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TECHNICAL DEPARTMENT SCIENCE GROUP

14

REPORT ON THE QUALITY OF BATHING WATERS IN HAMPSHIRE, SUSSEX, KENT AND THE ISLE OF WIGHT.

1993 BATHING SEASON.

Report Number DL/bw4/94 May 1994

DL/bw4/94

SUMMARY

- In England and Wales the National Rivers Authority is the competent authority for the EC Directive concerning the Quality of Bathing Waters (76/160/EEC). This report lists the bathing water quality results for Hampshire, Sussex, Kent and the Isle of Wight for the 1993 bathing season. The report also includes the results of marine algal monitoring and beach aesthetic surveys carried out at the same time or at the same sites.
- 2 The NRA Southern Region sampled 67 EC bathing waters weekly between 1st May and the end of September. A minimum of 20 samples were collected for coliform and faecal streptococci analysis and two samples were collected for *Salmonella* and Enterovirus analysis. 46 other bathing waters were sampled weekly for coliforms and faecal streptococci. On each visit sampling officers also recorded a range of physical and chemical parameters.
- 3 The UK Government currently uses the mandatory faecal coliform and total coliform standards as the basis for determining compliance with the Directive. This year 58 EC bathing waters in the Region (87%) conformed with the coliform standards, compared with 79.4% for all bathing waters in the UK. This was an increase of 11% compared with 1992 despite very poor summer weather conditions and is linked to the completion of a large number of minor sewerage improvements, particularly those relating to storm overflow arrangements.
- 4 Salmonella and enterovirus were monitored on two occasions at every EC bathing water. Salmonella were not detected at 57 bathing waters (85%) and enteroviruses were not detected at 32 bathing waters (48%).
- 5 Compliance to EC guideline standards for coliforms and faecal streptococci are <u>not</u> a requirement of the Directive. However, new schemes are currently being designed to achieve this objective and in 1993 39 bathing waters (58%) conformed with total coliform guideline standards, 25 bathing waters (37%) with faecal coliform guideline standards and 28 bathing waters (42%) with faecal streptococci guideline standards.
- 6 All EC bathing waters in the Region complied with the other mandatory physico-chemical standards listed in the Directive.

- 7 Marine algal blooms were generally restricted to the Kent coast but a widespread *Phaeocystis* bloom observed during late May and early June was observed throughout the Region. A series of other phytoplankton blooms occurred along the Kent coastline at regular intervals throughout the summer.
- 8 Aesthetic surveys were carried out to determine levels of sewage related debris on bathing beaches throughout the Region. Highest levels of sewage debris were recorded in parts of Kentand lowest levels in Sussex.
- 9 All EC bathing waters in the Region are required to comply with the requirements of the Directive by 1995. Compliance figures for 1993 are encouraging and suggest 100% compliance is possible for the 1996 bathing season.

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1 INTRODUCTION

The EC Directive concerning the Quality of Bathing Waters (76/160/EEC), agreed by all Community Members in December 1975, is intended to safeguard amenity, public health and the environment by reducing pollution of bathing waters and protecting them against further deterioration.

The Directive lists a range of water quality parameters which should be monitored, identifies standards which should be achieved in waters subject to the Directive and indicates the required monitoring frequency and period.

The NRA is the competent authority with respect to the Bathing Water and a number of other EC Directives and so is responsible for sampling and analysis. In 1993 the NRA Southern Region monitored the quality of bathing waters at 113 sites around the coasts of Hampshire, Sussex, Kent and the Isle of Wight. This included 67 EC beaches which are identified by the Department of the Environment for monitoring under the EC Directive (Figure 1) and 46 other beaches which were monitored because they were locally important, or, were additional monitoring sites on EC beaches included for pollution investigation purposes. This report details these results and also includes the results of marine algal monitoring and beach aesthetic surveys carried out at the same time or at the same sites.

2 SAMPLING AND ANALYSIS.

EC beaches were sampled weekly between 1st May and the end of September, which includes two weeks sampling prior to the UK Bathing Season identified by the Department of the Environment (15th May - 30th September). A minimum of 20 samples were collected for coliform and faecal streptococci analysis and two samples were collected for *Salmonella* and Enterovirus during the bathing season. Other beaches were sampled weekly for coliforms and faecal streptococci only. On each visit sampling officers also recorded a range of physical and chemical parameters.

The following non-identified bathing waters were monitored in addition to those listed in last years report.

Newhaven Quay	Sussex
Minster Beach	Kent
Folkestone, The Warren	Kent

All coliform and faecal streptococci analyses were undertaken by NRA Laboratories at Waterlooville and at Canterbury. All samples were analysed for confirmed coliforms and presumptive faecal streptococci within 6 hours of collection.

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The full results of bacteriological analyses are available on request from NRA public registers.

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3 BACTERIOLOGICAL AND OTHER STANDARDS

The EC Directive details 19 different pollution parameters to be monitored of which five are microbiological. Standards for those parameters for which they are set fall into two categories, imperative (I) and guideline (G) and details of the requirements for compliance are given in the Annex to the Directive (Appendix A). Compliance with imperative standards must be achieved within ten years of a bathing water being identified for the purposes of the Directive; most UK bathing waters were identified in 1985, only 27 were identified earlier. To prevent confusion the imperative standards will be referred to as the mandatory standards for the remainder of this report. The Directive also recommends that Member States endeavour to achieve guideline standards in bathing waters but this is not a requirement.

The "I" standards most commonly applied relate to faecal coliform and total coliform bacteria and require that 95% of all samples taken at a minimum fortnightly intervals through the bathing season should contain no more than 2,000 faecal coliform per 100ml seawater and 10,000 total coliforms per 100ml seawater. The UK Government currently uses the mandatory faecal coliform and total coliform standards as the basis for determining UK compliance with the Directive but ultimately it is the EC which makes the final assessment.

Additional microbiological "I" standards concern the occurrence of *Salmonella* and Enteroviruses, and "G" standards are set for faecal Streptococci, faecal coliform and total coliforms. The five microbiological parameters and compliance requirements are detailed in Table 1.

Total and faecal coliforms are bacteria of the human gut, occur in very high numbers in sewage and so are a valuable indicator of sewage pollution. Human faeces also contains faecal Streptococci, Salmonella and Enteroviruses which are pathogenic to man and there is a proven risk, albeit very small, of contacting minor illnesses from bathing in seawater contaminated by sewage. Such minor infections include gastroenteritis, ear, eye, and nose infections and skin rashes. There are no official statements relating EC standards to risk to health of bathers, the standards have not been derived from epidemiological study and appear primarily as a desire to harmonise conditions between Member States. Recent UK epidemiological research into the health effects of sea bathing concluded that the EC mandatory standards for bathing waters give adequate health protection. A Department of the Environment press release setting out the main conclusions is included in Appendix B.

The EC has recently published proposals to revise the bathing water standards. Details of these proposals and their implications are included in section 11.

TABLE 1	MICROBIOLOGICAL	QUALITY	REQUIREMENTS	OF	THE	EC
	BATHING WATER D	IRECTIVE	•			

PARAMETER	UNIT	STANDARDS			
		G value	I value		
Total Coliform	per 100m1.	500	10,000		
Faecal Coliform	per 100ml.	100	2,000		
Faecal Streptococci	per 100ml.	100	_		
Salmonella	per litre	-	0		
Enterovirus	per 10 litres	-	0		

Compliance levels: I, 95%, or G , 80% (faecal streptococci 90%) for samples taken during the bathing season.

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4 COMPLIANCE WITH MANDATORY COLIFORM STANDARDS.

Coliform results of samples collected during 1993 are summarised in Table 2a-d which lists the number of samples collected, the numbers failing to meet EC standards and statistical information for each beach. This year 58 EC beaches conformed with the coliform standards of the Directive. This represents 87% of bathing waters in the Region which exceeds the national figure of 79.4% for the United Kingdom.

This summer 39 of the 46 other beaches monitored would also have conformed with the mandatory coliform standards of the Directive if such standards applied to these bathing waters. EC bathing water standards do not apply to these 'other' beaches and there are currently no statutory requirements for compliance to any such standards at these beaches.

Previously, EC beaches were monitored once every two weeks during the bathing season, in 1988 some beaches were monitored weekly and others fortnightly and in 1989 all beaches were monitored weekly. In the past a beach was judged to conform with the EC Directive if no more than one sample from 12 exceeded the mandatory standards in the Directive. In 1988 and subsequently compliance has been based on a true 95% basis allowing no more than one failure in 20 samples , if fewer samples were collected all had to meet the standard. Compliance, calculated on this basis, with EC mandatory coliform standards between 1986 and 1993 is shown in Table 3a-d. In 1986 41 beaches and in 1987 38 beaches conformed with the EC standards compared to 27 in 1988, 45 in 1989, 48 in 1990, 45 in 1991 and 51 in 1992 when the stricter assessment of compliance was applied for the first time.

No major sewerage improvement schemes were completed between the 1992 and 1993 bathing seasons. However, 1993 was the first full season benefiting from improvements at West Cowes which were completed in May 1992 and the bathing water complied with EC standards for the first time since 1987.

Elsewhere, improvements in coliform compliance are not simply related to remedial sewage disposal schemes, 10 bathing waters which failed in 1992 passed this year and three bathing waters which passed in 1992 failed this year. Overall, 11% more bathing waters complied with EC standards compared to 1992, despite very poor summer weather conditions. This improvement is linked to the the completion of a large number of minor sewerage improvements, particularly those relating to storm overflow arrangements.

5 COMPLIANCE WITH MANDATORY VIRUS AND SALMONELLA STANDARDS.

Virus and Salmonella samples were collected on two occasions from each EC beach and results are summarised in Table 4a-d. Salmonella were detected at 10 beaches (85% comply), Enteroviruses were detected at 35 beaches (48% comply) and one or both of these pathogens were found at 37 beaches (45% comply).

Salmonella are only infrequently found in bathing waters in the Southern Region and when enumerated numbers have proved to be very low such that they are unlikely to pose a health risk to bathers.

Enteroviruses were found in a similar number of bathing waters as 1992. Each year samples all collected from all bathing waters during two weeks, usually late June and late July. The numbers of bathing waters recording viruses in these weeks vary considerably:

1993	June - 16	July -	- 23
1992	June - 21	July -	- 29
1991	June - 40	July -	- 33
1990	June - 25	July -	- 6

The reason for this variability is complex but involves weather and sea conditions and also the numbers of people emitting viruses into the local sewerage systems.

Enterviruses are determined as plaque forming units per ten litres of seawater and numbers are usually extremely low. An examination of enterovirus results collected in Southern Region between 1989 and 1993 has shown that highest numbers occur at those sites at which Enteroviruses are regularly recorded. Previous studies have shown that the distribution of *Salmonella* and Enteroviruses in bathing waters do not correlate with that of coliforms or faecal streptococci. The reason is that these pathogens survive much longer in seawater, Enteroviruses surviving days, weeks or months compared to coliforms which only survive a few hours on a sunny, mid-summer day.

Because Enteroviruses occur in such low densities in seawater they need to be isolated and enumerated using tissue culture methods. Appropriate methods have only been developed for a few types and strains and none of these are associated with gastro-enteritis in swimmers. The Enterovirus data presented can be regarded as indicative of the distribution of other viruses but their occurrence should not be regarded as demonstrating a health risk.

6 COMPLIANCE WITH GUIDELINE COLIFORM AND STREPTOCOCCI STANDARDS.

Article 3 of the Directive requires member states to set bathing water quality standards no less stringent than those specified as "I" values in the Annex to the Directive and also requires member states to endeavour to observe "G" values as guidelines, whether or not there is a corresponding "I" value. To comply with these guideline standards the Directive requires that 90% of samples conform with "G" values (80% in the case of total and faecal coliform) and that those 10% (or 20%) not complying must not be consecutive samples.

The proportions of samples determined for total coliform, faecal coliform and faecal streptococci complying to relevant mandatory "I" and guideline "G" standards are listed in Table 5a-d. If the consecutive sample rule is ignored then overall, 39 (58%) of EC Beaches conformed with the total coliform guideline standards, 25 (37%) conformed with the faecal coliform guideline standards and 28 (42%) conformed with the faecal streptococci guideline standards.

Compliance to guideline standards for each county is summarised in Table 6, in which compliance has been assessed using current Department of Environment rules which ignore the consecutive day rule. Overall compliance on this basis is 58% for total coliforms, 37% for faecal coliform and 42% for faecal streptococci.

SUMMARY OF	COMPLIANCE TO THE GUIDELINE STANDARDS
(EXCLUDING	CONSECUTIVE SAMPLE RULE) FOR TOTAL
COLIFORMS,	FAECAL COLIFORMS AND FAECAL
STREPTOCOCO	21 .
	SUMMARY OF (EXCLUDING COLIFORMS, STREPTOCOCC

County	Number of EC Bathing	No's of bathing waters Comply- ing to Guideline Standards				
	walels	Total Coliform	Faecal Coliform	Faecal Strepts		
Hampshire	12	10	8	10		
Sussex	22	10	6	6		
Kent	20	12	9	9		
Isle of Wight	13	7	2	3		
TOTAL	67	39	25	28		

7 COMPLIANCE WITH OTHER PHYSICO - CHEMICAL STANDARDS.

The Directive lists a number of other parameters for which mandatory standards are set but the Annex to the Directive provides that these parameters do not have to be measured in every case. These parameters include pH, transparency, colour, mineral oils, surface active substances and phenols. All except pH are determined by observational assessment of the visual and/or olfactory quality of water in the vicinity of the sampling site.

Colour	-	No change from normal for the
		prevailing weather and tidal
		conditions at time of sampling.

Mineral Oils - No film or odour present.

Surface Active - No lasting foam. Substances

Phenols - No specific odour.

Transparency - Depth to which a Secchi disc remains visible. In Southern Region this is determined by whether the sampler can see his/her feet whilst wading to collect the sample, but waivers are in force for this parameter at all our EC bathing waters.

In all cases of a positive field observation for colour, mineral oils, surface active substances or phenols a sample was collected for laboratory confirmation.

Article 8 states that the Directive may be waived in the case of certain parameters. In the Southern Region the Directive has been waived for transparency at all sites and colour at three sites on the grounds of geographical conditions. These waivers are likely to be permanent.

Table 7a-d contains a numerical summary of the results for these parameters, parameters with waivers are indicated with an asterisk. No bathing waters in our Region failed to comply with the requirements of the Directive for any of these parameters.

8 NATIONAL BEACH AWARD SCHEMES

8.1 The European Blue Flag Scheme

The European Blue Flag awards are organised in the UK by the Tidy Britain Group. In order to achieve a blue flag coastal resorts must achieve the following standards for beach cleanliness, bathing water quality and provision of services and amenities:

- Bathing Water Quality must comply with the guideline value of the appropriate microbiological parameters of the EC Bathing Water Directive (EC/160/EEC).
- There must be an absence of litter both on land and in the sea.
- There must be no oil pollution.
- Beaches must be cleaned up after each day.
- There must be no unauthorised camping or dumping and there must be safe and adequate access to the beach.
- Dogs must be banned from part of the beach.

