

ENVIRONMENT AGENCY



088216

**2001  
BATHING WATERS REPORT WALES**



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ENVIRONMENT AGENCY WALES

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*EA - water Quality  
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December 2001

# ENVIRONMENT AGENCY WALES

## 2001 BATHING WATER SURVEY

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**ENVIRONMENT AGENCY WALES**  
**2001 BATHING WATER SURVEY**

**1. BACKGROUND**

- 1.1 The Environment Agency (the Agency) was created on April 1 1996, as an amalgamation of the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution (HMIP), the Waste Regulation Authorities and some functions of the former Department for Environment, Transport and the Regions (DETR).
- 1.2 EC Directives are agreements between the EC and Member States. Thus the interpretation of them at national level, their adoption into national law, and accountability for compliance with the terms of the directives, lies entirely with National Governments.
- 1.3 The EC Bathing Waters Directive (76/160/EEC) was intended primarily to safeguard public health and the environment by reducing the pollution of bathing waters and protecting such waters against further deterioration. Under the Water Act 1989, the Environment Agency has inherited the responsibility of carrying out the necessary monitoring programmes in relation to certain water-related directives, which include the Bathing Water Directive, in England and Wales. The results from these monitoring programmes in Wales are submitted to the National Assembly for Wales (NAW) and the Department for Environment, Food and Rural Affairs (DEFRA). It is for such Government Departments, however, to interpret this and other such EC Directives within England and Wales, and it follows from the preceding paragraph that only they can assess 'compliance' or otherwise with the Directives.
- 1.4 When Directive 76/160/EEC was first adopted, only a limited number of bathing waters were identified by the UK Government. A large list of bathing waters has since been added to the initial list and all these are included in the Government's report to the EC. If bathing waters are not included in that report then they do not come within the terms of the Directive and thus, by definition, cannot be said to comply, or fail to comply, with its conditions. However, a number of non-identified bathing waters have in the past been routinely monitored by one of the Agency's predecessors, the NRA, and the results included in this report for comparison.
- 1.5 The NRA decided to cease all non-EC bathing water monitoring from 1994 because it considered that it had sufficient information to characterise these waters. The only exceptions to this are any bathing waters nominated by local councils for consideration for EC Directive "identification". However, in Wales, to enable local councils to continue to apply for the various Bathing Beach awards at non-EC bathing waters, an initiative, now co-ordinated by the Environment Agency and involving the National Assembly for Wales, Wales Tourist Board, Keep Wales Tidy (KWT), Dwr Cymru Welsh Water (DCWW) and the maritime local authorities, has been set up to collect the necessary data. 2001 was the eighth year of this initiative, the results of which are included in this report.

It is hoped that the initiative will continue next year, further details of which are given in section 4.

- 1.6 The Directive specifies a range of water quality standards that should be achieved in identified bathing waters and indicates the required monitoring frequency. These standards fall into two categories, (mandatory) imperative (I) and guideline (G) standards. Details of the requirements for compliance with these are given in Appendix 1.
- 1.7 The Bathing Waters (Classification) Regulations 1991 were published as a Statutory Instrument on 9th August 1991, bringing the regulations into UK law. The "Notice" and "Directions" were received in 1992.
- 1.8 The Government currently uses the faecal and total coliforms "I" standards as the basis for determining UK compliance with the Directive. Additional microbiological "I" standards concern the occurrence of Salmonella and Enteroviruses. Physico-chemical "I" standard parameters are tested as indicated in Appendix 1. The occurrence of Faecal Streptococci is also examined, although this parameter only has a non-mandatory "G" standard in the Directive. Environment Agency Wales has been granted a derogation for transparency (see Appendix 1) at all its bathing waters from 1991.
- 1.9 Compliance with the "G" standards is **not** mandatory but the Directive states that Member States should "endeavour" to observe them as guidelines. The "G" standard compliance requirements are specified in Appendix 1.

## **2. SAMPLING PROGRAMME**

- 2.1 The 75 bathing waters reported for Wales in 2001 which are currently identified by the UK Government as falling within the scope of the Directive are displayed on Figure 1 and listed in Appendix 2. This also shows West Kirby, which is under Environment Agency Wales operational control but lies outside Wales.
- 2.2 The Government requires that these bathing waters are monitored in accordance with the requirements of the Bathing Waters Directive and the data is reported to the NAW and DEFRA during October of each year. This report summarises the results of the monitoring carried out during the 2001 bathing season.
- 2.3 The non-identified bathing waters included in the initiative described in section 1.5 and monitored by the local authorities are listed in Appendix 3.
- 2.4 A summary poster on the current status of Directive 76/160/EEC compliance in England and Wales will be published in February 2002 by the Environment Agency.

### 3 2001 MONITORING PROGRAMME FOR BATHING WATERS IDENTIFIED AS FALLING WITHIN THE TERMS OF THE BATHING WATERS DIRECTIVE

3.1 Monitoring is confined to the period 1st May - 30th September, which includes two weeks sampling prior to the NAW/DEFRA identified bathing season (15 May - 30th September).

3.2 Guidance has been issued by NAW/DEFRA indicating the frequency of monitoring required for each parameter. This guidance has been used to develop the monitoring programme within Wales. NAW/ DEFRA specified that faecal streptococci, faecal and total coliforms should be analysed on at least 20 occasions during the bathing season.

Since 1992 the reported faecal and total coliform results have been "confirmed" instead of the "presumptive" results which had been reported in previous years. The need for enterovirus and salmonella sampling is determined using a 'trigger' involving weekly aesthetic surveys of each beach to determine if any deterioration could be due to the presence of sewage pollution. Those which fail the 'trigger' are sampled twice for enterovirus and salmonella in addition to the beaches that had failed to achieve the faecal/total coliform standards during the previous year. Details of this "trigger" are contained in Appendix 4.

pH is only required to be measured once during the season and the physicochemical parameters are assessed on 20 occasions during the bathing season.

3.3 Table 1 shows compliance of identified bathing waters with faecal and total coliforms "I" & "G" standards and with faecal streptococci "G" standards as reported by NAW/DEFRA in 2001. The number of samples taken at each beach, the number of exceedences against "I" and "G" standards and the compliance ("G" guideline and imperative, "I" imperative or "F" failure) are given for each determinand at each beach. As well as compliance with each determinand, the table shows the overall compliance of the beach. The table also shows a summary of Salmonella and Enterovirus sampling including the number of samples taken, the number of positive Salmonella results and the minimum and maximum Enterovirus values in Plaque Forming Units per 10 litres (PFU/10L). At beaches where Salmonella and Viruses have been sampled, letters a to d indicate the reasons for sampling. A key below the table explains these reasons.

3.4 Table 2 shows compliance of identified Bathing Waters with "I" standards for Faecal and Total Coliforms from 1986 to 2001.

3.5 Table 3 shows compliance of identified Bathing Waters with "G" standards for Faecal Streptococci, Faecal and Total Coliforms from 1990 to 2001. This is the water quality standard required for Blue Flag compliance.

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\* confirmed refers to the confirmation of the coliform test which requires further analysis of all samples to substantiate the result.



#### **4. 2001 MONITORING PROGRAMME FOR BATHING WATERS NOT IDENTIFIED UNDER THE TERMS OF THE BATHING WATERS DIRECTIVE**

- 4.1 The NRA ceased monitoring non-identified waters from 1994 but co-ordinated an initiative to help to ensure that the necessary data was available to enable local councils to nominate waters for Bathing Water awards. In 2001, the initiative was funded by the Green Sea Partnership members with money from Local Authorities, Environment Agency Wales and Wales Tourist Board. The Environment Agency Laboratory in Llanelli and carrying out most of the analyses under contract. Local councils carried out the sampling to Agency specifications. Swansea Council did not take part in this initiative although they collected samples and had them analysed at Carmarthen Public Health Laboratory.

A total of 111 non-identified bathing waters in Wales were monitored during 2001. No samples were taken at 3 of the non-identified beaches due to Foot and Mouth Restrictions. These were Bendricks Beach (Vale of Glamorgan) Swanlake Bay (Swansea) and Traethllyn (Pembrokeshire). These results have been reported to the National Assembly for Wales. Due to limited resources "confirmation" of faecal and total coliform results is only carried out for those which exceed the 2000/100ml faecal coliform standard or the 10000/100ml total coliform standard.

- 4.2 Table 4 shows compliance of the Non-EC identified Bathing Waters with Faecal and Total Coliform "I" and "G" standards and with Faecal Streptococci "G" standards in 2001. The number of samples taken at each beach, the number of failures against "I" and "G" standards and the compliance ("G" guideline and imperative, "I" imperative or "F" failure) are given for each determinand at each beach. As well as compliance with each determinand the table shows the overall compliance of the beach.
- 4.3 Tables 5 & 6 show compliance of Non-EC identified Bathing Waters with "I" and "G" standards respectively. Table 5 shows compliance with "I" standards for Faecal and Total Coliforms from 1986 to 2001 and table 6 show compliance with "G" standards for Faecal Streptococci, Faecal and Total Coliforms from 1990 to 2001.

#### **5 BLUE FLAG AND SEASIDE AWARDS**

- 5.1 The European Blue Flag Scheme is organised by the Federation of Environmental Education in Europe (FEEE). In Wales it is administered by the charity Keep Wales Tidy (KWT), part of the Tidy Britain Group (TBG). European Blue Flags are only awarded to those EC identified beaches where an application has been made by the local authority, or another interested party, and they meet the strict water quality and land-based requirements of the award scheme.

The water quality is judged on the results of the analyses of samples taken during the previous bathing season. The 2001 awards required compliance with "guideline" value water quality standards of the Directive for total and faecal coliforms and for faecal streptococci. In Wales 18 beaches were awarded Blue Flags in 2001. These

were as follows;

▣ Llanddona,	▣ Tenby South
▣ Newborough, Llanddwyn	▣ Tenby Castle
▣ Barmouth	▣ Pembrey Country Park, Cefn Sidan
▣ New Quay, Traeth y Harbwr	▣ Port Eynon
▣ Tre-saith	▣ Caswell Bay
▣ Aberporth	▣ Bracelet Bay
▣ Poppit Sands	▣ Porthcawl, Rest Bay
▣ St Davids, Whitesands Bay	▣ Penmaenmawr
▣ Newgale	
▣ Lydstep	

- 5.2 The Seaside Award scheme was introduced in 1992 and is also administered by KWT. Both EC identified and other beaches are eligible for application of these awards. There are two categories of award, Resort and Rural, depending on whether the beach is part of a managed tourist resort or whether it is a smaller beach with limited facilities, but still has clean water.

Water quality is again judged on the results of the analyses of samples taken during the previous bathing season. In order to be eligible for a "Seaside Award", the beach must meet at least the mandatory standard for faecal and total coliforms, along with the specified land-based criteria. In 2001, 103 beaches in Wales received Seaside Awards.

- 5.3 The Green Coast Award was piloted at nine beaches throughout Wales during 1998 and the first awards were made in 1999. It is backed by the Green Sea partnership, and is being developed by the Keep Wales Tidy Campaign. The aim is to recognise those beaches of high environmental quality, without the level of infrastructure and intensive management generally associated with more urban, traditional seaside resort beaches. In order to receive the award, beaches must attain guideline water quality, and have effective and appropriate management, to ensure protection of the natural environment. In 2001, 21 beaches in Wales were awarded the Green Coast Award. These were as follows;

★ Barafundle Bay	★ Mwnt at Aberporth
★ Broad Haven South	★ Porth Neigwl, Hells Mouth
★ Manorbier	★ Cemlyn
★ Abereiddi	★ Penmon
★ Marloes Sands	★ Porth Nobla, Llanfaelog
★ Martins Haven	★ Porth Swtan, Church Bay, Rhydwyn
★ St Brides Haven	★ Porth Trwyn, Llanfaethlu
★ St Davids, Caerfai Bay	★ Porth Tyn Tywyn, Llanfaelog
★ Llanrhystud	



- ★ Broad Beach, Rhosneigr
- ★ St. Davids, Red Wharf Bay
- ★ Traeth Llydan, Silver Bay,

- Rhoscolyn
- ★ Bae Cinmel, Kinnel Bay

## **6 REMEDIAL MEASURES REQUIRED TO MEET LONG TERM OBJECTIVE**

- 6.1 The long-term objective is for all identified bathing waters to comply with the mandatory standards laid down in the Directive. In order to facilitate this the former NRA Welsh Region identified and prioritised the remedial works required at identified bathing waters to ensure that Dwr Cymru Welsh Water (DCWW) discharges were not the cause of failure of the faecal and total coliform standards by the end of 1995. This deadline was later relaxed to 1999 for the Swansea Bay area.

The necessary improvements have been one of the main drivers behind DCWW's investment programme during the last 5 years. Now these improvements are nearing completion, it is clear that in some cases other non DCWW discharges, riverine and other diffuse inputs are causing problems for beach compliance.

It must be emphasised that compliance is considered an unreliable indication of trends due to the statistical limitations of such a small data set. Variation in compliance from year to year therefore does not necessarily indicate genuine improvements or deteriorations. There will always be some beaches which change their status because they are marginal failures or passes.

- 6.2 Appendix 6 shows the statistical risk of non compliance of all beaches with the 'I' and 'G' standards. The data used to calculate this risk, covers the period 1990 – 2001 (inclusive) for EC beaches and 1994 – 2001 for Non EC beaches, where the data is available.

These lists highlight, which beaches in Wales are at risk of failing "I" and "G" standards in the future, and assigns a percentage probability of this risk.

### **6.3 Green Sea Initiative**

This initiative is co-ordinated by the Wales Tourist Board and comprises membership by those bodies with an interest in the quality of the coastal environment around Wales. This includes Local Councils, Industry including the water company DCWW, local environmental groups, Countryside Commission for Wales (CCW), the Environment Agency along with several others.

The overall objective is to work together to improve the coastal environment. This obviously includes water quality around the Welsh coast. The organisation was formed in 1995 and has, as one of its objectives, to improve Guideline compliance by tackling the issues of diffuse pollution. This will be achieved through continued work with local communities and local Green Sea groups.

