry's capital and revenue costs can be absorbed gradually.
C.4	GEN OT				Clarification of the division of responsibilities between NRA and other control authorities is required.
C.4	REC 1	2			Data on consents should be published on a national scale in one publication. Would like more info, including cost of work.
C.4	REC 2	1			Welcomed. Relate to Environmental Protection Act.
C.4	REC 3	2			Discussion is needed on additional requirements of process plant and liabilities for industrial dischargers.
C.4	REC 4	2			Advice on consent requirements for septic tanks is welcomed but it must be consistent through NRA regions.
C.4	REC 6	4			Strongly disagree, maintenance records are solely concern of site operator.
C.4	REC 8	2			Absolute limits should be environmentally justified and practical. Absolute limits should be increased where tile limits are also used.
C.4	REC 8	2			Absolute limits should be practical and neither too lax or too stringent to protect the environment.
C.4	REC 9	2	Q		Define 'environmentally significant discharges'. Limits should be environmentally justified and practical. Further justification is
C.4	REC 9	2	Q		needed for use of 80%ile limits.
C.4	REC 10	3		Y	Could place unjustifiable costs on discharger.
C.4	REC 11	3			Difficult to see how compliance for instantaneous flow could be monitored.
C.4	REC 12	2			Worst case should be incorporated in consent conditions.
C.4	REC 13	1		G	Agreed. All discharges should be consented, requiring considerable NRA time and resource.
C.4	REC 14	1			Accepted.
C.4	REC 15	4		I	BOD and SS should remain: better reflection of environmental effect. Companies have made investments in equip. to measure BOD/SS.
C.4	REC 15	3		I	Concerned about implications for industry should new parameters come into being.
C.4	REC 16	2		Y	Environmental quality objectives for controlled water already take toxicity into account. Tests must be practical and feasible at reasonable cost.
C.4	REC 17	2			Health and safety difficulties must be considered.
C.4	REC 18	3			Transfer of information is especially important where charges are involved.
C.4	REC 19	2			Sampling programmes must be appropriate to discharge consents to which they are applied.
C.4	REC 20	2			Sampling programmes must be appropriate.
C.4	REC 21	4			Samples for assessing non compliance must be tripartite.
C.4	REC 22	4			Cannot accept rolling period of less than 12 months due to seasonal variations. Higher frequency of sampling is required to assess tiles >50%.
C.4	REC 23	1			Approved.
C.4	REC 24	3			Continuous self monitoring should remain optional. (Legal, public and cost implications.)
C.4	REC 26	3		Y	Independent checks may have cost implications.
C.4	REC 27	2			Discharger should be allowed to comment on information placed in register.
C.4	REC 28	1			Agreed.
C.4	REC 29	1			Most welcome.
C.4	REC 30	3			Do not agree that an employee name should appear on register.
C.4	REC 30	2			NRA should have regular liaisons with dischargers, involving transfer of information and provision of guidance.
C.4	REC 32	2			Warning notices would be more effective if initially they are informal.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
C.5	GEN MS		We consider that all farm effluent consents should be in descriptive terms.
C.5	GEN MS		Concern about suggestions that surface water drainage will be brought under discharge consents. Should only apply in special circumstances.
C.5	REC 1	1	Supported.
C.5	REC 4	2	If some consents are found to be unnecessary, dischargers should be informed.
C.5	REC 5	3	Numeric consents are not understood by farmers. Use descriptive consents specifying effluent treatment and maintenance.
C.5	REC 8	1	Supported.
C.5	REC 32	1	Supported.
C.5	REC 33	1	Supported.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
D.1	GEN CM		Full consultation with all parties to ensure that standards are acceptable.
D.1	REC 5	2	Discharge consents should include measures to control foaming and colouration where appropriate.
D.1	REC 8	2	Concern with regard to criteria by which absolute limits will be set.
D.1	REC 29	2	NRA should take strong action to tackle cases of pollution swiftly.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
E.1	REC 1	3	NRA should not publish ESTIMATES of degree of compliance.
E.1	REC 3	2	We consider it essential that any determinand should be clearly specified in consents.
E.1	REC 9	2	Such a statistical approach should be supported by a statement concerning sampling.
E.1	REC 10	2	Limits should be set with regard for the ability of the receiving water to accommodate discharge.
E.1	REC 13	2	Consents should not extend to substances that would otherwise be released from ground.
E.1	REC 15	4	Turbidity is not a satisfactory measure for consent conditions for mineral workings.
E.1	REC 17	2	No unreasonable costs should be imposed on industry to allow for this.
E.1	REC 17	2	Sampling should not endanger NRA or quarry staff.
E.1	REC 24	2 Y	This is reasonable provided NRA has full regard to the cost.
E.1	REC 27	3	Concerned that prosecution could follow our own monitored data passing to public domain.
E.1	REC 29	1	Welcomed.
E.1	REC 30	4	Not suited to management systems in the industry. Day to day site management is shared by a number of managers.
E.1	REC 32	3	Warnings to be given in normal correspondence between NRA and discharger.
E.1	REC 33	1	Strongly support.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
E.2	REC 10	1	Welcomed.
E.2	REC 15	4	Damage to rivers will be manifested as a biological effect and as such a biological determinand should be retained.
E.2	REC 15	4	TOC is unsuitable as it does not measure the biodegradability of the discharge.
E.2	REC 15	4	BOD online monitoring 'has proven it's reliability, accuracy and low running costs'. TOC equipment is unsuitable and high maintenance.
E.2	REC 15	2	Concerned that the report is being seen as a 'statement of intent' rather than allowing for possible changes.
E.2	REC 16	2	We suggest such discharges should have online toxicity tests.
E.2	REC 24	1	Recognition of the benefits of automatic continuous monitoring is to be welcomed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
F.1	GEN WQ	2	Any consent review programme must use fully explained procedures.
F.1	REC 1	2	Publication of summary data should not preclude public access to raw data.
F.1	REC 2	2	Where process changes are frequent, discharger should submit annual returns on the nature of the discharge.
F.1	REC 5	2	Where design and performance specifications are included in consent conditions, NRA should be involved at design stage. Allow for public scrutiny.
F.1	REC 6	2	Public should have access to maintenance records.
F.1	REC 6	2	Existing descriptive consents are notably lacking in enforceable conditions. Either convert to numerical or incorporate more clarity.
F.1	REC 8	2	Absolute limits should accompany percentile limits and not replace them.
F.1	REC 9	1	All file performance standards should use rolling time periods.
F.1	REC 9	2	Do not round up consent figures. Transition to new file system should not interrupt enforcement of compliance.
F.1	REC 11	1	Measurement, recording and documentation of flow rates in public register are essential to public accountability.
F.1	REC 12	2	Public register entries should be logged to indicate which flow rates are within the consents.
F.1	REC 15	4	Considerable doubt about suitability of TOC as oppose to BOD.
F.1	REC 19	3 Y	Tripartite sampling is an unnecessary extravagance. The NRA should also establish the courts requirements for samples.
F.1	REC 24	3	Continuous monitoring on a voluntary basis by a discharger raises questions about the availability of results and use in court.
F.1	REC 27	2 Q	All tripartite sample data should be placed on the public register. The courts acceptance of such publically disclosed data should be clarified.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
G.1	GEN CM		Consents for discharges should be sent to local authorities for retention on a local register.
G.1	GEN CM		When consent conditions are confirmed they should be published in local press.
G.1	GEN CM		Close liaison with local authorities over pollution is important.
G.1	GEN MS		Wider impact analysis should be considered.
G.1	GEN RE		NRA should have a pre-emptive power where pollution is likely or may result from a known process.
G.1	GEN RE		Discharges should be required to have a 'Discharge Policy Statement'. e.g stating peak discharge limits, QA, emergency action etc.
G.1	REC 19	2 Y	Sampling programmes need to be cost effective.
G.1	REC 24	3	Monitoring should not be achieved through voluntary arrangements with dischargers.
G.1	REC 25	2	Sampling should be decided locally but regime should be formally agreed with NRA.
G.1	REC 26	2	Comments should indicate specific data required.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
G.2	GEN WQ		Consider reduction of toxic use, or clean production. NRA should force waste reduction.
G.2	GEN WQ		Consider use of waste audits, assessing chemicals entering and leaving the plant, which would identify effluent components.
G.2	GEN WQ		NRA should assess ways to reduce pollution, rather than attempt to assess 'environmental capacity'
G.2	REC 19	3	Tripartite sampling should not be necessary, as the NRA should be seen as a responsible, trustworthy body.
G.2	REC 19	2	NRA should be able to prosecute on the basis of any sample.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
H.1	REC 1	2	Welcomed but there is currently a lack of information on consent compliance which can only impede accountability.
H.1	REC 2	1	New documentation will serve as prime documents in any prosecution.
H.1	REC 15	1	Supported.
H.1	REC 18	2	"Dialogue" should not develop to the point where exhortation or encouragement to improve replace prosecution.
H.1	REC 20	1	Agreed.
H.1	REC 22	1	Agreed.
H.1	REC 23	1	Agreed.
H.1	REC 24	1	Agreed.
H.1	REC 25	2	NRA should not rely on self validation by dischargers.
H.1	REC 26	1	Agreed.
H.1	REC 28	1	Any explanation of how public can interpret meaningful statistical information is to be welcomed.
H.1	REC 32	2	Important that warnings do not become a substitute for prosecution.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
I.1	GEN CO			Y	Basis of charges should be to cover costs incurred or a service rendered. Incentive charges should be resisted.
I.1	GEN CO			Y	We accept need for water quality improvements but must also ensure that we do not incur costs that inhibit our international competitiveness.
I.1	GEN OT				Need coordinated development of regulatory policy between NRA & HMIP, w.r.t effluent subject to integrated pollution control under EP Bill.
I.1	REC 2	3			We are concerned about disclosing in house site processes when the primary concern is about final effluent.
I.1	REC 8	2			Setting of limits needs careful consideration about the environment and the processes which produce the discharge.
I.1	REC 8	3			Concerned about interpretation of probability distributions.
I.1	REC 8	1			Absolute limits will encourage firms to tackle "house keeping" and undertake hazard studies.
I.1	REC 6	3		Y	We fear that NRA may specify more frequent shut downs and hence higher costs than are justified.
I.1	REC 12	3		Y	Application to existing plant would demand enormous expenditure.
I.1	REC 15	2			TOC should be used as as a monitoring variable, BOD used to measure the ultimate value of the determinand. Site specific correlations of BOD/TOC and SS/Turb. necessary.
I.1	REC 15	2			
I.1	REC 16	2			This should be limited to cases where significant toxic component cannot be limited satisfactorily.
I.1	REC 18	3			Sampling results should always be given to to discharger.
I.1	REC 24	3	Q		How will results of continuous monitoring be represented on the register?
I.1	REC 24	3	Q		How will occasional breakdowns and resulting false results be handled?
I.1	REC 28	2			We welcome this but fear that exceedences of percentile limits without a breach of consent will be misunderstood by the public.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
1.2	GEN CO	2	G	Charging scheme has to be right first time as it will be difficult politically to change afterwards.
1.2	GEN CM	2		Define when advertising becomes desirable.
1.2	REC 3	1		Essential.
1.2	REC 7	2		Define the level of change of character and scale of effluent needed before having to inform the NRA.
1.2	REC 8	1		Accepted.
1.2	REC 9	3		Will not frequency distributions vary between effluents and between determinands?
1.2	REC 13	1		Important.
1.2	REC 15	2		Both tests should be run in parallel to ensure a robust relationship can be established. Not hopeful about turbidity/SS relationship.
1.2	REC 16	1		Welcomed. Existing tests may not be adequate.
1.2	REC 17	3		Will it be workable in practise?
1.2	REC 28	2		More should be done to explain this. Use detailed discussion groups.
1.2	REC 32	2		Concerned that this could become a surrogate for prosecution.
1.2	REC 33	1		Strongly commend.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
I.3	GEN CO			G	Concerned about staffing implications for the NRA.
I.3	GEN OT				Consider future application of the Municipal Waste Water Directive.
I.3	GEN RE				Agricultural, fish farms and other diffused pollution are not adequately considered.
I.3	GEN WQ				Calculation and values used for setting limits should be published for each river.
I.3	GEN WQ				Suggest regularly reviewing consents w.r.t WQOs and pollution load.
I.3	GEN CO			Y	Suggests that the whole process has been wrongly divorced from charging policy.
I.3	GEN CO			Y	How much will implementation cost to the dischargers and the NRA?
I.3	REC 1	2		G	Cost of publication should be passed on to government not to water rate payers.
I.3	REC 2	1			Supported. Include a reminder to inform the NRA of change in discharge.
I.3	REC 3	3			Presence of a non-specified substance should not be an offence, only related pollution.
I.3	REC 5	2			Agree in principle though there are a number of pitfalls. (See later).
I.3	REC 7	2			Wholly laudable but may be impractical.
I.3	REC 8	2		Y	If absolute limits are very tight and this is coupled with full compliance, enormous sums of money will have to be spent to ensure compliance.
I.3	REC 9	1			No objection.
I.3	REC 10	3		Y	Could be expensive to measure flow and concentration.
I.3	REC 12	2			Presence of storm overflows on a sewer should be taken into account when setting consent conditions on trade effluent discharged to sewer.
I.3	REC 14	2			NRA should indicate how it will assess where it is relevant to set limits for ammonia.
I.3	REC 15	4			Do not support proposal to adopt TOC in place of BOD. Develop a rapid test that assesses BOD.
I.3	REC 17	3			Potential hazard of night time testing.
I.3	REC 18	1			Fully supported.
I.3	REC 19	3			With tripartite samples there is always a change in characteristics of a sample after it has been held for a period of weeks.
I.3	REC 19	2			NRA should announce sampling frequency that it intends to adopt.
I.3	REC 22	2			Every effort should be made to keep number of samples taken high enough to give rise to a proper assessment.
I.3	REC 23	1			Welcomed.
I.3	REC 24	2		Y	Costs incurred will be passed to customer and this might become a sensitive issue. Seems wasteful to connect system to the NRA.
I.3	REC 25	2			Sampling by NRA will need to be of sufficient frequency to make statistical comparisons.
I.3	REC 26	2		G	Agreed. Consider cost implications of additional remote interrogation systems by the NRA.
I.3	REC 27	2			Crucial that dischargers should be kept informed with regard to fate of any data being obtained by NRA.
I.3	REC 28	1			Supported.
I.3	REC 30	3			IWEM does not support that a person should be named on consent as there is a risk that they could be held liable for any breaches.
I.3	REC 32	3			IWEM believes that NRA will be under pressure to publish names of dischargers who have been given action warnings; this should be avoided.
I.3	REC 33	2			Good liaison with discharger essential. Capital expenditure may be planned differently from NRA priorities.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
M.1	GEN CH				Consents for discharges should be sent to local authorities for retention on a local register.
M.1	GEN CH				Close liaison with local authorities over pollution is important.
M.1	GEN MS				Wider impact analysis should be considered.
M.1	GEN OT				When consent conditions are confirmed they should be published in local press.
M.1	GEN RE				NRA should have a pre-emptive power where pollution is likely or may result from a known process.
M.1	GEN RE				Discharges should be required to have a 'Discharge Policy Statement'.e.g stating peak discharge limits, QA, emergency action etc.
M.1	REC 19	2		Y	Sampling programmes need to be cost effective.
M.1	REC 24	3			Monitoring should not be achieved through voluntary arrangements with dischargers.
M.1	REC 25	2			Sampling should be decided locally but regime should be formally agreed with NRA.
M.1	REC 26	2			Comments should indicate specific data required.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.1	GEN MS				Do not understand the inconsistencies shown in Annex 3 if all consents have been the responsibility of the DoE since 1973.
N.1	GEN OT		Q		Env. Prot. Bill, pt I, proposes to transfer consents for prescribed discharges from the NRA to the HMIP. Will HMIP follow the same procedures?
N.1	GEN OT				NCC issues consents affecting SSSIs. It has been agreed that the NCC and NRA will prepare a joint guidance note for possible dual roles.
N.1	GEN RE				Phosphate should be added to the list of determinants for relevant discharges (ref draft EC Directive on Municipal Waste Water Treatment).
N.1	GEN WQ				The setting of statutory WQOs will influence the setting of consents by the NRA as well as the timing of implementing the recommendations.
N.1	REC 5	3			Non-numeric consents should be the exception rather than the rule. All STWs should have numeric consents.
N.1	REC 9	1	Q		Clarify 'environmentally significant discharge'. Is there a formula which can be applied for polluting load?
N.1	REC 31	1	Q	Y	Will charges be at a level which will cover the variation in consents following from the review?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.2	REC 2	2			Requested information should be (a) relevant to the issuing of the consent, and (b) likely to be available.
N.2	REC 6	4			Maintenance provisions and record keeping should not be included in the formal consents.
N.2	REC 8	4	I		Unacceptable for fish farms. Runs contrary to WAA Working Party on fish farm discharge consents (1984). Inflows contain levels of SS and BOD.
N.2	REC 9	3	I		Fish farm pollution is accumulative, so file limits and a less stringent absolute limit would be more effective than a stringent absolute limit.
N.2	REC 10	4	I		The vulnerability of rivers to fish farm loads should be inherent in consideration of present consents, so load records should not be required.
N.2	REC 10	4	I		Measurement of loads from fish farms is not feasible.
N.2	REC 11	3			Where effluent flow is related to rain or river flow, the consent should allow for the range of possible environmental circumstances.
N.2	REC 14	2			Expect to have consultations with the NRA on the levels and forms of ammonia applicable.
N.2	REC 17	3	Y		Concerned about the expense and necessity of flow measurement equipment etc.
N.2	REC 17	3			Access arrangements should not be specified by the NRA alone. There is a risk of disease transmission between farms.
N.2	REC 18	2	Y		The discharger should have easy access to sample results. "They will be paying for them".
N.2	REC 19	2	Y		Support the recommendation that sampling programmes must be economical. Assume consultation with the sampling group.
N.2	REC 22	2			The appropriate time period for percentage limits at fish farms is to be discussed with the NRA.
N.2	REC 24	4	Y		No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
N.2	REC 25	4	Y		No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
N.2	REC 26	4	Y		No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
N.2	REC 28	1			Support this recommendation.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
N.3	GEN CM			Good consent compliance practice relies on a businesslike dialogue between NRA and the discharger at all levels.
N.3	REC 2	2		Application forms and policy should be compatible with requirements from Integrated Pollution Control.
N.3	REC 3	2		Some constituents declared in discussions aren't included in applications because of relative insignificance. Rubric should account for this.
N.3	REC 5	2		Combinations of numeric and non-numeric consents must be used for effluents dependent on quality of previously abstracted water.
N.3	REC 5	1		More meaningful control of certain constituents in discharges (eg traces of oil and grease) are best dealt with by non-numeric consents.
N.3	REC 6	3		Stipulation of maintenance procedures in the consent may cloud the issue of responsibility (should remain within the remit of the Site Manager).
N.3	REC 8	3	I	Consents relating to previously abstracted water should relate to derogation in quality, not absolute level.
N.3	REC 9	2		Define 'environmentally significant discharges'. The 80%ile limits must accomodate the varying quality of the input water.
N.3	REC 10	3	Y	This requirement would constitute a high degree of self-monitoring and might justify an abatement in the annual charges levied by the NRA.
N.3	REC 12	1		Agreed. Relevant to, say, surface water from coal tippings.
N.3	REC 15	4		Turbidity should not replace SS.
N.3	REC 15	4	I	Use of turbidity would create problems with surface water discharges when abstracted water has high levels of fine particles.
N.3	REC 15	1		TOC is an appropriate replacement for BOD.
N.3	REC 15	1		Endorses use of TOC instead of BOD.
N.3	REC 16	3		Toxicity tests using fish often fail to identify the offensive constituent and should be used with caution.
N.3	REC 17	2		For security and safety reasons, NRA inspectors must be identifiable and be familiar with the site.
N.3	REC 19	3	Y	NRA's monitoring costs should be kept to a minimum and be subject to external scrutiny.
N.3	REC 22	3		12 month rolling programme required to account for seasonal variations in climate and generation of electricity.
N.3	REC 23	2		Where two or more constituents are correlated, and more than one determinand is exceeded, this should be treated as one exceedence.
N.3	REC 24	3	I	Continuous monitoring should be introduced on a voluntary basis. NP are willing to assist with NRA feasibility studies of monitoring equipment.
N.3	REC 26	1	I	Agreed. Allows greater choice of measuring apparatus.
N.3	REC 27	1		Fully supports this recommendation.
N.3	REC 28	2		It is essential that results related to %ile limits are properly qualified to avoid misuse.
N.3	REC 29	3		With proper on-going dialogue, the attitude of the discharger should become self-evident should an individual accident occur.
N.3	REC 31	2		Action Warnings are agreed with in principle, but require further development.
N.3	REC 32	3		Names should not be made public. The duration that Action Warnings stay on record should be limited.
N.3	REC 33	2		Proceeding on a catchment basis is accepted for neutral translation of consents; over the longer term, priority should be
N.3	REC 33	2		given to reviewing consents to achieve river quality objectives.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
N.4	REC 5	3	Descriptive consents are difficult to police; ie whether the specified equipment is operating efficiently. NRA would need expertise to define types and maintenance of plant. Could put some responsibility for discharge onto the NRA, leading to problems with possible prosecutions. Potential difficulties outweigh any advantages (see REC 5).
N.4	REC 5	3	
N.4	REC 6	4	
N.4	REC 15	2	Agree that the new determinands have advantages; however, it is important that consent setting is considered during the comparison period.
N.4	REC 16	2	Inclusion of sampling frequency within the consent could compromise the NRA if minimum sample frequencies are not achieved.
N.4	REC 32	2	Ensure that informal warnings are not considered by the discharger to have little significance.
N.4	REC 33	2	Agree with approach on a broad basis, but hope sufficient flexibility will be adopted to allow other high priorities to be addressed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.5	GEN CO			Y	The considerable resource implications need to be assessed.
N.5	GEN OT				Take the EC Municipal Waste Water Directive into account.
N.5	REC 3	1			Supported in principle, although the Water Services Association may question the use of a rubric.
N.5	REC 4	1			Supported. Ref change in law on the control of discharges going to land. Should relate to NRA Aquifer Protection Policy.
N.5	REC 5	2			Aesthetic considerations need to be included, especially to control foaming and colour.
N.5	REC 6	3			NRA should only consider the broad principles of the maintenance regime, but not details, as NRA is concerned in end product, not process.
N.5	REC 7	2			Consider the control of peak discharges and seasonal components. Planning authorities need to follow advice from NRA on new development.
N.5	REC 8	2			Need a rigorous, supportable method for the consistent setting of absolute limits and translation from the 95%ile limits.
N.5	REC 9	2			Need practicable and workable limits. Water Services Association would have reservations about new limits.
N.5	REC 9	2	I		Use of 80%ile limits needs further statistical investigation and examination of worked examples. Concern about perception of new percentile limits.
N.5	REC 10	1			Supported. Some load consents already used.
N.5	REC 12	3	I		Need design criteria for controlling effects of rainfall flows on STWs and storm overflows. Concerned about implications for STW design.
N.5	REC 13	2			NRA Yorkshire already controls most temporary discharges. Question the need for special monitoring exercises.
N.5	REC 14	2			Agree with need for consistency. Differing views as to whether all STWs should have ammonia consents.
N.5	REC 15	3			Neutral transition from BOD to TOC may be difficult for some trade discharges. Replacing BOD needs to be demonstrated as a major benefit.
N.5	REC 15	3			The need for continuous BOD monitors needs to be investigated. A rapid BOD test needs to be developed.
N.5	REC 16	2			Protocol for toxicity tests required.
N.5	REC 17	3			NRA must be aware of their Health and Safety responsibilities.
N.5	REC 18	3			All compliance results should be sent to the discharger, as is current practice in Yorkshire Region NRA.
N.5	REC 22	2			Seasonal effects should be taken into consideration.
N.5	REC 24	2			Views differ on the placing of continuous monitoring results on the public register. Recognise difficulties of handling data on the register.
N.5	REC 30	2			Support use of named contact and individual accountability. However, using the consent application would be inflexible (use updatable schedule).
N.5	REC 32	2			Warnings for consent exceedences should be put on the register. Views differ on recording the risk of consent exceedence.
N.5	REC 33	2			Suggest that recommendations are phased in for selected categories of discharge and for selected catchments.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
N.6	GEN CM		We trust that the basis on which the NRA makes any decision to dispense with advertisement procedures will be made public.
N.6	GEN MS		We would emphasise the importance of records of household discharges in rural areas as aggregations of properties may have a significant impact.
N.6	GEN WQ		We are concerned about the effects of sea outfalls on public health, coastal amenities and nature conservation.
N.6	GEN WQ		Phosphates pollution should be considered.
N.6	GEN WQ		Should discuss biological monitoring and assessment of the affects of discharges on wildlife.
N.6	REC 1	1	Fully endorsed.
N.6	REC 4	2	District councils should provide advice on septic tank husbandry.
N.6	REC 5	1	Fully endorsed.
N.6	REC 6	1	Endorsed.
N.6	REC 7	1	Endorsed.
N.6	REC 8	1	Strongly endorsed given the evidence of infraction of law by sewage treatment works.
N.6	REC 17	2 G	There must be adequate staff and resources to implement the recommendation.
N.6	REC 28	2	In order to ensure consistent standards throughout the UK we suggest the NRA produce explanatory notes for users of pollution registers.
N.6	REC 29	1	Endorsed in light of poor record to date.
N.6	REC 30	1	Sensible measure.
N.6	REC 33	1	Strongly supported.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.7	REC 1	2			Can national guidelines be guaranteed to ensure data collection and compliance are consistent in all ten regions?
N.7	REC 6	4			Maintenance obligations and records of the site facility should be decided by the site owner.
N.7	REC 15	3		I	Parameters should not be changed until scientific accuracy and cost burdens for discharger have been considered.
N.7	REC 15	3			TOC and turbidity may be inappropriate at coastal sites due to influence of salinity, fine particles and marine growth.
N.7	REC 17	2		I	Large complex sites are not operated for standard visits outside normal working hours.
N.7	REC 18	1			Regular dialogue between NRA and discharger is welcomed.
N.7	REC 22	3			12 month rolling programmes are necessary for nuclear power stations due to seasonal variations.
N.7	REC 24	2			Who pays for buying installing and operating equipment?
N.7	REC 24	0	Q		Further classification of 'environmentally significant discharges' is needed.
N.7	REC 25	3		Y	Where duplication of data collection is occurring the discharger should not have to incur both costs.
N.7	REC 25	2			National sampling frequency guidelines on types of discharge and receiving waters will require widespread notification.
N.7	REC 27	1			Welcomed.
N.7	REC 30	3			For corporate bodies the legally responsible person under the Water Act 1989 and site contact will not be same. NRA statement would help.
N.7	REC 32	2			Formal action warning criteria will require precise scheme details for both parties to avoid serious misunderstandings occurring.
N.7	REC 33	2			Importance of discharges in relation to impact on receiving waters may be more important in some circumstances.
N.7	REC 33	2	Q		Will priorities and progress be available in documents and be discussed?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
N.8	GEN WQ		Little comment relating to protection of ground water quality. Presumably a parallel policy is being developed.
N.8	GEN WQ		Acceptable discharge levels to coastal waters are being investigated by NERC.
N.8	GEN WQ		NERC recommend consideration of the soils capacity to retain or produce pollutants.
N.8	REC 9	2	80%ile limits will give a more accurate assessment of compliance. Possible problems with episodic nature of industrial discharges.
N.8	REC 15	2	BOD tests need not take five days. Refer to NERC work on BOD/TOC relationship.
N.8	REC 16	3	Reservations about use of a "toxicity test", which has limitations. Need to research the relationship between tests and ecological impact.
N.8	REC 19	2	Tripartite sampling may not be strictly necessary.
N.8	REC 33	1	Strongly support catchment approach.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation	See key (A) (B) (C)	Summarised comment
0.1	GENMS	The letter from 0.1 relates to 'Interim Determinations' and revised consent limits. Does not refer to the report under consideration.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation	See key (A) (B) (C)	Summarised comment
P.1	REC 2	3 Q 1
P.1	REC 3	3
P.1	REC 9	1 Q
P.1	REC 11	4
P.1	REC 12	4
P.1	REC 16	3
P.1	REC 18	3
P.1	REC 24	3 Q Y
P.1	REC 25	3 Q Y
P.1	REC 26	3 Q Y
		Implies that development plans need to be notified to the NRA. Previously, this was not done until a project proposal evolved. Clarify.
		Concerned that discharger may be prosecuted for unspecified constituents of the discharge. Should change the consent before prosecuting.
		Clarify "environmentally significant discharge", perhaps by presenting examples.
		Placing absolute volume limits on dry and rainfall conditions seems difficult to enforce, and meaningless to an oil industry installation.
		Placing absolute volume limits on dry and rainfall conditions seems difficult to enforce, and meaningless to an oil industry installation.
		Toxicity testing is useful for setting determinands, but not as a consent because of difficulty in applying as a discharge quality control.
		Results of all analyses (by NRA and discharger) should be shared. Inform the discharger of analyses before putting on public register.
		Concerned that facilities for remote interrogation of equipment could be onerous for the discharger. NRA needs to explain further.
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PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
P.2	GEN OT		Q		Detail the relationship between NRA and other control authorities (HMIP).
P.2	REC 3	3			Lack of legal certainty for industry. Once granted a licence, the discharger should only be covered by its stated provisions.
P.2	REC 3	3	Q		Appears to conflict with recommendation 8.
P.2	REC 6	3			Ability of NRA to inspect facilities and maintenance records is questioned.
P.2	REC 8	4			Difficult to explain to the public why the absolute limit value is higher than the 95%ile limit. Prefers a statistical statement of limit values.
P.2	REC 8	3	Q		Appears to conflict with recommendation 3.
P.2	REC 8	3	Q		Define "relevant". Would pollutants with no defined EQOs be excluded?
P.2	REC 16	4			Queries necessity of test: EQOs should have taken toxicity into account. Impossible to apply to a proposed discharge.
P.2	REC 18	3			At present, power stations are informed of all results. Continuation of this practice is essential.
P.2	REC 19	3			Three month rolling period (para. 98) is too short: seasonal variations possible; and current sampling is once a month (adequate for control).
P.2	REC 28	3			Do not include all events over the threshold (ie the 80%ile value), only an indication of when the statistical limit has been breached.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
R.1	GEN CM				The NRA should "look after the 'river users' interests by liaising with local planning authorities".
R.1	GEN CO	Q	Y		What are the cost implications of the recommendations?
R.1	GEN CO		Y		Paragraph 64: How will "cost to the discharger" be weighed up by the NRA? The discharger may plead poverty every time.
R.1	GEN MS				Paragraph 64: Rather than "realistically attainable", use "appropriate limits relative to the water quality objectives".
R.1	GEN MS				The NRA should not suggest at the outset that a neutral revision will be appropriate for a large proportion of effluents.
R.1	GEN RE	Q			NRA to acknowledge receipt of comments and confirm that R.1 will be participate in discussions on later phases of implementation of new consents.
R.1	GEN WQ				Policy and principles by which the standards will be set should be clarified.
R.1	GEN WQ				RTS recommend that more emphasis is placed on the WQOs being the main factor for determining the consent limits.
R.1	GEN WQ				WQOs should be the prime determinant of discharge consents.
R.1	REC 2	2			The involvement of the "river user" needs to be better addressed.
R.1	REC 2	2			No reference is made to the need for information from the discharger AND the NRA to be given to the public (local planning authorities).
R.1	REC 6	2		I	The NRA should insist that the discharger installs and maintains flow measurement equipment.
R.1	REC 9	2	Q		Recommend "environmentally significant" refers to those areas where there is concern that the WQO is not being met.
R.1	REC 9	2	Q		How many STWs will be affected by the 80/50%ile limits?
R.1	REC 10	3			NRA should assess the problem of adequate measurement of flow.
R.1	REC 11	3			There should be no discharge consents where performance cannot be measured.
R.1	REC 11	2			Flow limits should take into account loading forecasts based on local planning authority development plans.
R.1	REC 11	2		I	The discharger must install and maintain flow measurement equipment where necessary (with particular relevance to volumes discharged).
R.1	REC 12	2			The NRA should insist that the discharger installs and maintains flow measurement equipment.
R.1	REC 18	2			The involvement of the "river user" needs to be better addressed.
R.1	REC 18	2			Public must be informed of dischargers causing regular pollution (LPA will then check damage and possibly restrict further development (if STW)).
R.1	REC 22	2	Q		Define "routine monitoring". Any change in sampling pattern could arguably render monitoring non-routine.
R.1	REC 29	2			The involvement of the "river user" needs to be better addressed.
R.1	REC 29	2			When the NRA is considering prosecution, they should consider the seriousness of the pollution (statistical, and effect on the public).
R.1	REC 29	0	Q	I	Will not all samples have to be tri-partite to ensure effective prosecution in respect of absolute limits? Is this feasible?
R.1	REC 33	0	Q		Further explanation of implementation would be welcomed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
R.2	GEN CM	Q	Paragraph 45: why is the suggestion for advertisement of consent applications not made a recommendation?
R.2	GEN MS	Q	Why do STWs have multiple consents: a separate one for each discharge?
R.2	GEN MS	Q	Why is fully treated flow imprecisely defined?
R.2	GEN MS	Q	Would like a definition of the which 24 hours is used to define fully treated flow.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
R.3	GEN WQ	1 C	Welcomes the report and will give the recommendations careful consideration in their current study on fresh water quality.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
R.4	GEN MS		Any policy relating to discharge consents should make clear that legal discharges may need to be reduced.
R.4	GEN MS		Would welcome consultation on the priorities for dealing with consents.
R.4	GEN MS		Paragraph 135: 'Use of natural resources' should refer primarily to the use of water by wildlife.
R.4	GEN RE		Want a provision for the NRA to order suspension of discharges when environment is more susceptible to damage, eg when suffering drought flows.
R.4	GEN WQ		Present methods of assessing the effect of discharges on wildlife are inadequate: there is no mention of this.
R.4	GEN WQ		Need to identify other potential problems: 'cocktail' effects of mixing discharges in close proximity, higher temperature discharges, release of 'nutrients' rather than 'pollutants'.
R.4	REC 19	1	Publish the method used by the NRA to enable others to follow the same procedures.
R.4	REC 31	3 Y	Concerned that present proposals for charging reflect the cost of monitoring rather than cost to the environment.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
R.5	GEN WQ			Use of discharge consents to reduce discharges of dangerous substances to the sea has not been addressed (Ref Intergovernmental Conference on the North Sea, and NRA Corporate Plan 1990/91). Also, application of 'precautionary approach' has not been covered. Recommends introduction of phosphate limits for freshwater areas affected, or likely to be affected, by eutrophication. Recommends full consultation on proposed system of WQOs, covering effects on users and specific objectives for each watercourse.
R.5	GEN WQ			
R.5	GEN WQ			
R.5	GEN WQ			
R.5	REC 5	3		Concerned that numeric upper limits for maximum volume, load, trade effluents and persistent chemicals should be applied to marine outfalls.
R.5	REC 9	2	I	Agreed. Parties other than the discharger and the NRA should be involved in identifying those discharges which are significant.
R.5	REC 11	1	I	Agreed. Also include percentile limits on flow, similar to those for substances, to ensure tight control on substance loads.
R.5	REC 16	3	I	Toxicity testing only measures acute effects, and therefore gives a misleading measure of the impact of persistent or accumulative substances.
R.5	REC 16	3	I	Recommend that numerical limits are applied to all discharges where persistent or accumulating substances occur.
R.5	REC 19	1	Y	Enforcement of limits requires a number of tri-partite samples: costs can be recovered through the courts or from dischargers in general.
R.5	REC 28	2		Details for inclusion in the register are listed in letter. The register format should be distributed for consultation, and aimed at the users.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
S.1	GEN RE			Would like stronger expression of the need to sample the actual peak loads of STWs. Welcome the move for all dischargers to use absolute limits. Percentile limits would encourage dischargers to work to best achievable standards. Support the restriction of ammonia. Support the substitutions of TOC for BOD and turbidity for SS. Continuous automatic monitoring is 'fundamental' to the effectiveness of the NRA, reducing labour intensive sampling. Welcome 'Action Warnings'. NRA should keep a register of warnings.
S.1	REC 8	1		
S.1	REC 9	1		
S.1	REC 14	1		
S.1	REC 15	1		
S.1	REC 24	1	I	
S.1	REC 32	1		
S.1	REC 32	1		