Blue flags are awarded in June each year using water quality statistics compiled for the previous bathing season. The official water quality statistics are those collected by the NRA.

New, more stringent, criteria were agreed for the 1992 Blue Flag Awards by the 12 European countries participating in the scheme. A significant change was that water quality must comply with the Guideline(G) values of the appropriate microbiological parameters of the EC Bathing Water Directive, whereas previously compliance to mandatory standards was acceptable.

In 1993 blue flags were awarded to 19 coastal resorts in the UK compared to 17 in 1992. Sheerness, Hayling Island West and Colwell Bay from Southern Region were successful.

During the bathing season the NRA provided results of bacteriological analysis to the successful local authorities who are required to display this information publicly as a condition of the award.

Details of the European Blue Flag Award criteria are reproduced in Appendix C.

8.2 The Tidy Britain Group - Seaside Award Scheme.

The Seaside Award was a new scheme introduced in 1992 and administered by the Tidy Britain Group. The award has been designed to complement the European Blue Flag Award, and to compensate for the loss of the Golden Starfish Award that was pilot tested in the UK and Greece in 1990/91 for rural beaches. The Seaside Award has two categories, Resort and Rural, the former encompassing managed tourist resorts and the latter designed to award smaller beaches which have limited facilities but still offer clean water and whose attraction lies in their undeveloped character.

Within each category, two levels of water quality are acknowledged: one that meets the mandatory (I) standards for the faecal and total coliform parameters of the EC Bathing Water Directive, and also complies with 28 land-based criteria - this will be known as the Seaside Award; and one that meets the Directive's more stringent guideline (G) standards for the same parameters, and also complies with the same 28 land-based criteria - this will be known as the "Premier" Seaside Award.

Eleven beaches in Southern Region were successful in obtaining seaside awards. The beaches and type of award are listed below:

Resort Beaches	-	Bexhill		
	-	Bognor Regis		
	-	Broadstairs		
	. ÷	Colwell Bay	Premier	Award
	-	Eastbourne		
	-	Hayling Island W.	Premier	Award
	-	Littlehampton		
	-	Margate		
	-	Ryde East		
		Sandown		
	-	Sheerness	Premier	Award
	-	Southsea		
Rural Beaches	_	Birling Gap	Premier	Award
	-	Camber		
	-	East Cowes		
	-	Dymchurch		
	-	Lepe Country Park		
	-	Littlestone		
	-	Pevensey Bay		
	-	St Helens		
	-	Winchelsea		
	-	Yaverland (Sandown))	

Details of the Seaside Award criteria for Resort and Rural beaches are reproduced in Appendix C.

9 MONITORING OF MARINE ALGAE

Marine algal blooms most commonly cause aesthetic nuisance in bathing waters and on beaches, through production of large amounts of foam or scum. This may be present on the surface of the water or be deposited on the beach, and can result in offensive smells as the bloom decays. *Phaeocystis* is the most common "bloom" phytoplankton in NRA Southern Region waters.

Some algae can cause skin irritation when bathers come into contact with bloom concentrations. Blooms of toxic dinoflagellates can also occur, resulting in localised mass mortalities of marine biota, or contamination with biotoxins of commercially fished shellfish and Crustacea, rendering them dangerous to human health.

In view of the increasing international and national concern at the effects of eutrophication, and the apparent increase in incidents of algal blooms around the UK coastline, the NRA have established a reporting procedure for the occurrence of exception marine algal blooms.

On all routine visits to bathing waters in our region water quality officers:

- observe the strandline and record the presence or absence of any evidence of bloom deposited by the previous tide, such as slime, scum, gelatinous sludge, localised dark patches in the sand, or sulphurous smells.
- observe the seawater at the waters'edge for any evidence of algal bloom such as excessive foam, colour change, smell etc, and record presence or absence.
- observe the sea offshore for signs of slicks, windrows, or foaming indicative of algal blooms, and record presence or absence.

Positive observations for the beach or waters edge are supported by samples which are examined in the laboratory to identify and enumerate the dominant species.

Beaches were sampled weekly from the first week in May until the end of September and the results are summarised in Table 8a-d. During that period there were a few positive records, the majority of these were at Kent beaches with a few at Sussex beaches. The majority of the observations related to blooms of Phaeocystis. This was observed at a large number of Kent beaches between mid-May and early June. This bloom of Phaeocystis extended into East Sussex during the same period but in the west of the Region blooms were only observed at a very few sites in mid-June. A series of other phytoplankton blooms occurred along the Kent coastline at regular intervals throughout the summer.

The most visible blooms were associated with *Noctiluca scintillans* which colours the sea salmon pink. One bloom was noted near Folkestone and was widespread offshore in this area.

Another large bloom was observed at Westbrook Bay, Minnis Bay and Reculver at the end of July. The bloom consisted of *Dunaliella* and occured at the same time and in the same area in 1992.

10 BATHING BEACH AESTHETIC SURVEYS

Most beach users find the presence of recognisable sewage related debris on beaches to be grossly objectionable and this criteria may be more important in beach selection than is the bacteriological quality of the bathing water. The importance of this factor is clearly recognised in the blue flag and seaside award schemes.

Sewage related debris enters the sea from unscreened crude sewage outfalls and storm overflows and also from small boats. Certain plastic and rubber items may persist for a very long time and can be dispersed over very large distances by the tides.

Planned and recently completed remedial sewage treatment schemes include the fine screening of all sewage discharged through long sea outfalls and increased water retention capacity within the sewerage network. Sewerage systems for coastal towns in the Southern Region are now being designed to allow no more than one storm water spillage per bathing season. As remedial sewage treatment schemes are progressed it is expected that the amounts of sewage related debris found on beaches will reduce significantly.

NRA Southern Region commenced pilot - scale bathing beach aesthetic surveys in 1991 to meet three objectives:

- to monitor reductions in sewage related debris resulting from remedial sewage treatment schemes.
- to monitor the efficiency of preliminary treatment (screening and maceration) of sewage discharged to the sea via long sea outfalls.
- to monitor the frequency and impact of storm overflows discharging to bathing waters.

Full scale surveys were carried out in 1992 and 1993 following an objective assessment method developed by Garber. Most bathing waters were assessed by water quality officers once per month during the bathing season, although more frequent surveys were carried out at Kent beaches because of the perceived scale of the problem.

On each visit a minimum of 100 metres length of the beach was inspected along the water's edge, along the strandline and along a line mid way between the two. At each of these locations the quantities of six categories of sewage related debris were determined using the following scale:

- 0 Absent
- 1 Trace quantities present
- 2 Some debris at intervals
- 3 Sufficient to be objectionable

The results of bathing beach aesthetic surveys undertaken during the 1993 bathing season are summarised in Table 9a-d. The total of all scores on all visits are recorded for each category of sewage related debris for each beach. The average score per visit has also been calculated for comparative purposes.

Intact faeces were observed rarely and were most probably of canine origin. Other recognisable sewage debris was also observed rarely except along parts of the Kent coast in Sandwich Bay, around the Thanet Penninsula and at Folkestone. Contraceptives, tampon applicators and sanitary towels were recorded the most frequently with the highest frequencies recorded in parts of Kent.

In general terms the lowest levels of sewage debris were observed along the Sussex coast, with more occurring on the Isle of Wight and Hampshire shorelines and the most occurring in Kent. The level of contamination was substantially higher along some Hampshire beaches in 1993 compared to 1992 indicative of wet summer weather and the increased likelyhood of storm overflow operation. The regional distribution to some extent reflects the location and numbers of unscreened crude sewage outfalls discharging to the sea.

Aesthetic surveys of this type are difficult to apply in a consistent objective manner because of the subjective nature of the observations being recorded. However, the results are good indicators of the general performance of local sewerage arrangements.

11 REVISION OF THE BATHING WATER DIRECTIVE

The EC Commission has recently agreed a proposal to revise the Directive. Their proposal, which will be published in the Official Journal, is intended to simplify and update the existing Directive. A number of steps have to be taken before it is adopted and replaces the existing Directive, including negotiation in the Council and discussion in the European Parliament. It is normal for this to take more than eighteen months and often considerably longer. It is also impossible to say at this stage which aspects of the proposal are likely to be incorporated in the revised Directive.

The proposed changes which affect monitoring are:

- Total coliform standard to be dropped.
- Salmonella standard to be dropped.
- Faecal coliforms to be replaced by a more definitive *E. coli*.
- Faecal streptococci to be given a mandatory standard of no more than 400 per 100 ml: a footnote allows abnormal peak values to be disregarded if a normal value is obtained within 48 hours (2 working days).
- Enteroviruses are retained with a mandatory standard of 0 but with a minimum sampling frequency of monthly unless a bathing water has for two seasons passed the guideline *E. coli* and mandatory faecal streptococci standards.
- Bacteriophages added to the list but with no standards set.
- Dissolved oxygen to have a mandatory standard of 80% - 100% (previously a guideline value only).
- Mandatory requirement for sewage related debris to be absent.
- Parameters ammonia, Kjeldahl nitrogen, pesticides, metals, cyanides, nitrates and phosphates no longer required.

12 FUTURE MONITORING STRATEGY.

The NRA has determined that from 1994 the monitoring of bathing waters will be restricted to those waters identified under the EC Bathing Water Directive. The NRA now consider they have sufficient information to characterise the background quality of most other bathing waters not within the scope of the Directive. Unless there is a dramatic change in the discharges into these waters, their overall quality should remain stable and routine monitoring is not required.

The only other monitoring will relate to, either, operational investigations of pollution, or, samples which may be collected at minor non-EC bathing waters where water quality has not yet been characterised. Any routine monitoring in relation to this additional sampling will normally be completed within three years..

Local Authorities may wish to make their own arrangements for monitoring of non-EC bathing waters particularly as some of these are entered for beach awards. The NRA take great care to ensure that sampling and analysis is done to common standards for all identified bathing waters and are prepared to carry out monitoring at these sites for Local Authorities on a recharge basis.

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TABLE 2a

ISLE OF WIGHT - BATHING WATER BACTERIOLOGICAL SUMMARY RESULTS 1993

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Sampling Point	Мар	No. of	f TOTAL COLIFORMS					FAEC	AL COLIF	ORMS
	Reference	Samples	Number of Failures	Arithmetic Mean	Median	Max Count	Number of Failures	Arithmetic Mean	Median	Max Count
EC Beaches Ryde - East Seagrove St Helens Bembridge Whitecliff Bay Sandown Shanklin Ventnor Compton Bay Totland Bay Colwell Bay Gurnard	SZ 601 927 SZ 632 912 SZ 637 892 SZ 657 881 SZ 641 862 SZ 601 843 SZ 585 811 SZ 502 773 SZ 377 841 SZ 322 871 SZ 328 879 SZ 477 959	20 20 20 20 20 20 20 20 20 20 20		213 753 661 318 832 811 497 2096 179 1687 565 790	58 140 220 60 235 260 205 1350 30 90 95 170	1500 9600 2900 8300 8400 3000 10500 1500 18900 7000 3600	0 2 0 1 0 1 0 1 1 0	85 470 225 158 413 344 200 700 119 401 352 255	20 65 105 53 140 135 73 630 10 48 35 75	580 5300 1000 1300 3700 1900 670 2800 1300 2600 5600 1700
Other Beaches East Cowes Woodside Ryde West Spring Vale Yaverland (Sandown) Shanklin (Welcome Beach) Brook Bay Brighstone Bay Norton Thorness Bay	SZ 506 964 SZ 548 933 SZ 585 930 SZ 617 921 SZ 611 849 SZ 589 827 SZ 383 835 SZ 419 817 SZ 347 898 SZ 450 933	20 20 20 20 20 20 20 20 20 20 20 20 20	1 0 0 0 1 4 2 0 0	970 152 452 516 1218 1494 6534 2199 476 142	105 43 105 60 630 195 4850 335 390 68	15000 2000 3800 4500 5400 17200 27500 16400 1400 730	0 0 1 0 2 10 3 0 0	131 37 114 255 515 526 3315 929 228 39	28 10 40 25 390 118 1850 160 195 10	860 220 570 2700 1800 1800 12100 10700 720 290

Directive I values: 10,000 Total Coliforms / 100ml, 2,000 Faecal Coliforms / 100ml ++ Not EC bathing waters, compliance statistic strictly illustrative

TABLE 2b

HAMPSHIRE - BATHING WATER BACTERIOLOGICAL SUMMARY RESULTS 1993

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Sampling Point	Мар	No. of		TOTAL COLIFORMS FAECAL COI						IFORMS		
	Reference	Samples	Number of Failures	Arithmetic Mean	Median	Max Count	Number of Failures	Arithmetic Mean	Median	Max Count		
EC Beaches West of Eastoke West Hayling Eastney Southsea Stokes Bay Lee-on-Solent Hillhead Calshot Lepe Milford-on-Sea Christchurch Bay Highcliffe	SZ 729 984 SZ 705 987 SZ 675 988 SZ 653 982 SZ 600 979 SU 562 005 SU 540 022 SU 481 012 SZ 456 985 SZ 283 915 SZ 239 928 SZ 216 931	20 20 20 20 20 20 20 20 20 20 20 20 20		220 26 89 514 238 110 78 452 68 655 266 160	10 20 15 195 50 48 40 78 48 205 80 20	3900 100 770 2500 3200 550 480 5900 280 5700 2100 980	1 0 2 0 0 0 0 1 0 0	173 14 45 451 43 53 50 149 38 460 116 96	10 10 10 20 25 10 30 20 80 30 15	3200 30 390 2500 270 300 250 1400 180 4800 980 640		
<u>Other Beaches</u> Calshot - Activ. Centre Weston Hard, Woolston Solent Breezes Portsmouth Victoria Pier	SU 478 023 SU 441 098 SU 506 038 SZ 631 992	20 20 20 20	0 - 0 0	516 1405 321 272	200 500 50 170	3000 7400 3000 2000	0 2 0 0	222 637 117 96	83 270 33 40	1 300 3400 750 420		

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Directive I values: 10,000 Total Coliforms / 100ml, 2,000 Faecal Coliforms / 100ml ++ Not EC bathing waters, compliance statistic strictly illustrative