## 7. SUMMARY TABLE OF RESULTS

Summary table showing compliance with the faecal and total coliform and faecal streptococci standards

Bathing Water		Number	"I" standard Compliance	Percent	"G" standard Compliance	Percent
EC	Wales	75	70	93.3	45	60.0
	Wales and West Kirby	76	71	93.4	46	60.5
NON EC	Wales	111	96	86.5	33	29.7

Note: "I" and "G" standards are explained in appendix 1.

All samples were "confirmed" for identified waters, but at non-identified waters only those samples which exceeded the 2000/100ml faecal coliform standard or the 10000/100ml total coliform standard were "confirmed".

## 8. REASONS FOR FAILURE TO COMPLY WITH THE IMPERATIVE STANDARD AT EC IDENTIFIED BATHING WATERS

During the 2001 bathing season 5 EC identified bathing waters failed to comply with the Imperative "I" Standard. All of these are located in the Northern Area of Wales. The information provided here is the best currently available to the Agency and further investigations into the reasons for failure are ongoing.

### 8.1 Llandudno West

This bathing water has a fair record of Imperative (I) level compliance between 1990-2000, failing from 1990 to 1994, it has never complied with the Guideline (G) standard.

Llandudno West Shore's bathing water is situated on the outer eastern side of the Conwy estuary. In common with other estuarine bathing waters, the water quality is subject to the same factors that affect the river's quality (for example, discharges and runoff from both urban activities and agricultural land upstream).

Dwr Cymru/Welsh Water (DC/WW) completed a major AMP2 improvement scheme for Conwy, Deganwy, Llandudno and Colwyn Bay in 1999. Prior to this, they had constructed a long sea outfall at West Shore in order to take the sewage away from the bathing area. This scheme also incorporated the transfer of various discharges from northern Llandudno, which previously impacted on the West Shore beach. From 1994 to 1999, sewage from Llandudno and the West Shore area was discharged crude via a long outfall off this beach. This outfall now serves as a storm sewage relief overflow with flows in normal conditions being transferred to the new sewage treatment works at Ganol. More locally, there are a number of storm relief overflows into the estuary

area from the sewage pumping stations which transfer the flows from places such as Conwy, Deganwy and Llandudno Junction to the same treatment works.

Most surface water systems in Llandudno are thought to drain to the Creuddyn stream, which is culverted through town and directed to the West Shore. The Creuddyn stream is known to be contaminated and thus dry weather flows have been diverted to treatment at the Ganol STW. Flows in excess of dry weather levels are diverted to the long sea outfall to the north, however, at times of very high flows it can discharge to the upper area of the beach. It is not currently known whether the stream did overflow onto the beach during the 2001 bathing season.

The failures this year in the Llandudno area are disappointing given the substantial investment by the water company, DC/WW, in ceasing a number of previously crude sewage outfalls in the area and directing them to the new Ganol sewage treatment works. DC/WW have reported no operational problems with this Sewage Treatment Works, however, the Agency is currently liaising closely with the company, on the operation of the whole Ganol scheme.

## **8.2 Llandudno North**

This bathing water has a good record of Imperative (I) level compliance between 1990-2000, failing only once in 1994, it has never complied with the Guideline (G) standard.

The information available to date has not led to any firm conclusion as to the source of the contamination. There are no known outfalls in the immediate vicinity of the monitoring point and, since 1999, the new Ganol Sewage Treatment Works has served the Llandudno area. It is, however, thought that urban run-off and greater disturbance of silts by large spring tides are likely to have combined to cause the poor water quality conditions at the time of the August 18<sup>th</sup> and 20<sup>th</sup> samples. Beach areas immediately adjacent to high use urban areas (e.g. Promenades), will inevitably receive surface run-off, which will have elevated bacterial levels inherent to urban surface water drainage e.g. dog faeces, picnic waste etc. The effect of urban drainage is likely to be the primary influence on the high risk (96.28% for 2002) of non-compliance with the EC Directive's far more stringent guideline standard.

There is one known major surface water system that still discharges to the bathing beach area, the other surface water systems are thought to drain to the Creuddyn stream, which is culverted through town and directed to the West Shore where it is connected to the foul water system. In addition to the major systems there are numerous small outfalls for drains serving the promenade. The latter has a substantial surface area and, due to its usage, is likely to be the source of a significant amount of contaminated runoff during rainfall events.

Surveys conducted between 1994-1996 identified issues with the contamination of the Afon Creuddyn and deterioration in WQ associated with combined sewer overflow (CSO) operations. The investigative work was then largely superseded by the sewerage flow modeling leading up to the completion of the comprehensive "Ganol

scheme". It is now felt that further work may be required in order to assess whether less obvious issues were being masked by those that were remedied.

The failures this year in the Llandudno area are disappointing given the substantial investment by the water company, DC/WW, in ceasing a number of previously crude sewage outfalls in the area and directing them to the new Ganol sewage treatment works.

DC/WW have reported no operational problems with this Sewage Treatment Works, however, the Agency is currently liaising closely with the company, on the operation of the whole Ganol scheme.

### 8.3 Rhyl

This bathing water has only a fair record of Imperative (I) level compliance between 1990-2000, failing from 1990, to 1993 and 1995 it has also never complied with the Guideline (G) standard.

Rhyl's bathing water is situated on the outer eastern side of the river Clwyd estuary. In common with other similarly situated estuarine bathing waters, the water quality is subject to the same variable factors that affect the river's quality (for example, discharges and runoff from both urban activities and agricultural land upstream). Sewage arising at Rhyl, as well as a substantial portion of the town's surface water drainage, is directed to a treatment works at Kinnel Bay via a pumping station at Westbourne Avenue. The discharges from this scheme, final treated effluent and settled storm flows, are via a long sea outfall and are not subject to UV treatment.

A storm sewage relief outfall from the pumping station at Westbourne Avenue discharges into the adjacent Clwyd Estuary. This storm overflow was designed to operate no more than three times during the May to September bathing season. Information received from DC/WW, indicates that the storm overflow operated at least three times during this period in 2001. Investigations are continuing into the duration and cause of these discharges. In addition, there have been operational problems with another storm sewage overflow at Rhuddlan, situated a short distance upstream on the Clwyd. The discharges were coincident with, but not necessarily the sole cause of, poor water quality at the bathing water monitoring point.

The Agency is currently liaising closely with the water company to assess whether the components of the local sewage improvement scheme are operating as designed.

A combination of other factors such as agricultural run-off, urban run-off and greater disturbance of silts by large spring tides, coincident with some of the samples, are likely to be contributing to the poor water quality conditions experienced in 2001. The sewerage regime at Rhyl is a combined system in that surface water from streets, yards etc is directed to it. There are also a number of drainage ditches partially culverted through the town and leading to the Rhyl Cut. This has been sampled and shown to have consistently elevated bacterial levels. Although this could be due to general urban runoff it could also possibly be due to misconnections to surface water drains.

Surface drainage in the area mostly gravitates into the river Clwyd, although the Agency has a drainage management system which involves the pumping of flows from the Rhyl Cut direct to the sea to alleviate flooding. Riverine influences would therefore be from those two sources, but primarily from the river Clwyd. This river's catchment is relatively large and has a significant amount of mixed farming activities.

Pollution prevention visits have been carried out within the Clwyd catchment, however, further work is needed to both assess and reduce the impact of land use runoff.

#### **8.4 Prestatyn**

This bathing water has a good record of Imperative (I) level compliance between 1990-2000, failing only in 1990 and 1994. Prestatyn has, however, never complied with the Guideline (G) standard.

Sewage at Prestatyn is discharged crude to a sea outfall to the North East of the beach. A DC/WW Asset Management Plan (AMP1) improvement scheme was delayed due to planning objections, however, this was recently resolved and the works are now underway and scheduled for completion in 2003. The existing outfall has been subject to blockages such that, occasionally, sewage has discharged out of the surge tower near the beach. No such problems have been confirmed for the 2001 season.

There have also been possible associated discharges from the sewerage system to the Prestatyn Gutter, although these were not brought to the Agency's attention at the time. Despite these ongoing issues, one of the exceedences coincides with elevated bacterial levels at other sites along the north coast and may well be due to the same reason, that is; rainfall, urban run-off and greater disturbance of silts by spring tides.

The sewerage regime at Prestatyn is a combined system in that surface water from streets, yards etc is directed to it. Nevertheless, there are also a number of drainage ditches partially culverted through the town and leading to the Prestatyn Gutter. The latter has been sampled and shown to have consistently elevated bacterial levels. Although this could be due to general urban runoff it could also possibly be due to misconnections to surface water drains.

#### **8.5 Tywyn**

This bathing water has a very good record of Imperative (I) level compliance between 1990-2000, with no failures recorded. The beach was awarded the Blue Flag award in 1996, however, it is now apparent that the bathing water quality has not improved sufficiently so as to consistently meet the EC Directive's guideline standard.

A new sewage treatment works was completed at Tywyn in 1995, this incorporated the transfer of flows from nearby Aberdyfi. Prior to this, there had been crude sewage

outfalls at both locations. Inspections of the sewage treatment works following the failures concluded that the works were functioning correctly.

The sewerage regime at Tywyn is largely a combined system in that the surface water from some streets, yards etc is directed to it. A number of drainage ditches are culverted through the town and lead to a watercourse referred to as the Tywyn Main Drain. Investigations and sampling surveys have identified consistently elevated bacterial levels in this watercourse. Although this could be due to general urban runoff it could also possibly be due to misconnections to surface water drains. For example, sewerage maps indicate that some properties are not connected to the main public sewer network and may in fact drain via a tank to the surface drainage system. There are also known to be combined sewer overflows (CSOs) and a pumping station overflow to a ditch leading to the drain. In addition, there is a high level storm sewage outfall from the new sewage works into the low level chamber of the sluice gate system at the mouth of the Tywyn Main Drain.

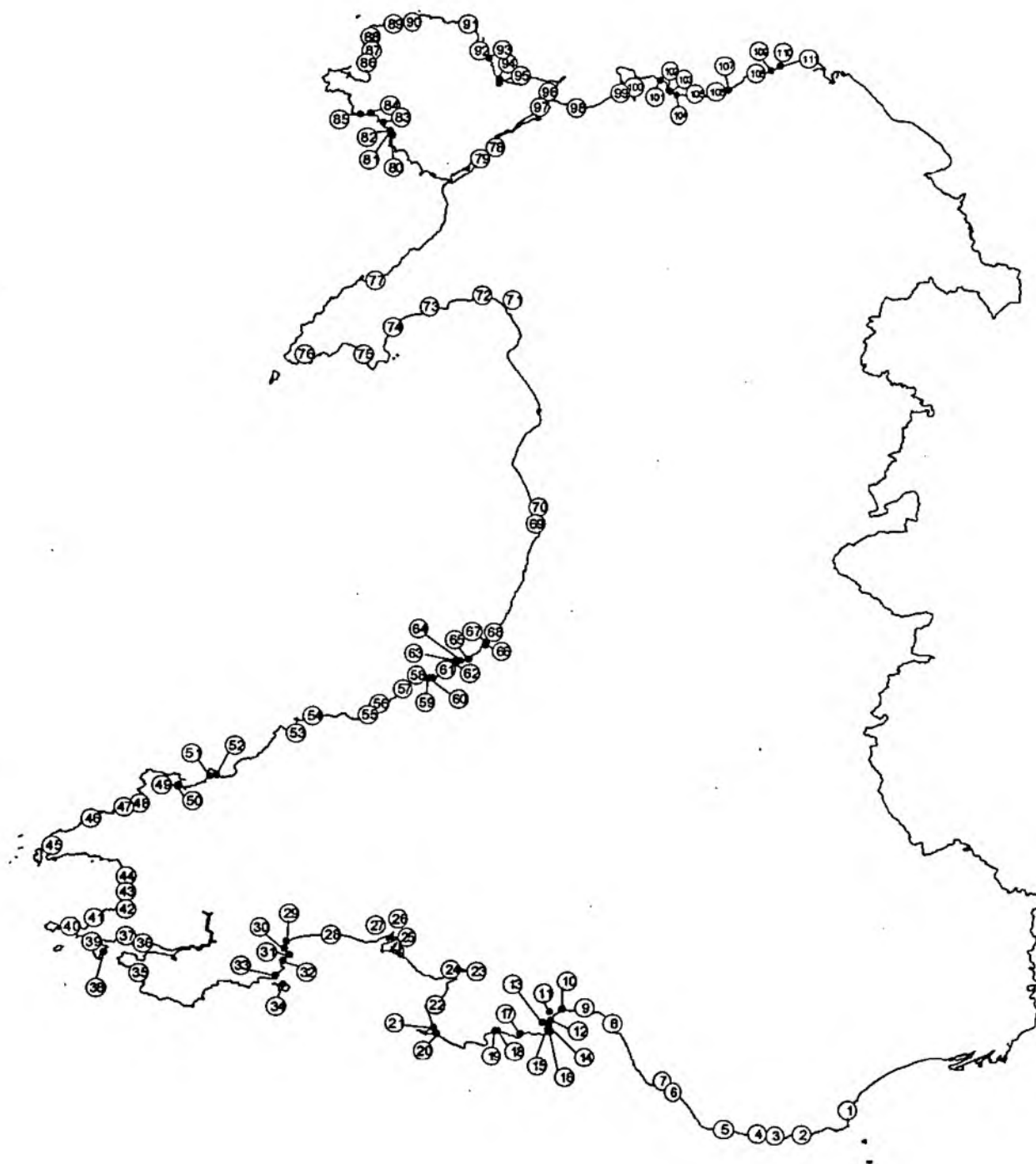
Further investigations are required to identify the sources of contamination in these drainage ditches and a method to assess the precise impact of the Tywyn Main Drain on the bathing water is under consideration.

## **9. UPDATE ON REASONS FOR FAILURE IN PREVIOUS YEARS**

During the 2000 bathing season there was only one Imperative Standard failure. This was at Llandanwg Central in the northern area of Wales. The failure was attributed to weather conditions exacerbating the primary settled sewage effluent from the outfall to the North of the beach, and causing it to impact on the compliance monitoring point. It was predicted that compliance with the EC Bathing Water Standards would continue to be variable at this beach until the Harlech /Llandanwg /Llanbedr improvement scheme planning appeal was resolved and the new regime completed.