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
S.2	GEN OT			Changes must be compatible with statutory water quality, river classifications, environmental assessment and EC waste water treatment directive.
S.2	GEN ST			NRA should treat STWs differently to industrial dischargers: STWs have no control over what arrives at the plant, whereas industry does.
S.2	REC 8	4	Y	In order to achieve absolute limits disproportionate amounts of money will have to be spent.
S.2	REC 24	4	Y	Continuous monitoring is not feasible on technical grounds and the cost would be great.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
S.3	GEN CM			Request notification of consent applications (esp. if sensitive or large scale) is given to Parish Councils as well as District Councils.
S.3	GEN LE		Q	Clarify paragraph 43 (temporarily relaxed consents). What action will be taken against Water Utility Co's unable to meet the 1992 consents?
S.3	REC 2	1		"High priority".
S.3	REC 3	1		"High priority".
S.3	REC 4	0		Concerned about discharges from septic tanks, particularly near watercourses.
S.3	REC 4	0		Provide statutory necessity for monitoring of discharge quality from, and maintenance of, septic tanks.
S.3	REC 6	1		"High priority".
S.3	REC 7	1		"High priority".
S.3	REC 12	1		"High priority".
S.3	REC 16	0	Q	How can this Rec. be applied to a STW carrying a consent to discharge toxic substances it receives in industrial effluent?
S.3	REC 16	0		There should be a legal requirement for industry to seek advice from the NRA on potentially toxic waste products.
S.3	REC 16	0		Discharger should have statutory obligation to monitor and inform NRA of any changes in chemical composition of the discharge.
S.3	REC 17	1		"High priority".
S.3	REC 30	1		"High priority".
S.3	REC 31	1		"High priority".