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Sampling Point	Мар	No. of		TOTAL COLIF	ORMS			FAECAL COLIN	ORMS	
	Reference	Samples	Number of Failures	Arithmetic Mean	Median	Max Count	Number of Failures	Arithmetic Mean	Median	Max Count
EC Beaches West Wittering Bracklesham Bay Selsey Pagham Bognor Regis Middleton on Sea Littlehampton Worthing South Lancing South Lancing Southwick Hove Brighton Saltdean Newhaven Seaford Eastbourne Pevensey Bay Normans Bay Bexhill Hastings Winchelsea Camber	SZ 768 980 SZ 805 963 SZ 868 937 SZ 892 972 SZ 923 985 SZ 985 999 TQ 040 013 TQ 139 021 TQ 183 036 TQ 245 047 TQ 288 043 TQ 323 034 TQ 381 018 TV 447 999 TV 488 982 TV 614 982 TQ 657 037 TQ 682 053 TQ 737 068 TQ 819 092 TQ 912 154 TQ 973 184	20 20 20 20 20 20 20 20 20 20 20 20 20 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	122 212 176 308 859 466 499 3198 7814 2656 1384 1524 582 1177 481 622 832 762 625 2554 137 328	20 35 28 20 90 95 455 220 830 370 305 83 475 83 475 83 475 83 400 490 455 60 205	1800 2300 2000 4700 5600 3700 5500 22800 70500 35100 8800 12100 5800 6400 4100 6200 4300 3300 2500 15300 850 1400	0 0 1 1 1 4 7 1 1 2 0 0 0 1 1 1 0 2 0 0	86 174 43 208 323 238 251 1183 2500 932 380 680 144 290 79 105 357 411 196 652 50 145	10 15 10 165 50 290 128 350 100 70 28 65 25 110 215 180 98 135 40 80	1200 1900 340 3200 1900 2300 2500 8100 12800 12800 10200 2900 7100 1900 1200 600 370 2600 2900 820 5400 200 520
Other Beaches Felpham Worthing East Shoreham by Sea Shoreham-Kingston Beach Brighton-Palace Pier Newhaven Quay Seaford-Dane Road Cuckmere Haven Beach Birling Gap Eastbourne	SZ 949 993 TQ 168 029 TQ 214 044 TQ 235 046 TQ 314 038 TV 449 988 TV 478 989 TV 520 976 TV 552 960	20 20 20 20 20 20 20 20 20 20 13 20	0 1 0 1 0 1 0 0 0 0	671 2547 750 974 2348 286 382 398 26	135 920 140 350 1050 90 185 40 20	3600 14000 7200 6400 13000 1800 2800 2900 130	1 6 1 0 3 0 0 0 0	265 1504 308 385 1085 92 94 91 91 9	60 430 90 250 390 35 33 15 10	2800 6900 2700 1600 6600 400 700 800 50
(Redoubt) St Leonards Bulver Hythe Hastings (Fairlight Glen)	TV 625 998 TQ 797 087 TQ 784 086 TQ 862 108	20 20 20 20	1 0 1 0	1758 810 2616 991	515 300 915 120	23900 3500 23200 5900	0 0 1	225 217 835 498	145 110 175 30	740 830 10500 5900

Directive I values: 10,000 Total Coliforms / 100ml, 2,000 Faecal Coliforms / 100ml ++ Not EC bathing waters, compliance statistic strictly illustrative

DL/bw4/94

TABLE 2d (i)

KENT - BATHING WATER BACTERIOLOGICAL SUMMARY RESULTS 1993

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DL/bw4/94

Sampling Point	Мар	No. of		TOTAL COLIFORMS FAECA						AECAL COLIFORMS			
	Reterence	Samples	Number of Failures	Arithmetic Mean	Median	Max Count	Number of Failures	Arithmetic Mean	Median	Max Count			
EC Beaches													
Littlestone	TR 084 239	20	0	360	200	2600	1	246	115	2600			
St Marys Bay	TR 093 277	20	0	659	140	8200	1	502	55	7600			
Dymchurch-Martello													
Tower	TR 113 304	20	0	502	445	1800	0	259	100	1500			
Hythe - West													
Parade	TR 160 340	20	0	167	45	900	0	81	25	560			
Sandgate-Princes										i l			
Parade	TR 188 348	20	0	599	285	6600	0	84	50	450			
Folkestone	TR 237 363	20	0	1916	1025	10000	1	696	410	4900			
St Margarets Bay	TR 368 444	20	0	166	115	890	0	56	33	220			
Deal Castle	TR 378 527	20	2	4062	2850	16200	7	1937	1150	7700			
Sandwich Bay	TR 358 590	20	8	55100	3900	844000	8	6223	1900	76800			
Ramsgato - Western													
Undercliff	TR 372 640	20	0	3581	2950	8400	3	1184	930	2300			
Broadstairs -					1.	ļ	÷						
Viking Bay	TR 398 677	20 [0	702	330	6100	0	298	160	1300			
Joss Bay	TR 399 702	20	· 0	143	135	460	0	63	45	190			
Margate - Fulsam	mp 356 345	20		224	20	2600		410	25	1 4 9 9			
ROCK	TR 350 /15	20	0	231	145	2600	0	110	35	1400			
Margate - The Bay	TR 347 708	20	. 0	00/	142	3000		327	/0	2700			
St Mildreds Bay	TR 328 705	20	v I	130	/5	740 500	v l	24	40	1/0			
Marno Pau	TR 200 09/	20	J . Å	1641	805	8300	1	659	280	2600			
Wort Boach	TK 100 000	20	, n	221	28	2700		44	15	240			
Tousdoup	TR 050 000	20		370	45	3500	ň	27 RO	10	760			
Sheerness	TO 925 750	20	ŏ	55	30	450	ŏ	16	10	40			
pheerine 32	12 723 730				<u> </u>	100	<u> </u>			10			

Directive I values: 10,000 Total Coliforms / 100ml, 2,000 Faecal Coliforms / 100ml

TABLE 2d (ii)

KENT - BATHING WATER BACTERIOLOGICAL SUMMARY RESULTS 1993

Sampling Point	Мар	No. of	TOTAL COLIFORMS FAECAL COLIF						FORMS		
	Reference	Samples	Number of Failures	Arithmetic Mean	Median	Max Count	Number of Failures	Arithmetic Mean	Median	Max Count	
Other Beaches											
Greatstone	TR 082 229	20	0	478	250	2300	0	274	120	1400	
Dymchurch - Car		Í									
Park	TR 101 290	20	1	308	115	1400	1	187	45	1100	
Dymchurch - Hythe											
Road	TR 128 319	20	1	185	100	710	1	66	45	390	
Sandgate - Town											
Centre	TR 203 351	20	1	2684	555	38000	2	1925	• 95	31300	
Folkestone - The			<u>^</u>		262		•				
warren	TR 480 376	20	U	668	360	3000	0	196	120	680	
Dover Harbour	TR 321 412	20	0	238	125	820	0	79	50	410	
Ramsgate Sands	TR 387 649	20	7	1169	465	13400	1	420	220	4100	
Broadstairs - East	mp 404 600	20		207	165	2500	0	4.2.4	<u> </u>		
	TR 401 000	20		297		2500	0		00	220	
Bolany Bay	1R 391 /12	20	0	170	120	760	0	117	40	200	
Wostgato Pay	TR 373 714	20	ň I	600	115	6400	0	97	50	520	
Westbrook Bay	TR 320 702	20	ň	152	90	620	1	05	78	220	
Walpole Bay	TR 365 715	20	ŏ	81	48	350	ò	43	40	140	
Dumpton Gap	TR 397 667	20	i l	889	285	10800	ŏ	189	135	550	
Reculver Beach	TR 226 694	20	o	659	50	8700	ŏ	63	15	360	
Tankerton Beach	TR 127 674	20	1	1251	78	19600	õ	111	25	720	
Hampton Pier	TR 158 684	20	1	1405	395	14700	1	1028	63	14700	
Kingsdown Beach	TR 380 485	20	<u>'</u> .0	836	195	6600	1	380	80	3100	
Minster Beach	TQ 934 740	20	0	58	15	420	o	20	10	170	

Directive I values: 10,000 Total Coliforms / 100ml, 2,000 Faecal Coliforms / 100ml ++ Not EC bathing waters, compliance statistic strictly illustrative

DL/bw4/94

TABLE 3a

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ISLE OF WIGHT BEACHES -COMPLIANCE TO EC DIRECTIVE

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	1986	1987	1988	1989	1990	1991	1992	1 9 93
Ryde	F	F	F	F	Р	р	P	D
Seagrove	Р	Р	F	F	F	г Т	<u>।</u> म	ר ד
St Helens	Р	Р	F	F	P	P	- - 	D
Bembridge	F	F	F	F	P	- न	P	T T
Whitecliff Bay	Р	Р	F	- F	P	P	P	ב מ
Sandown	Р	Р	P	P	P	P	P	D
Shanklin	Р	P	P	P	P	P	P	D
Ventnor	F	P	F	F	P	F	- 	r D
Compton Bay	P	P	P	P	P	P	D I	Г D
Totland Bay	F	P	Ē.	P	P	P	T D	г D
Colwell Bay	F	P	F	P	P	p	r D	r D
Gurnard	F	F	- - 	P		- - -	r F	r D
Cowes	F	P	F	F	F	F	л Я	P P
						-	-	•

P = Pass F = Fail

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Compliance tested on coliforms only

DL/bw4/94

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HAMPSHIRE BEACHES -COMPLIANCE TO EC DIRECTIVE

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de la companya de la	1986	1987	1988	1989	1990	1991	1992	1993
Highcliffe	Р	P	Р	P	P	P	D	D
Christchurch Bay	Р	Р	Ŧ	P	P	D L	r D	r
Milford-on-Sea	Р	F	- F	- न	r TD	r D	P F	P 7
Lepe	Р	P	P	г Р	r D	r D	r D	P
Calshot	P	P	F	P I	r D	P	P	Р
Lee-on-Solent	P	- q	r P	E D	r D	P	P	P -
Hillhead	_	_	-	F	P	P	P	Р
Stokes Bay	Р	ъ	- D	- D	P D	P	P	Р
Southsea	D	r D	r F	P	Р	P	Р	Р
Eastney	L D	r D	r F	P	Р	P	Р	F
West Havling	P	P	F	P	Р	Р	Р	Р
West of Pastaka	P	P	P	Р	Р	Р	P	Р
West of Eastoke	P	Р	P	Р	Р	Р	Р	P

- 2

P = Pass F = Fail

Compliance tested on coliforms only

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TABLE 3c

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SUSSEX BEACHES -COMPLIANCE TO EC DIRECTIVE

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- ÷	1986	1987	1988	1989	1990	1 9 91	19 92	1 9 93
West Wittering	Р	Р	Р	Р	P	Р	Р	Р
Bracklesham Bay	Р	Р	ŀ	P	Р	P	P	P
Selsey	Р	F	F	P	F	Р	Р	P
Pagham	P	Р	F	Р	Р	Р	P	P
Bognor Regis	Р	Р	Р	Р	Р	F	Р	P
Middleton on Sea	P	Р	F	Р	Р	P	F	P
Littlehampton	Р	F	F	Р	Р	P	Р	P
Worthing	F	F	F	Р	Р	Р	F	F
South Lancing	F	F	F	F	F	F	F	F
Southwick	Р	F	F	P	F	F	Р	P
Hove	F	F	F	F	F	F	F	Р
Brighton	Р	Р	F	Р	F	Р	Р	F
Saltdean	Р	Р	Р	Р	Р	Р	Р	P
Newhaven	P	F	F,	F	F	F	Р	P
Seaford	F	F	F	F	F	Р	Р	Р
Eastbourne	Р	Р	Р	Р	Р	Р	Р	P
Pevensey Bay	Р	F	Р	Р	F	Р	Р	P
Normans Bay	Р	Р	Р	Р	Р	Р	Р	P
Bexhill	Р	Р	Р	Р	Р	Р	Р	Р
Hastings	P	F	F	Р	Р	F	F	F
Winchelsea	Р	Р	P	Р	Р	P	Р	Р
Camber	Р	F	Р	q	q	ਸ	P	Ð

P = Pass F = Fail

Compliance tested on coliforms only

DL/bw4/94

KENT BEACHES -COMPLIANCE TO EC DIRECTIVE

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	1986	1987	1988	1989	1990	1991	1992	1993
Littlestone	F	Р	F	F	Р	F	р	р
St Marys Bay	F	F	F	Р	P	F	p	Þ
Dymchurch	F	F	F	F	F	- ד	P	D
Hythe	F	F	F	P	- न	P	F	י מ
Sandgate	F	F	F	- P	- P	P	r F	<u>г</u> . D
Folkestone	F	F	F	- F	- T	<u>।</u> न	r D	r D
St Margarets Bay	F	P	P	P	P	D	P	r D
Deal Castle	F	- न	- F	• म	ं 1 म	r F	P	r T
Sandwich Bay	F	F	F	- म	r F	F	P	F
Ramsgate	P	т F	- ਸ	F	ם ת	r T	F	<u>F</u>
Broadstairs	ू म	F	F	r D	r D	r m	F	F
Joss Bay	г F	F	r F	<i>P</i>	P.	F	P	P
Margate-Fulsam Rock	۲ ۲	r D	Г Р	P	P	P	P	Р
Margate_The Bay		r D	E D	P	P	P _	Р	Р
St Mildrode Bay	P	P	12 To	P	P _	F	Р	P
Minnig Row	P	r	- E'	P	P	Р	Р	Р
Hampe Day	P	Р	P	P	Р	P	Р	Р
Herne Bay	P	F.	F	F	F	F	F	Р
west Beach	Р	Р	Р	Р	P	Р	Р	Р
Leysdown	F	Р	Р	F	Р	P	р	Р
Sheerness	-	÷	-	-	Р	Р	Р	Р

P = Pass F = Fail

Compliance tested on coliforms only

TABLE 4a

ISLE OF WIGHT BEACHES VIRUS AND SALMONELLA RESULTS 1993

..

	V: (PFU/1)	IRUS) litres)	SALMONEI (Present=1 Abs	LLA ent=0)
E C Beaches	30 June	28 July	30 June 28	July
Ryde - East	0	0	0	0
Seagrove	0	0	0	0
St Helens	1	0	0	0
Bembridge	0	1	0	Ō
Whitecliff Bay	0	13	0	Ō
Sandown	1	2	0	Ō
Shanklin	1	0	0	Õ
Ventnor	0*	4	0	Ō
Compton Bay	0	0	0	Ō
Totland Bay	0	0	0	Õ
Colwell Bay	1	0	0	Ō
Gurnard	0	0	0	Õ
Cowes - West	0	0	0	Ō

* Sampled on 21 July.

The EC Directive requires that bathing waters are free from viruses and Salmonella.

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DL/bw4/94

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HAMPSHIRE BEACHES VIRUS AND SALMONELLA RESULTS 1993

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	V: (PFU/10	IRUS D litres)	SALMONELLA (Present=1 Absent=0)			
<u>E C Beaches</u>	29 June	27 July	29 June	27 July		
Highcliffe	0	3	0	0		
Christchurch Bay	4	1	0	0		
Milford on Sea	4	0	0	0		
Lepe	0	0	0	0		
Calshot	1	0	0	0		
Hillhead	0	0	0	0		
Lee on Solent	0	0	0	0		
Stokes Bay	0	1	0	0		
Southsea	0	0	0	0		
Eastney	0	1	0	1		
West Hayling	0	0	0	0		
West of Eastoke	0	0	0	0		

The EC Directive requires that bathing waters are free from viruses and Salmonella.

DL/bw4/94

TABLE 4c

SUSSEX BEACHES VIRUS AND SALMONELLA RESULTS 1993

. .