Llandanwg Central passed the "I" standard this season, however the planning appeal was not resolved and DCWW are still awaiting the results of the appeal to the NAW. This bathing water therefore still remains at risk of failure.

Figure 1 - Location of Non EC Identified Bathing Water Sampling Sites in 2001  
(see table 1 for details of each bathing water)

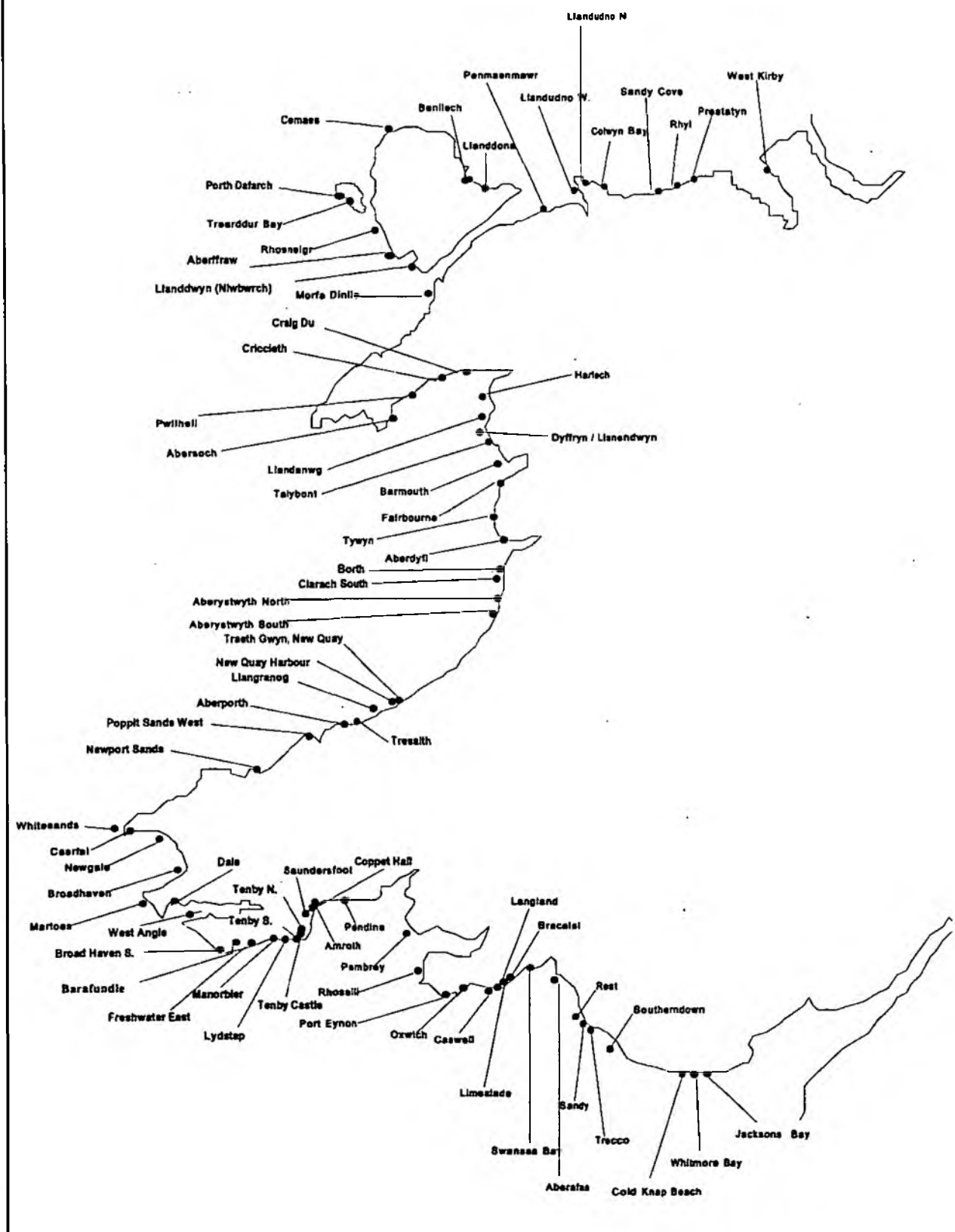




**Table 1. Non EC Identified Bathing waters sampled in 2001**

1 Penarth Yacht Club	57 Cwmtudu
2 Watchouse Bay	58 Newquay N
3 Pontygary Bay	59 Llanina
4 Limpert Bay	60 Little Quay (Cei Bach)
5 Llantwit Major Beach	61 Gilfach yr Halen
6 Ogmore-by-Sea	62 Aberaeron S
7 Newton Bay	63 Aberaeron N (4th Groyne)
8 Aberafan East	64 Aberaeron N of outfall
9 Jersey Marine West	65 Aberarth
10 Swansea Bay County Hall	66 Llanon
11 Swansea Bay Sketty Lane	67 Llansantffraid
12 Swansea Bay Black Pill	68 Llanrhystud S
13 West Cross	69 Ynyslas ũ Sea (North Groyne)
14 Norton Road	70 Ynyslas ũ Estuary (Twyni Bach)
15 Mumbles Knab Rock	71 Garreg Wen
16 Mumbles Head Pier	72 Criccieth West
17 Pwll Du	73 Morfa Aberech
18 Three Cliffs Bay	74 Llanbedrog
19 Torbay /Crawley Woods	75 Porth Neigwl
20 Mewslade East	76 Aberdaron
21 Rhossili Bay	77 Porth Nefyn
22 Broughton Beach	78 Port Dinorwic
23 Llanelli Beach	79 Menai Strait
24 Burry Port Beach	80 Porth Trecastell
25 St Ishmael	81 Porth Nobla, Llanfaelog
26 Llanstephen Beach	82 Porth Tyn Tywyn Llanfaelog
27 Ferryside Beach	83 Traeth Crigyll, Rhosneigr
28 Morfa Bychan (Pendine)	84 Silver Bay, Rhoscolyn
29 Wisemans Bridge	85 Borth Wen ũ Rhoscolyn
30 Glen Beach, Saundersfoot	86 Porth Tywyn Mawr, Sandy Beach
31 Monkstone Beach (Nr Tenby)	87 Porth Trwyn, Llanfaethlu
32 Waterwynch Bay	88 Church Bay / Porth Swtan
33 Penally	89 Cemlyn
34 Priory Bay, Caldy Island	90 Traeth Bach, Cemaes Bay
35 Freshwater West	91 Porth Eilian, Amlwch
36 Gelliswick	92 Traeth Llugwy, Dulas
37 Sandy Haven	93 Moelfre
38 Watwick	94 St. Davids, Red Wharf Bay
39 Westdale	95 Red Wharf Bay
40 Martins Haven	96 Lleiniog Beach Penmon
41 St. Brides Haven	97 Beaumaris
42 Little Haven	98 Llanfairfechan Shore R
43 Druidston Haven	99 Morfa Conwy
44 Nolton Haven	100 Deganwy N Shelter
45 Porthselau, Nr. Whiresands	101 Penrhyn Bay
46 Abereiddy	102 Penrhos Col. Rhos on Sea
47 Abercastle	103 Colwyn Bay
48 Abermawr	104 Old Colwyn
49 Goodwick Harbour	105 Llandulas
50 Goodwick Sands	106 Abergele
51 Pwll Gwaelod	107 Towyn
52 Cwm yr Eglwys	108 Splash point (Rhyl)
53 Patch	109 Ffrith Beach, Prestatyn
54 Mwnt at Aberporth	110 Barkby Beach (Prestatyn)
55 Penbryn	111 Talacre/Gronant (Point of Ayre)
56 Cil Borth	

Figure 2 - Location of Identified Bathing Water Sampling Sites in 2001



**Table 2. Compliance of Identified Bathing Waters with "I" & "G" Values in 2001 for Total Coliforms, Faecal Coliforms and Faecal Streps and results for Salmonella & Viruses**

(G= Guideline and Imperative pass; I=Imperative pass; F= Imperative fail)

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No Fail "I"	No Fail "G"	Compliance	No. Samples	No Fail "G"	Compliance		No. Samples	No. +ve results	No. Samples	Min Value	Max Value
Jacksons Bay	20	0	4	G	20	0	7	I	20	3	F	I	0		0		
Whitmore Bay Central	20	0	3	G	20	0	7	I	20	4	F	I	0		0		
Cold Knap*	19	0	3	G	19	0	4	I	19	3	F	I	0		0		
Southerndown	20	0	6	I	20	0	10	I	20	0	G	I	0		0		
Trecco Bay	20	0	2	G	20	0	5	I	20	1	G	I	0		0		
Sandy Bay	20	0	2	G	20	0	5	I	20	0	G	I	0		0		
Rest Bay	20	0	0	G	20	0	2	G	20	0	G	G	0		0		
Aberafan Slip	20	0	2	G	20	1	6	I	20	3	F	I	0		0		
Swansea Bay	20	0	3	G	20	0	8	I	20	6	F	I	0		0		
Bracelet Bay	20	0	0	G	20	0	2	G	20	1	G	G	0		0		
Limeslade	20	0	1	G	20	0	5	I	20	3	F	I	0		0		
Langland West	20	0	0	G	20	0	2	G	20	0	G	G	0		0		
Caswell Central	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Oxwich West	20	0	0	G	20	0	0	G	20	1	G	G	0		0		
Port Eynon West	20	0	1	G	20	0	1	G	20	1	G	G	0		0		
Rhossili at Hillend	20	0	0	G	20	0	1	G	20	0	G	G	0		0		
Pembrey	20	0	0	G	20	0	1	G	20	1	G	G	0		0		
Pendine East	20	0	0	G	20	0	3	G	20	0	G	G	0		0		
Amroth Central	20	0	0	G	20	0	1	G	20	0	G	G	0		0		
Coppet Hall	20	0	2	G	20	0	3	G	20	0	G	G	0		0		
Saundersfoot	20	0	1	G	20	0	1	G	20	1	G	G	0		0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance		No. Samples	No. +ve results	No. Samples	Min Value	Max Value
Tenby North	20	0	0	G	20	0	1	G	20	0	G	G	0		0		
Castle Beach Tenby	20	0	0	G	20	0	1	G	20	0	G	G	0		0		
Tenby South	20	0	0	G	20	0	3	G	20	0	G	G	0		0		
Lydstep North Beach	20	0	2	G	20	0	3	G	20	0	G	G	0		0		
Manorbrier Beach	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Freshwater East	20	0	0	G	20	0	3	G	20	1	G	G	0		0		
Barafundle	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Broadhaven South	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
West Angle	20	0	0	G	20	0	2	G	20	0	G	G	0		0		
Dale	20	0	1	G	20	0	3	G	20	1	G	G	0		0		
Marloes Sands	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Broadhaven Central	20	0	1	G	20	0	3	G	20	2	G	G	0		0		
Newgale Central	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Caerfai Bay	20	0	1	G	20	0	0	G	20	1	G	G	0		0		
Whitesands Central	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
Newport North	20	0	3	G	20	0	5	I	20	1	G	I	0		0		
Poppit West	20	0	2	G	20	1	4	G	20	2	G	G	0		0		
Aberporth	20	0	0	G	20	0	1	G	20	0	G	G	0		0		
Tresaith	20	0	0	G	20	0	2	G	20	0	G	G	0		0		
Centre of Llangrannog Bay	20	0	6	I	20	1	16	I	20	5	F	I	0		0		
Newquay Harbour	20	0	0	G	20	0	0	G	20	0	G	G	0		0		
New Quay	20	0	3	G	20	0	4	G	20	2	G	G	0		0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No Fail "I"	No Fail "G"	Compliance	No. Samples	No Fail "G"	Compliance		No. Samples	No. +ve results	No. Samples	Min Value	Max Value
Aberystwyth South	22	0	7 I		22	0	8 I		22	2 G	I		0		0		
Aberystwyth North	20	0	3 G		20	0	9 I		20	3 F	I		0		0		
Borth	20	0	2 G		20	1	4 G		20	1 G	G		0		0		
Aberdyfi	20	0	4 G		20	0	11 I		20	6 F	I		0		0		
Clarach South	20	1	1 G		20	1	5 I		20	2 G	I		0		0		
Tywyn	20	0	5 I		20	2	8 F		20	3 F	F		2(b)	0	2(b)	<1	1
Fairbourne	20	1	3 G		20	0	6 I		20	1 G	I		0		0		
Barmouth	20	0	1 G		20	0	4 G		20	0 G	G		0		0		
Talybont	20	0	2 G		20	0	3 G		20	1 G	G		0		0		
Duffryn	20	0	0 G		20	0	2 G		20	0 G	G		0		0		
Llandanwg Central	20	0	9 I		20	1	11 I		20	1 G	I		2(a)	0	2(a)	<1	<1
Harlech North	20	0	4 G		20	0	5 I		20	2 G	I		2(c)	0	2(c)	1	3
Craig Du Beach Central	20	0	1 G		20	0	5 I		20	2 G	I		0		0		
Criccieth East	20	0	2 G		20	1	4 G		20	5 F	I		0		0		
Pwllheli	20	0	0 G		20	0	1 G		20	2 G	G		0		0		
Abersoch South	20	0	1 G		20	1	4 G		20	1 G	G		0		0		
Morfa Dinlle	20	0	0 G		20	0	1 G		20	0 G	G		0		0		
Llanddwyn	20	0	0 G		20	0	0 G		20	0 G	G		0		0		
Aberffraw	20	0	1 G		20	0	2 G		20	0 G	G		0		0		
Rhosneigr	20	0	0 G		20	0	0 G		20	0 G	G		0		0		
Trearddur Bay	20	0	1 G		20	0	1 G		20	2 G	G		0		0		
Porth Dafarch	20	0	1 G		20	0	4 G		20	1 G	G		2(c)	0	2(c)	<1	<1
Cemaes	20	0	6 I		20	1	7 I		20	5 F	I		0		0		
Benllech	20	0	5 I		20	0	9 I		20	2 G	I		0		0		
Llanddona	20	0	0 G		20	0	2 G		20	1 G	G		0		0		
Penmaenmawr	20	0	4 G		20	0	7 I		20	2 G	I		0		0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No Fail "I"	No Fail "G"	Compliance	No. Samples	No Fail "G"	Compliance		No. Samples	No. +ve results	No. Samples	Min Value	Max Value
Llandudno West	20	1	4	G	20	2	7	F	20	4	F	F	0		0		
Llandudno North	20	2	3	F	20	2	10	F	20	2	G	F	1(b)	0	1(b)	<1	<1
Colwyn Bay	20	0	6	I	20	0	15	I	20	6	F	I	0		0		
Sandy Cove	20	1	6	I	20	1	10	I	20	5	F	I	0		0		
Rhyl	20	3	12	F	20	5	15	F	20	9	F	F	2(b)	0	2(b)	<1	12
Prestatyn Central	20	1	5	I	20	2	11	F	20	4	F	F	0		0		
West Kirby	20	0	0	G	20	0	0	G	20	1	G	G	0		0		

Reasons for Virus and Salmonella Sampling

- (a) Non-compliant with "I" standards in 2000
- (b) Non-compliant with "I" standards in 2001
- (c) Sewage Debris Trigger
- (d) Area operational decision

\* Result calculated using reduced number of samples.