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
W.1	GEN CO		Y	ESTIMATED COST TO HOUSEHOLDERS OF IMPLEMENTING PROPOSALS: ADDITIONAL PER ANNUM CHARGE = ? (Data with-held at present: 26/11/90) See recs 8 & 9.
W.1	GEN CO		Y	Some recommendations are aimed at simply changing the regulatory regime, resulting in a cumbersome administrative burden and additional cost.
W.1	GEN CO		Y	Technical changes in setting of consent standards would result in heavy investment for little gain to the environment.
W.1	GEN CO		Y	The report proposals go beyond what is necessary to protect the environment, yet require extensive further investment and operating costs.
W.1	GEN CO		Y	Costs and resource implications, to WSCs and the NRA must be taken fully into account.
W.1	GEN MS			The recent ('arbitrary') changes to effluent discharge consenting policy should be withdrawn pending consideration of issues detailed by WSC.
W.1	GEN OT			Discussions should include the DoE and the Office of Water Services.
W.1	GEN OT			Consider all prospective changes: introduction of statutory water quality objectives, changes to river classification scheme, changes in
W.1	GEN OT			environmental impact assessments, EC Dir. on Treatment of Municipal Waste Water, Environmental Protection Bill, and Integrated Pollution Control.
W.1	GEN RE			Discussions with NRA requested, then WSC wish to make suggestions for phased implementation of change which meets a wider range of requirements.
W.1	GEN ST			Differences between sewage and trade flows must be considered further (ie sewage flows vary widely, trade effluent can be regulated).
W.1	REC 2	3	I	Consult the WSCs before completing this exercise, in order to reduce administrative difficulties.
W.1	REC 3	3		Pollution caused by unconsented substances should create an offence, not just the presence of the substances. WSCs wish to examine rubric.
W.1	REC 4	0		Notify WSCs of septic tanks affecting ground water used for public supplies. Include this requirement in the NRA Groundwater Protection Policy.
W.1	REC 5	2		WSCs hope to work with NRA to agree conditions for descriptive consents, with the discharger deciding the type and form of treatment
W.1	REC 5	2		necessary to attain consent conditions.
W.1	REC 6	2		Accepted, providing within scope of Schedule 12, para 2(3) of the Water Act.
W.1	REC 7	2		'A simple 'de minimus' arrangement for reporting increases in load will be required.' WSCs are not always informed of new dwellings.
W.1	REC 8	4	Y	WSCs consider that no case has been made for the necessity of absolute limits. Implementation would involve an extended timescale and high costs.
W.1	REC 8	4		Much wider debate of this issue is required.
W.1	REC 8	4	Y	ESTIMATED COST OF ACHIEVING ABSOLUTE STANDARDS: CAPITAL = ?, OPERATING = ? (Data with-held at present: 26/11/90)
W.1	REC 9	4		No arguments presented for abandoning the 95%ile limit. The 95%ile limit has advantages. It is:- consistent with the river quality
W.1	REC 9	4		classification scheme; a good working maximum; set on valid statistical grounds; & there is experience of designing and operating to this level.
W.1	REC 9	4	I	Changing from 95%ile limit will involve much work with no obvious environmental benefit. Moreover, re-education of the public would be necessary.
W.1	REC 10	2		Accepted for controlling mass of toxic substances and where solids depositions likely. Keep use to a minimum.
W.1	REC 10	2	Y	Must be assessed over a substantial period using flow composited bulk samples. Cost of equipment and its operation must be considered.
W.1	REC 11	2	Q	Presumed to refer to industrial discharges, as STWs are covered by Rec. 12.
W.1	REC 12	4		Paragraph 72: Many works receive and treat effluent containing trade effluent and to exclude it is impracticable.
W.1	REC 12	0		Not clear what changes will be made to the ways in which flows are taken in account in STW design. Should continue to follow Rec.s of Technical
W.1	REC 12	0		Com. on Storm Overflows (1970).
W.1	REC 14	4	Y	ESTIMATED COST OF INTRODUCING WIDESCALE AMMONIA STANDARDS: CAPITAL = ?, OPERATING = ? (Data with-held at present: 26/11/90)
W.1	REC 14	2	I	New obligations for ammonia removal should only be imposed where necessary for environmental reasons.

W.1	REC 14	2	Y	Setting of ammonia standard for receiving waters will govern discharge consent standard and hence the financial implications.
W.1	REC 15	4	Y	Change to TOC would involve:- altering consents on an individual basis, re-calibration of river catchment models, new approach to river
W.1	REC 15	4	Y	improvement plans, and re-appraisal of design criteria. BOD test would be retained to assess how much TOC is biodegradable in receiving water.
W.1	REC 15	4	Y	More appropriate to put research effort into a rapid BOD test.
W.1	REC 15	3		A sound technical case must be made before adopting new quality control criteria.
W.1	REC 16	2		Tests should be applied directly to the discharges rather than to the STW discharge. No test approved by the Standing Committee of Analysts.
W.1	REC 17	4	I	Taking samples at any time conflicts with the rights of access granted by Water Act 1989 (S. 147) (ie at reasonable times and in emergencies).
W.1	REC 17	4	I	Consider H&S responsibilities. WSCs "... consider it unreasonable to provide facilities in order to accompany NRA officers on random visits .."
W.1	REC 18	3		It is extremely important for the NRA to notify all dischargers of all results, promptly, to enable necessary any action.
W.1	REC 19	3	Y	WSCs wish to be consulted on proposed changes to sampling regimes, as these have compliance and cost implications for the WSCs.
W.1	REC 20	3		Concerned about implication that 'subsequent enforcement action' will be the normal response to accidents and emergencies.
W.1	REC 20	3		Threat of action should not impede rapid handling of emergencies.
W.1	REC 21	2		Understood. Have regard to responses to Rec.s 8, 17, 18 and 19.
W.1	REC 22	2		Shorter periods than one year would be accepted, providing seasonal effects are taken into account.
W.1	REC 24	3		WSCs are concerned about direct links with the NRA. These measures 'could only result in confrontation'. On a practical basis, instrument
W.1	REC 24	3		problems could be misinterpreted by the NRA.
W.1	REC 24	2	Y	Due to cost of continuous monitoring, confine it to most sensitive discharges. National guidelines would avoid regional discrepancies.
W.1	REC 24	2		There are advantages in self-monitoring, but only with a structured, agreed programme. Leads towards quality assurance approach, as applied in
W.1	REC 24	2		other countries and industries. Legal framework may need to be adjusted. Note the practical problems with equipment, especially reliability.
W.1	REC 26	2		Practical problems referred to under Rec. 24.
W.1	REC 27	2		Needs to conform with Section 117 of Water Act.
W.1	REC 28	2		Introductory note welcome. Disagree with use of 80 and 50%ile limits as stated under Rec. 9.
W.1	REC 29	3		Considerable emphasis is placed on prosecution. This discourages an open working relationship between the dischargers and the NRA.
W.1	REC 29	2		NRA should publish their prosecution policy, eg confirm no action if remedial action planned, or mitigating circumstances involved.
W.1	REC 30	2		There should be one point of contact for policy matters, and several for operational matters. Inappropriate to use names, refer to post holders.
W.1	REC 32	3		Warning actions are already in effect as warning letters. Detailed publication of warnings would be invidious, lead to misleading comparisons,
W.1	REC 32	3		and possibly prejudice later court proceedings. WSCs would require a right to challenge the NRA's actions.
W.1	REC 33	2		If this means looking at consents from the needs of the rivers, Rec. is commendable. Consider revisions in line with all relevant information.

## PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation	See key (A) (B) (C)	Summarised comment
W.2	GEN MS	1
		"Waveny D.C looks forward to the implementation of the new and uniform consent and compliance policy .."

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
W.3	GEN CO			Y	Consent changes will have investment implications for the dischargers: advocate 'more sympathetic approach'.
W.3	GEN LE				Possible legal problems anticipated with changing existing and NRA issued consents.
W.3	GEN LE				Question definition of 'consent' and hence extent of NRA powers (see letter for details).
W.3	GEN MS				Define 'discharges'; eg impractical to apply consents to water supply washout points.
W.3	GEN MS				Concerned about lax interpretation of 'emergency' overflows (with waived consents).
W.3	GEN RE				Further consideration suggested for areas of diffuse pollution: eg agricultural, fish farm and storm water discharges.
W.3	GEN RE				Report pays little attention to discharges to groundwaters. Want Group reconvened to produce relevant proposals.
W.3	GEN RE				Consent for cryptosporidium oocysts is required.
W.3	REC 9	2		I	Assess percentile values on 'real' rather than 'model' effluent concentrations asap.
W.3	REC 14	0			Ammonia consents should be used as a consent condition.
W.3	REC 15	4			Use of TOC is 'merely for convenience', is not justified, and has no history of usage.
W.3	REC 15	4			Turbidity measures different particle range than SS, so consent would drop. Do not use.
W.3	REC 19	3			Consideration of analytical accuracy is insufficient: may increase severity of consent.
W.3	REC 19	3			Ensure that laboratory results provided by voluntary bodies are accurate before using for prosecution.
W.3	REC 22	2			Sampling needs to be stated as representative.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by respondent.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
W.4	GEN CO			Y	Criticise expenditure on monitoring rather than on improvement of sewage systems.
W.4	REC 1	1		G	Costs of analysis and publication of data should be borne by the Government.
W.4	REC 2	1		G	"Desirable". Will hopefully eliminate investigative charges incurred by the NRA.
W.4	REC 3	1			"Sensible approach". Protects environment from abuse of the system.
W.4	REC 4	1			Strongly supports this recommendation.
W.4	REC 5	3		I	Stringent flow limits on marine discharges will necessitate extra storm overflows.
W.4	REC 5	3		I	Limits on marine discharges may cause difficulties without co-operation of local planning authorities.
W.4	REC 6	4		I	Consent compliance means that maintenance obligations are met; hence records irrelevant.
W.4	REC 7	2			Co-operation of planning auth. essential to guarantee no. of dwellings connected to STW.
W.4	REC 8	2		I	Approves of balancing the protection of receiving water with the cost to discharger.
W.4	REC 9	4			Uneven loading thro' day and season makes 50/80 %ile limits an inaccurate measure of performance.
W.4	REC 9	3		Y	Translation from 95 to 80/50%ile limits may effect a costly tightening of consent.
W.4	REC 10	3		Y	High administrative and monitoring implications, so only use where real risk exists.
W.4	REC 11	4		I	Cannot see how breaking of absolute flow limit could be prevented at STW or storm overflow.
W.4	REC 11	4			Would prefer agreed levels of treatment for various multiples of normal flow.
W.4	REC 12	3		Y	Major cost implications, hope for long term project, starting with worst catchment.
W.4	REC 13	2	Q	Y	Where will finance for such projects come from.
W.4	REC 14	1		I	Majority of WW's STWs are already subject to ammonia limits.
W.4	REC 15	4			TOC and turbidity are not suitable for assessing crude and settled sewages.
W.4	REC 16	2		Y	Acceptable, but difficult to apply a practicable, reproducible, reasonable cost method.
W.4	REC 17	3		I	Doubts the practicality of early morning samples, especially w.r.t. Health and Safety.
W.4	REC 18	3			Would prefer their present system of informing discharger of every sample result.
W.4	REC 21	0			Expect use of tri-partite samples when legal action is taken on non-compliance.
W.4	REC 22	3		Y	Periods < 12 months would cause problems, eg spring overloading on biological filter plant.
W.4	REC 23	1			Hope this will be the case.
W.4	REC 24	3			Only viable if TOC and turbidity are found to be acceptable limits.
W.4	REC 24	3		Y	Cost passed to consumer, plus cost of NRA's monitoring; exercise may be politically sensitive.
W.4	REC 25	2			Needs to be frequent enough for statistical comparisons in line with BS5700.
W.4	REC 26	3		Y	"This proposal can only significantly add to the Company's costs."
W.4	REC 28	3			Public not interested in individual results; pressure groups draw their own conclusions regardless of other interpretations.
W.4	REC 29	1			Strongly support this proposal.
W.4	REC 30	4			Can see no advantage over current procedures.
W.4	REC 32	2			Sensible, but NRA should not consider a high no. of Warnings indicative of good control.
W.4	REC 33	2			Essential to have good liaison between discharger and NRA.
W.4	REC 33	2		Y	Major expenditure may have to be committed outside catchment order " if complete chaos is to be avoided".