		(PFU	VIRU /10 J	JS .itr€	es)	SALI Present=	10ne: 1 Abs	ONELLA Absent=0)	
	1	July	29	Ju]	y	1 July	29	Julv	
<u>E C Beaches</u>		-			-		-	1	
West Wittering		1		0		0		0	
Bracklesham Bay		0		0		0		0	
Selsey		0		1		0		0	
Pagham		0		0		0		Ő	
Bognor Regis		0		0		0		0	
Middleton on Sea		0		1		0		0	
Littlehampton		0		0		0		0	
Worthing		1		0		0		Ō	
South Lancing		0		2		0		Ō	
Southwick		0		4		0		0	
Hove		0		14		0		1	
Brighton		0		0		0		0	
Saltdean		0		1		0		0	
Newhaven		0		3		0		Ó	
Seaford		0		1		0		0	
Eastbourne		0		0		0		0	
Pevensey Bay		0		0		0		0	
Normans Bay		0		0		0		0	
Bexhill		0		0		0		0	
Hastings		0		0		0		0	
Winchelsea		0*		1		0		0	
Camber		0*		0	9	 0		1	
* Sampled 29th June			• 7						

The EC Directive requires that bathing waters are free from viruses and Salmonella.
KENT BEACHES VIRUS AND SALMONELLA RESULTS 1993

	V (PFU/1	IRUS 0 litres)	SALMONELLA (Present=1 Absent=0)		
29 <u>E C Beaches</u>) June	27 July	29 June	27 July	
Littlestone	0	0	0	1	
St Marys Bay	0	0	0	0	
Dymchurch - Mart. Tower	2	0	0	1	
Hythe - West Parade	0	0	0	0	
Sandgate-Princes Parade	2	0	0	0	
Folkestone	15	0	0	1	
St Margarets Bay	1	0	0	1	
Deal Castle	4	0	0	0	
Sandwich Bay	2	2	0	1	
Ramsgate - Western U'C	4	12	0	0	
Broadstairs - Viking Bay	0	6	0	1	
Joss Bay	0	0	0	0	
Margate - Fulsam Rock	0	0	0	0	
Margate - The Bay	0	1	0	0	
St Mildreds Bay	0*	0	0	0	
Minnis Bay	0*	0	0	0	
Herne Bay	0	4	0	1	
West Beach	0	0	0	0	
Leysdown	0	1	0	0	
Sheerness	0*	0	0	0	

* Sampled on 7 July.

The EC Directive requires that bathing waters are free from viruses and Salmonella.

Sites sampled on two adjacent days each week, first date reported.

DL/bw4/94

TABLE 5a

ISLE OF WIGHT BEACHES - COMPLIANCE TO MANDATORY AND GUIDELINE BACTERIOLOGICAL STANDARDS 1993

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		то	TAL COLIF	ORMS	FA	ECAL COLI	FORMS	FAECAL	STREPS
Sampling Point	Map Reference	Number of Samples	Z passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	Z passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	% passing guideline standards G-value
EC_Beaches									
Ryde - East Seagrove St Helens Bembridge White Cliff Bay Sandown Shanklin Ventnor Compton Bay Totland Bay Colwell Bay Gurnard Cowes - Bay	SZ 601 927 SZ 632 912 SZ 637 892 SZ 657 881 SZ 641 862 SZ 601 843 SZ 585 811 SZ 502 773 SZ 377 841 SZ 322 871 SZ 328 879 SZ 477 959 SZ 488 967	20 20 20 20 20 20 20 20 20 20 20 20 20 2	100% 100% 100% 100% 100% 100% 95% 100% 95% 100%	857 857 807 857 607 707 607 107 857 757 807 657 90%	20 20 20 20 20 20 20 20 20 20 20 20	1007 907 1007 957 1007 957 1007 957 957 957 1007 1007	807 607 457 607 507 307 557 157 807 707 757 557 657	20 20 20 20 20 20 20 20 20 20 20 20 20 2	857 807 857 757 857 857 857 857 957 757 907 757 957
Other Beaches			++	++		++	++		++
East Cowes Woodside Ryde - West Yaverland - (Sandown) Norton Spring Vale Shanklin (Welcome Beach) Brook Bay Thorness Bay Brightstone Bay	SZ 506 964 SZ 548 933 SZ 585 930 SZ 611 849 SZ 347 898 SZ 617 921 SZ 589 827 SZ 383 835 SZ 450 933 SZ 419 817	20 20 20 20 20 20 20 20 20 20 20 20	957 1007 1007 1007 1007 1007 95% 807 1007 907	807 957 907 507 657 807 657 357 957 557	20 20 20 20 20 20 20 20 20 20	1007 1007 1007 1007 1007 957 957 907 507 1007 857	807 907 657 457 307 707 507 157 957 407	20 20 20 20 20 20 20 20 20 20 20	857 957 807 757 757 757 307 957 707

The Directive requires that 95% of samples must conform with the following I-values; total coliforms 10000 per 100ml seawater, faecal coliforms 2000 per 100ml.

The Directive also requires that EC member states <u>endeavour</u> to observe G-values of 500 per 100ml for total coliforms and 100 per 100ml for faecal coliforms in 80% of samples and 100 per 100ml for faecal streptococci in 90% of samples.

++ Not EC Bathing Waters, compliance statistics strictly illustrative.

TABLE 5b

HAMPSHIRE BEACHES - COMPLIANCE TO MANDATORY AND GUIDELINE BACTERIOLOGICAL STANDARDS 1993

. .

		TO	TAL COLIF	ORMS	FA	ECAL COLI	FORMS	FAECAI	STREPS
Sampling Point	Map Reference	Number of Samples	% passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	% passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	% passing guideline standards G-value
EC Beaches									
Highcliffe Christchurch -	SZ 216 931	20	100%	90 %	20	100%	80%	20	95%
Bay Milford on Sea	SZ 239 928	20	100%	85%	20	100%	70%	20 20	90 %
Lepe	SZ 456 985	20	100%	100%	20	100%	95%	20	1007
Lee on Solent	SU 562 005	20	100%	90%	20	100%	85%	20	90%
Stokes Bay	SU 540 022 SZ 600 979	20	100%	95%	20 20	100%	85% 95%	20	95 % 95 %
Eastney	SZ 653 982 SZ 675 988	20 20	100 % 100 %	70% 95%	20 20	90 % 100%	40% 85%	20 20	75 % 1 00%
West Hayling West of East-	SZ 705 987	20	100%	100%	20	100%	100%	20	95%
Stoke	SZ 729 984	20	100%	95 %	20	95 %	95 %	20	95 Z
Other Beaches			++	++		++	++		++
Calshot -			1007	207	20	1007	667	20	007
Weston	SU 478 023 SU 441 098	20	100%	50%	20	90%	30%	20	80%
Solent Breezes Portsmouth -	SU 506 038	20	100%	80%	20	10 0%	75%	20	80%
Victoria Pier	SZ 631 992	20	100%	95%	20	100%	70%	20	95 %

The Directive requires that 95% of samples must conform with the following I-values; total coliforms 10000 per 100ml seawater, faecal coliforms 2000 per 100ml.

The Directive also requires that EC member states <u>endeavour</u> to observe G-values of 500 per 100ml for total coliforms and 100 per 100ml for faecal coliforms in 80% of samples and 100 per 100ml for faecal streptococci in 90% of samples.

++ Not EC Bathing Waters, compliance statistics strictly illustrative.

TABLE 5c

SUSSEX BEACHES - COMPLIANCE TO MANDATORY AND GUIDELINE BACTERIOLOGICAL STANDARDS 1993

. .

		TC	TAL COLIF	ORMS	FAI	ECAL COLII	FORMS	FAECAL STREPS	
Sampling Point	Map Reference	Number of Samples	7 passing mandatory standards I-value	X passing guideline standards G-value	Number of Samples	Z passing mandatory standards I-value	7 passing guideline standards G-value	Number of Samples	% passing guideline standards G-value
EC Beaches									
West Wittering Bracklesham Bay Selsey Pagham Bognor Regis Middleton on	SZ 768 980 SZ 805 963 SZ 868 937 SZ 892 972 SZ 923 985	20 20 20 20 20 20	100% 100% 100% 100% 100%	957 967 907 957 757	20 20 20 20 20 20	100 % 100 % 100% 95% 100%	90 % 85 % 90 % 75 % 45 %	20 20 20 20 20	757 907 957 857 657
Sea Littlehampton Worthing South Lancing Southwick	SZ 985 999 TQ 040 013 TQ 139 021 TQ 183 036 TO 242 048	20 20 20 20 20	100% 100% 90% 75% 95%	85 % 90 % 55% 55% 35%	20 20 20 20 20	95 % 95% 80% 65%	65% 65% 30% 50%	20 20 20 20 20	55% 85% 55% 60% 70%
Hove Brighton Saltdean Newhaven Seaford	TQ 288 043 TQ 323 034 TQ 381 018 TV 449 988	20 20 20 20 20	100 % 95 % 100 % 100 %	60 % 60 % 85% 50%	20 20 20 20 20	95% 90% 100% 100%	50% 55% 85% 55%	20 20 20 20 20	65% 75% 90% 85%
Eastbourne Pevensey Bay Normans Bay Bexhill Hastians	TV 614 982 TQ 657 037 TQ 682 053 TQ 737 068	20 20 20 20 20	100 % 100 % 100 %	75 % 65% 50%	20 20 20 20 20	100 % 100 % 95% 100%	45 % 30 % 35 % 50 %	20 20 20 20 20	80% 95% 70% 65%
Winchelsea Camber	TQ 912 154 TQ 973 184	20 20 20	90% 100% 100%	55% 95% 80%	20 20 20	90% 100% 100%	40% 95% 55%	20 20 20	60% 100% 80%
<u>Other_Beaches</u>			++	++		++	++		++
Felpham Worthing East Shoreham by Sea Shoreham-	SZ 949 993 TQ 168 029 TQ 214 044	20 20 20	100 % 95 % 100%	75% 40% 70%	20 20 20	95% 70% 95%	60 % 30 % 55 %	20 20 20	80 % 50% 85%
Kingston Beach Brighton -	TQ 235 046	20	100%	6(%	20	-100%	25%	20	95 %
Palace Pier Seaford - Dane	TQ 314 038	20	95%	40%	20	85%	20%	20	55%
Cuckmere Haven	TV 478 989	20	100%	90%	20	100%	15%	20	057
Birling Gap Eastbourne	TV 520 976 TV 552 960	20	100%	100%	20	100%	100%	20	1007
(Redoubt) St Leonards Bulver Hythe Hastings (Fairlight	TV 625 998 TQ 797 087 TQ 784 086	20 20 20	95% 100% 95%	50 % 5 5% 4 5%	20 20 2 0	100 % 100% 95%	35 % 45 % 50%	20 20 19	75% 65% 63%
Glen) Newhaven -	TQ 862 108	20	100%	70%	20	95%	60 %	20	75 %
mest yudy	IV 447 999	20		804	20		65%	<u></u>	100%

The Directive requires that 95% of samples must conform with the following I-values; total coliforms 10000 per 100ml seawater, faecal coliforms 2000 per 100ml.

The Directive also requires that EC member states <u>endeavour</u> to observe G-values of 500 per 100ml for total coliforms and 100 per 100ml for faecal coliforms in 80% of samples and 100 per 100ml for faecal streptococci in 90% of samples.

++ Not EC Bathing Waters, compliance statistics strictly illustrative.

TABLE 5d

KENT BEACHES - COMPLIANCE 'T() MANDATORY AND GUIDELINE BACTERIOLOGICAL STANDARDS 1993

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		TC TC	TAL COLIE	FORMS	FA	ECAL COLI	FORMS	FAECAI	STREPS
Sampling Point	Map Reference	Number of Samples	7 passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	% passing mandatory standards I-value	% passing guideline standards G-value	Number of Samples	7 passing guideline standards G-value
EC Beaches								6	
Littlestone	TR 084 239	20	100%	90%	20	95 2	457	20	707
St Marys Bay Dymchurch -	TR 093 277	20	1007	90%	20	95 %	60%	20	75%
Mart.Tower Hythe-West-	TR 113 304	20	100%	55 X	20	100%	55%	20	65 %
Parade Sandgate-	TR 160 340	20	100%	90%	20	100%	75%	20	100%
Princess Parade	TR 188 348	20	100%	85%	20	100%	80%	20	80%
St Margarets-	IK 237 363	20	100%	35%	20	95%	35%	. 20	55 %
Day Doal Castle	1K 368 444	20	100%	957	20	100%	90%	20	95 %
Sandwich Ray	TP 359 500		90%	20%	20	657	5%	20	45%
Ramsgate-	TP 372 640	20	1007	54	20	60%	0%	20	25 %
Broadstairs- Viking Bay	TR 398 677	20	100%	56	20	85%	10%	20	307
Joss Bay	TR 399 702	20	100%	1007	20	100%	35%	20	55%
Margate-Fulsam- Rock	TR 356 715	20	100%	057	20	100%	80%	20	1007
Margate-The Bay	TR 347 708	20	100%	652	20	100%	90%	20	95%
St Mildreds Bay	TR 328 705	20	100%	95%	20	1007	00%	20	80%
Minnis Bay	TR 286 697	20	100%	100%	20	100%	907	20	95%
Herne Bay	TR 186 686	20	100%	35%	20	95%	35%	20	90A 657
West Beach	TR 098 660	20	100%	90%	20	100%	85%	20	1007
Leysdown	TR 034 708	20	100%	80%	20	100%	85%	20	952
Sheerness	1Q 925 750	20	100%	100%	20	100%	100%	20	90%
<u>Other Beaches</u>			++	++		++	++		++
Greatstone Dymchurch-Car-	TR 082 229	20	100%	ንርጄ	20	100%	45%	20	60 %
Park Dymchurch-	TR 101 290	20	100%	75%	20	100%	70%	20	75 %
Hythe Road Sandgate-Town	TR 128 319	20	100%	90 Z	20	100 %	807	20	80%
Centre	TR 203 351	20	95%	40%	20	90 %	65%	20	657
Dover Harbour	TR 321 412	20	100%	80%	20	100%	75%	20	100%
Broadstairs-	TR 387 649	20	95%	60%	20	95 %	20%	20	80%
Botany Bay	TR 401 688	20	100%	95%	20	100%	70%	20	70%
Palm Bay	IR 391 712	20	100%	100%	20	100%	807	20	90%
Westnate Bay	TR 3/3 714	20	100%	90%	20	100%	657	20	80%
Westbrook Bay	TR 320 /02	20	100%	80%	20	100%	70%	20	85%
Walpole Bav	18 341 /00 TD 365 315	20	100%	956 1009	20	100%	60 %	20	75 %
Dumpton Gap	18 202 /12	20	952	757	20	100%	90%	20	90%
Reculver Beach	TR 226 694	20	1002	202	20	100%	35%	20	60%
Tankerton Beach	TR 127 674	20	95%	80 2	20	100%	05% 05%	20	90%
Hampton Pier	TR 158 684	20	95%	60%	20	952	00% 60%	20	95%
Kingsdown Beach Folkestone -	TR 380 485	20	100%	65%	20	95%	55%	20	65%
The Warren Minster Beach	TR 480 376 TQ 934 740	20	100 % 100 %	60 % 100 %	20 20	100 % 100%	45 %	20	85%
						1004	7 JA	20	100%

The Directive requires that 95% of samples must conform with the following I-values; tota. coliforms 10000 per 100ml seawater, faecal coliforms 2000 per 100ml.