**Table 3.**                      **Summary of Identified Bathing Waters sampled between 1986 and 2001.**  
**Overall compliance with Imperative (I) standards for Faecal and Total Coliforms.**

Bathing Water	86	87	88	89	90	91	92#	93	94	95	96	97	98	99	00	01
Jacksons Bay	F	F	F	F	F	F	F	P	F	P	F	P	P	P	P	P
Whitmore Bay	F	F	F	F	F	P	F	P	F	P	P	P	P	P	P	P
Cold Knap	F	F	F	P	F	P	P	P	P	P	P	P	P	P	P	P*
Southerndown	F	P	F	P	P	P	P	P	P	P	P	F	P	P	P	P
Trecco Bay	F	F	P	F	P	P	P	P	P	P	P	P	P	P	P	P
Sandy Bay	F	F	F	P	F	P	P	P	P	P	P	P	P	P	P	P
Rest Bay	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Aberafan	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Swansea Bay	F	F	F	P	F	P	F	F	P	F	F	F	F	P	P	P
Bracelet Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Limeslade Bay	F	F	P	F	P	P	P	P	F	P	P	F	P	P	P	P
Langland Bay	F	P	P	F	P	P	P	F	P	P	P	P	P	P	P	P
Caswell Bay	P	F	P	P	P	P	F	P	P	P	P	P	P	P	P	P
Oxwich Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Port Eynon Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Rhossili	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Pembrey	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Pendine	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Amroth	F	F	P	P	P	P	P	P	P	P	P	F+	P	P	P	P
Coppet Hall															P	P
Saundersfoot	P	F	P	P	F	P	P	P	F	P	P	P+	P	P	P	P
Tenby North	P	F	F	P	P	P	P	P	P	P	P	P+	P	P	P	P
Tenby Castle														P	P	P
Tenby South	F	P	P	P	P	P	P	P	P	P	P	P+	P	P	P	P



Bathing Water	86	87	88	89	90	91	92#	93	94	95	96	97	98	99	00	01
Lydstep North												P	P	P	P	P
Manobier												P	P	P	P	P
Freshwater East														P	P	P
Barafundle															P	P
Broad Haven South												P	P	P	P	P
West Angle															P	P
Dale															P	P
Marloes												P	P	P	P	P
Broadhaven	F	P	P	P	P	P	P	P	F	P	P	P+	P	P	P	P
Newgale	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Caerfai												P+	P	P	P	P
Whitesands	P	P	P	P	P	P	P	P	P	P	P	P+	P	P	P	P
Newport North	P	P	P	P	P	P	P	F	F	P	P	P	P	P	P	P
Poppit Sands											P	P	F	P	P	P
Aberporth										P	P	P	P	P	P	P
Tresaith										P	P	P	P	P	P	P
Llangranog												P	P	P	P	P
New Quay Harbour													P	P	P	P
Traeth Gwyn New Quay	P	P	P	P	P	P	P	P	F	P	P	P	P	P	P	P
Aberystwyth South	F	F	P	P	F	P	F	F	F	P	P	P	P	P	P	P
Aberystwyth North	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Clarach South													P	P	P	P
Borth	P	P	P	P	P	P	P	P	P	F	P	P	P	P	P	P
Aberdyfi					F	P	F	F	P	F	F	P	P	P	P	P
Tywyn	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P	F
Fairbourne	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Barmouth	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

Bathing Water	86	87	88	89	90	91	92#	93	94	95	96	97	98	99	00	01
Talybont										P	P	P	P	P	P	P
Dyffryn/Llanendwyn										P	P	P	P	P	P	P
Llandanwg	P	P	P	P	P	P	P	P	P	P	P	P	P	P	F	P
Harlech	P	P	P	P	P	P	P	P	P	F	F	P	P	P	P	P
Craig Du Beach	F	F	P	P	P	P	F	P	F	P	P	P	P	P	P	P
Criccieth	P	F	P	P	F	P	F	P	F	P	P	P	F	P	P	P
Pwllheli	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Abersoch	P	P	F	P	P	P	P	P	P	P	P	P	F	P	P	P
Morfa Dinlle			P	P	P	P	P	P	P	P	P	P	P	P	P	P
Llanddwyn												P	P	P	P	P
Aberffraw															P	P
Rhosneigr					P	P	P	P	P	P	P	P	P	P	P	P
Trearddur Bay	F	F	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Porth Dafarch													P	P	P	P
Cemaes Bay													P	P	P	P
Benllech	P	F	P	P	F	F	P	P	P	P	P	P	P	P	P	P
Llanddona												P	P	P	P	P
Penmaenmawr										F	P	P	P	F	P	P
Llandudno West Shore	F	F	F	F	F	F	F	F	F	P	P	P	P	P	P	F
Llandudno North Shore	P	P	P	P	F	P	P	P	P	P	P	P	P	P	P	F
Colwyn Bay	P	P	P	P	P	P	P	F	P	P	P	P	P	P	P	P
Sandy Cove	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	P
Rhyl	F	F	F	F	F	F	F	F	P	F	P	P	P	P	P	F
Prestatyn	F	P	P	P	F	P	P	P	F	P	P	P	P	P	P	F
** West Kirby						F	F	F	P	F	F	P	P	P	P	P
Total No. Waters in Wales	47	47	48	48	50	51	50	50	50	55	56	64	68	70	75	75
Total No. Pass in Wales	23	28	37	40	35	45	39	42	38	49	52	60	64	69	74	70
% Pass in Wales	48.9	59.6	77.1	83.3	70.0	88.2	78.0	84.0	76.0	89.1	92.9	93.8	94.1	98.6	98.7	93.3

Bathing Water	86	87	88	89	90	91	92#	93	94	95	96	97	98	99	00	01
Total No. Waters in Wales and West Kirby	47	47	48	48	50	51	51	51	51	56	57	65	69	71	76	76
Total No. Pass in Wales and West Kirby	23	28	37	40	35	45	39	42	39	49	52	61	65	70	75	71
% Pass in Wales and West Kirby	48.9	59.6	77.1	83.3	70.0	88.2	76.5	82.4	76.5	87.5	91.2	93.8	94.2	98.6	98.7	93.4

# From 1992 all samples were subject to "confirmation" of analysis compared with previous years "presumptive" results

\*\*West Kirby is situated in England but falls within the Welsh Region of the Environment Agency, for operational purposes, but is not reported in Environment Agency Wales statistics.

\* Coldknap only sampled 19 times during the 2001 season. Compliance therefore calculated using a reduced number of samples.

**Table 4. Summary of Identified Bathing Waters sampled between 1990 and 2001.**  
**Overall compliance with Guideline (G) standards for Faecal Streptococci, Faecal and Total coliforms.**

Bathing Water	90	91	92#	93	94	95	96	97	98	99	00	01
Jacksons Bay	F	F	F	F	F	F	F	F	F	F	F	F
Whitmore Bay	F	F	F	F	F	F	F	F	F	F	F	F
Cold Knap	F	F	F	F	F	F	F	F	F	F	F	F
Southerndown	F	F	F	F	F	F	F	F	F	F	F	F
Trecco Bay	F	F	F	F	F	P	P	P	F	F	F	F
Sandy Bay	F	F	F	F	F	P	F	F	F	F	F	F
Rest Bay	F	F	F	P	F	F	P	P	P	P	P	P
Aberafan	F	F	F	F	F	F	F	F	F	F	F	F
Swansea Bay	F	F	F	F	F	F	F	F	F	F	F	F
Bracelet Bay	F	F	F	F	F	F	F	F	F	P	P	P
Limeslade Bay	F	F	F	F	F	F	F	F	F	P	F	F
Langland Bay	F	F	F	F	F	F	F	F	F	P	F	P
Caswell Bay	F	F	F	F	F	F	F	P	F	P	P	P
Oxwich Bay	F	P	P	P	P	P	P	P	P	P	P	P
Port Eynon Bay	P	P	P	P	P	P	P	P	P	P	P	P
Rhossili	P	P	P	P	P	P	P	P	P	P	P	P
Pembrey	P	P	P	P	F	P	P	F	F	P	P	P
Pendine	F	F	F	P	F	F	F	F	P	P	F	P
Amroth	F	F	P	F	F	P	F	F	P	P	F	P
Coppet Hall											F	P
Saundersfoot	F	F	F	F	F	F	F	F	P	F	F	P
Tenby North	F	P	P	F	F	P	P	P	P	F	F	P
Tenby Castle										P	P	P
Tenby South	F	F	F	F	F	F	F	P	P	P	P	P
Lydstep North								P	P	P	P	P
Manobier								P	P	P	P	P
Freshwater East										P	P	P
Barafundle											P	P
Broad Haven South								P	P	P	P	P
West Angle											P	P
Dale											P	P
Marloes								P	P	P	P	P
Broadhaven	F	F	P	F	F	P	P	F	F	F	F	P
Newgale	P	P	P	P	F	P	P	P	P	P	P	P
Caerfai								P	P	P	P	P
Whitesands	F	P	P	P	F	P	P	P	P	P	P	P
Newport North	F	F	P	F	F	F	F	F	F	P	F	F
Poppit Sands							F	F	F	P	P	P
Aberporth						P	F	F	F	P	P	P
Tresaith						F	F	P	F	P	P	P
Llangranog								F	F	F	F	F
New Quay Harbour									P	P	P	P
Traeth Gwyn New Quay	F	F	F	F	F	F	P	P	F	F	F	P
Aberystwyth South	F	F	F	F	F	F	P	P	F	F	F	F

Bathing Water	90	91	92#	93	94	95	96	97	98	99	00	01
Aberystwyth North	F	F	F	F	F	F	P	F	F	P	F	F
Clarach South									F	P	F	F
Borth	F*	F	P	F	P	F	F	F	F	P	F	P
Aberdyfi	F*	F	F	F	F	F	F	F	F	F	F	F
Tywyn	F*	F	F	F	F	F	P	F	F	F	F	F
Fairbourne	F*	F	F	F	P	F	P	P	F	P	F	F
Barmouth	F*	F	F	F	P	P	P	P	P	P	P	P
Talybont						P	P	P	P	F	P	P
Dyffryn/Llanendwyn						P	P	P	F	P	F	P
Llandanwg	F*	F	F	F	F	F	F	P	F	F	F	F
Harlech	F*	F	F	P	F	F	F	P	F	P	F	F
Craig Du Beach Central	F*	F	F	F	F	F	P	P	F	P	F	F
Criccieth	F*	F	F	F	F	F	F	F	F	F	F	F
Pwllheli	P*	P	F	P	P	P	P	P	P	P	F	P
Abersoch	F*	F	F	F	F	P	F	P	F	F	F	P
Morfa Dinlle	F*	P	P	P	P	P	P	P	P	P	P	P
Llanddwyn								P	P	P	P	P
Aberffraw											F	P
Rhosneigr	P*	P	P	P	P	P	P	P	P	P	P	P
Trearddur Bay	F*	F	F	F	P	P	F	F	P	F	F	P
Porth Dafarch									P	F	F	P
Cemaes Bay									F	F	F	F
Benllech	F*	F	F	F	F	F	F	F	F	F	F	F
Llanddona								P	F	P	P	P
Penmaenmawr						F	F	F	F	F	P	F
Llandudno West Shore	F*	F	F	F	F	F	F	F	F	F	F	F
Llandudno North Shore	F*	F	F	F	F	P	F	F	F	F	F	F
Colwyn Bay	F*	F	F	F	F	F	F	F	F	F	F	F
Sandy Cove	F*	F	F	F	F	F	P	F	F	F	P	F
Rhyl	F*	F	F	F	F	F	F	F	F	F	F	F
Prestatyn	F*	F	F	F	F	F	F	F	F	F	F	F
** West Kirby		F	F	F	F	F	F	F	P	F	P	P
Total No. Waters in Wales	50	50	50	50	50	55	56	64	68	70	75	75
Total No. pass in Wales	6	9	13	11	10	21	23	31	25	39	32	45
% Pass in Wales	12.0	18.0	26.0	22.0	20.0	38.2	41.1	48.4	36.8	55.7	42.7	60
Total No. in Wales & West Kirby	50	51	51	51	51	56	57	65	69	71	76	76
Total No. pass in Wales & West Kirby	6	9	13	11	10	21	23	31	26	39	33	46
% Pass in Wales & West Kirby	12.0	17.6	25.5	21.6	19.6	37.5	40.4	47.7	37.7	54.9	43.4	60.6

# From 1992 all samples were subject to "confirmation" of analysis compared with previous years "presumptive" results

\*\* West Kirby is situated in England but falls within the Welsh Region of the Environment Agency, for operational purposes, but is not reported in Environment Agency Wales statistics.

\* Compliance against "G" value for total and faecal coliforms only, streptococci results deleted due to AQC protocol problems.