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## PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

## Column 1

Respondent codes:

Total number of respondents: 50

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A.1 Association of County Councils  
 B.1 Basildon District Council  
 B.2 The Brewers' Society  
 B.3 British Aggregate Construction Materials Industries  
 B.4 British Coal  
 B.5 British Effluent and Water Association  
 B.6 British Leather Confederation  
 B.7 British Nuclear Fuels  
 B.8 British Paper and Board Industry Federation  
 B.9 British Trout Association  
 B.10 Broads Authority  
 C.1 Chemical Industries Association  
 C.2 The China Clay Association (same response as E.1)  
 C.3 CIBA-GEIGY  
 C.4 Confederation of British Industry (CBI)  
 C.5 Country Landowners Association  
 D.1 Derbyshire County Council  
 E.1 ECC International (see C.2)  
 E.2 Envitech  
 F.1 Friends of the Earth  
 G.1 Great Yarmouth Borough Council (reply related to M.1)  
 G.2 Green Peace  
 H.1 Humberside County Council  
 I.1 Imperial Chemical Industries (ICI)  
 I.2 Institute of Fisheries Management (and National Federation of Anglers)

I.3 Institution of Water and Environmental Management (IWEM)  
 M.1 The Maritime Pollution Information Forum (see G.1)  
 N.1 Nature Conservancy Council  
 N.2 National Farmers Union (NFU)  
 N.3 National Power  
 N.4 National Rivers Authority (NRA), Wessex Region  
 N.5 National Rivers Authority (NRA), Yorkshire Region  
 N.6 The National Trust  
 N.7 Nuclear Electric  
 N.8 Natural Environment Research Council (NERC)  
 O.1 Office of Water Services (reply does not refer to NRA report)  
 P.1 Petroleum Industry Association  
 P.2 PowerGen  
 R.1 River Thames Society  
 R.2 Riverwatch  
 R.3 Royal Commission on Environmental Pollution  
 R.4 Royal Society for Nature Conservation  
 R.5 Royal Society for the Protection of Birds  
 S.1 South West Rivers Association  
 S.2 South West Water  
 S.3 Staverton Parish Council  
 W.1 Water Services Association  
 W.2 Waveney District Council  
 W.3 The Water Companies Association  
 W.4 Wessex Water



# KEY

## Column 2

Recommendations are numbered as in the "Discharge consent and compliance policy" report:

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REC 1 to REC 33

## Column 2

General comment subjects, where specified, are as follows:

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GEN CO General comments relating to costs.  
 GEN CM Consideration of communication between parties and of advertising.  
 GEN LE Comments mentioning potential legal problems  
 GEN OT References to other Bills, Acts, Directives and authorities.  
 GEN RE Further recommendations suggested.  
 GEN ST Comparison of STWs and industry.  
 GEN WQ Comments relating to Water Quality Objectives or the environment in general.  
 GEN MS Miscellaneous

## Column 3

(A) Agreement levels:

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(B) Type of response:

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(C) Costing implications for the discharger:

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Level 0 Recommendation not understood / more information required  
 Level 1 "Useful", "welcomed" etc  
 Level 2 Agreed in principle, but some reservations  
 Level 3 Concerned about implications  
 Level 4 Disagrees

Q Query

G General mention of costs  
 Y Specific reference to cost to discharger  
 I Comment implies cost to discharger

## Column 4

Summarised comments:

\*\*\*\*\*

The comments are to be read in conjunction with the report recommendations.  
 Comments are abbreviated: refer to letters for fuller details where required.  
 Where no response is shown for a recommendation, no specific comment  
 has been made, and general acceptance can be implied.

Selected abbreviations:

WSC: Water and Sewage Companies (referred to by W.1)  
 HMIP: Her Majesty's Inspectorate of Pollution  
 EQO: Environmental Quality Objective  
 WQO: Water Quality Objective  
 NP: National Power

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
I.2	GEN CO	2	G	Charging scheme has to be right first time as it will be difficult politically to change afterwards.
I.3	GEN CO		G	Concerned about staffing implications for the NRA.
I.3	GEN CO		Y	Suggests that the whole process has been wrongly divorced from charging policy.
B.9	GEN CO		Y	Compare charges with other EC countries.
C.4	GEN CO		Y	Monitoring techniques and compliance standards should be feasible and practical to implement at an acceptable cost.
I.1	GEN CO		Y	Basis of charges should be to cover costs incurred or a service rendered. Incentive charges should be resisted.
I.1	GEN CO		Y	We accept need for water quality improvements but must also ensure that we do not incur costs that inhibit our international competitiveness.
N.5	GEN CO		Y	The considerable resource implications need to be assessed.
R.1	GEN CO	Q	Y	What are the cost implications of the recommendations?
R.1	GEN CO		Y	Paragraph 64: How will "cost to the discharger" be weighed up by the NRA? The discharger may plead poverty every time.
W.1	GEN CO		Y	ESTIMATED COST TO HOUSEHOLDERS OF IMPLEMENTING PROPOSALS: ADDITIONAL PER ANNUM CHARGE = ? (Data with-held at present: 26/11/90) See recs 8 & 9.
W.1	GEN CO		Y	Some recommendations are aimed at simply changing the regulatory regime, resulting in a cumbersome administrative burden and additional cost.
W.1	GEN CO		Y	Technical changes in setting of consent standards would result in heavy investment for little gain to the environment.
W.1	GEN CO		Y	The report proposals go beyond what is necessary to protect the environment, yet require extensive further investment and operating costs.
W.1	GEN CO		Y	Costs and resource implications, to WCs and the NRA must be taken fully into account.
W.3	GEN CO		Y	Consent changes will have investment implications for the dischargers: advocate "more sympathetic approach".
W.4	GEN CO		Y	Criticise expenditure on monitoring rather than on improvement of sewage systems.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
I.2	GEN CM	2	Define when advertising becomes desirable.
D.1	GEN CM		Full consultation with all parties to ensure that standards are acceptable.
G.1	GEN CM		Consents for discharges should be sent to local authorities for retention on a local register.
G.1	GEN CM		When consent conditions are confirmed they should be published in local press.
G.1	GEN CM		Close liaison with local authorities over pollution is important.
M.1	GEN CM		Consents for discharges should be sent to local authorities for retention on a local register.
M.1	GEN CM		Close liaison with local authorities over pollution is important.
N.3	GEN CM		Good consent compliance practice relies on a businesslike dialogue between NRA and the discharger at all levels.
N.6	GEN CM		We trust that the basis on which the NRA makes any decision to dispense with advertisement procedures will be made public.
R.1	GEN CM		The NRA should 'look after the 'river users' interests by liaising with local planning authorities'.
R.2	GEN CM		Paragraph 45: why is the suggestion for advertisement of consent applications not made a recommendation?
S.3	GEN CM		Request notification of consent applications (esp. if sensitive or large scale) is given to Parish Councils as well as District Councils.
		Q	

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
S.3	GEN LE	Q	Clarify paragraph 43 (temporarily relaxed consents). What action will be taken against Water Utility Co's unable to meet the 1992 consents?
W.3	GEN LE		Possible legal problems anticipated with changing existing and NRA issued consents.
W.3	GEN LE		Question definition of 'consent' and hence extent of NRA powers (see letter for details).

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
I.3	GEN OT		Consider future application of the Municipal Waste Water Directive.
B.1	GEN OT		Would like a Rec. promoting regular dialogue between NRA, discharger and local authority.
C.4	GEN OT		Clarification of the division of responsibilities between NRA and other control authorities is required.
I.1	GEN OT		Need coordinated development of regulatory policy between NRA & HMIP, w.r.t effluent subject to integrated pollution control under EP Bill.
M.1	GEN OT		When consent conditions are confirmed they should be published in local press.
N.1	GEN OT	Q	Env. Prot. Bill, pt I, proposes to transfer consents for prescribed discharges from the NRA to the HMIP. Will HMIP follow the same procedures?
N.1	GEN OT		NCC issues consents affecting SSSIs. It has been agreed that the NCC and NRA will prepare a joint guidance note for possible dual roles.
N.5	GEN OT		Take the EC Municipal Waste Water Directive into account.
P.2	GEN OT	Q	Detail the relationship between NRA and other control authorities (HMIP).
S.2	GEN OT		Changes must be compatible with statutory water quality, river classifications, environmental assessment and EC waste water treatment directive.
W.1	GEN OT		Discussions should include the DoE and the Office of Water Services.
W.1	GEN OT		Consider all prospective changes: introduction of statutory water quality objectives, changes to river classification scheme, changes in
W.1	GEN OT		environmental impact assessments, EC Dir. on Treatment of Municipal Waste Water, Environmental Protection Bill, and Integrated Pollution Control.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
I.3	GEN RE	Q	Agricultural, fish farms and other diffused pollution are not adequately considered.
N.8	GEN RE		Little comment relating to protection of ground water quality. Presumably a parallel policy is being developed.
G.1	GEN RE		NRA should have a pre-emptive power where pollution is likely or may result from a known process.
G.1	GEN RE		Discharges should be required to have a 'Discharge Policy Statement'.e.g stating peak discharge limits, QA, emergency action etc.
M.1	GEN RE		NRA should have a pre-emptive power where pollution is likely or may result from a known process.
M.1	GEN RE		Discharges should be required to have a 'Discharge Policy Statement'.e.g stating peak discharge limits, QA, emergency action etc.
N.1	GEN RE		Phosphate should be added to the list of determinants for relevant discharges (ref draft EC Directive on Municipal Waste Water Treatment).
R.1	GEN RE		NRA to acknowledge receipt of comments and confirm that R.1 will be participate in discussions on later phases of implementation of new consents.
R.4	GEN RE		Want a provision for the NRA to order suspension of discharges when environment is more susceptible to damage, eg when suffering drought flows.
S.1	GEN RE		Would like stronger expression of the need to sample the actual peak loads of STWs.
W.1	GEN RE		Discussions with NRA requested, then WSC wish to make suggestions for phased implementation of change which meets a wider range of requirements.
W.3	GEN RE		Further consideration suggested for areas of diffuse pollution: eg agricultural, fish farm and storm water discharges.
W.3	GEN RE		Report pays little attention to discharges to groundwaters. Want Group reconvened to produce relevant proposals.
W.3	GEN RE		Consent for cryptosporidium oocysts is required.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
S.2	GEN ST		NRA should treat STWs differently to industrial dischargers: STWs have no control over what arrives at the plant, whereas industry does.
W.1	GEN ST		Differences between sewage and trade flows must be considered further (ie sewage flows vary widely, trade effluent can be regulated).

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
F.1	GEN WQ	2	Any consent review programme must use fully explained procedures.
R.3	GEN WQ	1 C	Welcomes the report and will give the recommendations careful consideration in their current study on fresh water quality.
B.7	GEN WQ		Para 47: Consents set in terms of separate concentration, flow limits, instead of load, will not encourage water conservation.
B.7	GEN WQ		Discusses points to consider when setting limits.
C.1	GEN WQ		Surprised that WQOs and EQSs are not mentioned in executive summary.
C.1	GEN WQ		Para 22: Environmental acceptability needs to be defined.
I.3	GEN WQ		Suggest regularly reviewing consents w.r.t WQOs and pollution load.
N.8	GEN WQ		Acceptable discharge levels to coastal waters are being investigated by NERC.
N.8	GEN WQ		NERC recommend consideration of the soils capacity to retain or produce pollutants.
B.1	GEN WQ	Q	What effect will the Rec.s have on the ecology of rivers?
G.2	GEN WQ		Consider reduction of toxic use, or clean production. NRA should force waste reduction.
G.2	GEN WQ		Consider use of waste audits, assessing chemicals entering and leaving the plant, which would identify effluent components.
G.2	GEN WQ		NRA should assess ways to reduce pollution, rather than attempt to assess 'environmental capacity'
I.3	GEN WQ		Calculation and values used for setting limits should be published for each river.
N.1	GEN WQ		The setting of statutory WQOs will influence the setting of consents by the NRA as well as the timing of implementing the recommendations.
N.6	GEN WQ		We are concerned about the effects of sea outfalls on public health, coastal amenities and nature conservation.
N.6	GEN WQ		Phosphates pollution should be considered.
N.6	GEN WQ		Should discuss biological monitoring and assessment of the affects of discharges on wildlife.
R.1	GEN WQ		Policy and principles by which the standards will be set should be clarified.
R.1	GEN WQ		RTS recommend that more emphasis is placed on the WQOs being the main factor for determining the consent limits.
R.1	GEN WQ		WQOs should be the prime determinant of discharge consents.
R.4	GEN WQ		Present methods of assessing the effect of discharges on wildlife are inadequate: there is no mention of this.
R.4	GEN WQ		Need to identify other potential problems: 'cocktail' effects of mixing discharges in close proximity, higher temperature discharges, release
R.4	GEN WQ		of 'nutrients' rather than 'pollutants'.
R.5	GEN WQ		Use of discharge consents to reduce discharges of dangerous substances to the sea has not been addressed (Ref Intergovernmental Conference
R.5	GEN WQ		on the North Sea, and NRA Corporate Plan 1990/91). Also, application of 'precautionary approach' has not been covered.
R.5	GEN WQ		Recommends introduction of phosphate limits for freshwater areas affected, or likely to be affected, by eutrophication.
R.5	GEN WQ		Recommends full consultation on proposed system of WQOs, covering effects on users and specific objectives for each watercourse.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
B.8	GEN MS	Y	"Equating emission limits to equal competitiveness is overstating the position, not least as the water environment is not uniform internationally"
C.4	GEN MS		NRA should set achievable limits and time scales so that industry's capital and revenue costs can be absorbed gradually.
C.5	GEN MS		We consider that all farm effluent consents should be in descriptive terms.
C.5	GEN MS		Concern about suggestions that surface water drainage will be brought under discharge consents. Should only apply in special circumstances.
G.1	GEN MS		Wider impact analysis should be considered.
M.1	GEN MS		Wider impact analysis should be considered.
N.1	GEN MS		Do not understand the inconsistencies shown in Annex 3 if all consents have been the responsibility of the DoE since 1973.
N.6	GEN MS		We would emphasise the importance of records of household discharges in rural areas as aggregations of properties may have a significant impact.
O.1	GEN MS		The letter from O.1 relates to 'Interim Determinations' and revised consent limits. Does not refer to the report under consideration.
R.1	GEN MS		Paragraph 64: Rather than 'realistically attainable', use 'appropriate limits relative to the water quality objectives'.
R.1	GEN MS		The NRA should not suggest at the outset that a neutral revision will be appropriate for a large proportion of effluents.
R.2	GEN MS	Q	Why do STWs have multiple consents: a separate one for each discharge?
R.2	GEN MS	Q	Why is fully treated flow imprecisely defined?
R.2	GEN MS	Q	Would like a definition of the which 24 hours is used to define fully treated flow.
R.4	GEN MS		Any policy relating to discharge consents should make clear that legal discharges may need to be reduced.
R.4	GEN MS		Would welcome consultation on the priorities for dealing with consents.
R.4	GEN MS		Paragraph 135: 'Use of natural resources' should refer primarily to the use of water by wildlife.
W.1	GEN MS		The recent ('arbitrary') changes to effluent discharge consenting policy should be withdrawn pending consideration of issues detailed by WSC.
W.3	GEN MS		Define 'discharges'; eg impractical to apply consents to water supply washout points.
W.3	GEN MS		Concerned about lax interpretation of 'emergency' overflows (with waived consents).

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 1	3			Concerned that publication of degree of compliance could be misleading.
C.2	REC 1	3			NRA should not publish ESTIMATES of degree of compliance.
E.1	REC 1	3			NRA should not publish ESTIMATES of degree of compliance.
B.2	REC 1	2	Q	G	Who will pay?
B.7	REC 1	2			Collection and presentation of compliance and consent data should be done in an equal manner across the country.
B.9	REC 1	2			Public register should make clear when pollution incidents are proved guilty.
C.4	REC 1	2			Data on consents should be published on a national scale in one publication. Would like more info, including cost of work.
F.1	REC 1	2			Publication of summary data should not preclude public access to raw data.
B.1	REC 1	2			Welcomed but there is currently a lack of information on consent compliance which can only impede accountability.
I.3	REC 1	2		G	Cost of publication should be passed on to government not to water rate payers.
N.7	REC 1	2			Can national guidelines be guaranteed to ensure data collection and compliance are consistent in all ten regions?
A.1	REC 1	1			Welcomed.
B.5	REC 1	1			Very helpful if summary data could be published in waterfacts.
B.8	REC 1	1			Existing consents have to be identified and future agreements considered.
C.1	REC 1	1			Agreed.
C.5	REC 1	1			Supported.
N.6	REC 1	1			Fully endorsed.
W.4	REC 1	1		G	Costs of analysis and publication of data should be borne by the Government.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
I.1	REC 2	3			We are concerned about disclosing in house site processes when the primary concern is about final effluent.
P.1	REC 2	3	Q	I	Implies that development plans need to be notified to the NRA. Previously, this was not done until a project proposal evolved. Clarify.
W.1	REC 2	3		I	Consult the WSCs before completing this exercise, in order to reduce administrative difficulties.
C.1	REC 2	2			Some guidance on what constitutes a change in scale or character of effluent would help.
C.3	REC 2	2			Application should not be only form of dialogue before consent is finalised.
C.3	REC 2	2			Change of scale and character of discharge needs to be clearly defined.
F.1	REC 2	2			Where process changes are frequent, discharger should submit annual returns on the nature of the discharge.
N.2	REC 2	2			Requested information should be (a) relevant to the issuing of the consent, and (b) likely to be available.
N.3	REC 2	2			Application forms and policy should be compatible with requirements from Integrated Pollution Control.
R.1	REC 2	2			The involvement of the 'river user' needs to be better addressed.
R.1	REC 2	2			No reference is made to the need for information from the discharger AND the NRA to be given to the public (local planning authorities).
B.2	REC 2	1			Very useful.
B.3	REC 2	1			Plea for forms to be kept as simple as possible.
B.5	REC 2	1			Helpful if reminder could be repeated on any annual invoice.
C.4	REC 2	1			Welcomed. Relate to Environmental Protection Act.
H.1	REC 2	1			New documentation will serve as prime documents in any prosecution.
I.3	REC 2	1			Supported. Include a reminder to inform the NRA of change in discharge.
S.3	REC 2	1			'High priority'.
W.4	REC 2	1		G	'Desirable'. Will hopefully eliminate investigative charges incurred by the NRA.

# PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
B.5	REC 3	3		Most dischargers are unlikely to have resources to assess the impact of their effluent.
I.3	REC 3	3		Presence of a non-specified substance should not be an offence, only related pollution.
P.1	REC 3	3		Concerned that discharger may be prosecuted for unspecified constituents of the discharge. Should change the consent before prosecuting.
P.2	REC 3	3		Lack of legal certainty for industry. Once granted a licence, the discharger should only be covered by its stated provisions.
P.2	REC 3	3	Q	Appears to conflict with recommendation 8.
W.1	REC 3	3		Pollution caused by unconsented substances should create an offence, not just the presence of the substances. WSCs wish to examine rubric.
B.2	REC 3	2		Also useful to indicate the type of substance (e.g redlist) as an appendix.
B.3	REC 3	2		Concerned about constituents already in water and the need to identify these.
B.7	REC 3	2		Limits must be considered very carefully. Concentrations at levels below those of environmental significance must be acceptable.
C.2	REC 3	2		We consider it essential that any determinand should be clearly specified in consents.
C.4	REC 3	2		Discussion is needed on additional requirements of process plant and liabilities for industrial dischargers.
E.1	REC 3	2		We consider it essential that any determinand should be clearly specified in consents.
N.3	REC 3	2		Some constituents declared in discussions aren't included in applications because of relative insignificance. Rubric should account for this.
A.1	REC 3	1		Welcomed.
B.10	REC 3	1		Welcomed.
C.1	REC 3	1		Agreed.
I.2	REC 3	1		Essential.
N.5	REC 3	1		Supported in principle, although the Water Services Association may question the use of a rubric.
S.3	REC 3	1		"High priority".
W.4	REC 3	1		"Sensible approach". Protects environment from abuse of the system.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation			See key (A) (B) (C)	Summarised comment
B.10	REC	4	2	Use of prohibition notices should be reviewed according to vulnerable areas.
C.4	REC	4	2	Advice on consent requirements for septic tanks is welcomed but it must be consistent through NRA regions.
C.5	REC	4	2	If some consents are found to be unnecessary, dischargers should be informed.
N.6	REC	4	2	District councils should provide advice on septic tank husbandry.
A.1	REC	4	1	Identification of problems will enable a preventative approach.
B.5	REC	4	1	Welcomed.
C.1	REC	4	1	Agreed.
N.5	REC	4	1	Supported. Ref change in law on the control of discharges going to land. Should relate to NRA Aquifer Protection Policy.
W.4	REC	4	1	Strongly supports this recommendation.
B.3	REC	4	0	As the principle of septic tanks is to provide the means whereby final overflow is pollution free, we see no reason for NRA consent.
S.3	REC	4	0	Concerned about discharges from septic tanks, particularly near watercourses.
S.3	REC	4	0	Provide statutory necessity for monitoring of discharge quality from, and maintenance of, septic tanks.
W.1	REC	4	0	Notify WSCs of septic tanks affecting ground water used for public supplies. Include this requirement in the NRA Groundwater Protection Policy.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
B.9	REC 5	3		REC.5 imply imposition of of manditory working procedures. Are NRA staff qualified in fish farming.
C.5	REC 5	3		Numeric consents are not understood by farmers. Use descriptive consents specifying effluent treatment and maintenance.
N.1	REC 5	3		Non-numeric consents should be the exception rather than the rule. All STWs should have numeric consents.
N.4	REC 5	3		Descriptive consents are difficult to police; ie whether the specified equipment is operating efficiently. NRA would need expertise to
N.4	REC 5	3		define types and maintenance of plant. Could put some responsibility for discharge onto the NRA, leading to problems with possible prosecutions.
R.5	REC 5	3		Concerned that numeric upper limits for maximum volume, load, trade effluents and persistent chemicals should be applied to marine outfalls.
W.4	REC 5	3	I	Stringent flow limits on marine discharges will necessitate extra storm overflows.
W.4	REC 5	3	I	Limits on marine discharges may cause difficulties without co-operation of local planning authorities.
B.5	REC 5	2		When a consent imposes specific facilities on the discharger it is assumed that the NRA will be responsible for any design faults.
D.1	REC 5	2		Discharge consents should include measures to control foaming and colouration where appropriate.
F.1	REC 5	2		Where design and performance specifications are included in consent conditions, NRA should be involved at design stage. Allow for public scrutiny.
I.3	REC 5	2		Agree in principle though there are a number of pitfalls. (See later).
N.3	REC 5	2		Combinations of numeric and non-numeric consents must be used for effluents dependent on quality of previously abstracted water.
N.5	REC 5	2		Aesthetic considerations need to be included, especially to control foaming and colour.
W.1	REC 5	2		WSCs hope to work with NRA to agree conditions for descriptive consents, with the discharger deciding the type and form of treatment
W.1	REC 5	2		Necessary to attain consent conditions.
N.3	REC 5	1		More meaningful control of certain constituents in discharges (eg traces of oil and grease) are best dealt with by non-numeric consents.
N.6	REC 5	1		Fully endorsed.
C.1	REC 5	0	Q	Before we comment we need more detail on intentions of NRA.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
C.4	REC 6	4			Strongly disagree, maintenance records are solely concern of site operator.
N.2	REC 6	4			Maintenance provisions and record keeping should not be included in the formal consents.
N.4	REC 6	4			Potential difficulties outweigh any advantages (see REC 5).
N.7	REC 6	4			Maintenance obligations and records of the site facility should be decided by the site owner.
W.4	REC 6	4	I		Consent compliance means that maintenance obligations are met; hence records irrelevant.
B.2	REC 6	3	I		Time-consuming. "Widely" indicates inconsistency.
C.3	REC 6	3			Concern about inclusion of maintenance conditions in consent.
I.1	REC 6	3	Y		We fear that NRA may specify more frequent shut downs and hence higher costs than are justified.
N.3	REC 6	3			Stipulation of maintenance procedures in the consent may cloud the issue of responsibility (should remain within the remit of the Site Manager).
N.5	REC 6	3			NRA should only consider the broad principles of the maintenance regime, but not details, as NRA is concerned in end product, not process.
P.2	REC 6	3			Ability of NRA to inspect facilities and maintenance records is questioned.
B.4	REC 6	2			Discharger, rather than NRA, is best able to judge maintenance intervals.
B.6	REC 6	2			Different criteria needed for large & small dischargers. Small discharges should have a simplified, more tolerant system.
B.10	REC 6	2			Adequate staff resources and training required.
F.1	REC 6	2			Public should have access to maintenance records.
F.1	REC 6	2			Existing descriptive consents are notably lacking in enforceable conditions. Either convert to numerical or incorporate more clarity.
R.1	REC 6	2	I		The NRA should insist that the discharger installs and maintains flow measurement equipment.
W.1	REC 6	2			Accepted, providing within scope of Schedule 12, para 2(3) of the Water Act.
A.1	REC 6	1			Welcomed.
B.5	REC 6	1			Welcomed. Pleased to discuss maintenance obligations to be written into consents.
C.1	REC 6	1			Agreed.
N.6	REC 6	1			Endorsed.
S.3	REC 6	1			'High priority'.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
I.2	REC 7	2		Define the level of change of character and scale of effluent needed before having to inform the NRA.
I.3	REC 7	2		Wholly laudable but may be impractical.
N.5	REC 7	2		Consider the control of peak discharges and seasonal components. Planning authorities need to follow advice from NRA on new development.
W.1	REC 7	2		"A simple 'de minimus' arrangement for reporting increases in load will be required." WSCs are not always informed of new dwellings.
W.4	REC 7	2		Co-operation of planning auth. essential to guarantee no. of dwellings connected to STW.
C.1	REC 7	1		Agreed.
N.6	REC 7	1		Endorsed.
S.3	REC 7	1		"High priority".

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.2	REC 8	4		I	Unacceptable for fish farms. Runs contrary to WAA Working Party on fish farm discharge consents (1984). Inflows contain levels of SS and BOD.
P.2	REC 8	4			Difficult to explain to the public why the absolute limit value is higher than the 95%ile limit. Prefers a statistical statement of limit values.
S.2	REC 8	4		Y	In order to achieve absolute limits disproportionate amounts of money will have to be spent.
W.1	REC 8	4		Y	WSCs consider that no case has been made for the necessity of absolute limits. Implementation would involve an extended timescale and high costs.
W.1	REC 8	4			Much wider debate of this issue is required.
W.1	REC 8	4		Y	ESTIMATED COST OF ACHIEVING ABSOLUTE STANDARDS: CAPITAL = ?, OPERATING = ? (Data with-held at present: 26/11/90)
B.4	REC 8	3			Limits should be given due attention, not translated from present 95%ile limit.
I.1	REC 8	3			Concerned about interpretation of probability distributions.
N.3	REC 8	3		I	Consents relating to previously abstracted water should relate to derogation in quality, not absolute level.
P.2	REC 8	3		Q	Appears to conflict with recommendation 3.
P.2	REC 8	3		Q	Define 'relevant'. Would pollutants with no defined EQOs be excluded?
B.3	REC 8	2			Absolute limits should allow for worst case.
B.7	REC 8	2			Welcomed. Limits should be set to protect environment & allow site operation. Para: See no reason why abs.Limits could not be set in different ways
B.9	REC 8	2			Water inflow contains high BOD and SS already. This should be taken into account.
C.1	REC 8	2			Consents should include an upper limit which must not be exceeded and an average limit to be achieved. The way in which limits are derived needs
C.1	REC 8	2			further discussion.
C.3	REC 8	2		Q	Clarify level infringement where there is continuous monitoring. 1 secsecond 1 hour etc.
C.4	REC 8	2			Absolute limits should be environmentally justified and practical. Absolute limits should be increased where %ile limits are also used.
C.4	REC 8	2			Absolute limits should be practical and neither too lax or too stringent to protect the environment.
D.1	REC 8	2			Concern with regard to criteria by which absolute limits will be set.
F.1	REC 8	2			Absolute limits should accompany percentile limits and not replace them.
I.1	REC 8	2			Setting of limits needs careful consideration about the environment and the processes which produce the discharge.
I.3	REC 8	2		Y	If absolute limits are very tight and this is coupled with full compliance, enormous sums of money will have to be spent to ensure compliance.
N.5	REC 8	2			Need a rigorous, supportable method for the consistent setting of absolute limits and translation from the 95%ile limits.
W.4	REC 8	2		I	Approves of balancing the protection of receiving water with the cost to discharger.
A.1	REC 8	1			Welcomed.
B.2	REC 8	1			Brings STWs in line with industry.
B.10	REC 8	1			Welcomed.
C.5	REC 8	1			Supported.
I.1	REC 8	1			Absolute limits will encourage firms to tackle 'house keeping' and undertake hazard studies.
I.2	REC 8	1			Accepted.
N.6	REC 8	1			Strongly endorsed given the evidence of infraction of law by sewage treatment works.
S.1	REC 8	1			Welcome the move for all dischargers to use absolute limits.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.7	REC 9	4			No comment due to lack of statistical argument supporting 80%ile limits.
W.1	REC 9	4			No arguments presented for abandoning the 95%ile limit. The 95%ile limit has advantages. It is:- consistent with the river quality
W.1	REC 9	4			classification scheme; a good working maximum; set on valid statistical grounds; & there is experience of designing and operating to this level.
W.1	REC 9	4	I		Changing from 95%ile limit will involve much work with no obvious environmental benefit. Moreover, re-education of the public would be necessary.
W.4	REC 9	4			Uneven loading thro' day and season makes 50/80 %ile limits an inaccurate measure of performance.
B.2	REC 9	3	I		Complying with increasing complexity will be onerous for the discharger.
B.4	REC 9	3			The percentile concept should be limited to major discharges such as sewage works.
I.2	REC 9	3			Will not frequency distributions vary between effluents and between determinands?
N.2	REC 9	3	I		Fish farm pollution is accumulative, so %ile limits and a less stringent absolute limit would be more effective than a stringent absolute limit.
W.4	REC 9	3	Y		Translation from 95 to 80/50%ile limits may effect a costly tightening of consent.
B.5	REC 9	2			Majority of numeric consents will require modelling; requiring huge manpower and material resources.
B.9	REC 9	2			The %ile limits are more applicable for continually monitored discharges.
B.10	REC 9	2			Desirability of water quality improvement should be a criterion.
C.2	REC 9	2			Such a statistical approach should be supported by a statement concerning sampling.
C.3	REC 9	2	Q		Define 'environmentally significant discharges'.
C.4	REC 9	2	Q		Define 'environmentally significant discharges'. Limits should be environmentally justified and practical. Further justification is
C.4	REC 9	2	Q		needed for use of 80%ile limits.
E.1	REC 9	2			Such a statistical approach should be supported by a statement concerning sampling.
F.1	REC 9	2			Do not round up consent figures. Transition to new %ile system should not interrupt enforcement of compliance.
N.3	REC 9	2			Define 'environmentally significant discharges'. The 80%ile limits must accommodate the varying quality of the input water.
N.5	REC 9	2			Need practicable and workable limits. Water Services Association would have reservations about new limits.
N.5	REC 9	2	I		Use of 80%ile limits needs further statistical investigation and examination of worked examples. Concern about perception of new percentile limits.
N.8	REC 9	2			80%ile limits will give a more accurate assessment of compliance. Possible problems with episodic nature of industrial discharges.
R.1	REC 9	2	Q		Recommend 'environmentally significant' refers to those areas where there is concern that the WQO is not being met.
R.1	REC 9	2	Q		How many STWs will be affected by the 80/50%ile limits?
R.5	REC 9	2	I		Agreed. Parties other than the discharger and the NRA should be involved in identifying those discharges which are significant.
W.3	REC 9	2	I		Assess percentile values on 'real' rather than 'model' effluent concentrations asap.
A.1	REC 9	1	Q		Define 'environmentally significant discharges'
A.1	REC 9	1			Include criterion for desirability of water quality improvement.
C.1	REC 9	1			Agreed. The way in which limits are derived needs further discussion.
F.1	REC 9	1			All %ile performance standards should use rolling time periods.
I.3	REC 9	1			No objection.
N.1	REC 9	1	Q		Clarify 'environmentally significant discharge'. Is there a formula which can be applied for polluting load?
P.1	REC 9	1	Q		Clarify 'environmentally significant discharge', perhaps by presenting examples.
S.1	REC 9	1			Percentile limits would encourage dischargers to work to best achievable standards.
B.1	REC 9	0	Q		Recommendation requires elucidation.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.2	REC 10	4		I	The vulnerability of rivers to fish farm loads should be inherent in consideration of present consents, so load records should not be required.
N.2	REC 10	4		I	Measurement of loads from fish farms is not feasible.
B.2	REC 10	3		Y	On-site storage and mixing expensive.
B.2	REC 10	3	Q	I	Will discharger have to close operations when certain mass reached?
B.5	REC 10	3		Y	Costly as intensive flow and load monitoring would be required in most cases.
C.4	REC 10	3		Y	Could place unjustifiable costs on discharger.
I.3	REC 10	3		Y	Could be expensive to measure flow and concentration.
N.3	REC 10	3		Y	This requirement would constitute a high degree of self-monitoring and might justify an abatement in the annual charges levied by the NRA.
R.1	REC 10	3			NRA should assess the problem of adequate measurement of flow.
W.4	REC 10	3		Y	High administrative and monitoring implications, so only use where real risk exists.
B.3	REC 10	2			Imposition of limits should recognise the ability of water to redress the balance.
B.7	REC 10	2			Agreed, but where load limits apply, there is no call for 80 or 50%ile limit.
C.1	REC 10	2			Careful definition of limits and their justification is necessary.
C.2	REC 10	2			Limits should be set with regard for the ability of the receiving water to accommodate discharge.
C.3	REC 10	2			Careful definition of limits and a justification for same is necessary.
E.1	REC 10	2			Limits should be set with regard for the ability of the receiving water to accommodate discharge.
W.1	REC 10	2			Accepted for controlling mass of toxic substances and where solids depositions likely. Keep use to a minimum.
W.1	REC 10	2		Y	Must be assessed over a substantial period using flow composited bulk samples. Cost of equipment and its operation must be considered.
A.1	REC 10	1			Welcomed.
B.6	REC 10	1			Supported. Recommend that occasional excursions outside limit should be acceptable.
B.7	REC 10	1			Welcomed. Encourages industry to conserve water.
B.10	REC 10	1			Welcomed. Particularly relevant to Broads.
E.2	REC 10	1			Welcomed.
N.5	REC 10	1			Supported. Some load consents already used.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.4	REC 11	4			Not realistic to impose limits on instantaneous flow which is influenced by rain.
P.1	REC 11	4			Placing absolute volume limits on dry and rainfall conditions seems difficult to enforce, and meaningless to an oil industry installation.
W.4	REC 11	4	I		Cannot see how breaking of absolute flow limit could be prevented at STW or storm overflow.
W.4	REC 11	4			Would prefer agreed levels of treatment for various multiples of normal flow.
B.2	REC 11	3	Y		Telemetry and storage equipment expensive: who will pay?
B.7	REC 11	3			Numeric limits may not automatically need absolute limits for instantaneous flow.
C.4	REC 11	3			Difficult to see how compliance for instantaneous flow could be monitored.
N.2	REC 11	3			Where effluent flow is related to rain or river flow, the consent should allow for the range of possible environmental circumstances.
R.1	REC 11	3			There should be no discharge consents where performance cannot be measured.
R.1	REC 11	2			Flow limits should take into account loading forecasts based on local planning authority development plans.
R.1	REC 11	2	I		The discharger must install and maintain flow measurement equipment where necessary (with particular relevance to volumes discharged).
W.1	REC 11	2	Q		Presumed to refer to industrial discharges, as STWs are covered by Rec. 12.
A.1	REC 11	1			Will make controls more meaningful in ecological terms.
B.10	REC 11	1			Welcomed. Help make controls more meaningful in ecological terms.
C.1	REC 11	1			Agreed.
F.1	REC 11	1			Measurement, recording and documentation of flow rates in public register are essential to public accountability.
R.5	REC 11	1	I		Agreed. Also include percentile limits on flow, similar to those for substances, to ensure tight control on substance loads.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.8	REC 12	4	I		Unrealistic to design plant capacity for all surface run-off situations.
P.1	REC 12	4			Placing absolute volume limits on dry and rainfall conditions seems difficult to enforce, and meaningless to an oil industry installation.
W.1	REC 12	4			Paragraph 72: Many works receive and treat effluent containing trade effluent and to exclude it is impracticable.
B.3	REC 12	3			Potentially complex and must be capable of practical application.
I.1	REC 12	3	Y		Application to existing plant would demand enormous expenditure.
N.5	REC 12	3	I		Need design criteria for controlling effects of rainfall flows on STWs and storm overflows. Concerned about implications for STW design.
W.4	REC 12	3	Y		Major cost implications, hope for long term project, starting with worst catchment.
B.4	REC 12	2			Principles of this recommendation apply to all discharges influenced by rainfall.
C.4	REC 12	2			Worst case should be incorporated in consent conditions.
F.1	REC 12	2			Public register entries should be logged to indicate which flow rates are within the consents.
I.3	REC 12	2			Presence of storm overflows on a sewer should be taken into account when setting consent conditions on trade effluent discharged to sewer.
R.1	REC 12	2			The NRA should insist that the discharger installs and maintains flow measurement equipment.
B.5	REC 12	1			BEWA pleased to discuss techniques for removing solids from storm overflows. Storm water flow modeling has resource implications.
C.1	REC 12	1			Agreed.
N.3	REC 12	1			Agreed. Relevant to, say, surface water from coal tipplings.
S.3	REC 12	1			'High priority'.
B.2	REC 12	0			Assumed to refer to STWs.
W.1	REC 12	0			Not clear what changes will be made to the ways in which flows are taken in account in STW design. Should continue to follow Rec.s of Technical
W.1	REC 12	0			Com. on Storm Overflows (1970).