The Directive also requires that EC member states <u>endeavour</u> to observe G-values of 500 per 100ml for total coliforms and 100 per 100ml for faecal coliforms in 80% of samples and 100 per 100ml for faecal streptococci in 90% of samples.

++ Not EC Bathing Waters, compliance statistics strictly illustrative.

TABLE 7a

ISLE OF WIGHT BEACHES - COMPLIANCE TO PHYSICO -CHEMICAL PARAMETERS 1993

	рн	Transp- arency	Colour	Mineral Oils	Surface Active Substances	Phenols
N	umber of	Observati	ons (Numb	er of Fai	lures)	
E C Beaches						
Ryde - East Seagrove St Helens Bembridge Whitecliff Bay Sandown Shanklin Ventnor Compton Bay Totland Bay Colwell Bay Gurnard Cowes - West	2(0) 2(0) 2(0) 2(0) 2(0) 2(0) 2(0) 2(0)	20(1) * 20(1) * 20(1) * 20(0) * 20(2) * 20(1) * 20(1) * 20(3) * 20(3) * 20(9) * 20(8) * 20(6) * 20(8) * 20(4) *	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)
Other Beaches						
Cowes - East Woodside Ryde - West Sandown - Yaverland Norton Spring Vale Shanklin - Welcome Beach Brook Bay Brightsone Bay Thorness Bay	2(0) 2(0) 2(0) 2(0) 2(0) 2(0) 2(0) 2(0)	20 (8) 20(14) 20 (4) 20 (3) 20 (3) 20 (0) 20 (1) 20(15) 20(16) 20(10)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)

* Denotes waiver granted because of geographical conditions

TABLE 7b

HAMPSHIRE BEACHES - COMPLIANCE TO PHYSICO -CHEMICAL PARAMETERS 1993

	рн	Transp- arency	Colour	Mineral Oils	Surface Active Substances	Phenols	
Number of Observations (Number of Failures)							
<u>E_C_Beaches</u>							
Highcliffe Christchurch Bay	2(0)	20(4) _*	20(0)	20(0)	20(0)	20(0)	
Milford on Sea Lepe	2(0) 2(0)	20(4) × 20(2) × 20(2) ×	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	
Lee on Solent Hillhead	2(0) 2(0) 2(0)	20(3) * 20(9) * 20(5) *	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	
Stokes Bay Southsea Eastney	2(0) 2(0) 2(0)	20(8) * 20(4) * 20(3) *	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0)	20(0) 20(0)	
West Hayling West of	2(0)	20(3) *	20(0)	20(0)	20(0)	20(0) 20(0)	
Eastoke	2(0)	20(2) ×	20(0)	20(0)	20(0)	20(0)	
<u>Other Beaches</u>							
Calshot Activity							
Centre Weston Solent Breezes	2(0) 2(0) 2(0)	20(2) 20(9) 20(6)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	
Portsmouth - Victoria Pier	2(0)	20(2)	20(0)	20(0)	20(0)	20(0)	

SUSSEX BEACHES - COMPLIANCE TO PHYSICO -CHEMICAL PAFAMETERS 1993

	рН	Transp-	Colour	Mineral	Surface	Phenols
		arency		Oils	Active	
					Substances	
N	umber of	Observati	ons (Numb	er of Fai	lures)	
•						
<u>E C Beaches</u>						
	2(0)	20 (2)	20(0)	20(0)	20(0)	20(0)
West Wittering	2(0)	$20(3) \times (5) \times (5)$	20(0)	20(0)	20(0)	20(0)
Bracklesnam	2(0)	20 (5)*	20(0)	20(0)	20(0)	20(0)
Bay	2(0)	20 (6)	20(0)	20(0)	20(0)	20(0)
Deabam	2(0)	20 (0) =	20(0)	20(0)		
Pomor Regis	2(0)	20(11) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 20(12) + 2	20(0)	20(0)		
Middlaton-On-	2(0)	20(12)*	20(0)	20(0)	20(0)	20(0)
Cos	2(0)	20(13) *	20(0)	20(0)	20(0)	20(0)
Tittlehamnton	2(0)	20(13) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 20(12) = 2	20(0)	20(0)		
Worthing -	2(0,	20(12) *	20(0)	20(0)	20(0)	20(0)
Wast	2(0)	20(13) *	20(0)	20(0)	20(0)	20(0)
South Lancing	2(0)	20(13)	20(0)	20(0)	20(0)	
Southwick	2(0)	$20(10) \times$	20(0)	20(0)	20(0)	
Hove	2(0)	20(8) *	20(0)	20(0)	20(0)	
Brighton	2(0)	$21(13) \times$	21(0)	21(0)	21(0)	21(0)
Saltdean	2(0)	21(13) *	21(0) *	21(0)	21(0)	21(0)
Newhaven	2(0)	21(17) *	21(0)	21(0)	21(0)	
Seaford	2(0)	21(13) +	21(0)	21(0)	21(0)	21(0)
Eastbourne	2(0)	21 (8) *	21(0)	21(0)	21(0)	21(0)
Pevensev Bay	2(0)	21(19) *	21(0)	21(0)	21(0)	21(0)
Normans Bay	2(0)	21(20) *	21(0)	21(0)	21(0)	21(0)
Bexhill	2(0)	21(18) *	$\frac{1}{21(0)}$	21(0)	21(0)	21(0)
Hastings	2(0)	21(20) *	21(0)	21(0)	21(0)	21(0)
Winchelsea	2(0)	20(17) *	20(0)	20(0)	20(0)	20(0)
Camber	12(0)	20(15) *	20(0)	20(0)	20(0)	20(0)
					、 - ,	
<u>Other Beaches</u>						í í
			• • •		. tr	
Worthing East	2(0)	20(11)	20(0)	20(0)	20(0)	20(0)
Shoreham by-						
Sea	2(0)	20(10)	20(0)	20(0)	20(0)	20(0)
Shoreham -						
Kingston Beach	2(0)	20(14)	20(0)	20(0)	20(0)	20(0)
Brighton -	\					
Palace Pier	2(0)	21(13)	21(0)	21(0)	21(0)	21(0)
Seaford -						
Dane Road	2(0)	21 (8)	21(0)	21(0)	21(0)	21(0)
Birling Gap	2(0)	21(16)	21(0)	21(0)	21(0)	21(0)
St Leonards	2(0)	21(18)	21(0)	21(0)	21(0)	21(0)
Eastbourne						
(Redoubt)	2(0)	21(10)	21(0)	21(0)	21(0)	21(0)
Bulver Hytne	2(0)	21(18)	21(0)	21(0)	21(0)	21(0)
Feipnam	2(0)	20(14)	20(0)	20(0)	20(0)	20(0)
Cuckmere -	2(2)	10(10)				
Naven Beach	2(0)	13(10)	13(0)	13(0)	13(0)	13(0)
Newnaven -	2(0)	21/11)	21(2)			
Hest	2(0)	21(11)	21(0)	21(0)	21(0)	21(0)

* Denotes waiver granted because of geographical conditions

TABLE 7d KENT BEACHES - COMPLIANCE TO PHYSICO CHEMICAL PARAMETERS 1993 •

	рН	Transp- arency	Colour	Mineral Oils	Surface Active Substances	Phenols
N	umber of	Observati	ons (Numb	er of Fai	lures)	
<u>E C Beaches</u>						
Littlestone St Marys Bay Dymchurch Mart	2(0) 2(0)	20(19) * 20(19) *	20(0) 20(0)	20(0) 20(0)	20(0) 20(0)	20(0) 20(0)
Tower Hythe - West	2(0)	20(19) *	20(0)	20(0)	20(0)	20(0)
Parade Sandgate -	2(0)	20(13) *	20(0)	20(0)	20(0)	20(0)
Princes Parade Folkestone St Margarets Bay	2(0) 2(0) 2(0)	20(11) * 20(20) * 20(20) *	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)	20(0) 20(0) 20(0)
Deal Castle Sandwich Bay Ramsgate -	2(0) 2(0)	20(20) * 20(20) *	20(0) 20(0)	20(0) 20(0)	20(0) 20(0)	20(0) 20(0)
Western U'C Broadstairs -	2(0)	20(19) *	20(0)	20(0)	20(0)	20(0)
Viking Bay Joss Bay Margate -	2(0) 2(0)	21(21) * 21(20) *	21(0) 21(0)	21(0) 21(0)	21(0) 21(0)	21(0) 21(0)
Fulsam Rock Margate - The	2(0)	21(17) *	21(0) *	21(0)	21(0)	21(0)
Bay St Mildreds	2(0)	21(18) *	21(0) ×	21(0)	21(0)	21(0)
St Mildreds Bay Minnis Bay Herne Bay West Beach Leysdown Sheerness	2(0) 2(0) 1(0) 2(0) 2(0) 2(0)	21(18) * 21(19) * 21(20) * 21(20) * 21(19) * 21(18) *	21(0) 21(0) 21(0) 21(0) 21(0) 21(0)	21(0), 21(0) 21(0) 21(0) 21(0) 21(0)	21(0) 21(0) 21(0) 21(0) 21(0) 21(0)	21(0) 21(0) 21(0) 21(0) 21(0) 21(0)

* Denotes waiver granted because of geographical conditions

Cont'd....

TABLE 7d

KENT BEACHES - COMPLIANCE TO PHYSICO -CHEMICAL PARAMETERS 1993

	рН	Transp- arency	Colour	Mineral Oils	Surface Active Substances	Phenols		
N	Number of Observations (Number of Failures)							
<u>Other Beaches</u>								
Dymchurch -								
Car Park	2(0)	20(19)	20(0)	20(0)	20(0)	20(0)		
Dymchurch -								
Hythe Road	2(0)	20(19)	20(0)	20(0)	20(0)	20(0)		
Sandgate -	2(0)	20(10)	20/01	20(0)	20(0)	20(0)		
Dover Harbour	2(0)	20(10)	20(0)	20(0)	20(0)	20(0)		
Ramsgate Sands	2(0)	20(19) 20(20)	20(0)	20(0)	20(0)	20(0)		
Broadstairs -	2(0)	20(20)	20(0)	20(0)	20(0)	20(0)		
East Cliff	2(0)	21(20)	21(0)	21(0)	21(0)	21(0)		
Botany Bay	2(0)	21(17)	21(0)	21(0)	21(0)	21(0)		
Palm Bay	2(0)	21(19)	21(0)	21(0)	21(0)	21(0)		
Westgate Bay	2(0)	21(20)	21(0)	21(0)	21(0)	21(0)		
Greatstone	2(0)	20(19)	20(0)	20(0)	20(0)	20(0)		
Westbrook Bay	2(0)	21(20)	21(0)	21(0)	21(0)	21(0)		
Walpole Bay	2(0)	21(16)	21(9)	21(0)	21(0)	21(0)		
Dumpton Gap	2(0)	21(21)	21(0)	21(0)	21(0)	21(0)		
Reculver Beach	2(0)	21(19)	21(0)	21(0)	21(0)	21(0)		
Tankerton								
Beach	2(0)	21(20)	21(0)	21(0)	21(0)	21(0)		
Hampton Pier	2(0)	21(19)	21(0)	21(0)	21(0)	21(0)		
Kingsdown	2(2)			a	_			
Beach	2(0)	20(20)	20(0)	20(0)	20(0)	20(0)		
Folkestone -	2(2)		22(2)					
The warren	2(0)	20(18)	20(0)	20(0)	20(0)	20(0)		
Minster Beach	2(0)	21(18)	21(0)	21(0)	21(0)	21(0)		

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	NUMBER (number of	ATIONS records)	TYPE OF PQSITIVE	
	Strandline	Seawater waters edge	Sea Offshore	REGORD
<u>E C Beaches</u>				
Ryde East	20(0)	20(0)	20(0)	
Seagrove	20(0)	20(0)	20(0)	
St Helens	20(0)	20(0)	20(0)	
Bembridge	20(0)	20(0)	20(0)	
Whitecliff Bay	20(0)	20(0)	20(0)	
Sandown	20(0)	20(0)	20(0)	
Shanklin	20(0)	20(0)	20(0)	
Ventnor	20(0)	20(0)	20(0)	
Compton Bay	20(0)	20(1)	20(0)	5
Totland Bay	20(0)	20(0)	20(0)	
Colwell Bay	20(0)	20(0)	20(0)	
Gurnard	20(0)	20(0)	20(0)	
Cowes	20(0)	20(0)	20(0)	
Other Beaches				
East Cowes	20(0)	20(0)	20(0)	
Woodside	20(0)	20(0)	20(0)	
Ryde – West	20(0)	20(0)	20(0)	
Yaverland (Sandown)	20(0)	20(0)	20(0)	
Norton	20(0)	20(1)	20(0)	5
Springvale	20(0)	20(0)	20(0)	
Shanklin (Welcome Beach)	20(0)	20(0)	20(0)	
Brook Bay	20(0)	20(0)	20(0)	
Brighstone Bay	20(0)	20(0)	20(0)	
Thorness Bay	20(0)	20(0)	20(0)	
Type of positive record	- code		· •	L

1 Strandline - scum present	5 Water's Edge - excessive foam
2 Strandline – slime present	6 Water's Edge - abnormal colour
3 Strandline - dark patches	7 Water's Edge - smell
in sand	8 Sea Offshore - visible slicks
4 Strandline - sulphurous smell	9 Sea Offshore - foam

TABLE 8b HAMPSHIRE BEACHES - MARINE ALGAL MONITORING RESULTS, 1993

	NUMBER (number of	TYPE OF POSITIVE RECORD		
	Strandline	Seawater waters edge	Sea Offshore	NEGORD
E C Beaches				······································
Highcliffe	20(0)	20(1)	20(0)	5
Christchurch Bay	20(0)	20(1)	20(0)	5
Milford on Sea	20(0)	20(1)	20(0)	5
Lepe	20(0)	20(0)	20(0)	
Calshot	20(0)	20(0)	20(0)	
Lee on Solent	20(0)	20(0)	20(0)	
Hillhead	20(0)	20(0)	20(0)	
Stokes Bay	20(0)	20(0)	20(0)	
Southsea	20(0)	20(0)	20(0)	
Eastney	20(0)	20(0)	20(0)	
West Hayling	20(0)	20(0)	20(0)	
West of Eastoke	20(0)	20(0)	20(0)	
Other Beaches				
Calshot Activs Centre	20(0)	20(0)	20(0)	
Weston	20(0)	20(0)	20(0)	
Solent Breezes	20(1)	20(0)	20(0)	1
Portsmouth, Victoria P.	20(0)	20(0)	20(0)	

Type of positive record - code

- Strandline scum present
 Strandline slime present
 Strandline dark patches
- - in sand
- 4 Strandline sulphurous smell
- 5 Water's Edge excessive foam 6 Water's Edge - abnormal colour 7 Water's Edge - smell 8 Sea Offshore - visible slicks 9 Constant 9 Sea Offshore - foam - 1 × - - -