**Table 5. Compliance of Non-Identified Bathing Waters with "I" and "G" Values in 2001**  
**(G=Guideline and Imperative pass; I=Imperative pass; F= Imperative fail)**

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
1	Penarth Yacht Club	20	0	16	I	20	1	19	I	20	16	P	I
2	Watchouse Bay	20	0	4	G	20	0	8	I	20	7	F	I
3	Fontygary Bay	20	0	0	G	20	0	1	G	20	0	G	G
4	Limpert Bay	20	0	2	G	20	0	7	I	20	0	G	I
5	Llantwit Major Beach	20	0	2	G	20	0	5	I	20	4	F	I
6	Ogmore Central	20	0	12	I	20	1	17	I	20	4	F	I
7	Newton Bay	20	0	5	I	20	1	11	I	20	8	F	I
8	Aberafan East	20	0	5	I	20	2	6	F	20	3	F	F
9	Jersey Marine West	20	0	6	I	20	2	11	F	20	8	F	F
10	Swansea Bay County Hall	21	0	6	I	21	0	8	I	21	1	G	I
11	Swansea Bay Sketty Lane	21	0	3	G	21	0	13	I	21	3	F	I
12	Swansea Bay Black Pill	21	0	8	I	21	1	15	I	21	6	F	I
13	Swansea Bay West Cross	21	3	10	F	21	4	12	F	21	7	F	F
14	Swansea Bay opposite Norton Road	21	0	5	I	21	0	6	I	21	3	F	I
15	Mumbles Knab Rock	21	0	2	G	21	0	2	G	21	0	G	G
16	Mumbles Head Pier	21	0	1	G	21	0	5	I	21	1	G	I
17	Pwlldu	21	0	1	G	21	0	2	G	21	0	G	G

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
18	Three Cliffs Bay West	21	0	0	G	21	0	1	G	21	0	G	G
19	Torbay, Crawley Woods	21	0	0	G	21	0	0	G	21	0	G	G
20	Mewslade Bay East	16 <sup>▲</sup>	0	2	G	16 <sup>▲</sup>	0	3	G	16 <sup>▲</sup>	0	G	G <sup>▲</sup>
21	Rhossili	21	0	2	G	21	1	3	G	21	0	G	G
22	Broughton Beach	21	1	4	G	21	1	7	I	21	1	G	I
23	Llanelli Beach	20	0	11	I	20	2	13	F	20	7	F	F
24	Burry Port Beach	20	0	3	G	20	0	8	I	20	2	G	I
25	St Ishmael	20	0	8	I	20	1	11	I	20	4	F	I
26	Llanstephen Beach	20	0	8	I	20	2	12	F	20	4	F	F
27	Ferryside Beach	20	0	9	I	20	1	13	I	20	5	F	I
28	Morfa Bychan (Pendine)	20	0	5	I	20	3	11	F	20	6	F	F
29	Wisemans Bridge	20	0	0	G	20	0	3	G	20	5	F	I
30	Glen Beach	20	0	1	G	20	0	4	G	20	2	G	G
31	Monkstone Beach	20	0	0	G	20	0	0	G	20	2	G	G
32	Waterwynch Bay	20	0	1	G	20	0	3	G	20	1	G	G
33	Penally	20	1	2	G	20	1	3	G	20	2	G	G
34	Priory Bay, Caldy Island	20	0	0	G	20	0	5	I	20	0	G	I
35	Freshwater West	20	0	0	G	20	0	0	G	20	0	G	G
36	Gelliswick	20	0	6	I	20	2	7	F	20	3	F	F
37	Sandy Haven	20	0	0	G	20	0	3	G	20	2	G	G



	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
38	Watwick	20	0	0	G	20	0	0	G	20	0	G	G
39	West Dale	20	0	0	G	20	0	0	G	20	0	G	G
40	Martins Haven	20	0	0	G	20	0	0	G	20	0	G	G
41	St. Brides Haven	20	0	4	G	20	0	6	I	20	3	F	I
42	Little Haven	20	0	3	G	20	1	4	G	20	5	F	I
43	Druidston Haven	20	0	1	G	20	0	4	G	20	3	F	I
44	Nolton Haven	20	0	3	G	20	0	5	I	20	4	F	I
45	Porthselau	20	0	0	G	20	0	1	G	20	0	G	G
46	Abereiddy	20	0	1	G	20	0	1	G	20	1	G	G
47	Abercastle	20	1	4	G	20	3	11	F	20	3	F	F
48	Abermawr	20	0	0	G	20	0	1	G	20	0	G	G
49	Goodwick Harbour	20	0	1	G	20	0	3	G	20	0	G	G
50	Goodwick Sands	20	0	0	G	20	0	5	I	20	1	G	I
51	Pwll Gwaelod	20	0	6	I	20	0	14	I	20	3	F	I
52	Cwm yr Eglwys	20	0	2	G	20	0	7	I	20	2	G	I
53	Patch	20	1	7	I	20	2	11	F	20	2	F	F
54	Mwnt at Aberporth	20	0	2	G	20	0	6	I	20	2	G	I
55	Penbryn	20	0	1	G	20	0	5	I	20	2	G	I
56	Cil Borth	20	0	2	G	20	0	7	I	20	1	G	I
57	Cwmtudu	20	1	6	I	20	2	10	F	20	5	F	F

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
58	Newquay N	20	0	8	I	20	1	14	I	20	5	F	I
59	Llanina	20	0	4	G	20	4	12	F	20	6	F	F
60	Little Quay (Cei Bach)	20	1	7	I	20	2	11	F	20	5	F	F
61	Gilfach yr Halen	20	1	7	I	20	2	13	F	20	6	F	F
62	Aberaeron S	20	0	2	G	20	1	4	G	20	2	G	G
63	Aberaeron N 4th Groyne	20	0	4	G	20	1	7	I	20	3	F	I
64	Aberaeron N of outfall	20	0	2	G	20	1	7	I	20	2	G	I
65	Aberarth	20	0	3	G	20	0	7	I	20	6	F	I
66	Llanon	20	0	6	I	20	1	12	I	20	8	F	I
67	Llansantffraid	20	I	5	I	20	1	8	I	20	5	F	I
68	Llanrhystud S	20	0	1	G	20	0	3	G	20	1	G	G
69	Ynyslas	20	0	1	G	20	0	7	I	20	3	F	I
70	Ynyslas Estuary	20	0	8	I	20	3	11	F	20	5	F	F
71	Garreg Wen	20	5	17	F	20	5	17	F	20	9	F	F
72	Criccieth West	20	0	2	G	20	1	6	I	20	3	F	I
73	Morfa Aberech	20	0	0	G	20	0	0	G	20	1	G	G
74	Llanbedrog	20	0	2	G	20	0	6	I	20	2	G	I
75	Porth Neigwl	20	0	1	G	20	0	2	G	20	1	G	G
76	Aberdaron	20	0	4	G	20	0	9	I	20	2	G	I
77	Porth Nefyn	20	0	4	G	20	0	5	I	20	4	F	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "T"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
78	Port Dinorwic	20	0	6	I	20	0	6	I	20	3	F	I
79	Plas Menai	20	0	9	I	20	2	12	F	20	5	F	F
80	Porth Trecaſtell	19	0	0	G	19	0	1	G	19	1	G	G
81	Porth Nobla, Llanfaelog	20	0	0	G	20	0	0	G	20	0	G	G
82	Porth Tyn Tywyn Llanfaelog	20	0	1	G	20	0	3	G	20	2	G	G
83	Traeth Crigyll, Rhosneigr	20	0	2	G	20	0	6	I	20	2	G	I
84	Silver Bay, Rhoscolyn	20	0	0	G	20	0	1	G	20	2	G	G
85	Borth Wen, Rhoscolyn	20	0	0	G	20	0	0	G	20	0	G	G
86	Porth Tywyn Mawr, Sandy Beach	20	0	0	G	20	0	2	G	20	1	G	G
87	Porth Trwyn	20	0	2	G	20	1	6	I	20	3	F	I
88	Church Bay	20	0	0	G	20	0	2	G	20	0	G	G
89	Cemlyn	20	0	0	G	20	0	2	G	20	1	G	G
90	Traeth Bach, Cemaes Bay	20	1	4	G	20	1	9	I	20	10	F	I
91	Porth Eilian, Amlwch	20	0	4	G	20	1	7	I	20	6	F	I
92	Traeth Llugwy	20	0	1	G	20	0	4	G	20	2	G	G
93	Moelfre	20	0	2	G	20	0	6	I	20	0	G	I
94	St. Davids, Benllech	20	0	2	G	20	0	3	G	20	3	F	I
95	Red Wharf Bay	20	0	2	G	20	1	5	I	20	4	F	I
96	Lleiniog	20	1	1	G	20	1	5	I	20	1	G	I
97	Beaumaris	20	0	1	G	20	0	4	G	20	3	F	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
98	Port Dinorwic	20	0	6	I	20	0	6	I	20	3	F	I
99	Plas Menai	20	0	9	I	20	2	12	F	20	5	F	F
100	Llanfairfechan	20	0	2	G	20	0	5	I	20	1	G	I
101	Morfa Conwy	20	0	3	G	20	0	5	I	20	0	G	I
102	Deganwy N Shelter	20	0	2	G	20	1	7	I	20	2	G	I
103	Penrhyn Bay	20	0	3	G	20	0	7	I	20	4	F	I
104	Colwyn Bay, Caley Promenade	20	0	3	G	20	1	8	I	20	2	G	I
105	Colwyn Bay, Marine Road	20	0	4	G	20	1	9	I	20	4	F	I
106	Old Colwyn	20	0	2	G	20	0	8	I	20	4	F	I
107	Llanddulas	20	0	1	G	20	0	2	G	20	4	F	I
108	Abergele	20	1	8	I	20	1	12	I	20	4	F	I
109	Towyn	20	0	2	G	20	0	5	I	20	1	G	I
110	Rhyl Splash Point	20	0	4	G	20	0	12	I	20	3	F	I
111	Ffrith Beach, Prestatyn	20	0	1	G	20	0	5	I	20	0	G	I
112	Prestatyn Barkby Beach	20	0	0	G	20	0	6	I	20	2	G	I
113	Gronant / Talacre	20	0	3	G	20	0	12	I	20	1	G	I

^ Compliance calculated using a reduced number of samples as a consequence of restricted access due to Foot and Mouth.

**Table 6. Summary of Non-Identified Bathing waters sampled between 1986 and 2001.  
Overall Compliance with Imperative (I) standard for Faecal and Total Coliforms**

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
<i>Vale of Glamorgan County Borough Council</i>																
Penarth Yacht Club (19029)	F	F		F	F		F	F	F	F	F	F	P	F	F	P
St Marys Well Bay (19032)	F	F		F	F	F	F	P	F	F	P					
Bendricks Beach (19076)						F			F	F	F	P	P	F	P	*
Whitmore Bay (19033)						P										
Whitmore Bay (19035)						P										
Little Island (19056)						P	P	P								
Watchouse Bay (68603)	F	F		F	F	P	P	P	F	P	P	P	P	P	F	P
Fontygary Bay (19038)	F	P		P	P	F	P	P	P	P	P	P	P	F	P	P
Limpert Bay (19147)							P		P	P	P	P	P	P	P	P
Llantwit Major Beach (74050)	P	P		P	P	F	P	P	P	F	P	P	P	P	P	P
Ogmore by Sea (19042)	F	F														
Ogmore by Sea (19043)	F	F	F	F	F	F	P									P
Ogmore by Sea (19044)	F	F														
<i>Bridgend County Borough Council</i>																
Newton Bay (19112)						F			F	P	P	P	P	P	P	P
<i>Neath and Port Talbot County Borough Council</i>																
Aberafan East (19050)			F	P	P	P	P		P	P	P	P	F	P	P	F
Aberafan West (19052)			P	P	F	P	P	P								
Margam Sands (19131)	P	F														
Margam Sands (19135)	P	P	F	P	F	P	P									
Margam Sands (74004)	P	F														
Jersey Marine East (74026)	F	F		P			P	P	F	P	P	P	P			
Jersey Marine Central (39153)	F	F	F	P	P	P	P	P	F	P	P	P	F			
Jersey Marine West (39097)	F	F		F			F	P	F	P	P	P	P	F	P	F
<i>Swansea County Council</i>																
Swansea Bay (39098)				P												
Swansea Bay County Hall (74060)								P	P	P	F	F	F	P	P	P

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Swansea Bay (39100)				F												
Swansea Bay Sketty Lane (39154)									F	F	F	F	F	P	F	P
Swansea Bay Black Pill (39101)				P		P	P	P	F	P	F	F	F	P	F	P
Swansea Bay West Cross(74005)														F	F	F
Swansea Bay opposite Norton Road (39102)				F					P	P				F	F	P
Mumbles Knab Rock (39103)				F		F	P	P	P	P	P	F	P	P	F	P
Mumbles Head Pier (39104)				F		F	P	F	P	F	P	F	P	P	F	P
Langland Bay E (39107)						P	P									
Brandy Cove (39170)						P					F	P	P	P		
Pwlldu (39114)											P		P	P	P	P
Three Cliffs Bay West (39117)								P			P	P	F	P	P	P
Torbay, Crawley Woods (74062)						P								P	P	P
Mewslade Bay East (39128)														P	P	P <sup>A</sup>
Fall Bay (74096)							P							P		
Rhossili Bay (39161)														P	P	P
Broughton Beach (74025)		P		P	P	P	P	P	F	P	P	P	F	P	F	P
<b><i>Carmarthenshire County Council</i></b>																
Llanelli Beach (39001)	F	F	F	F	F	F	F	F	F	F	F	P	P	P	P	F
Llanelli (39002)	F	F														
Burry Port Beach(39003)	F	P	F	P	P	P	P	P	F	F	F	P	P	P	P	P
St Ishmael (88503)	F								F	F	F	P	P	P	F	P
St Ishmael (88502)	F															
Llanstephen Beach (39008)	F						F		F	P	F	P	F	F	F	F
Ferryside Beach (39007)											F	F	F	P	F	P
Pendine West (39011)			P	P	P	P	P									
Morfa Bychan (88501)	F	P										F	P	P	F	F
<b><i>Pembrokeshire County Council</i></b>																
Amroth E (39012)			P	P	P	P	P									
Amroth W (39014)			P	P	P	P										
Wisemans Bridge (32797)								P	P	P	P	F	P	P	F	P
Coppett Hall Beach (32421)						F		P	F	F	P	P	P	P		
Saundersfoot E (39016)			P	P	F	F	P									
Glen Beach (83777)															P	P
Saundersfoot Slip (39018)			F	F												
Saundersfoot W (39019)			F	P	P	P	P									