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 13	3			Concerned about naturally occurring substances already in the water.
B.3	REC 13	3		Y	Concerned that the prescribed solution could be very costly.
C.2	REC 13	2			Consents should not extend to substances that would otherwise be released from ground.
E.1	REC 13	2			Consents should not extend to substances that would otherwise be released from ground.
N.5	REC 13	2			NRA Yorkshire already controls most temporary discharges. Question the need for special monitoring exercises.
W.4	REC 13	2	Q	Y	Where will finance for such projects come from.
A.1	REC 13	1			Welcomed.
B.2	REC 13	1			Agreed.
B.10	REC 13	1			Welcomed.
C.1	REC 13	1			Agreed.
C.4	REC 13	1		G	Agreed. All discharges should be consented, requiring considerable NRA time and resource.
I.2	REC 13	1			Important.
B.1	REC 13	0	Q		Is control of illegal discharges from septic tanks etc being considered?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
W.1	REC 14	4	Y	ESTIMATED COST OF INTRODUCING WIDESCALE AMMONIA STANDARDS: CAPITAL = ?, OPERATING = ? (Data with-held at present: 26/11/90)
I.3	REC 14	2		NRA should indicate how it will assess where it is relevant to set limits for ammonia.
N.2	REC 14	2		Expect to have consultations with the NRA on the levels and forms of ammonia applicable.
N.5	REC 14	2		Agree with need for consistency. Differing views as to whether all STWs should have ammonia consents.
W.1	REC 14	2	I	New obligations for ammonia removal should only be imposed where necessary for environmental reasons.
W.1	REC 14	2	Y	Setting of ammonia standard for receiving waters will govern discharge consent standard and hence the financial implications.
A.1	REC 14	1		Set ammonia consents for all environmentally sensitive situations.
B.1	REC 14	1		Welcomes the view to set national standards.
B.10	REC 14	1		Numeric cosents levels should be set for all environmentally sensitive areas.
C.1	REC 14	1		Agreed.
C.4	REC 14	1		Accepted.
S.1	REC 14	1		Support the restriction of ammonia.
W.4	REC 14	1	I	Majority of WW's STWs are already subject to ammonia limits.
W.3	REC 14	0		Ammonia consents should be used as a consent condition.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.4	REC 15	4			TOC is inappropriate to mining effluents. Turbidity measures a different influence on water quality.
B.8	REC 15	4	Q		Question relevance of turbidity and TOC as practical measures.
B.9	REC 15	4			BOD and SS are more relevant to water quality than TOC and turbidity.
C.2	REC 15	4			Turbidity is not a satisfactory measure for consent conditons for mineral workings.
C.4	REC 15	4	I		BOD and SS should remain: better reflection of environmental effect. Companies have made investments in equip. to measure BOD/SS.
E.1	REC 15	4			Turbidity is not a satisfactory measure for consent conditons for mineral workings.
E.2	REC 15	4			Damage to rivers will be manifested as a biological effect and as such a biological determinand should be retained.
E.2	REC 15	4			TOC is unsuitable as it does not measure the biodegradability of the discharge.
E.2	REC 15	4			BOD online monitoring "has proven it's reliability, accuracy and low running costs". TOC equipment is unsuitable and high maintenance.
F.1	REC 15	4			Conciderable doubt about suitability of TOC as oppose to BOD.
I.3	REC 15	4			Do not support proposal to adopt TOC in place of BOD. Develop a rapid test that assesse BOD.
N.3	REC 15	4			Turbidity should not replace SS.
N.3	REC 15	4	I		Use of turbidity would create problems with surface water discharges when abstracted water has high levels of fine particles.
W.1	REC 15	4	Y		Change to TOC would involve:- altering consents on an individual basis, re-calibration of river catchment models, new approach to river improvement plans, and re-appraisal of design criteria. BOD test would be retained to assess how much TOC is biodegradable in receiving water. More appropriate to put research effort into a rapid BOD test.
W.1	REC 15	4	Y		
W.1	REC 15	4	Y		
W.3	REC 15	4			Use of TOC is "merely for convenience", is not justified, and has no history of usage.
W.3	REC 15	4			Turbidity measures different particle range than SS, so consent would drop. Do not use.
W.4	REC 15	4			TOC and turbidity are not suitable for assessing crude and settled sewages.
B.3	REC 15	3			Unsure about comparative appropriateness of BOD or TOC.
B.3	REC 15	3			High SS caused by sand extraction is likely to be of same composition as river bed.
B.6	REC 15	3			Correlation between TOC & BOD for STW may have little relevance to industrial discharges.
C.1	REC 15	3			Turbidity could be a contentious issue as it is difficult to define.
C.4	REC 15	3	I		Concerned about implications for industry should new parameters come into being.
N.5	REC 15	3			Neutral transition from BOD to TOC may be difficult for some trade discharges. Replacing BOD needs to be demonstrated as a major benefit.
N.5	REC 15	3			The need for continuous BOD monitors needs to be investigated. A rapid BOD test needs to be developed.
N.7	REC 15	3	I		Parameters should not be changed until scientific accuracy and cost burdens for discharger have been considered.
N.7	REC 15	3			TOC and turbidity may be inappropriate at coastal sites due to influence of salinity, fine particles and marine growth.
W.1	REC 15	3			A sound technical case must be made before adopting new quality control criteria.
A.1	REC 15	2			Concerned about ease of measurement of TOC and turbidity.

B.2	REC 15	2	Properly assess the parameters.
B.8	REC 15	2	Already involved in similar exercise with the European Commission.
B.10	REC 15	2	Parallel assessment over four years to evaluate suitability is welcomed.
C.3	REC 15	2	A sufficient period of parallel assessment is needed to test new parameters.
E.2	REC 15	2	Concerned that the report is being seen a 'statement of intent' rather than allowing for possible changes.
I.1	REC 15	2	TOC should be used as as a monitoring variable, BOD used to measure the ultimate value of the determinand. Site specific correlations of BOD/TOC and SS/Turb. necessary.
I.2	REC 15	2	Both tests should be run in parallel to ensure a robust relationship can be established. Not hopeful about turbidity/SS relationship.
N.4	REC 15	2	Agree that the new determinands have advantages; however, it is important that consent setting is considered during the comparison period.
N.8	REC 15	2	BOD tests need not take five days. Refer to NERC work on BOD/TOC relationship.
B.5	REC 15	1	TOC unlikely to be discharger friendly. Surprised that SS is not amenable to continous monitoring.
B.7	REC 15	1	Agree with need for long data gathering period.
B.1	REC 15	1	Supported.
N.3	REC 15	1	TOC is an appropriate replacement for BOD.
N.3	REC 15	1	Endorses use of TOC instead of BOD.
S.1	REC 15	1	Support the substitutions of TOC for BOD and turbidity for SS.
B.1	REC 15	0 Q	How will comparisons be made between the old and new determinands?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
P.2	REC 16	4			Queries necessity of test: EQOs should have taken toxicity into account. Impossible to apply to a proposed discharge.
B.7	REC 16	3	Q		Category of discharges to which this applies could be made clearer.
B.8	REC 16	3		I	Concerned about identification of low levels of toxic substances.
B.8	REC 16	3		I	Concerned that very low levels of toxic substances may lead to refusal of discharge consent.
N.3	REC 16	3			Toxicity tests using fish often fail to identify the offensive constituent and should be used with caution.
N.8	REC 16	3			Reservations about use of a "toxicity test", which has limitations. Need to research the relationship between tests and ecological impact.
P.1	REC 16	3			Toxicity testing is useful for setting determinands, but not as a consent because of difficulty in applying as a discharge quality control.
R.5	REC 16	3		I	Toxicity testing only measures acute effects, and therefore gives a misleading measure of the impact of persistent or accumulative substances.
R.5	REC 16	3		I	Recommend that numerical limits are applied to all discharges where persistent or accumulating substances occur.
B.2	REC 16	2		Y	Expensive but sensible.
B.8	REC 16	2		I	Support Red List approach, although practicalities are difficult.
C.1	REC 16	2			Happy to discuss with NRA as we have some reservations about some tests.
C.3	REC 16	2			A range of tests should be considered and there should be early dialogue.
C.4	REC 16	2		Y	Environmental quality objectives for controlled water already take toxicity into account. Tests must be practical and feasible at reasonable cost.
E.2	REC 16	2			We suggest such discharges should have online toxicity tests.
I.1	REC 16	2			This should be limited to cases where significant toxic component cannot be limited satisfactorily.
N.4	REC 16	2			Inclusion of sampling frequency within the consent could compromise the NRA if minimum sample frequencies are not achieved.
N.5	REC 16	2			Protocol for toxicity tests required.
W.1	REC 16	2			Tests should be applied directly to the discharges rather than to the STW discharge. No test approved by the Standing Committee of Analysts.
W.4	REC 16	2		Y	Acceptable, but difficult to apply a practicable, reproducible, reasonable cost method.
A.1	REC 16	1			Complementary to other monitoring.
B.10	REC 16	1			Toxicity test is believed to be complementary to other monitoring checks.
I.2	REC 16	1			Welcomed. Existing tests may not be adequate.
B.2	REC 16	0	Q		Clarify "environmentally significant discharges".
S.3	REC 16	0	Q		How can this Rec. be applied to a STW carrying a consent to discharge toxic substances it receives in industrial effluent?
S.3	REC 16	0			There should be a legal requirement for industry to seek advice from the NRA on potentially toxic waste products.
S.3	REC 16	0			Discharger should have statutory obligation to monitor and inform NRA of any changes in chemical composition of the discharge.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
W.1	REC 17	4	I		Taking samples at any time conflicts with the rights of access granted by Water Act 1989 (S. 147) (ie at reasonable times and in emergencies).
W.1	REC 17	4	I		Consider H&S responsibilities. WSCs "... consider it unreasonable to provide facilities in order to accompany NRA officers on random visits ..."
B.9	REC 17	3			Unpredictable visits may be dangerous as they could be mistaken for poachers.
I.2	REC 17	3			Will it be workable in practise?
I.3	REC 17	3			Potential hazard of night time testing.
N.2	REC 17	3	Y		Concerned about the expense and necessity of flow measurement equipment etc.
N.2	REC 17	3			Access arrangements should not be specified by the NRA alone. There is a risk of disease transmission between farms.
N.5	REC 17	3			NRA must be aware of their Health and Safety responsibilities.
W.4	REC 17	3	I		Doubts the practicality of early morning samples, especially w.r.t. Health and Safety.
A.1	REC 17	2	G		Welcomed, but dependent on adequate NRA staffing and resources.
B.3	REC 17	2			Visits should not be so unpredictable that staff safety is endangered. Strongly discourage out of hours visits.
B.4	REC 17	2			Some warning is needed to ensure safety of NRA and British Coal staff.
B.10	REC 17	2	G		Adequate NRA staff resources required.
C.2	REC 17	2	Y		No unreasonable costs should be imposed on industry to allow for this.
C.2	REC 17	2			Sampling should not endanger NRA or quarry staff.
C.4	REC 17	2			Health and safety difficulties must be considered.
E.1	REC 17	2			No unreasonable costs should be imposed on industry to allow for this.
E.1	REC 17	2			Sampling should not endanger NRA or quarry staff.
N.3	REC 17	2			For security and safety reasons, NRA inspectors must be identifiable and be familiar with the site.
N.6	REC 17	2	G		There must be adequate staff and resources to implement the recommendation.
N.7	REC 17	2	I		Large complex sites are not operated for standard visits outside normal working hours.
C.1	REC 17	1			Agreed.
S.3	REC 17	1			"High priority".

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 18	3			Discharger should be notified of results as and when they occur.
B.9	REC 18	3			All results should be communicated to discharger.
C.3	REC 18	3			Discharger needs to know what details are put on public register. Must know of out of compliance samples before the public.
C.4	REC 18	3			Transfer of information is especially important where charges are involved.
I.1	REC 18	3			Sampling results should always be given to to discharger.
N.5	REC 18	3			All compliance results should be sent to the discharger, as is current practice in Yorkshire Region NRA.
P.1	REC 18	3			Results of all analyses (by NRA and discharger) should be shared. Inform the discharger of analyses before putting on public register.
P.2	REC 18	3			At present, power stations are informed of all results. Continuation of this practice is essential.
W.1	REC 18	3			It is extremely important for the NRA to notify all dischargers of all results, promptly, to enable necessary any action.
W.4	REC 18	3			Would prefer their present system of informing discharger of every sample result.
A.1	REC 18	2	G		Welcomed, but dependent on adequate NRA staffing and resources.
B.10	REC 18	2	G		Adequate NRA staff resources required.
C.1	REC 18	2			NRA should inform dischargers of details to be placed on public register.
H.1	REC 18	2			"Dialogue" should not develop to the point where exhortation or encouragement to improve replace prosecution.
N.2	REC 18	2	Y		The discharger should have easy access to sample results. "They will be paying for them".
R.1	REC 18	2			The involvement of the "river user" needs to be better addressed.
R.1	REC 18	2			Public must be informed of dischargers causing regular pollution (LPA will then check damage and possibly restrict further development (if STW)).
B.2	REC 18	1			Dialogue sensible and important.
I.3	REC 18	1			Fully supported.
N.7	REC 18	1			Regular dialogue between NRA and discharger is welcomed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
F.1	REC 19	3	Y		Tripartite sampling is an unnecessary extravagance. The NRA should also establish the courts requirements for samples.
G.2	REC 19	3			Tripartite sampling should not be necessary, as the NRA should be seen as a responsible, trustworthy body.
I.3	REC 19	3			With tripartite samples there is always a change in characteristics of a sample after it has been held for a period of weeks.
N.3	REC 19	3	Y		NRA's monitoring costs should be kept to a minimum and be subject to external scrutiny.
P.2	REC 19	3			Three month rolling period (para. 98) is too short: seasonal variations possible; and current sampling is once a month (adequate for control).
W.1	REC 19	3	Y		WSCs wish to be consulted on proposed changes to sampling regimes, as these have compliance and cost implications for the WSCs.
W.3	REC 19	3			Consideration of analytical accuracy is insufficient: may increase severity of consent.
W.3	REC 19	3			Ensure that laboratory results provided by voluntary bodies are accurate before using for prosecution.
A.1	REC 19	2	G		Welcomed, but dependent on adequate NRA staffing and resources.
B.9	REC 19	2	Y		NRA should follow the comment "sampling programmes need to be economical".
B.10	REC 19	2	G		Adequate NRA staff resources required.
C.1	REC 19	2			Guidance should be extended to sampling techniques and analytical methods. Sampling techniques etc could be included on the consent.
C.3	REC 19	2			Sampling methods, strategies and analytical methods need careful consideration.
C.4	REC 19	2			Sampling programmes must be appropriate to discharge consents to which they are applied.
G.1	REC 19	2	Y		Sampling programmes need to be cost effective.
G.2	REC 19	2			NRA should be able to prosecute on the basis of any sample.
I.3	REC 19	2			NRA should announce sampling frequency that it intends to adopt.
M.1	REC 19	2	Y		Sampling programmes need to be cost effective.
N.2	REC 19	2	Y		Support the recommendation that sampling programmes must be economical. Assume consultation with the sampling group.
N.8	REC 19	2			Tripartite sampling may not be strictly necessary.
B.3	REC 19	1			Welcomed.
R.4	REC 19	1			Publish the method used by the NRA to enable others to follow the same procedures.
R.5	REC 19	1	Y		Enforcement of limits requires a number of tri-partite samples: costs can be recovered through the courts or from dischargers in general.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
W.1	REC 20	3			Concerned about implication that "subsequent enforcement action" will be the normal response to accidents and emergencies.
W.1	REC 20	3			Threat of action should not impede rapid handling of emergencies.
A.1	REC 20	2	G		Welcomed, but dependent on adequate NRA staffing and resources.
B.10	REC 20	2	G		Adequate NRA staff resources required.
C.4	REC 20	2			Sampling programmes must be appropriate.
B.3	REC 20	1	Y		Should be possible for discharger to request further sampling at his own cost.
C.1	REC 20	1			Agreed.
H.1	REC 20	1			Agreed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
C.1	REC 21	4	Need proper quality control. Single samples should not be used to assess compliance. Samples for assessing non compliance must be tripartite. Para 101: Apparent contradiction, tripartite samples needed for prosecution. Time periods need consideration. Any sample used for assessing compliance must be taken by accepted methods. Understood. Have regard to responses to Rec.s 8, 17, 18 and 19. Expect use of tri-partite samples when legal action is taken on non-compliance.
C.4	REC 21	4	
B.7	REC 21	3	
B.2	REC 21	2	
C.3	REC 21	2	
W.1	REC 21	2	
W.4	REC 21	0	