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TABLE 8c SUSSEX BEACHES - MARINE ALGAL MONITORING RESULTS, 1993

	NUMBER (number of	TYPE OF POSITIVE RECORD		
	Strandline	Seawater waters edge	Sea Offshore	REGORD
<u>E C Beaches</u> West Wittering Bracklesham Bay Selsey Pagham Bognor Regis Middleton on Sea Littlehampton Worthing South Lancing South Lancing Southwick Hove Brighton Saltdean Newhaven Seaford Eastbourne Pevensey Bay Normans Bay Bexhill Hastings Winchelsea Camber	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(1) 20(0) 20(1)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(1) 21(1) 21(1) 21(1) 21(1) 21(1) 20(1) 20(2)	20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0) 20(0)	5 5 1 5 1,5,8
Other Beaches Worthing East Shoreham by Sea Shoreham - Kingston B. Brighton - Palace Pier Seaford - Dane Road St Leonards Birling Gap Eastbourne (Redoubt) Bulverhythe Newhaven - West Quay Felpham Cuckmere Haven Beach	20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(1) 21(1) 21(0) 20(0) 13(0)	20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(1) 21(1) 21(1) 21(0) 20(0) 13(0)	20(0) 20(0) 20(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 21(0) 20(0) 13(0)	1,5

<u>Type of positive record - code</u>

1	Strandline – scum present	5	Water's Edge - excessive foam
2	Strandline – slime present	6	Water's Edge - abnormal colour
3	Strandline – dark patches	7	Water's Edge - smell
	in sand	8	Sea Offshore - visible slicks
4	Strandline - sulphurous smell	9	Sea Offshore - foam

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	NUMBER (number of	TYPE OF POSITIVE		
	Strandline	Seawater waters edge	Sea Offshore	RECORD
E C Beaches				
Littlestone	20(1)	20(1)	20(0)	1.5
St Marys Bay	20(1)	20(0)	20(0)	1
Dymchurch - Mart Tower	20(0)	20(0)	20(0)	
Hythe - West Parade	20(0)	20(1)	20(1)	5.8
Sandgate - Princes Par.	20(0)	20(3)	20(1)	5,8
Folkestone	19(0)	19(0)	19(1)	9
St Margarets Bay	19(0)	19(1)	19(3)	5.9
Deal Castle	19(0)	19(0)	19(1)	9
Sandwich Bay	19(0)	19(0)	19(1)	9
Ramsgate – Western U'C	19(0)	19(0)	19(0)	
Broadstairs - Viking Bay	21(0)	21(1)	21(0)	5
Joss Bay	21(0)	21(1)	21(0)	5
Margate - Fulsam Rock	21(0)	21(2)	21(1)	5,9
Margate - The Bay	21(0)	21(2)	21(0)	5
St Mildreds Bay	21(0)	21(2)	21(0)	5
Minnis Bay	21(0)	21(1)	21(1)	5,9
Herne Bay	21(0)	21(0)	21(0)	
West Beach	20(0)	20(5)	20(1)	5,9
Leysdown	21(0)	21(1)	21(0)	5
Sheerness	21(0)	21(1)	21(0)	5
Other Beaches				
Greatstone	20(3)	20(4)	20(1)	1.3.5.8
Dymchurch - Car Park	20(1)	20(0)	20(0)	1
Dymchurch - Hythe Road	20(0)	20(0)	20(0)	-
Sandgate - Town Centre	20(0)	20(2)	20(1)	5.8
Dover Harbour	19(0)	19(2)	19(1)	5,9
Ramsgate Sands	19(1)	19(1)	19(0)	1.5
Broadstairs – East Cliff	21(0)	21(1)	21(0)	5
Botany Bay	21(0)	21(2)	21(1)	5,9
Palm Bay	21(0)	21(2)	21(0)	5
Westgate Bay	21(0)	21(1)	21(1)	5,9
Westbrook Bay	21(0)	21(4)	21(0)	5
Walpole Bay	21(0)	21(4)	21(0)	5
Dumpton Gap	21(0)	21(1)	21(1)	5,9
Reculver Beach	21(0)	21(1)	21(0)	5
Tankerton Beach	21(0)	21(1)	21(0)	5
Hampton Pier	21(0)	21(1)	21(0)	5
Kingsdown Beach	19(0)	19(0)	19(0)	
Minster Beach	21(0)	21(1)	21(0)	5
Folkestone - Warren	19(0)	19(1)	19(1)	5,9
Type of positive record	- code			
1 Strandline - scum	present	5 Wate	er's Edge -	excessive foam
2 Strandline – slime	e present	6 Wate	er's Edge -	abnormal colour
3 Strandline - dark	patches	7 Wate	er's Edge -	smell
IN Sand 4 Strandline - culot	MITOUS SMAll	8 Sea	Offshore -	visible slicks
strandthe Bulph		J 388	orranote -	LOAM

TABLE 9a ISLE OF WIGHT-BATHING BEACH AESTHETIC SURVEY RESULTS, 1993

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	Number of Surveys	Intact Faeces	Grease/Scum	Sewage Debris	Contraceptives Tampon Applicators	Sanitary Towels	Noxious Sewage Odours	Total Season Score	Average Score per Visit
<u>EC Beaches</u> Ryde, East	6					1		1	0.17
Seagrove St Helens Bembridge Whitecliff Bay Sandown	5 6 6 6	1	1	4 4 2	3 4 1	1 2		1 8 11 0 3	0.20 1.33 1.83 0.00 0.50
Shanklin Ventnor Compton Bay Totland Bay Colwell Bay Gurnard	6 6 6 6 6	2	1	1 2 3 1 5	1 2 1 1 4	1 2 3 3 4		3 4 8 7 13	0.50 0.67 1.33 1.17 2.17
Cowes (West) Other_Beaches	6			4	3	4		11	1.83
East Cowes Woodside Ryde West Sandown, Yaverland Norton Shanklin Welcome Beach Spring Vale Thorness Bay Brook Bay Brighstone Bay	6 6 5 5 6 6 6 6	1 2	2	12 3 2 2 1 3 1 2 4	12 3 2 2 2 3 1 3 4	15 3 3 7 1 9 6	20 1	40 9 10 4 11 2 6 2 34 17	6.67 1.50 1.67 0.67 2.20 0.40 1.00 0.33 5.67 2.83

Numbers denote Total Season Score

TABLE 9b HAMPSHIRE - BATHING BEACH AESTHETIC SURVEY RESULTS, 1993

	Number of Surveys	Intact Faeces	Grease/Scum	Sewage Debris	Contraceptives Tampon Applicators	Sanitary Towels	Noxious Sewage Odours	Total Season Score	Average Score per Visit
EC_Beaches Highcliffe Christchurch Bay Milford on Sea Lepe Calshot Lee on Solent Stokes Bay Southsea Eastney West Hayling West of Eaststoke Hillhead	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1 1 1	1	2 2 3 1 4 4 4 2 3	2 2 1 5 7 2 3 2	5 5 1 5 8 9 13 14 5 3 4 8	1	10 9 2 8 11 15 22 25 10 7 4 14	1.67 1.50 0.33 1.33 1.83 2.50 3.67 4.17 1.67 1.17 0.67 3.33
<u>Other Beaches</u> Calshot Activity Centre Weston Solent Breezes Portsmouth Victoria Pier	6 6 6			7 4 3 3	6 7 1	18 14 7 25		31 25 11 8	5.17 4.17 1.83 1.33

Numbers denote Total Season Score

TABLE 9c SUSSEX - BATHING BEACH AESTHETIC SURVEY RESULTS, 1993

	Number of Surveys	Intact Faeces	Grease/Scum	Sewage Debris	Contraceptives Tampon Applicators	Sanitary Towels	Noxious Sewage Odours	Total Season Score	Average Score per Visit
EC Beaches West Wittering Bracklesham Bay Selsey Pagham Bognor Regis Middleton on Sea Littlehampton Worthing South Lancing South Lancing Southwick Hove Brighton Saltdean Newhaven Seaford Eastbourne Pevensey Bay Normans Bay Bexhill Hastings Winchelsea Camber	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 8 10	1 2 1	2	1 2 1 1	2 2 1 1 4 2	1 1 1 1 1	1	2 5 0 3 3 0 4 3 1 4 1 0 1 0 0 0 1 2 0 3 4 2	0.50 1.25 0.00 0.75 0.75 0.00 1.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.50 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.00 0.25 0.50 0.20
Other Beaches Worthing East Shoreham-by-Sea Shoreham, Kingston Beach Brighton, Palace Pier Newhaven Quay Seaford, Dane Road Birling Gap St Leonards Sovereign Yacht Club Felpham Yacht Club Bulverhythe Hastings Fairlight Glen Cuckmere Haven Beach	5 2 6 4 3 4 4 4 1 3 4 -	1 1 1	1 6 1 2 1	2	1	4	2	6 2 11 2 0 1 0 1 4 5 - -	1.20 1.00 1.83 0.25 0.67 0.00 0.25 0.00 1.00 1.33 1.25 - -

Numbers denote Total Season Score

TABLE 9d KENT - BATHING BEACH AESTHETIC SURVEY RESULTS, 1993

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	mber of Surveys	tact Faeces	ease/Scum	wage Debris	ntraceptives npon Applicators	nitary Towels	xious Sewage ours	tal Season Score	erage Score per sit
·····	NN	In	gr	s S	H CO	Sa	0N NO	To	Av Vi
<u>EC Beaches</u> Littlestone St Mary's Bay Dymchurch, Martello Tower	10 9 7			1 1	1	10 2 2	1	11 4 3	1.10 0.44 0.43
Hythe, West Parade Sandgate, Princes	9 7					1 1		1 1	$\begin{array}{c} 0.11 \\ 0.14 \end{array}$
Parade Folkestone St Margaret's Bay Deal Castle Sandwich Bay Ramsgate Western	9 9 7 7 7	1	1	11 6 5 7 19	5 1 2	16 9 7 15 28	1	35 16 12 22 50	3.88 1.77 1.71 3.14 7.14
Broadstairs, Viking Bay Joss Bay Margate, Fulsam Rock Margate, The Bay St Mildred's Bay Minnis Bay Herne Bay West Beach Leysdown Sheerness	8 5 9 10 8 9 11 10 9	1	10 1 1 2	22 1 3 17 21 7 1 · 3 3	27 3 4 2 8	31 12 22 24 14 5 -4 6		53 37 2 15 44 49 21 7 11 17	6.62 4.63 0.40 1.66 4.44 6.12 2.33 0.63 1.10 1.89
Other beaches Dymchurch, Car Park Dymchurch, Hythe Road Sandgate, Town Centre Folkestone, The Warren Dover Harbour Ramsgate Sands Broadstairs, East Cliff Botany Bay Palm Bay Westgate Bay Greatstone Westbrook Bay Walpole Bay Dumpton Gap Reculver Beach Tankerton Beach Hampton Pier Kingsdown Beach	10 8 9 10 6 7 8 7 7 11 9 7 7 11 10 7 10		6 1 2	12 1 6 4 21 11 7 7 19 6 7 7 5	5 1 3 1 1 1 6 5	6 13 2 7 10 9 23 14 17 21 10 26 6 3 8 12 7	1	6 0 30 3 8 16 14 44 28 17 29 18 51 13 3 22 19 20	0.60 0.00 3.33 0.30 1.33 2.29 1.75 6.29 4.00 1.55 3.22 2.57 7.29 1.86 0.27 2.20 2.71 2.00

Numbers denote Total Season Score

APPENDIX A

DEPARTMENT OF THE ENVIRONMENT PRESS RELEASE DETAILING THE RESULTS OF THE STUDY ON THE HEALTH EFFECTS OF SEA BATHING.

ENVIRONMENT NEWS RELEASE

<u>50</u>

31 January 1994

HEALTH STUDY ON EFFECTS OF SEA BATHING REASSURING

Robert Atkins, Minister of State for the Environment and Countryside, announced today the publication of the final report of a comprehensive 4-year study to assess the health risks of sea bathing. The Minister stressed that this report should provide reassurance for the many people who enjoy sea bathing.

The Minister also welcomed the Department of Health's agreement that the current mandatory EC standards give adequate health protection. Any additional benefit to be gained by tightening EC standards is likely to be insignificant.

In a written answer to a Parliamentary Question from Harold Elletson (Blackpool North), Mr Atkins said:

"The Water Research Centre is today publishing the final report of the four year programme of research into the health effects of sea bathing. The research was jointly funded by my own Department, my right Hon Friends the Secretaries of State for Wales and Health, and the National Rivers Authority.

"I welcome the report. The Government has funded this independent research because of concerns expressed about the possibility of contracting illnesses from swimming at our holiday beaches. It will provide reassurance for the many people who enjoy sea bathing. "The work has demonstrated for the first time that sea water itself has effects on sea bathers, causing an increase in reported symptoms such as eye irritations, sore ears and skin rashes. It has also confirmed the relationship which was already known between the level of particular micro-organisms in sea water and the reporting of gastro-intestinal symptoms and diarrhoea. However, the report concludes that the current mandatory EC standards give adequate health protection.

"I and colleagues in the other Departments agree with this assessment and believe that any additional benefit to be gained by tightening EC standards is likely to be insignificant.

"The Government is committed to securing improvements in our bathing waters. A £2 billion programme is in hand to bring virtually all UK bathing waters up to the mandatory standards of the EC Bathing Water Directive by the end of 1995. Already 80% of our 458 bathing waters meet or exceed these standards. The forthcoming very large expenditures to implement the Urban Waste Water Treatment Directive will improve further the quality of our coastal waters.

"Copies of the full report have been placed in the Library of the House."

NOTES TO EDITORS

This work was jointly funded by the Department of the Environment, Department of Health, the Welsh Office and the National Rivers Authority.

Although there is firm advice from the Department of Health that the risks of contracting serious illness from sea bathing is negligible there are indications from previous research that minor infections can be contracted.

A Working group of experts set up by DoE in 1988 recommended the combined approach of "beach surveys" and "cohort" studies be undertaken both of which have been recognised by the World Health Organisation.

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The full scale epidemiological survey followed two pilot studies carried out in 1989 (Langland Bay) and 1990 (Moreton and Ramsgate) to validate and refine the epidemiological methods used. Eight more "beach surveys" were conducted by the IPH team at Rhyl, Morecambe, Lyme Regis, Paignton, Skegness, Cleethorpes, Instow and Westward Ho! and involved interviewing up to 2,000 people per bathing water with follow up telephone interviews to ascertain any illness. Water quality was carefully monitored throughout the interview days. Two further "cohort" studies were conducted at Southsea and Southend where, at each location, approximately 400 volunteers were recruited of which 200 entered the water and immersed themselves while the control group remained on the shore.

This two year research project has related the incidence of symptoms reported by bathers to a careful analysis of the microbiological quality of the bathing water.

The overall management of the contract was given to the Water Research centre and the sub-contractors were the Centre for Research into Environment and Health (CREH) of the University of Wales and the Institute of Public Health (IPH), University of Surrey.