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Monkstone Beach (39574)												P	P	P	P	P
Tenby N Lifeboat (39021)			P	P	P	P	P									
Tenby S St.Catherines (39022)			P	P	P	P	P				P	P	P			
Tenby S Atlantic Hotel (39023)			P	P	P	P	P									
Penally (83617)														P	P	P
Waterwynch Bay (83616)														P	P	P
Priory Bay, Caldey (39573)												P	P	P	F	P
Tenby S Opp Kiln Park (39025)			P	P	P	P	P									
Lydstep N Beach (39026)						P	P	P	P	P	P					
Skrinkle (39423)							P	P	P	P	P	P				
Manorbier Beach (39027)	P			F	F		P	P	P	P	P					
Manorbier (39028)	P			P	P	P	P									
Swanlake Bay (83776)															P	*
Freshwater East (86210)	P															
Freshwater East (39029)	P			P	P		P		P	P	P	P	P			
Freshwater East (39030)	P			P	P	P	P	P								
Barafundle (39136)							P	P	P	P	P	P	P	P		
Broad Haven South (32422)						P	P	P	P	P	P					
Freshwater West (39031)								P	P	P	P	P	P	P	P	P
West Angle (39032)			P		P			P	P	P	P	P	P	P		
Llanreath Bay (86106)			F		P	P										
Neyland Slip (85110)			F			F										
Milford Beach (39191)						P										
Gelliswick (39037)	P		F		P	F	P	P	P	P	P	F	P	P	P	F
Sandy Haven (39192)						P					P	P	P	P	P	P
Lindsway Bay (St Ishmaels) (39572)												P				
Dale (39040)		P	P		P	P	P	P	P	P	P	P	P	P		
Watwick (39634)													P	P	P	P
West Dale (39571)												P	P	P	P	P
Marloes (39139)						P										
Marloes (32788)								P	P	P	P					
Martins Haven (39041)									P		P	P	P	P	P	P
Musselwick (39140)						P										
St. Brides Haven (39042)						P				P	P	P	P	P	P	P
Little Haven (39043)		P			P		P		F	P	P	F	P	P	P	P



Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Druidston Haven (39141)							P							P	P	P
Nolton Haven (39046)	F						P	P	F	P	P	F	P	P	F	P
Newgale S (39047)			P	P	P	P										
Newgale N (39049)			P	P	F	P										
Solva (39050)	F						P									
Caerfai (39142)		P				P	P	P	P	P	P					
Porthclais (32686)							F				P	F				
Porthselau (83778)															P	P
Abereiddy (39053)		P				P	P	P	P	P	P	P	P	P	P	P
Traethllyn (39143)											P	P	P	P	P	*
Traethllyn (32789)								P								
Porthgain (32685)							P									
Trevine (39055)	F															
Abercastle (39056)							P				F	P			P	F
Abermawr (39144)											P	P		P	P	P
Goodwick (84004)	P	P														
Goodwick Harbour (39058)	P	F		P	P	P	P	P	P	P	P	P	P	P	P	P
Goodwick Beach (39059)	P	P		P	P	P	P	P	F	P	F	P	P			
Goodwick Sands (83613)														P	P	P
Fishguard (39060)	F	F					P									
Pwll Gwaelod (32790)								P	F	P	F	F	F	P	F	P
Cwm yr Eglwys (32791)								P	P	F	P	P	P	P	P	P
Newport Parrog Beach (39063)											F	F				
Newport Sands South (39064)			P	P	P	P	P	P	P	P	P	P	P			
Poppit Sands West (39067)	F	F		P	P	P	P	P	P	P						
Poppit Sands East (39068)	P	F		P	P	P	P	P	P	P	P					
Ceibwr (39066)												P				
St Dogmaels Slipway (39341)												F				
<b>Ceredigion County Council</b>																
Patch (32424)						F	F	F	F	F	P	F	F	P	F	F
Gwbert (83515)		F	F			F	F	P	F	F	F	P				
Gwbert (39070)		F														
Mwnt at Aberporth (32425)						P	P	P	P	P	P	P	P	P	P	P
Aberporth (39072)	F	F	F		F	F	F	P	F							
Aberporth E (83502)	P	P	F		F	F	P	P	F		P	P	P			

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Tresaith (39073)	F	F		P	F	P	P	P	P							
Penbryn (39147)				P		F	P	P	P	P	P	F	P	P		P
Llangranog (39075)	F	F	F	F	F	F	P	P	F	P	P					
Cil Borth (32851)								P	P	P	P	P	P	P	P	P
Cwmtudu (32426)							P	P	P	P	P	P	P	P	P	F
Newquay N (39077)						P	F	P	P	P	P	P	P	P	P	P
Newquay S (39079)			P	P	P	P	P	P	P	P	P	P				
Llanina (39146)				P	F	P	P	P	P	F	P	P	F	F	P	F
Little Quay (Cei Bach) (39081)	P		P	P	P	P	P	P	F	F	F	P	P	P	P	F
Gilfach yr Halen (32427)						P	P	P	F	P	P	P	P	F	P	F
Aberaeron S (39082)	P				P	P	P	P	F	P	P	P	P	P	P	P
Aberaeron N 4th Groyne (39083)					F	P	F	P	F	P	P	F	P	P	P	P
Aberaeron N (39084)	P									F	F					
Aberaeron N of outfall (N of Groynes) (39427)					F	F	P	P	F	P	F	P	P	F	P	P
Aberaeron Harbour (39426)							F									
Aberarth (32428)						P	P	P	P	P	P	P	P	P	P	P
Llanon (32429)						P	P	P	P	P	F	P	P	P	P	P
Llansantffraid (32430)						P	P	P	P	P	F	P	P	P	P	P
Llanrhystud S (39087)						P	P	P	P	P	P	P	P	P	P	P
Morfa Bychan Slipway (32431)						P	P	P	P	P	P					
Tanybwch (32432)						P	P	P	F	P	P					
Aberystwyth Slip (82103)			F	F		F	F	F	F							
Clarach Bay S (39095)	F	P	F	F	F	F	F	F	F	P						
Aberystwyth S (39090)			F	F	F	F	F									
Clarach Bay N (39096)	F					F	F	F	F	P	P	P				
Ynyslas North Groyne (20022)					P	P	P		P	P	P	P	P	P	P	P
Ynyslas Twini Bach (20399)					F	P	P		P	F	P	F	F	P	F	F
<b>Gwynedd County Borough Council</b>																
Aberdyfi (20170)	F	F	F	P	F	F	F									
Aberdyfi (20172)	F	F	F	P	F	F	P									
Aberdyfi (20171)	F	F	F	P												
Llwyngwrl (20189)				F	F	F	F									
Barmouth (20181)				F	P	P	P									
Llanaber (20025)	P		P			P	P									
Talybont (20026)	P				P		P	P								

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Llanendwyn (20027)		P			P	P		P								
Black Rock Sands (22540)			P		P	P	P	P								
Garreg Wen (23253)	P	F	F		P	F	F	F	F	F	F	F	F	F	F	F
Criccieth West (23141)							P		F	P	P	F	F	P	F	P
Criccieth (22541)			F	F	F	F	F									
Afon Wen (22543)	F	F	F													
Pen y chain (22544)	P	F	F		P		P									
Morfa Abererch (22545)		P	P		P		P		P	P	P	P	P	P	P	P
Pwllheli (22546)			F		P	P	P									
Traeth Crugen (22548)		P	P		P		P									
Llanbedrog (22549)	F	F	F	P	F	F	P		P	P	P	P	P	P	F	P
Abersoch (22550)			F	P	P	P	P									
Abersoch (23346)						P										
Abersoch (22586)							P									
Machroes (20335)						P										
Porth Ceiriad (20334)						P										
Porth Neigwl (23331)					P	P										
Porth Neigwl (25437)							P		P	P	P	P	P	P	P	P
Aberdaron (22553)	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P
Porth Oer (22555)	F				P	P	P									
Porth Iago (22556)	P				P	P	P									
Porth Colman (22557)	P				P	P	P									
Porth Tywyn (22558)			P		P	P	P									
Porth Dinllaen (22559)	F	P	F	P	F	P	P	P								
Porth Nefyn (22560)	F	P	P	P	P	P	P		P	P	P	P	P	P	P	P
Trefor (22561)	P	P	P		P		P									
Aberdesach (22562)	P	P			P		P									
Pontllynfi (22563)			P			P										
Morfa Dinlle (22564)	P	P														
Dinas Dinlle (23244)	P	P	P		P	P	F									
Plas Menai (23290)				P	P	P	P		P	P	P	F	F	P	P	F
Port Dinorwic (23252)	F	F			F	F	F		P	P	F	P	P	P	P	P
<b>Anglesey County Council</b>																
Llanddwyn (Niwbwrch) (27537)	F		P		P			P	P	P	P					
Malltraeth (27556)						P										

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Traeth Mawr, Aberffraw (27538)	P		P	P			P				P	P	P	P		
Porth Tre Castell (27539)	P												P	P	P	P
Porth Nobla, Llanfaelog (27540)	P										P	P	P	P	P	P
Porth Tyn Tywyn Llanfaelog (23476)													P	P	P	P
Rhosneigr (27536)	P	P	F	P												
Rhosneigr (27534)	P	F	F	P	P	P	F									
Traeth Crigyll Rhosneigr (23477)													P	P	P	P
Traeth Crigyll (27557)						P	P									
Silver Bay, Rhoscolyn (27541)					P						P	P	P	P	P	P
Borth Wen - Rhoscolyn (27542)					F			P	P	P	P	P	P	P	P	P
Porth y Garan (27787)	F				P											
Porth Gwr Mawr (27544)						F	F	F								
Porth Dafarch - Trearddur (27546)	P							P	P	P	P	P				
Holyhead Newry (27559)						P	P						P			
Penrhos (27817)	P				F	P										
Porth Tywyn Mawr, Sandy Beach (27547)					P					P	P	P	P	P	P	P
Porth Trefadog (23479)													F			
Porth Trwyn (23480)													P	P	P	P
Church Bay (27548)	P		P		P					P	P	P	P	P	P	P
Cemlyn (27531)													P	P	P	P
Cemaes (27529)	P	F		P	F	P		F			P	P				
Traeth Bach, Cemaes Bay (23481)													P	P	P	P
Bull Bay (27566)											F	P				
Porth Eilian, Amlwch (27549)							F				P	P	F	F	P	P
Traeth Llugwy (27528)	P		P	P	P						P	P	F	P	P	P
Moelfre (27561)							F				P	P	F	P	P	P
Traeth Bychan (27527)	P			P	F		P									
St. Davids, Benllech (23491)													P	P	P	P
Benllech (27827)			F	P	P	P	P									
Red Wharf Bay (27552)				F		F										
Red Wharf Bay (25806)															P	P
Llanddona (27562)	P			P	P	P		P	P	P	P					
Lleiniog (27564)													P	P	P	P
Beaumaris (27829)				F	F	F	F									
Beaumaris (27828)	P			F	P	P	F									

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Beaumaris (27757)											P	P	P	P	P	P
Pentraeth (23482)													F			
Menai Bridge Pier (27568)						F	P									
<b>Conwy County Borough Council</b>																
Llanfairfechan Shore Rd (23245)	P	F	F	P	P	P	P	F	P	P	P	P	F	P	P	P
Penmaenmawr (22996)							P									
Penmaenmawr (22995)	F				P	P	P	P	P							
Penmaenmawr (23006)	P			P	P	P	P									
Penmaenmawr (23005)	P			F	F	P	F									
Morfa Conwy (23246)	F	F	F		F			P	P	F	P	P	P	P	P	P
Conwy Morfa (25036)	F															
Deganwy N Shelter (25034)					F	F	F	F	P	P	F	P	P	P	F	P
Llandudno W (25033)					F	F	F									
Llandudno N (25026)						F	P									
Llandudno N (25185)							P									
Penrhyn Bay (25045)	F	F	F		F	F	F	F	F	F	F	F	F	P	F	P
Colwyn Bay, Rhos Abbey Hotel(25042)			P		F	P	P	P	P	P	P	P	P	P	P	
Colwyn Bay, Caley Promenade (25041)			F		P	F	P	F	P	P	P	P	P	P	P	P
Colwyn Bay, Marine Road (25020)									P	P	P	P	P	P	P	P
Old Colwyn (23492)													P	P	P	P
Llanddulas (3597)			F	P	P	P	F		P	P	P	F	F	P	P	P
Abergele (3600)							P									
Abergele (3601)	P	P	F	P	F	P	P		P	P	P	P	P	P	P	P
Towyn (25436)									P	P	P	P	P	P	F	P
Kinmel Bay (3605)			F	F		F	F									
<b>Denbighshire County Council</b>																
Rhyl Splash Point (3610)			F	P	F	F	F						P	P	F	P
Ffrith Beach, Prestatyn (3611)	P	F	F	P	F	F				P	P	P	P	P	P	P
Prestatyn Barkby (3614)			F		P	F	P						P	P	P	P
<b>Flintshire County Council</b>																
Gronant (25498)										P	P					
Gronant / Talacre (3617)		P		P	P	P	P		P	P	P	P	P	P	P	P
<b>Wirral County Council</b>																
Thurstaston Station Rd (3649)						F	F									
Caldycroft Drive (3648)						F	F									

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
W. Kirby (3647)						P	P									
Total Number Sampled in Wales	89	63	73	83	111	142	149	87	102	102	121	113	116	116	114	111
Number not Exceeding "I" standards in Wales	47	27	31	59	70	96	112	73	65	82	95	88	92	104	89	95
% Not Exceeding "I" standards in Wales	52.8	42.9	42.5	71.1	63.1	67.6	75.2	83.9	63.7	80.4	78.5	77.9	79.3	89.7	78.1	85.6
Total Number Sampled in Wales and Wirral	89	63	73	83	111	143	150	87	102	102	121	113	116	116	114	111
Number not Exceeding "I" standards in Wales and Wirral	47	27	31	59	70	97	113	73	65	82	95	88	92	104	89	95
% Not Exceeding "I" standards in Wales and Wirral	52.8	42.9	42.5	71.1	63.1	67.8	75.3	83.9	63.7	80.4	78.5	77.9	79.3	89.7	78.1	85.6