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
C.4	REC 22	4	Cannot accept rolling period of less than 12 months due to seasonal variations. Higher frequency of sampling is required to assess %iles>50%. Large numbers of samples over 3 month period would be needed to judge compliance. 12 month rolling programme required to account for seasonal variations in climate and generation of electricity. 12 month rolling programmes are necessary for nuclear power stations due to seasonal variations. Periods < 12 months would cause problems, eg spring overloading on biological filter plant. There should be consultation on how results should be interpreted. Guidelines on level of deviation required before a prosecution would be considered appropriate. Every effort should be made to keep number of samples taken high enough to give rise to a proper assessment. The appropriate time period for percentage limits at fish farms is to be discussed with the NRA. Seasonal effects should be taken into consideration. Define "routine monitoring". Any change in sampling pattern could arguably render monitoring non-routine. Shorter periods than one year would be accepted, providing seasonal effects are taken into account. Sampling needs to be stated as representative. Welcomed. Welcomed. Reduction of time period is welcomed. Particularly relevant in case of continuous monitoring. Agreed.
B.7	REC 22	3	
N.3	REC 22	3	
N.7	REC 22	3	
W.4	REC 22	3 Y	
C.3	REC 22	2	
C.3	REC 22	2	
I.3	REC 22	2	
N.2	REC 22	2	
N.5	REC 22	2	
R.1	REC 22	2 Q	
W.1	REC 22	2	
W.3	REC 22	2	
A.1	REC 22	1	
B.10	REC 22	1	
C.1	REC 22	1	
H.1	REC 22	1	

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
B.4	REC 23	2	Short rolling time periods could introduce seasonal influences.
N.3	REC 23	2	Where two or more constituents are correlated, and more than one determinand is exceeded, this should be treated as one exceedence.
A.1	REC 23	1	Welcomed.
B.7	REC 23	1	Fully endorsed.
B.10	REC 23	1	Welcomed.
C.1	REC 23	1	Agreed.
C.4	REC 23	1	Approved.
H.1	REC 23	1	Agreed.
I.3	REC 23	1	Welcomed.
W.4	REC 23	1	Hope this will be the case.
B.2	REC 23	0 Q	Guidance from NRA would be useful.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.2	REC 24	4		Y	No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
S.2	REC 24	4		Y	Continuous monitoring is not feasible on technical grounds and the cost would be great.
B.2	REC 24	3		Y	Expensive; who will pay?
B.4	REC 24	3			Difficulties expected on remote sites & spoil tips where vandalism is a problem.
B.4	REC 24	3			Equipment to monitor effluent may not be available.
B.9	REC 24	3		Y	Continuous monitoring is desirable for sewage works/chemical factories but not fish farms. Inappropriate for fish farmers to pay when they are not
B.9	REC 24	3		Y	significant polluters.
C.4	REC 24	3			Continuous self monitoring should remain optional. (legal, public and cost implications.)
F.1	REC 24	3			Continuous monitoring on a voluntary basis by a discharger raises questions about the availability of results and use in court.
G.1	REC 24	3			Monitoring should not be achieved through voluntary arrangements with dischargers.
I.1	REC 24	3	Q		How will results of continuous monitoring be represented on the register?
I.1	REC 24	3	Q		How will occasional breakdowns and resulting false results be handled?
M.1	REC 24	3			Monitoring should not be achieved through voluntary arrangements with dischargers.
N.3	REC 24	3		I	Continuous monitoring should be introduced on a voluntary basis. NP are willing to assist with NRA feasibility studies of monitoring equipment.
P.1	REC 24	3	Q	Y	Concerned that facilities for remote interrogation of equipment could be onerous for the discharger. NRA needs to explain further.
W.1	REC 24	3			WSCs are concerned about direct links with the NRA. These measures "could only result in confrontation". On a practical basis, instrument
W.1	REC 24	3			problems could be misinterpreted by the NRA.
W.4	REC 24	3			Only viable if TOC and turbidity are found to be acceptable limits.
W.4	REC 24	3		Y	Cost passed to consumer, plus cost of NRA's monitoring: exercise may be politically sensitive.
B.3	REC 24	2		I	Should not be based on polluters ability to pay but on seriousness of pollution.
B.4	REC 24	2			Continuous monitoring only on major discharges which could influence river quality.
C.1	REC 24	2			Continuous monitoring should be a management tool only.
C.2	REC 24	2		Y	This is reasonable provided NRA has full regard of the cost.
E.1	REC 24	2		Y	This is reasonable provided NRA has full regard to the cost.
I.3	REC 24	2		Y	Costs incurred will be passed to customer and this might become a sensitive issue. Seems wasteful to connect system to the NRA.
N.5	REC 24	2			Views differ on the placing of continuous monitoring results on the public register. Recognise difficulties of handling data on the register.
N.7	REC 24	2			Who pays for buying installing and operating equipment?
W.1	REC 24	2		Y	Due to cost of continuous monitoring, confine it to most sensitive discharges. National guidelines would avoid regional discrepancies.

W.1	REC 24	2		There are advantages in self-monitoring, but only with a structured, agreed programme. Leads towards quality assurance approach, as applied in
W.1	REC 24	2		Other countries and industries. Legal framework may need to be adjusted. Note the practical problems with equipment, especially reliability.
A.1	REC 24	1		Continuous records are a "vital tool" for assessment of compliance.
B.8	REC 24	1		Supports the use of continuous monitoring using load based criteria.
B.8	REC 24	1	I	Some mills are "moving in this direction" to provide information which will aid in discussions with local communities.
B.10	REC 24	1		Provision of continuous recorders is a vital tool to the assessment of compliance.
E.2	REC 24	1		Recognition of the benefits of automatic continuous monitoring is to be welcomed.
H.1	REC 24	1		Agreed.
S.1	REC 24	1	I	Continuous automatic monitoring is "fundamental" to the effectiveness of the NRA, reducing labour intensive sampling.
B.6	REC 24	0	Y	Cost of supplying resources for continuous monitoring may not be justified.
N.7	REC 24	0	Q	Further classification of "environmentally significant discharges" is needed.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 25	4		I	Many dischargers have neither facilities nor expertise to carry out monitoring.
N.2	REC 25	4		Y	No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
N.7	REC 25	3		Y	Where duplication of data collection is occurring the discharger should not have to incur both costs.
P.1	REC 25	3	Q	Y	Concerned that facilities for remote interrogation of equipment could be onerous for the discharger. NRA needs to explain further.
G.1	REC 25	2			Sampling should be decided locally but regime should be formally agreed with NRA.
H.1	REC 25	2			NRA should not rely on self validation by dischargers.
I.3	REC 25	2			Sampling by NRA will need to be of sufficient frequency to make statistical comparisons.
M.1	REC 25	2			Sampling should be decided locally but regime should be formally agreed with NRA.
N.7	REC 25	2			National sampling frequency guidelines on types of discharge and receiving waters will require widespread notification.
W.4	REC 25	2			Needs to be frequent enough for statistical comparisons in line with BS5700.
A.1	REC 25	1			Tripartite sampling 'essential'.
B.10	REC 25	1			Essential.
C.1	REC 25	1			Agreed.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
N.2	REC 26	4		Y	No affordable continuous-monitoring equipment available. Self-monitoring has no benefit while NRA charges for independent checks.
B.2	REC 26	3		Y	Expensive; who will pay?
C.1	REC 26	3	Q		What validation procedures will be used? How will the results be handled on public registers?
C.4	REC 26	3		Y	Independent checks may have cost implications.
P.1	REC 26	3	Q	Y	Concerned that facilities for remote interrogation of equipment could be onerous for the discharger. NRA needs to explain further.
W.4	REC 26	3		Y	"This proposal can only significantly add to the Company's costs."
G.1	REC 26	2			Comments should indicate specific data required.
I.3	REC 26	2		G	Agreed. Consider cost implications of additional remote interrogation systems by the NRA.
M.1	REC 26	2			Comments should indicate specific data required.
W.1	REC 26	2			Practical problems referred to under Rec. 24.
A.1	REC 26	1			Essential.
B.10	REC 26	1			Essential.
H.1	REC 26	1			Agreed.
N.3	REC 26	1		I	Agreed. Allows greater choice of measuring apparatus.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)		Summarised comment
B.4	REC 27	3		Difficult to see how NRA would decide which data to put on public register.
B.4	REC 27	3		The discharger incurs the cost of continuous monitoring and NRA saves supervision costs. Reduction in charges would be reasonable.
C.2	REC 27	3		Concerned that prosecution could follow our own monitored data passing to public domain.
E.1	REC 27	3		Concerned that prosecution could follow our own monitored data passing to public domain.
C.4	REC 27	2		Discharger should be allowed to comment on information placed in register.
F.1	REC 27	2	Q	All tripartite sample data should be placed on the public register. The courts acceptance of such publically disclosed data should be clarified.
I.3	REC 27	2		Crucial that dischargers should be kept informed with regard to fate of any data being obtained by NRA.
W.1	REC 27	2		Needs to conform with Section 117 of Water Act.
A.1	REC 27	1		Agreed.
B.10	REC 27	1		Welcomed as it will make dischargers aware of their obligations.
N.3	REC 27	1		Fully supports this recommendation.
N.7	REC 27	1		Welcomed.
B.3	REC 27	0		Unclear as to meaning of recommendation.
C.1	REC 27	0		We wish to discuss this issue with you.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
P.2	REC 28	3	Do not include all events over the threshold (ie the 80%ile value), only an indication of when the statistical limit has been breached.
W.4	REC 28	3	Public not interested in individual results; pressure groups draw their own conclusions regardless of other interpretations.
C.1	REC 28	2	Comments on reliability of instrumentation should be placed on public register.
I.1	REC 28	2	We welcome this but fear that exceedences of percentile limits without a breach of consent will be misunderstood by the public.
I.2	REC 28	2	More should be done to explain this. Use detailed discussion groups.
N.3	REC 28	2	It is essential that results related to %ile limits are properly qualified to avoid misuse.
N.6	REC 28	2	In order to ensure consistent standards throughout the UK we suggest the NRA produce explanatory notes for users of pollution registers.
R.5	REC 28	2	Details for inclusion in the register are listed in letter. The register format should be distributed for consultation, and aimed at the users.
W.1	REC 28	2	Introductory note welcome. Disagree with use of 80 and 50%ile limits as stated under Rec. 9.
A.1	REC 28	1	Agreed.
B.2	REC 28	1	NRA guidance of interpretation of 'exceedence' important.
B.7	REC 28	1	Fully endorsed.
B.10	REC 28	1	Welcomed as it will make dischargers aware of their obligations.
C.4	REC 28	1	Agreed.
H.1	REC 28	1	Any explanation of how public can intepret meaningful statistical information is to be welcomed.
I.3	REC 28	1	Supported.
N.2	REC 28	1	Support this recommendation.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.6	REC 29	3		I	Industry may transfer to other countries with a more relaxed attitude to limits.
N.3	REC 29	3			With proper on-going dialogue, the attitude of the discharger should become self-evident should an individual accident occur.
W.1	REC 29	3			Considerable emphasis is placed on prosecution. This discourages an open working relationship between the dischargers and the NRA.
B.7	REC 29	2			Para: Clarity types of samples accepted as evidence, and status of types of limits with respect to prosecution.
D.1	REC 29	2			NRA should take strong action to tackle cases of pollution swiftly.
R.1	REC 29	2			The involvement of the 'river user' needs to be better addressed.
R.1	REC 29	2			When the NRA is considering prosecution, they should consider the seriousness of the pollution (statistical, and effect on the public).
W.1	REC 29	2			NRA should publish their prosecution policy, eg confirm no action if remedial action planned, or mitigating circumstances involved.
A.1	REC 29	1			Agreed.
B.2	REC 29	1			Agreed.
B.3	REC 29	1			Plea for uniformity across country and between companies.
B.10	REC 29	1			Welcomed as it will make dischargers aware of their obligations.
C.1	REC 29	1			This is a reasonable statement.
C.2	REC 29	1			Welcomed.
C.4	REC 29	1			Most welcome.
E.1	REC 29	1			Welcomed.
N.6	REC 29	1			Endorsed in light of poor record to date.
W.4	REC 29	1			Strongly support this proposal.
R.1	REC 29	0	Q	I	Will not all samples have to be tri-partite to ensure effective prosecution in respect of absolute limits? Is this feasible?

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)	Summarised comment
C.2	REC 30	4	Not suited to management systems in the industry. Day to day management is shared by number of managers.
E.1	REC 30	4	Not suited to management systems in the industry. Day to day site management is shared by a number of managers.
W.4	REC 30	4	Can see no advantage over current procedures.
B.3	REC 30	3	Formal actions by NRA should be directed through proper company channels.
C.4	REC 30	3	Do not agree that an employee name should appear on register .
I.3	REC 30	3	IWEM does not support that a person should be named on consent as there is a risk that they could be held liable for any breaches.
N.7	REC 30	3	For corporate bodies the legally responsible person under the Water Act 1989 and site contact will not be same. NRA statement would help.
B.5	REC 30	2	Regular checking by NRA of changes in designated person may be necessary.
B.7	REC 30	2	Nominated person should not be liable for any breaches by corporate body.
B.8	REC 30	2	Must indicate whether person is only a contact or has corporate responsibility.
B.9	REC 30	2	Responsibility for any failure should be with the corporate body .
C.4	REC 30	2	NRA should have regular liaisons with dischargers, involving transfer of information and provision of guidance.
N.5	REC 30	2	Support use of named contact and individual accountability. However, using the consent application would be inflexible (use updatable schedule).
W.1	REC 30	2	There should be one point of contact for policy matters, and several for operational matters. Inappropriate to use names, refer to post holders.
A.1	REC 30	1	Agreed.
B.10	REC 30	1	Welcomed as it will make dischargers aware of their obligations.
C.1	REC 30	1	Dialogue between NRA and discharger is welcomed. See considerable sense in nominating a contact.
W.6	REC 30	1	Sensible measure.
S.3	REC 30	1	'High priority'.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
R.4	REC 31	3		Y	Concerned that present proposals for charging reflect the cost of monitoring rather than cost to the environment.
N.3	REC 31	2			Action Warnings are agreed with in principle, but require further development.
A.1	REC 31	1			Agreed.
B.10	REC 31	1			Welcomed as it will make dischargers aware of their obligations.
C.1	REC 31	1			Agreed.
N.1	REC 31	1	Q	Y	Will charges be at a level which will cover the variation in consents following from the review?
S.3	REC 31	1			'High priority'.

PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation		See key (A) (B) (C)			Summarised comment
B.3	REC 32	3			Warnings should not appear on register.
C.2	REC 32	3			Warnings to be given in normal correspondence between NRA and discharger.
E.1	REC 32	3			Warnings to be given in normal correspondence between NRA and discharger.
I.3	REC 32	3			IWEM believes that NRA will be under pressure to publish names of dischargers who have been given action warnings; this should be avoided.
N.3	REC 32	3			Names should not be made public. The duration that Action Warnings stay on record should be limited.
W.1	REC 32	3			Warning actions are already in effect as warning letters. Detailed publication of warnings would be invidious, lead to misleading comparisons, and possibly prejudice later court proceedings. WSCs would require a right to challenge the NRA's actions.
W.1	REC 32	3			
B.2	REC 32	2	Q		Agreed, but further details required.
B.9	REC 32	2		Y	Concerned that intended charges are inappropriate to the requirements to be satisfied.
C.4	REC 32	2			Warning notices would be more effective if initially they are informal.
B.1	REC 32	2			Important that warnings do not become a substitute for prosecution.
I.2	REC 32	2			Concerned that this could become a surrogate for prosecution.
N.4	REC 32	2			Ensure that informal warnings are not considered by the discharger to have little significance.
N.5	REC 32	2			Warnings for consent exceedences should be put on the register. Views differ on recording the risk of consent exceedence.
N.7	REC 32	2			Formal action warning criteria will require precise scheme details for both parties to avoid serious misunderstandings occurring.
W.4	REC 32	2			Sensible, but NRA should not consider a high no. of Warnings indicative of good control.
A.1	REC 32	1			Agreed.
B.10	REC 32	1			Welcomed as it will make dischargers aware of their obligations.
C.1	REC 32	1			Agreed.
C.5	REC 32	1			Supported.
S.1	REC 32	1			Welcome 'Action Warnings'. NRA should keep a register of warnings.



PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

(a) GENERAL SUMMARY AND CATEGORISATION: Arranged by recommendation.

Respondent/ recommendation	See key			Summarised comment
	(A)	(B)	(C)	
A.1	REC 33	2		List of priority areas should account for necessity of environmental improvement.
B.8	REC 33	2	I	State the environmental objectives and timescales, and agree programmes with the dischargers.
B.10	REC 33	2		Priorities include areas where improvements are required for environmental reasons.
C.3	REC 33	2		The introduction of a catchment basis can only be foreseen when policy agreed nationally.
I.3	REC 33	2		Good liason with discharger essential. Capital expenditure may be planned differently from NRA priorities.
N.3	REC 33	2		Proceeding on a catchment basis is accepted for neutral translation of consents; over the longer term, priority should be
N.3	REC 33	2		given to reviewing consents to achieve river quality objectives.
N.4	REC 33	2		Agree with approach on a broad basis, but hope sufficient flexibility will be adopted to allow other high priorities to be addressed.
N.5	REC 33	2		Suggest that recommendations are phased in for selected categories of discharge and for selected catchments.
N.7	REC 33	2		Importance of discharges in relation to impact on receiving waters may be more important in some circumstances.
N.7	REC 33	2	Q	Will priorities and progress be available in documents and be discussed?
W.1	REC 33	2		If this means looking at consents from the needs of the rivers, Rec. is commendable. Consider revisions in line with all relevant information.
W.4	REC 33	2		Essential to have good liaison between discharger and NRA.
W.4	REC 33	2	Y	Major expenditure may have to be committed outside catchment order " if complete chaos is to be avoided".
B.3	REC 33	1		Welcomed.
C.1	REC 33	1		There is a need to coordinate activities to ensure consistency of approach.
C.2	REC 33	1		Strongly support.
C.5	REC 33	1		Supported.
E.1	REC 33	1		Strongly support.
I.2	REC 33	1		Strongly commend.
N.6	REC 33	1		Strongly supported.
N.8	REC 33	1		Strongly support catchment approach.
W.2	GEN 33	1		"Waveny D.C looks forward to the implementation of the new and uniform consent and compliance policy .."
B.2	REC 33	0		Unable to comment on relevance of recommendation.
R.1	REC 33	0	Q	Further explanation of implementation would be welcomed.

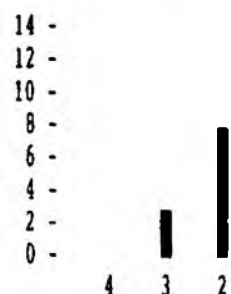
## PHASE 2: COMMENTS RECEIVED ON RECOMMENDATIONS

## (a) GENERAL SUMMARY AND CATEGORISATION: Responses to recommendations.

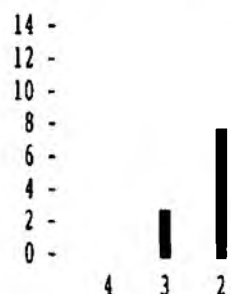
The following histograms illustrate the degree of agreement with the recommendations. Refer to the summarised comments for more information. The diagrams do not indicate the lucidity of the argument presented, or the number of comments presented on each recommendation by any one respondent. Note that the responses should not be considered as a representative sample of interested parties. For example, several duplicate replies would bias the histograms to show more or less agreement.

KEY	4	Disagrees with recommendation.	Vertical axis shows number of replies. One level of agreement has been noted for each recommendation mentioned on each reply. Where more than one comment has been made, the highest level (least agreement) has been taken.
	3	Concerned about implications.	
	2	Agrees in principle, but has some reservations or additional comments.	
	1, 0	Does not disagree with the recommendation: these comments are not shown.	

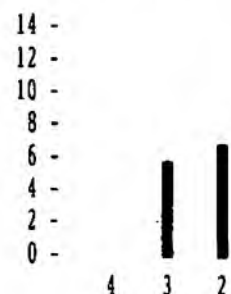
RECOMMENDATION 1



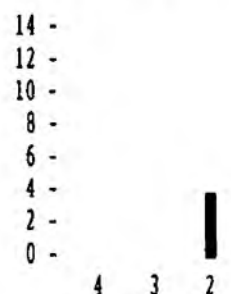
RECOMMENDATION 2



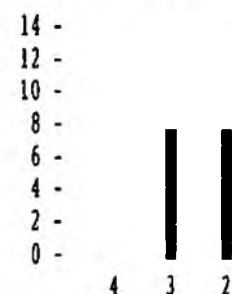
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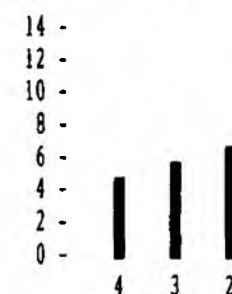
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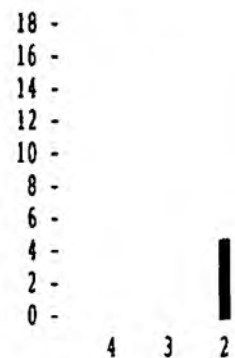
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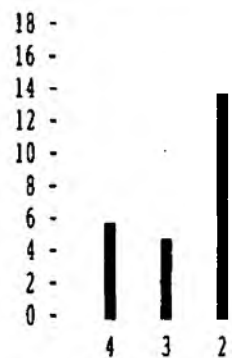
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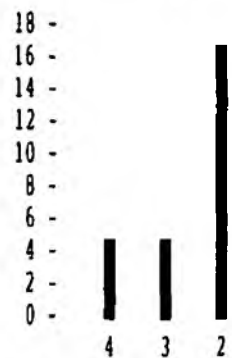
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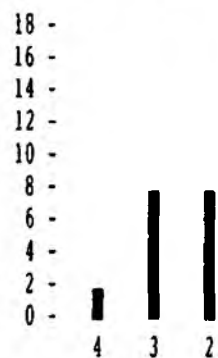
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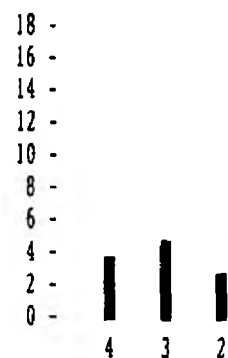
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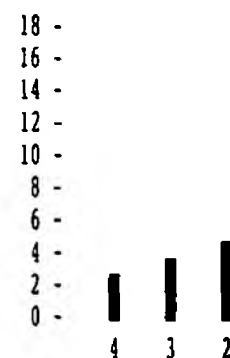
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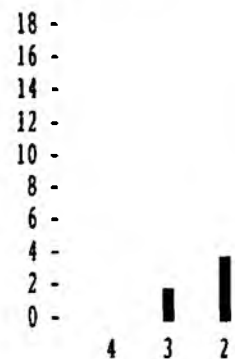
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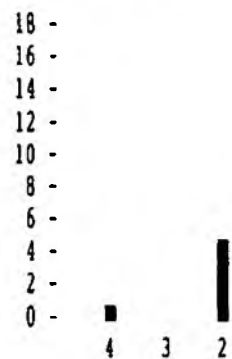
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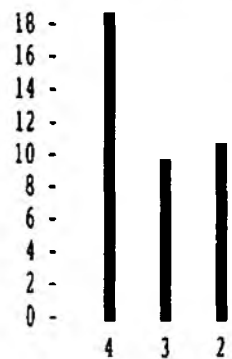
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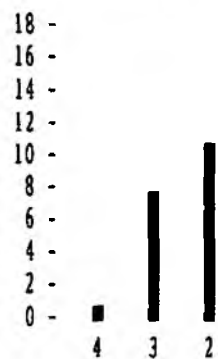
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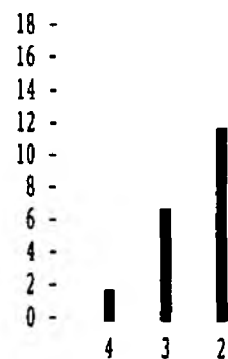
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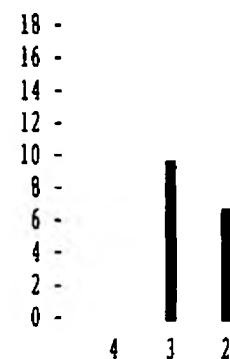
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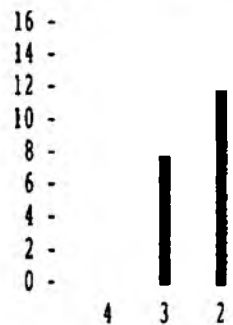
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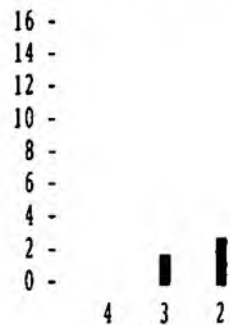
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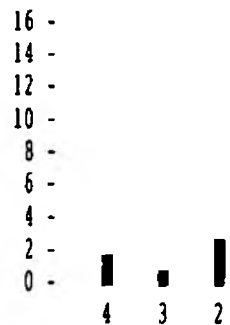
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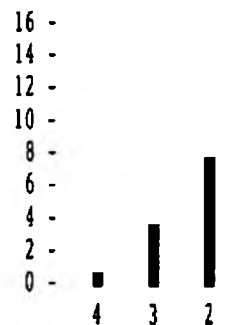
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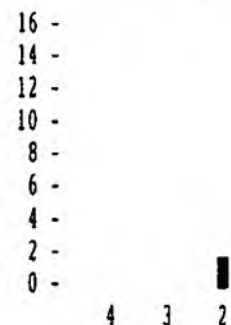
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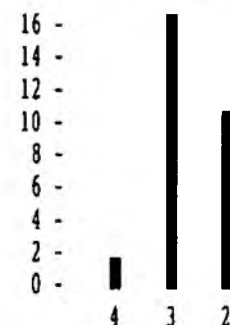
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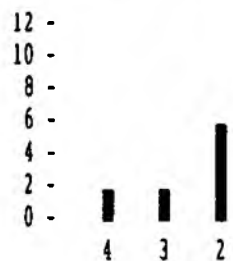
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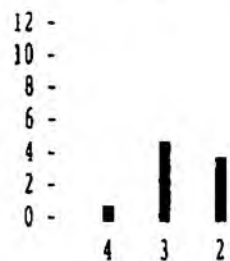
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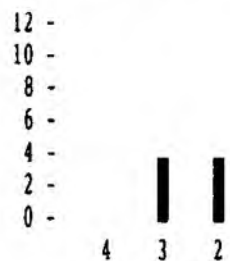
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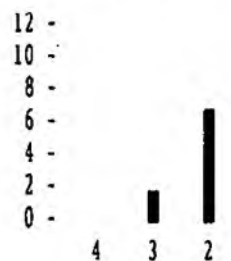
RECOMMENDATION 26



RECOMMENDATION 27



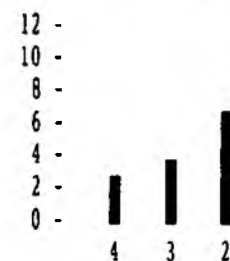
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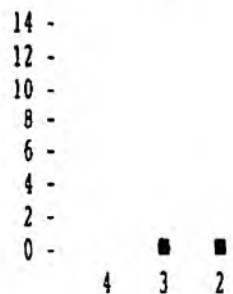
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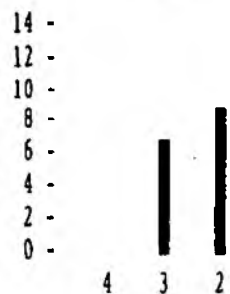
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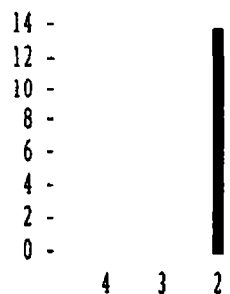
RECOMMENDATION 31



RECOMMENDATION 32



RECOMMENDATION 33



APPENDIX A  
BRIEFING LETTER



3692

Our Ref: RJP/CDD

17th October 1990

Mr S. Wharton  
Binnie & Partners  
Consulting Engineers  
Grosvenor House  
69 London Road  
Redhill  
Surrey  
RH1 1LQ

BINNIE & PARTNERS	
Redhill	
RECEIVED	
Job	19 OCT 1990
File	
Reply	
date	

Dear Mr Wharton

Discharge Consent & Compliance Policy

This contract is for Binnie & Partners to assist the NRA in evaluating the possible costs falling on dischargers arising from the Recommendations contained in the NRA Report, "Discharge consent and compliance policy : a blueprint for the future, Water Quality Series No. 1, 1990". It is proposed that the work required by the NRA be carried out in two phases.

Phase 1

- a) An assessment will be made of the 33 recommendations of the Report, in order to identify which ones could have significant cost implications for dischargers, and why.
- b) A specific assessment of the cost implications for a discharger with regard to the purchase, installation and maintenance of the necessary equipment to fulfil the obligations arising from Recommendations 17, 24 and 26

Phase 2

Upon receipt of all comments on the Report by the NRA at the end of October, it will be necessary to:

- a) summarise and categorise the nature of the comments received on each recommendation; and
  - b) assess and critically evaluate those comments which refer specifically to cost implications falling on the discharger.
- Phases 1 & 2 to be completed by the end of November.
  - Total cost not to exceed £10k (+VAT) etc.

2 1/2 wks

In order to finalise an agreement between us I suggest that you submit to us a proforma covering your normal conditions for advisory work, based on the ACE conditions of engagement.

Yours sincerely



Dr R.J. Pentreath  
Chief Scientist

**APPENDIX B**

**COMMENTS ON THE WATER SERVICES ASSOCIATION  
SUBMISSION WITH REFERENCE TO COSTS**



**DISCHARGE AND CONSENT COMPLIANCE  
POLICY - A BLUEPRINT FOR THE FUTURE**

**COMMENTS ON THE WATER SERVICES  
ASSOCIATION LETTER OF 19 DECEMBER 1990  
WITH SPECIFIC REFERENCE TO COSTS**

**Recommendation 8**

'All numeric consents should include absolute limits for all relevant determinants'.

WSA costs:	Capital	£12,000 million
	OPE	£200 million per annum

Assessing the cost implications of this recommendation is difficult because of the number of far reaching assumptions that must be made before any costing exercise may be started.

The assumptions that must be made relate to:

- 1 The relationship between the 95% iles and the chosen absolute limit (80% iles and 50% iles should also be considered, as referred to in Recommendation 9);
- 2 The existing sampling regime on which the absolute limit will be based (This affects the accuracy of the statistical analysis for the absolute limit and the confidence limits).
- 3 Confidence limits acceptable to Dischargers (These are well established for the 95% iles but not for absolute limits);
- 4 The nature of the incoming flow including constituents, variability of flow and the dischargers' control over the influent waste. (STW's have to accept whatever arrives at the works and have no control over its constituents);

We therefore feel that without considerable investigative work, it is not possible to speculate on the accuracy of the WSA costs given in their letter.

**Recommendation 14**

'In new and reviewed consents there should be consistent application of limits for ammonia in all discharges to which this is relevant'.

WSA estimates the costs to be '.... IN THE ORDER OF £3,000 MILLION WITH ANNUAL OPERATING COSTS OF £60 MILLION'. They have not however, revealed the basis of their estimates.

The capital costs of this recommendation have been estimated by B&P at £1.75 million per sewage treatment works for uprating from a non-nitrifying to nitrifying process. The increase in operation costs are estimated at £42,000 per works per annum. These costs have been based on an average works serving a population equivalent of 8000.

Using the figures quoted above it is possible to compare the costs of uprating with the total quoted by the WSA. (See Table (i)).

Table (i) shows that if 25% of the works require uprating from non-nitrifying to nitrifying then the total costs will be:

Capital	£2854 million (5% below WSA costs)
Operation and Maintenance	£ 69 million (13% above WSA costs)

NATIONAL RIVERS AUTHORITY

DISCHARGE CONSENT AND COMPLIANCE POLICY: A BLUE PRINT FOR THE FUTURE  
TABLE (1)

RECOMMENDATION 14

LIMITS FOR AMMONIA IN ALL DISCHARGES

2/18/91

BINNIE &amp; PARTNERS

TOTAL NO OF WORKS	PERCENTAGE NON - NITRIFYING %	NO OF WORKS NON - NITRIFYING	CAPITAL COST PER WORKS £ MILLIONS		OP & MAINT COST PER WORKS £ MILLIONS		CAPITAL COST OF UPRATING £ MILLIONS	COST OF COST OF UPRATING £ MILLIONS	TOTAL COSTS £ MILLIONS	
			NON - N	N	NON - N	N			CAPITAL	OP & MAINT
6524	100	6524	3.79	5.54	.07	.11	1.75	.04	11417	274
6524	75	4893	3.79	5.54	.07	.11	1.75	.04	8563	206
6524	50	3262	3.79	5.54	.07	.11	1.75	.04	5709	137
6524	26	1696	3.79	5.54	.07	.11	1.75	.04	2968	71
6524	25	1631	3.79	5.54	.07	.11	1.75	.04	2854	69
6524	22	1435	3.79	5.54	.07	.11	1.75	.04	2512	60
6524	10	652	3.79	5.54	.07	.11	1.75	.04	1142	27
6524	5	326	3.79	5.54	.07	.11	1.75	.04	571	14

## NOTES

1. Costs based on Table 4.
2. Number of STW's based on company reports.

## WSA Costs

Capital £3000 million

Operation and Maintenance £60 million per annum