Copies of the full report are available from the Water Research centre, Henley Road, Medmenham, Marlow, Bucks SL7 2HD.

"HOW THE RESEARCH WAS CARRIED OUT", and "CONCLUSIONS OF THE FINAL REPORT INTO THE HEALTH EFFECTS OF SEA BATHING" are attached. News releases 373 19/6/90, 243 18/4/91 and 611 16/9/92 provide background information.

Press Enquiries:071 276 0929(Out of Hours:071 873 1966)Public Enquiries Unit:071 276 0900

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CONCLUSIONS OF THE FINAL REPORT INTO THE HEALTH EFFECTS OF SEA BATHING

1. In the Cohort Studies, the results of medical and clinical examinations after exposure and the numbers of subjects who bought medicines, who sought medical advice or who lost days of normal activity, did not show any significant differences between bathers and non-bathers. There was also no agreement between the medical diagnoses of red or infected ears and throats after exposure to the water, and subjects' reporting of those symptoms. These findings suggest that in the Cohort Studies bathing was not associated with overt infection or serious illness.

2. In the Cohort Studies certain factors, unrelated to bathing, were found to operate independently of water quality. This enabled their effects to be assessed separately from water quality, the first time that this has been achieved in any study of water quality and health. Among bathers, the older people were, the less they reported objective gastro-intestinal Females reported these symptoms slightly more than symptoms. males. Other factors which were not related to water, such as consumption of certain prepared foods; predisposition to diarrhoea, or unusual fatigue prior to bathing, increased the rates at which bathers reported subjective gastro-intestinal Prior exposure to gastro-enteritis in the bathers' symptoms. household increased the reporting of objective gastrointestinal symptoms. This factor had a greater effect than exposure to the most highly contaminated water recorded in the cohort studies (80 or more faecal streptococci per 100 ml).

3. In the case of the Beach Surveys, those participating in water activities reported more frequently than non-participants a number of categories of symptoms. These categories were eye; ear, nose and throat; skin and one or more symptoms. The relative likelihood (odds ratio) of participants doing so did not correlate with the concentrations of any microbial indicator of faecal pollution, but did correlate with increasing degree of water contact by those reporting the symptoms. It must be assumed that that these symptoms result from prolonged contact with water and not from contact with waterborne pathogens. 4. Those subjects in the Beach Surveys who entered the water recorded all classes of symptoms more frequently, up to seven days after exposure, than those who did not enter the water. The relative frequencies at which the symptoms were reported by all participants were consistently related to the degree of water contact, in the following ascending order: no activity (ie those not entering), wading, swimming, surfing and diving.

5. Depending upon the beach used in the Cohort Studies, certain symptoms were recorded significantly more frequently by bathers than by non-bathers. However, only gastro-intestinal symptoms were consistently recorded more frequently at all beaches.

6. In the Beach Surveys there were significant correlations between the number (geometric mean) of total coliform bacteria in the water and the likelihood of diarrhoea being recorded by those subjects who entered the water or waded in it, compared with the likelihood for those not having contact with water. In the case of enteroviruses, the correlation was highly significant. However, the likelihood of diarrhoea did not become statistically significant until total coliform counts reached or exceeded the imperative (mandatory) standards of the Bathing Water Directive or the average counts of enteroviruses were 10-40 times greater than implied by its imperative standard.

7. Data for objective and subjective gastro-intestinal symptoms from all four Cohort Studies were pooled and each category of symptoms was examined by logistic regression analysis. The only consistent relationship between water quality and the rates of gastro-intestinal symptoms occurred with faecal streptococci when measured at chest depth and when counts exceeded 35-40 per 100ml.

8. The above results of both studies show considerable consistency with those of previous studies of the effects of water quality on the health of bathers. This adds plausibility and increases the likelihood that the effects are real and universal. 9. The results of the Beach Survey studies for diarrhoea in those using the water and wading in it and of the Cohort Studies for objective gastro-intestinal symptoms in bathers, suggest that the imperative standards of the Directive for total soliform bacteria and enteroviruses, and by implication for faecal coliform bacteria, give adequate protection to health and do not support the introduction of more stringent standards.

10. When water was sampled at the standard depth required in the Directive, the quality of the water had no significant effect on rates of diarrhoeal symptoms in bathers, surfers and divers in the Beach Surveys or on rates of gastro-intestinal symptoms in bathers in the Cohort Studies. These findings and the relationship detected in Conclusion 7, suggest that sampling strategies should reflect the depths of water, locations and tidal states most used in marine recreation.

HOW THE RESEARCH WAS CARRIED OUT

Two different, but complementary, research methods were employed. They are described in the report as the <u>Beach Survey</u> and the <u>Cohort Study</u>.

The <u>Beach Survey</u> involved over 16,500 participants at 10 beaches. The beaches were chosen to reflect a wide range of water quality and included bathing waters that did not meet the EC bathing water standard. The water quality was measured on study days. Participants were asked whether they had entered the water, whether they had bathed, dived or surfed and about other factors that might have affected their health.

The <u>Cohort Study</u> involved 1112 volunteers at four beaches who were recruited prior to the study day and randomly assigned to a bathing group or non-bathing group. Symptoms of ill health were studied before and after the study day in greater detail than in the Beach Survey and were supplemented by medical checks. Water quality was also studied in greater detail. Again the bathing waters selected reflected a range of standards although, for ethical reasons all had to meet current EC standards. Analysis of the information from the interviews and the water sampling was designed to reveal whether there was any statistically significant relationship between symptoms of illhealth which people had reported and the water quality, activity and length of time in the water. In the Cohort Study the relationship between symptoms and other factors such as age, eating habits and health of other members of the household was also investigated. This analysis is complex particularly when the differences in symptom reporting between say, bathers and non bathers, is very small and other factors such as the consumption of certain foods can have similar effects.

This study is one of the largest ever undertaken on this subject and the only one to use the combined approach of the Beach Survey and the Cohort Study. The use of statistical techniques and rigorous quality control in the water monitoring make the findings as accurate as is possible. The draft final report was submitted to independent review by experts in the fields of epidemiology, statistics and environmental and medical microbiology and the reviewers' comments helped to inform the final drafting of the report.

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APPENDIX B

THE EC DIRECTIVE CONCERNING THE QUALITY OF BATHING WATERS.

APPENDIX – EC BATHING WATER DIRECTIVE

COUNCIL DIRECTIVE

of 8 December 1975

concerning the quality of bathing water

(76/160/EEC)

(as amended by the Act of Accession of Greece of 28 May 1979 (O] L 291, 19.11.79, p. 17); and the Act of Accession of Spain and Portugal of 12 June 1985 (OJ L 302, 15.11.85, p. 9))

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 100 and 235 thereof,

Having regard to the proposal from the Commission.

Having regard to the opinion of the European Parliament(1),

Having regard to the opinion of the Economic and Social Committee('),

Whereas, in order to protect the environment and public health, it is necessary to reduce the pollution of bathing water and to protect such water against further deterioration;

Whereas surveillance of bathing water is necessary in order to attain, within the framework of the operation of the common market, the Community's objectives as regards the improvement of living conditions, the harmonious development of economic activities throughout the Community and continuous and balanced expansion;

Whereas there exist in this area certain laws, regulations or administrative provisions in Member States which directly affect the functioning of the common market; whereas, however, not all the powers needed to act in this way have been provided for in the Treaty;

Whereas the programme of action of the European Communities on the environment(') provides that quality objectives are to be jointly drawn up fixing the various requirements which an environment must meet *inter alia* the definition of parameters for water, including bathing water;

Whereas, in order to attain these quality objectives, the Member States must lay down limit values corresponding to certain parameters; whereas bathing water must be made to conform to these values within 10 years following the notification of this Directive;

Whereas it should be provided that bathing water will, under certain conditions, be deemed to conform to the relevant parametric values even if a certain percentage of samples taken during the bathing season does not comply with the limits specified in the Annex;

Whereas, to achieve a certain degree of flexibility in the application of this Directive, the Member States must have the power to provide for derogations; whereas such derogations must not, however, disregard requirements essential for the protection of public health;

(¹) OJ No C 112, 20, 12, 1973, p. 3.

^{(&}lt;sup>1</sup>) OJ No C 128, 9. 6. 1975, p. 13. (¹) OJ No C 286, 15. 12. 1975, p. 5.

Whereas technical progress necessitates rapid adaptation of the technical requirements laid down in the Annex; whereas, in order to facilitate the introduction of the measures required for this purpose, a procedure should be provided for whereby close cooperation would be established between the Member States and the Commission within a Committee on Adaptation to Technical Progress;

Whereas public interest in the environment and in the improvement of its quality is increasing; whereas the public should therefore receive objective information on the quality of bathing water,

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. This Directive concerns the quality of bathing water, with the exception of water intended for therapeutic purposes and water used in swimming pools.

2. For the purposes of this Directive:

- (a) 'bathing water' means all running or still fresh waters or parts thereof and sea water, in which:
 - bathing is explicitly authorized by the competent authorities of each member State, or
 - bathing is not prohibited and is traditionally practised by a large number of bathers;
- (b) 'bathing area' means any place where bathing water is found;
- (c) 'bathing season' means the period during which a large number of bathers can be expected, in the light of local custom, and any local rules which may exist concerning bathing and weather conditions.

Article 2

The physical, chemical and microbiological parameters applicable to bathing water are indicated in the Annex which forms an integral part of this Directive.

Article 3

1. Member States shall set, for all bathing areas or for each individual bathing area, the values applicable to bathing water for the parameters given in the Annex.

In the case of the parameters for which no values are given in the Annex, Member States may decide not to fix any values pursuant to the first sub-paragraph, until such time as figures have been determined.

2. The values set pursuant to paragraph 1 may not be less stringent than those given in column 1 of the Annex.

3. Where values appear in column G of the Annex, whether or not there is a corresponding value in column 1 of the Annex, Member States shall endeavour, subject to Article 7, to observe them as guidelines.

Article 4

1. Member States shall take all necessary measures to ensure that, within 10 years following the notification of this Directive, the quality of bathing water conforms to the limit values set in accordance with Article 3.

2. Member States shall ensure that, in bathing areas specially equipped for bathing to be created by the competent authorities of the Member States after the notification of this Directive, the 'I values' laid down in the Annex are observed from the time when bathing is first permitted. However, for bathing areas created during the two years following the notification of this Directive, these values need not be observed until the end of that period.

3. In exceptional circumstances Member States may grant derogations in respect of the 10-year time limit laid down in paragraph I. Justifications for any such derogations based on plans for the management of water within the area concerned must be communicated to the Commission as soon as possible and not later than six years following the notification of this Directive. The Commission shall examine these justifications in detail and, where necessary, make appropriate proposals concerning them to the Council.

4. As regards sea water in the vicinity of frontiers and water crossing frontiers which affect the quality of the bathing water of another Member State, the consequences for the common quality objectives for bathing areas so affected shall be determined in collaboration by the riparian Member States concerned.

The Commission may participate in these deliberations.

Article 5

1. For the purposes of Article 4, bathing water shall be deemed to conform to the relevant parameters:

if samples of that water, taken at the same sampling point and at the intervals specified in the Annex, show that it conforms to the parametric values for the quality of the water concerned, in the case of:

- 95% of the samples for parameters corresponding to those specified in column 1 of the Annex;
- 90% of the samples in all other cases with the exception of the 'total coliform' and 'faecal coliform' parameters where the percentage may be 80%

and if, in the case of the 5, 10 or 20% of the samples which do not comply:

- the water does not deviate from the parametric values in question by more than 50%, except for microbiological parameters, pH and dissolved oxygen;
- consecutive water samples taken at statistically suitable intervals do not deviate from the relevant parametric values.
- Deviations from the values referred to in Article 3 shall not be taken into consideration in the calculation of the percentage referred to in paragraph 1 when they are the result of floods, other natural disasters or abnormal weather conditions.

Article 6

1. The competent authorities in the Member States shall carry out sampling operations, the minimum frequency of which is laid down in the Annex.

2. Samples should be taken at places where the daily average density of bathers is highest. Samples should preferably be taken 30 cm below the surface of the water except for mineral oil samples which shall be taken at surface level. Sampling should begin two weeks before the start of the bathing season.

3. Local investigation of the conditions prevailing upstream in the case of fresh running water, and of the ambient conditions in the case of fresh still water and sea water should be carried out scrupulously and repeated periodically in order to obtain geographical and topographical data and to determine the volume and nature of all polluting and potentially polluting discharges and their effects according to the distance from the bathing area.

4. Should inspection by a competent authority or sampling operations reveal that there is a discharge or a probable discharge of substances likely to lower the quality of the bathing water, additional sampling must take place. Such additional sampling must also take place if there are any other grounds for suspecting that there is a decrease in water quality.

5. Reference methods of analysis for the parameters concerned are set out in the Annex. Laboratories which employ other methods must ensure that the results obtained are equivalent or comparable to those specified in the Annex.

Article 7

1. Implementation of the measures taken pursuant to this Directive may under no circumstances lead either directly or indirectly to deterioration of the current quality of bathing water.

2. Member States may at any time fix more stringent values for bathing water than those laid down in this Directive.

Article 8

This Directive may be waived:

- (a) in the case of certain parameters marked (0) in the Annex, because of exceptional weather or geographical conditions;
- (b) when bathing water undergoes natural enrichment in certain substances causing a deviation from the values prescribed in the Annex.

Natural enrichment means the process whereby, without human intervention, a given body of water receives from the soil certain substances contained therein.

In no case may the exceptions provided for in this Article disregard the requirements essential for public health protection. Where a Member State waives the provisions of this Directive, it shall forthwith notify the Commission thereof, stating its reasons and the periods anticipated.

Article 9

Such amendments as are necessary for adapting this Directive to technical progress shall relate to:

- the methods of analysis

- the G and I parameter values set out in the Annex.

They shall be adopted in accordance with the procedure laid down in Article 11.

Article 10

1. A Committee on Adaptation to Technical Progress (hereinafter called 'the committee') is hereby set up. It shall consist of representatives of the Member States and be chaired by a representative of the Commission.

2. The committee shall draw up its own rules of procedure.

Article 11

1. Where the procedure laid down in this Article is to be followed, matters shall be referred to the committee by the chairman, either on his own initiative or at the request of the representative of a Member State.

2. The representative of the Commission shall submit to the committee a draft of the measures to be adopted. The committee shall deliver its opinion on the draft within a time limit set by the chairman having regard to the urgency of the matter. Opinions shall be adopted by a majority of 54 votes, the votes of the Member States being weighted as provided in Article 148 (2) of the Treaty. The chairman shall not vote.

3. (a) The Commission shall adopt the measures envisaged where they are in accordance with the opinion of the committee.

- (b) Where the measures envisaged are not in accordance with the opinion of the committee, or if no opinionis adopted, the Commission shall without delay propose to the Council the measures to be adopted. The Council shall act by a qualified majority.
- (c) If, within three months of the proposal being submitted to it, the Council has not acted, the proposed measures shall be adopted by the Commission.

Article 12

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive within two years of its notification. They shall forthwith inform the Commission thereof.