▲ Compliance calculated using a reduced number of samples as a consequence of restricted access due to Foot and Mouth

\* No Samples taken in 2001 season due to foot and mouth restrictions

P = ≤ 5% of samples with > 2001/100ml for Faecal Coliforms and ≤ 5% of samples > 10000/100ml Total Coliforms

F = > 5% of samples with > 2001/100ml for Faecal Coliforms and > 5% of samples > 10000/100ml Total Coliform

**Table 7. Summary of Non-Identified Bathing waters sampled between 1990 and 2001. Overall compliance with Guideline (G) standards for Faecal Coliforms, Total Coliforms and Faecal Streptococci.**

Bathing Water	90	91	92	93	94	95	96	97	98	99	00	01
<b>Vale of Glamorgan County Borough Council</b>												
Penarth Yacht Club (19029)	F		F	F	F	F	F	F	F	F	F	F
St Marys Well Bay (19032)	F	F	F	F	F	F	F					
Bendricks Beach (19076)		F			F	F	F	F	F	F	F	*
Whitmore Bay (19033)		F										
Whitmore Bay (19035)		F										
Little Island (19056)		F	F	F								
Watchouse Bay (68603)	F	F	F	F	F	F	F	F	F	F	F	F
Fontygary Bay (19038)	F	F	F	F	F	F	F	F	F	F	F	P
Limpert Bay (19147)			F		F	F	F	F	P	F	F	F
Llantwit Major Beach (74050)	F	F	F	F	F	F	F	F	F	P	F	F
Ogmore by Sea (19043)	F	F	F									F
<b>Bridgend County Borough Council</b>												
Newton Bay (19112)		F			F	F	F	F	F	F	F	F
<b>Neath and Port Talbot County Borough Council</b>												
Aberafan East (19050)	F	F	F		F	F	F	F	F	F	F	F
Aberafan West (19052)	F	F	F	F								
Margam Sands (19135)	F	F										
Jersey Marine East (74026)			F	F	F	F	F	F	F			
Jersey Marine Central (39153)	F	F	F	F	F	F	F	F	F			
Jersey Marine West (39097)			F	F	F	F	F	F	F	F	F	F
<b>Swansea County Council</b>												
Swansea Bay County Hall (74060)				F	F	F	F	F	F	F	F	F
Swansea Bay Sketty Lane (39154)					F	F	F	F	F	F	F	F
Swansea Bay Black Pill (39101)		F	F	F	F	F	F	F	F	F	F	F
West Cross Swansea Bay (74005)										F	F	F
Swansea Bay Opposite Norton Road (39102)					F	F				F	F	F
Mumbles Knab Rock (39103)		F	F	F	F	F	F	F	F	P	F	P
Mumbles Head Pier (39104)		F	F	F	F	F	F	F	F	F	F	F
Langland Bay E (39107)		F	F									
Brandy Cove (39170)		F					F	F	F	P		
Pwlldu (39114)							F		F	P	P	P
Three Cliffs Bay West (39117)				P			F	F	F	P	P	P
Torbay (74062)		P								P	P	P
Mewslade Bay East (39128)										P	P	P <sup>A</sup>
Fall Bay (74096)			P							P		
Rhossili Bay (39161)										P	P	P
Broughton Beach (74025)	P	F	P	F	F	F	F	F	F	F	F	F
<b>Carmarthenshire County Council</b>												
Llanelli Beach (39001)	F	F	F	F	F	F	F	F	F	F	F	F
Burry Port Beach (39003)	F	F	F	F	F	F	F	F	F	P	P	F
St Ishmael (88503)					F	F	F	F	F	F	F	F
Llanstephen Beach (39008)			F		F	F	F	F	F	F	F	F
Ferryside Beach (39007)							F	F	F	F	F	F
Pendine West (39011)	F	F	F									
Morfa Bychan (88501)								F	F	F	F	F
<b>Pembrokeshire County Council</b>												
Amroth E (39012)	P	F	F									
Amroth W (39014)	F	F										

Bathing Water	90	91	92	93	94	95	96	97	98	99	00	01
Wisemans Bridge (32797)				F	F	P	F		F	F	F	F
Coppett Hall Beach (32421)		F			F	F	F		F	F		
Saundersfoot E (39016)	F	F	F									
Glen Beach (83777)											F	P
Saundersfoot W (39019)	F	F	F									
Monkstone Beach (39574)								P	P	F	P	P
Tenby N Lifeboat (39021)	P	P	F									
Tenby S St.Catherines (39022)	F	F	F					P	F			
Tenby S Atlantic Hotel (39023)	F	F	F									
Penally (83617)										F	P	P
Waterwynch Bay (83616)										F	P	P
Priory Bay, Caldey (39573)								P	P	F	F	F
Tenby S Opp Kiln Park (39025)	F	F	P									
Lydstep N Beach (39026)		F	P	P	F	P	P					
Skrinkle (39423)			P	P	P	P	P	P				
Manorbier Beach (39027)	F	F	P	P	F	P	F					
Manorbier (39028)	F		P									
Swanlake Bay (83776)											P	*
Freshwater East (39029)	P	F	F	P	P	P	F	P	F			
Freshwater East (39030)	F		F									
Barafundle (39136)			P	P	P	P	P	P	P	P		
Broad Haven South (32422)		P	P	F	P	P	P					
Freshwater West (39031)				F	P	F	P	P	P	P	P	P
West Angle (39032)	P			F	F	F	P	F	F	F		
Llanreath Bay (86106)	F	F										
Neyland Slip (85110)		F										
Milford Beach (39191)		F										
Gelliswick (39037)	F	F	F	F	F	F	F	F	F	F	F	F
Sandy Haven (39192)		P					P	F	F	F	F	P
Lindsway Bay (St Ishmaels) (39572)								P				
Dale (39040)	F	F	F	F	P	F	F	F	F	F		
Watwick (39634)									P	P	P	P
West Dale (39571)								P	P	P	P	P
Marloes (32788)		P		P	P	P	P					
Martins Haven (39041)					P		P	P	P	P	P	P
Musselwick (39140)		P										
St. Brides Haven (39042)		P				F	F	F	F	P	P	F
Little Haven (39043)	F		F		F	F	F	F	F	F	F	F
Druidston Haven (39141)			P							F	P	F
Nolton Haven (39046)			F	F	F	F	F	F	F	F	F	F
Newgale S (39047)	P	F										
Newgale N (39049)	F	F										
Solva (39050)			F									
Caerfai (39142)		P	P	F	P	P	P					
Porthclais (32686)			F				F	F				
Porthselau (83778)											P	P
Abereiddy (39053)		P	P	P	P	P	P	P	P	P	P	P
Traethllyn (39143)							P	P	P	P	P	*
Traethllyn (32789)				P								
Porthgain (32685)			F									
Abercastle (39056)			F				F	F			F	F
Abermawr (39144)							P	P	F	P	F	P
Goodwick Harbour (39058)	F	P	P	F	F	F	F	P	P	P	F	P



Bathing Water	90	91	92	93	94	95	96	97	98	99	00	01
Goodwick Beach (39059)	F	F	F	F	F	F	F	F	F			
Goodwick Sands (83613)										F	F	F
Fishguard (39060)			F									
Pwll Gwaelod (32790)				F	F	F	F	F	F	F	F	F
Cwm yr Eglwys (32791)				F	F	F	F	F	F	F	F	F
Newport Parrog Beach (39063)							F	F				
Newport Sands South (39064)	P	F	F	F	P	P	F	P	F			
Poppit Sands West (39067)	P	P	F	F	P	P						
Poppit Sands East (39068)	P	F	F	F	F	P	F					
Ceibwr (39066)								F				
<b>Ceredigion County Council</b>												
Patch (32424)		F	F	F	F	F	F	F	F	F	F	F
Gwbert (83515)		F	F	F	F	F	F	F				
Mwnt at Aberporth (32425)		P	P	P	P	P	P	F	F	F	P	F
Aberporth (39072)	F	F	F	F	F							
Aberporth E (83502)	F	F	F	F	F		F	F	F			
Tresaith (39073)	F	F	F	F	F							
Penbryn (39147)		F	F	F	F	P	F	F	F	F	F	F
Llangranog (39075)	F	F	F	F	F	F	F					
Cil Borth (32851)				F	F	P	F	F	F	P	F	F
Cwmtudu (32426)			F	F	F	F	F	F	F	F	F	F
Newquay N (39077)		F	F	F	F	F	F	F	F	F	F	F
Newquay S (39079)	F	F	F	F	F	F	P	F				
Llanina (39146)	F	F	F	F	F	F	F	F	F	F	F	F
Little Quay (Cei Bach) (39081)	F	F	F	F	F	F	F	F	F	F	F	F
Gilfach yr Halen (32427)		F	F	F	F	F	F	F	F	F	F	F
Aberaeron S (39082)	P	F	F	F	F	P	F	F	F	F	F	P
Aberaeron N 4th Groyne (39083)	F	F	F	F	F	F	F	F	F	F	F	F
Aberaeron N (39084)						F	F					
Aberaeron N of outfall (N of Groynes) (39427)	F	F	F	F	F	F	F	F	F	F	F	F
Aberaeron Harbour (39426)			F									
Aberarth (32428)		F	F	P	F	P	F	F	F	F	F	F
Llanon (32429)		F	F	F	F	F	F	F	F	F	F	F
Llansantffraid (32430)		F	F	P	F	F	F	F	P	P	F	F
Llanrhystud S (39087)		P	P	F	P	P	F	P	F	P	P	P
Morfa Bychan at Slipway (32431)		F	F	F	F	P	P					
Tanybwllch (32432)		F	F	F	F	P	P					
Aberystwyth Slip (82103)		F	F	F	F							
Clarach Bay S (39095)	F	F	F	F	F	F						
Aberystwyth S (39090)	F	F	F									
Clarach Bay N (39096)		F	F	F	F	F	F	F				
Ynyslas (20022)		P	P		P	F	P	P	F	F	F	F
Ynyslas (20399)		F	F		F	F	F	F	F	F	F	F
<b>Gwynedd County Borough Council</b>												
Aberdyfi (20170)		F	F									
Aberdyfi (20172)		F	F									
Llwyngwrl (20189)		F	F									
Barmouth (20181)		F	F									
Llanaber (20025)		F	P									
Talybont (20026)			F	F								
Llanendwyn (20027)		P		F								
Black Rock Sands (22540)		F	F	F								
Garreg Wen (23253)		F	F	F	F	F	F	F	F	F	F	F

Bathing Water	90	91	92	93	94	95	96	97	98	99	00	01
Criccieth E (23141)			F		F	P	F	F	F	F	F	F
Criccieth W (22541)		F	F									
Pen y chain (22544)			F									
Morfa Abererch (22545)			F		P	P	F	P	F	P	P	P
Pwllheli (22546)		F	F									
Traeth Crugen (22548)			F									
Llanbedrog (22549)		F	F		F	F	F	F	F	F	F	F
Abersoch (22550)		F	F									
Abersoch (23346)		F										
Abersoch (22586)			F									
Machroes (20335)		F										
Porth Ceiriad (20334)		P										
Porth Neigwl (25437)		P	P		P	P	P	P	P	P	P	P
Aberdaron (22553)		P	P		F	F	F	F	P	P	F	F
Porth Oer (22555)		P	P									
Porth Iago (22556)		P	P									
Porth Colman (22557)		F	F									
Porth Tywyn (22558)		P	P									
Porth Dinllaen (22559)		F	F	F								
Porth Nefyn (22560)		F	F		F	F	F	F	F	F	F	F
Trefor (22561)			F									
Aberdesach (22562)			F									
Pontllynfi (22563)		F										
Dinas Dinlle (23244)		F	P									
Port Dinorwic (23252)		F	F		F	F	F	F	F	F	F	F
Plas Menai (23290)		F	F		F	F	F	F	F	F	F	F
Anglesey County Council												
Llanddwyn (Niwbwrch) (27537)				F	P	P	P					
Traeth Mawr, Aberffraw (27538)			F				F	P	F	F		
Porth Treacastell (27539)									F	P	F	P
Porth Nobla, Llanfaelog (27540)							F	P	P	P	P	P
Porth Tyn Tywyn Llanfaelog (23476)									P	P	P	P
Rhosneigr (27534)		F	F									
Traeth Crigyll Rhosneigr (23477)									F	F	F	F
Traeth Crigyll (27557)		F	F									
Silver Bay, Rhoscolyn (27541)							F	P	P	P	P	P
Borth Wen - Rhoscolyn (27542)					F	P	F	P	F	P	F	P
Porth Gwr Mawr (27544)		F	F	F								
Porth Dafarch - Trearddur (27546)				F	F	P	F	F				
Holyhead Newry (27559)		P	F						F			
Penrhos (27817)		F										
Porth Tywyn Mawr, Sandy Beach (27547)						P	F	F	P	P	F	P
Porth Trefadog (23479)									F			
Porth Trwyn (23480)									P	P	P	F
Church Bay (27548)						P	F	P	P	P	P	P
Cemlyn (27531)									P	P	P	P
Cemaes (27529)		F					F	F				
Traeth Bach, Cemaes Bay (23481)									F	F	F	F
Bull Bay (27566)							F	F				
Porth Eilian, Amlwch (27549)			F				F	F	F	F	F	F
Traeth Llwgwy (27528)							F	F	F	F	F	P
Moelfre (27561)			F				F	F	F	F	F	F
Traeth Bychan (27527)			F									