2. Member States will communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

Article 13

Member States shall, four years following the notification of this Directive and at regular intervals thereafter, submit a comprehensive report to the Commission on their bathing water and the most significant characteristics thereof.

After prior consent has been obtained from the Member State concerned the Commission may publish the information obtained.

Article 14

This Directive is addressed to the Member States.

Done at Brussels, 8 December 1975.

For the Council The President M. PEDINI

Ed. note: The deadline for compliance with this Directive has been extended for Portugal until 1 January 1989. (Act of Accession of Spain and Portugal of 12.6.85, Annex XXXVI Chap. III.2 (OJ L 302, 15.11.85, p. 9))

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ANNEX

	Parameters	с	I	Minimum sampling frequency	Meshod of analysis and Inspection
	Microbiological				
1	Total coliforms /100 ml	500	10 000	Fortnightly (1)	Fermentation in multiple tubes. Sub- culturing of the positive tubes on a
2	Faecal coliforms /100 ml	100	2 000	Fortnightly (1)	to MPN (most probable number) or membrane filtration and culture on an appropriate medium such as Tergitol lactose agar, endo agar, 0.4% Teepol broth, subculturing and identification of the suspect colonies.
					In the case of 1 and 2, the incubation temperature is variable according to whether total or faecal coliforms are being investigated.
3	Faccal streptococci /100 ml	100		(2)	Litsky method. Count according to MPN (most probable number) on filtration on membrane. Culture on an appropriate medium.
4	Salmonella /1 litre	-	0	(2)	Concentration by membrane filtration. Inoculation on a standard medium. Enrichment – subculturing on isolating agar – identification.
5	Entero víruses PFU/10 litres	_	0	(2)	Concentrating by filtration, flocculation or centrifuging and confirmation.
	Physico-chemical:				
6	рH	_	6 to 9 (0)	(2)	Electrometry with calibration at pH 7 and 9.
7	Colour	-	No abnormal change in colour (0)	Fortnightly (1)	Visual inspection or photometry with standards on the Pt.Co scale.
		-	io∉o.	(2)	

QUALITY REQUIREMENTS FOR BATHING WATER

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_		Parameters	С	I	Minimum sampting frequency	Method of analysis and inspection
	8	Mineral oils mg/litre	-	No film visible on the surface of the water and no odour	Fortnightly (1)	Visual and olfactory inspection or extraction using an adequate volume and weighing the dry residue.
			<u>≤</u> 0.3	-	(2)	
**	9	Surface-active mg/litre substances (lauryl- reacting with sulfate) methylene blue	-	No lasting foam	Fortnightly (1)	Visual inspection or absorption spectro- photometry with methylene blue.
			≤ 0.3	-	(2)	
	10	Phenols mg/litre (phenol indices) C+H+OH	4	No specific odour	Fortnightly (1)	Verification of the absence of specific odour due to phenol or absorption
			≤ 0.005	≤ 0.05	(2)	(4 AAP) method.
-	11	Transparency m	2	1 (0)	Formightly (1)	Secchi's disc.
-	12	Dissolved oxygen % saturation O:	80 to 120	_	(2)	Winkler's method or electrometric method (oxygen meter).
_	13	Tarry residues and floating materials such as wood, plastic articles, bottles, containers of glass, plastic, rubber or any other substance. Waste or splinters	Absence		Forinightly (1)	Yisual inspection.
	14	Ammonia mg/litre NH1			(3)	Absorption spectrophotometry, Nessler's method, or indophenol blue method.
	15	Nitrogen Kjeldahl mg/litre N			(3)	Kjeldahl method.
	16	Other substances regarded as indications of pollution Pesticides mg/litre (parathion, HCH, dieldrin)			(2)	Extraction with appropriate solvents and chromatographic determination.

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Bathing water 7

	Parameters	c	1	Minimum sampting frequency	Method of analysis and inspection	
17	Heavy metals such as: - arsenic mg/litre As - cadmium Cd - chrome V1 Cr V1 - lead Pb - mercury Hg			(2)	Atomic absorption possibly preceded by extraction	
18	Cyanides mg/litre Cn			(2)	Absorption spectrophotometry using a specific reagent	
19	Nitrates and mg/litre NO, phosphates PO,			(2)	Absorption spectrophotometry using a specific reagent	

G = guide.

I = mandatory.

- (0) Provision exists for exceeding the limits in the event of exceptional geographical or meteorological conditions.
- (1) When a sampling taken in previous years produced results which are appreciably better than those in this Annex and when no new factor likely to lower the quality of the water has appeared, the competent authorities may reduce the sampling frequency by a factor of 2.
- (2) Concentration to be checked by the competent authorities when an inspection in the bathing area shows that the substance may be present or that the quality of the water has deteriorated.
- (3) These parameters must be checked by the competent authorities when there is a tendency towards the eutrophication of the water.

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APPENDIX C

TIDY BRITAIN GROUP - EUROPEAN BLUE FLAG AND SEASIDE AWARD CRITERIA 1992



APPENDIX – TIDY BRITAIN GROUP – EUROPEAN BLUE FLAG CRITERIA 1992

EUROPEAN BLUE FLAG

CRITERIA FOR 1992

The European Blue Flag for beaches is awarded annually and is only valid for one year. To be eligible for the Blue Flag a bathing beach has to fulfil all requirements. The Blue Flag should be removed whilst any criterion is no longer satisfied.

WATER QUALITY

- 1 The water must comply with the Guideline value of the appropriate microbiological parameters of the EC Bathing Water Directive 76/160/EC.
- 2 No industrial or sewage discharges affecting the beach area.

BEACH AND INTERTIDAL AREA

- 3 No gross pollution by sewage related or other waste including glass and litter and no discharge of industrial or urban waste.
- 4 No algal or other vegetation materials accumulating or decaying.
- 5 No oil pollution.

MANAGEMENT

- 6 The beach must be actively managed by the owners (local authority or private) as a tourist resort.
- 7 Local emergency plans to cope with pollution incidents.
- 8 Easy and safe access to the beach for all including disabled people where this is possible.
- 9 Prohibition of unauthorised driving, dumping and camping.
- 10 Manage the conflicting and incompatible needs of different users e.g. zoning for swimmers, windsurfers, nature conservation.
- 11 Dogs must be banned throughout the summer season.
- 12 A source of drinking water.
- 13 Public telephones within easy access to the beach.
- 14 Clean and regularly maintained toilet facilities.
- 15 All buildings and equipment must be maintained to a high standard and there must be safe confinement of all construction work which must not detract from the enjoyment of the beach user.

CLEANSING

- 16 Provide regular and adequate cleansing of the beach.
- 17 Litter bins in adequate numbers, properly secured and regularly maintained/emptied.

SAFETY

- 18 Safe bathing under all normal weather conditions.
- 19 Life guard(s) on duty during the summer season and/or adequate safety provision including lifesaving equipment.
- 20 Clearly signposted First Aid facilities.

INFORMATION AND EDUCATION

- 21 Prompt public warning if the beach or part thereof has or is expected to become grossly polluted or unsafe.
- 22 Evidence that the interests of protected sites and rare or protected species have been addressed with close liaison with recognised local conservation organisations.
- 23 Laws covering beach use and code of conduct easily available to the public (including in tourist offices, town hall).
- 24 Public display of Bathing Water Quality poster with updated information of water quality and location of sampling points
 the Blue Flag Criteria.
- 25 The responsible authority should be able to demonstrate at least five educational activities relating to the coastal environment in the area.

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APPENDIX – TIDY BRITAIN GROUP – SEASIDE AWARD CRITERIA 1992

SEASIDE AWARD

RESORT BEACH CRITERIA FOR 1992

The awards for beaches attaining these high standards are only valid for one year. To be eligible a bathing beach has to fulfil all requirements. The flag should be removed whilst any criterion is not satisfied.

WATER QUALITY

1 The SEASIDE AWARD will be given to beaches which have bathing water of the mandatory standard (Bathing Water Directive 76/160/EC) and fulfil 28 land-based criteria.

The "Premier" SEASIDE AWARD will be given to beaches which have bathing water of the guideline standard (Bathing Water Directive 76/160/EC) and fulfil 28 land-based criteria.

Mandatory Bathing Water must meet the mandatory standards for the faecal and total coliform parameters of the EC Bathing Water Directive 76/160/EC. Guideline Bathing Water must meet the mandatory and guideline standards for the same parameters.

2 No industrial or sewage discharges affecting the beach area. The Seaside Awards Office should be notified of any discharge points within one mile.

BEACH AND INTERTIDAL AREA

- 3 No gross pollution by sewage related or other waste matter including litter and no discharge of industrial or urban waste.
- 4 No algal or other vegetation materials accumulating or decaying.
- 5 No oil pollution.

MANAGEMENT

- 6 The beach must be actively managed by the owners (local authority or private) as a tourist resort.
- 7 Local emergency plans to cope with pollution incidents.
- 8 Easy and safe access to the beach for all including disabled people where this is possible.
- 9 Prohibition of unauthorised driving, dumping and camping.
- 10 Manage the conflicting and incompatible needs of different users e.g. zoning for swimmers, surfers, windsurfers, motorised craft, nature conservation.
- 11 Dogs must be banned throughout the summer season.

12 Dog refuse bins must be available along the seafront where all dogs should be kept on a lead and under control at all times (or evidence that bye-law applications are being submitted).

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- 13 A clearly marked and protected source of drinking water.
- 14 Public telephones, which must be checked daily, within easy access (5 minutes' walk) from the beach.
- 15 Adequate toilet facilities, cleaned and maintained daily, including facilities for disabled people.
- 16 All buildings and equipment must be maintained to a high standard and, where practicable, there must be safe confinement of all construction work which must not detract from the enjoyment of the beach user.
- 17 Adequate access and parking facilities with marked spaces and suitable access for disabled people. Where it is necessary to park on the beach it must be safe and clearly marked and defined.

CLEANSING

18 Adequate daily cleansing of the beach.

19 Appropriate litter bins in adequate numbers (at least every 25 metres along the seafront), properly secured and regularly maintained, emptied at least daily.

SAFETY

- 20 The area patrolled by lifeguards should be clearly defined and marked.
- 21 Lifeguard(s) on duty during the summer season and/or adequate safety provision including lifesaving equipment.
- 22 Clearly sign-posted First Aid facilities must be available on the seafront.
- 23 Some daily beach supervision throughout the holiday season between 10.00 am and 6.00 pm. This may be through attendant lifeguards, first aid officer, beach officer or a combination.
- 24 A record should be kept of all emergency incidents and the Seaside Awards office notified of any significant incidents.

INFORMATION AND EDUCATION

- 25 Prompt public warning if the beach or part thereof has or is expected to become grossly polluted or unsafe.
- 26 Evidence that the interests of protected sites and rare or protected species have been addressed with close liaison with recognised local conservation organisations.
- 27 Laws covering beach use and appropriate codes of conduct easily available to the public (including in Tourist Information centres and civic offices).

SEASIDE AWARD

RURAL BEACH CRITERIA FOR 1992

This award is open to any rural beach which has limited facilities and has not been actively managed and developed as a resort. The aim of the award is to acknowledge those beaches for their undeveloped qualities whilst at the same time promoting considerate use by visitors.

The awards for beaches attaining these high standards are only valid for one year. To be eligible for the award a bathing beach has to fulfil all the requirements. The award should be removed whilst any criterion is no longer satisfied.

WATER QUALITY

1 The SEASIDE AWARD will be given to beaches which have bathing water of the mandatory standard (Bathing Water Directive 76/160/EC) and fulfil 8 land-based criteria.

The "Premier" SEASIDE AWARD will be given to beaches which have bathing water of the guideline standard (Bathing Water Directive 76/160/EC) and fulfil 8 land-based criteria.

Mandatory Bathing Water must meet the mandatory standards for the faecal and total coliform parameters of the EC Bathing Water Directive 76/160/EC. Guideline Bathing Water must meet the mandatory and guideline standards for the same parameters.

BEACH AND INTERTIDAL AREA

2 No gross pollution by sewage related debris or other waste including oil, glass and litter and no discharge of industrial or urban waste or decaying vegetation.

MANAGEMENT

- 3 The beach must be actively managed under a scheme of "guardianship" by a local group, school, parish or individual.
- 4 Access must be safe and well maintained.
- 5 Discouragement of unauthorised driving, dumping and camping.
- 6 Any buildings and equipment must be adequately maintained and there must be safe confinement of all construction work which must not detract from the enjoyment of the beach user.

CLEANSING

7 Provision of properly secured litter bins in adequate numbers where appropriate.

SAFETY

8 Beach users should be warned that if they swim they do so at their own risk.

28 Public display of - Bathing Water Quality Poster with

- updated information of water quality
- Car parks
- The Award Criteria
- The Seaside Awards Office address
- Map delineating the area of the awarded
 - beach and location of sampling points.

29 The responsible authority should be able to demonstrate that it encourages promotional/ educational activities relating to the coastal environment in the area.

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WATER QUALITY CRITERIA

Water quality will be judged on the results of water analyses during the summer season of 1991.

Mandatory Bathing Water must meet the mandatory standards for the faecal and total coliform parameters of the EC Bathing Water Directive 76/160/EC.

[a] Total coliform < 10,000 per 100ml

[b] Faecal coliform < 2,000 per 100ml

There should be at least 20 samples, taken at regular intervals throughout the summer season, of which 95% must comply with each of the above two parameters.

Guideline Bathing Water must meet the guideline standards for the faecal and total coliform parameters and the mandatory standard for the faecal and total coliform parameters of the EC Bathing Water Directive 76/160/EC.

[a] Total coliform < 500 per 100ml[b] Faecal coliform < 100 per 100ml

There should be at least 20 samples, taken at regular intervals throughout the summer season, of which 80% must comply with each of the above two parameters.

A beach will be eligible for the SEASIDE AWARD, where the bathing, water meets the mandatory standards.

A beach will be eligible for the "Premier" SEASIDE AWARD where the bathing water meets the guideline standards.

AWARD ENTRY FEES

The fee includes all administration, judging and certificate/flag costs.

Those beaches entering for the Tidy Britain Group's SEASIDE AWARD can also enter for the European Blue Flag for an additional fee of £200.

SEASIDE AWARD for resort beaches:	£300
SEASIDE AWARD for rural beaches:	£100
EUROPEAN BLUE FLAG for resort beaches:	£500

INFORMATION AND EDUCATION

An Information Point with advice about nearest:

telephone hospital/surgery first aid police coastguard local hazards

and

map delineating the appropriate area of the beach, sampling points and facilities if appropriate.

Each entry should be accompanied by:

Evidence to show a scheme of "guardianship" of the beach; this may be a local school, parish council or even individual who has undertaken to keep an eye on the beach, alert authorities to problems and even do some litter picking and maintenance of notices.

Evidence that visitors are actively encouraged to protect and conserve the beach and that there has been consultation and liaison with recognised local conservation organisations.

A map and a short (2 page) summary of plans for the coastal area and denoting areas of site fragility which are not suitable to carry large numbers of visitors.

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National Rivers Authority

Southern Region

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