Bathing Water	90	91	92	93	94	95	96	97	98	99	00	01
St. Davids, Benllech (23491)									F	P	P	F
Benllech (27827)		F	F									
Red Wharf Bay (27552)		F										
Red Warf Bay (25806)											F	F
Llanddona (27562)		F			F	P	P					
Lleiniog (27564)									P	F	P	F
Beaumaris (27829)		F	F									
Beaumaris (27828)		F	F									
Beaumaris (27757)							F	F	F	F	F	F
Pentraeth (23482)									F			
Menai Bridge Pier (27568)		F	F									
<b>Conwy County Borough Council</b>												
Llanfairfechan Shore Rd (23245)		F	F	F	F	F	F	F	F	F	F	F
Penmaenmawr (22996)			F									
Penmaenmawr (22995)		F	F	F	F							
Penmaenmawr (23006)		F	F									
Penmaenmawr (23005)		F	F									
Morfa Conwy (23246)				F	F	F	F	F	F	F	F	F
Deganwy N Shelter (25034)		F	F	F	F	F	F	F	F	F	F	F
Llandudno W (25033)		F	F									
Llandudno N (25026)		F	F									
Llandudno N (25185)			F									
Penrhyn Bay (25045)		F	F	F	F	F	F	F	F	F	F	F
Colwyn Bay, Rhos Abbey Hotel (25042)		F	F	F	F	F	F	F	F	F	P	
Colwyn Bay, Caley Promenade (25041)		F	F	F	F	F	F	F	F	F	F	F
Colwyn Bay, Marine Road (25020)					F	F	F	F	F	F	F	F
Old Colwyn (23492)									F	F	F	F
Llanddulas (3597)		F	F		F	F	F	F	F	F	F	F
Abergele (3600)			F									
Abergele (3601)		F	F		F	F	F	F	F	F	F	F
Towyn (25436)					P	F	F	F	F	F	F	F
Kinmel Bay (3605)		F	F									
<b>Denbighshire County Council</b>												
Rhyl Splash Point (3610)		F	F						F	F	F	F
Ffrith Beach, Prestatyn (3611)		F				F	F	F	F	F	F	F
Prestatyn Barkby (3614)		F	F						F	F	F	F
<b>Flintshire County Council</b>												
Gronant (25498)						F	F					
Gronant / Talacre (3617)		F	F		F	F	F	F	F	F	F	F
<b>Wirral County Council</b>												
Thurstaston Station Rd (3649)		F	F									
Caldycroft Drive (3648)		F	F									
W. Kirby (3647)		F	F									
<b>Total Number Sampled in Wales</b>	50*	139	145	83	102	102	120	109	116	116	114	111
<b>Number not Exceeding "G" standards in Wales</b>	10	23	27	12	19	30	21	24	22	36	32	33
<b>% Not Exceeding "G" standards in Wales</b>	20.0	16.5	18.6	14.5	18.6	29.4	17.5	22.0	19.0	31.0	28.1	29.7
<b>Total Number Sampled in Wales and Wirral</b>	50*	142	148	83	102	102	120	109	116	116	114	111
<b>Number not Exceeding "G" standards in Wales and Wirral</b>	10	23	27	12	19	30	21	24	22	36	32	33
<b>% Not Exceeding "G" standards in Wales and Wirral</b>	20.0	16.2	18.2	14.5	18.6	29.4	17.5	22.0	19.0	31.0	28.1	29.7

▲ Compliance calculated using a reduced number of samples due to restricted access due to Foot and Mouth

\* No Samples taken in 2001 season due to foot and mouth restrictions

## Appendix 1

### Criteria for Assessing Compliance with EC Bathing Waters Directive Standards

1. Article 3 of the EC Directive on the quality of bathing waters (76/160/EEC) requires member states to set bathing water quality standards no less stringent than those specified as "Imperative" (I) values in the Annex to the Directive. Article 3 also requires member states to endeavour to observe "Guideline" (G) values as guidelines, whether or not there is a corresponding "I" value.
2. Article 5 sets out the detailed requirements for compliance.  
For "I" value determinands:-

- a) 95% of the samples must comply with the "I" value
- b) The 5% not complying with the "I" value must not allow consecutive samples taken at statistically valid intervals to exceed the "I" value, i.e. "I" value failures must be of short duration.

For "G" value determinands:-

- a) 90% of the samples must conform with the "G" value (80% in the case of total coliform and faecal coliform parameters).
- b) The 10 (or 20%) not complying with the "G" value must not allow consecutive samples taken at statistically valid intervals to not exceed the "G" value, i.e. "G" value failures should be of short duration.

### Quality Standards for Bathing Waters used in this Report

<u>Parameter</u>	<u>Imperative Standard</u>	<u>Guide Standard</u>
<u>Microbiological</u>		
Faecal coliforms	2000/100 ml	100/100 ml
Total coliforms	10000/100 ml	500/100 ml
Faecal streptococci		100/100 ml
Salmonella	0 / litre	
Enteroviruses	0 PFU/10 litres	
<u>Physico-chemical</u>		
<u>Parameter</u>	<u>Imperative Standard</u>	<u>Guide Standard</u>
pH	6 - 9	-
Colour	No abnormal change in colour	-
Mineral Oils	No film visible on water surface and no odour	0.3 mg / litre
Surface Active Substances	No lasting foam	0.3 mg / litre
Phenols	No specific odour (0.05 mg / litre)	0.005 mg / litre
Transparency *	Extinction depth of 1m for Secchi disc - equivalent to 6.665 ftu (turbidity)	Extinction depth of 2m - equivalent turbidity value not yet calculated
Tarry Residues and Persistent Floating Solids	-	Must be absent

\* Environment Agency Wales has been granted a derogation for transparency at all its bathing waters so is not required to comply with these standards.

**Appendix 2****Identified Bathing Water Sample Point Details**

Bathing Water	Sample Point NGR	Sample Point Number	NAW/DEFRA Number
Jacksons Bay	ST1220066570	19055	36100
Whitmore Bay	ST1145066250	19034	36200
Cold Knap	ST0965066400	19037	36300
Southerndown	SS8840072900	19100	36400
Trecco Bay	SS8310076300	19114	36500
Sandy Bay	SS8240076500	19117	36600
Rest Bay	SS8000077900	19122	36700
Aberafan	SS7390089600	19051	36800
Swansea Bay	SS6440092100	74006	36900
Bracelet Bay	SS6300087100	39105	37000
Limeslade Bay	SS6250087000	39106	37100
Langland Bay	SS6060087100	39109	37200
Caswell Bay	SS5910087400	39111	37300
Oxwich Bay	SS5070086200	39123	37400
Port Eynon Bay	SS4720084800	39127	37500
Rhossili	SS4140090000	74010	37600
Pembrey	SS4000099800	39005	37700
Pendine	SN2380007400	39010	37800
Amroth	SN1670006800	39013	37900
Coppet Hall	SN14300 05300	32421	37980
Saundersfoot	SN1410004700	39017	38000
Tenby North	SN1345000800	39020	38100
Tenby Castle	SN 13820 00230	39022	38150
Tenby South	SS1325099850	39024	38200
Lydstep North	SS0920098300	39570	38220
Manobier	SS0580097400	39027	38230
Freshwater East	SS 02200 97900	39029	38235
Barafundle	SR9920095000	39136	38238
Broad Haven South	SR9790093900	32422	38240
West Angle	SM8520013300	39032	38250
Dale	SM8130005700	39040	38260
Marloes	SM7850007500	32788	38280
Broadhaven Central	SM8610013800	84231	38300
Newgale	SM8460021700	39048	38400
Caerfai	SM7600024400	39142	38460
Whitesands	SM7300027000	84232	38500
Newport North	SN0530040700	39065	38600
Poppit Sands	SN1520048900	39067	38630
Aberporth	SN2580051700	39072	38660

Bathing Water	Sample Point NGR	Sample Point Number	NAW/DEFRA Number
Tresaith	SN2780051700	39073	38670
Llangranog	SN3100054300	39075	38680
New Quay Harbour	SN3910059900	39079	38690
Traeth Gwyn New Quay	SN3980059700	39080	38700
Aberystwyth South	SN5790081400	39091	38800
Aberystwyth North	SN5830082200	39093	38900
Clarach South	SN5860083700	39095	38920
Borth	SN6077090080	20023	39000
Aberdyfi	SN6072095800	20171	39050
Tywyn	SH5767000320	20019	39100
Fairbourne	SM9240013600	20402	39200
Barmouth	SH6084015900	20014	39300
Talybont	SH5775021100	20026	39350
Dyffryn/Llanendwyn	SH5671022580	20027	39360
Llandanwg	SH5669028180	20028	39400
Harlech	SH5676031480	22596	39500
Craig Du Beach - from 1998	SH5362036410	22593	39600
Morfa Bychan / Black Rock Sands (Old Site)	SH5421035950	22539	
Criccieth	SH5033338075	23142	39700
Pwllheli	SH3710034070	22589	39800
Abersoch	SH3168027720	22552	39900
Morfa Dinlle	SH4349056690	22564	39970
Llanddwyn	SH4034063050	27537	39980
Aberffraw	SH3524067640	27538	39985
Rhosneigr	SH3237072120	27536	39990
Trearddur Bay	SH2556078910	27532	40000
Porth Dafarch	SH2330079900	27546	40010
Cemaes Bay	SH3732093620	27529	40050
Benllech	SH5268082560	27551	40100
Llanddona	SH5660081210	27562	40140
Penmaenmawr	SH7180076930	22995	40180
Llandudno West Shore	SH7655081650	25032	40200
Llandudno North Shore - from 1998	SH7832082490	23486	40300
Llandudno North (Old Site)	SH7918082270	25046	
Colwyn Bay	SH8584079170	25049	40400
Sandy Cove	SH9780080600	3604	40500
Rhyl	SJ0020082600	3608	40600
Prestatyn	SJ0585084200	3612	40700
West Kirby	SJ2100086800	3646	40750

### Appendix 3      Non-Identified Bathing Water Sample Point Details.

Bathing Water	NGR	Sample Number
Penarth Yacht Club	ST1895070850	19029
Bendricks Beach, Barry	ST1360067000	19076
Watch House Bay, Barry	ST1060066200	68603
Fontygary Bay, Rhooose	ST0525065750	19038
Limpert Bay, Aberthaw	ST0190066200	19147
Ogmore Central	SS8617074650	19043
Llantwit Major	SS9550067300	74050
Newton Bay, Porthcawl	SS8380076940	19112
Aberafan East	SS7445088950	19050
Jersey Marine West	SS6920092001	39097
Swansea Bay - County Hall	SS6530092001	74060
Swansea Bay - Sketty Lane	SS6290091400	39154
Swansea Bay - Black Pill	SS6320089800	39101
West Cross	SS6160089400	74005
Norton Road	SS6270088700	39102
Mumbles - Knab Rock	SS6250087800	39103
Mumbles Head Pier	SS6320087400	39104
Pwll Du	SS5750087000	39114
Three Cliffs Bay	SS5330087600	39117
Torbay/Crawley Woods	SS5280087600	39118
Mewslade East	SS4200187000	39128
Rhossili	SS4140088300	39161
Broughton Bay	SS4190093000	74025
Llanelli Beach	SS4960099500	39001
Burry Port	SN4460000200	39003
St. Ishmael (Kidwelly)	SN3650007500	88503
Llanstephan Beach	SN3550010700	39008
Ferryside Beach	SN3050010400	39007
Morfa Bychan (Pendine)	SN2240007400	88501
Wisemans Bridge	SN1440006000	32797
Glen Beach	SN1400004500	83777
Monkstone Beach (Nr Tenby)	SN1480003100	39574
Waterwynch Bay	SN1370001900	83616
Penally	SS1240098900	83617
Priory Bay, Caldy Island	SS1380097000	39573
Swanlake Bay	SS0450098000	83776
Freshwater West	SR8820099700	39031
Gelliswick, Milford Haven	SM8870005600	39037
Sandy Haven	SM8570007300	39192



Bathing Water	NGR	Sample Number
Watwick	SM8170004100	39634
Westdale	SM7980005800	39571
Martin's Haven	SM7610009200	39041
St. Brides Haven	SM8020011100	39042
Little Haven	SM8570012800	39043
Druidston Haven	SM8600017000	39141
Nolton Haven	SM8580018800	39046
Porthselau	SM7260026000	83778
Abereiddy	SM7970031300	39053
Traethllyfn	SM8010031900	39143
Abercastle	SM8520033500	39056
Abermawr	SM8810034600	39144
Goodwick Harbour South	SM9480038200	39058
Goodwick Sands	SM9480037900	83613
Pwllgwaelod	SN0050039900	32790
Cwm yr Eglwys	SN0160040100	32791
Patch	SN1627048520	32424
Mwnt	SN1930051900	32425
Penbryn	SN2910052400	39147
Cil Borth	SN3110054400	32851
Cwmtydu	SN3555057650	32426
New Quay, North Beach	SN3900060200	39077
Llanina	SN4030059800	39146
Little Quay (Cei Bach)	SN4100059800	39081
Gilfach yr Halen	SN4354061360	32427
Aberaeron South (Northern Groyne)	SN4530062800	39082
Aberaeron Harbour (Fourth Groyne North)	SN4550063400	39083
Aberaeron North (North of groynes)	SN4620063500	39427
Aberarth	SN4765063870	32428
Llanon	SN5067066750	32429
Llansantffraid	SN5086067180	32430
Llanrhystyd	SN5230069100	39087
Ynyslas (Northern Groyne - Sea)	SN6030092800	20022
Ynyslas (Twyni Bach - Estuary)	SN6120094300	20399
Carreg Wen	SH5607037060	23253
Criccieth West End	SH5017537967	23141
Abererch	SH4031035790	22545
Llanbedrog	SH3339031440	22549
Porth Neigwl	SH2808026310	25437
Aberdaron	SH1733026260	22553
Porth Nefyn	SH3017040840	22560

Bathing Water	NGR	Sample Number
Port Dinorwic (Felinheli)	SH5217067370	23252
Plas Menai	SH5024066120	23290
Porth Tre Castell	SH3321070660	27539
Porth Nobla, Llanfaelog	SH3292071160	27540
Porth Tyn Llanfaelog	SH3274071580	23476
Traeth Crigyll	SH3143073240	23477
Silver Bay, Rhoscolyn	SH2925075160	27541
Borth Wen, Rhoscolyn	SH2732075000	27542
Porth Tywyn Mawr (Sandy Beach)	SH2867085160	27547
Porth Trwyn	SH2950087800	23480
Church Bay	SH2997089400	27548
Cemlyn	SH3356093160	27531
Traeth Bach	SH3710093600	23481
Porth Eilian, Amlwch	SH4768092960	27549
Traeth Llugwy	SH4990087520	27528
Moelfre	SH5133086250	27561
St. Davids, Benllech	SH5307082040	23491
Red Wharf Bay	SH5320081200	25806
Lleiniog Beach Penmon	SH6250079020	27564
Beaumaris	SH6095076000	27757
Llanfairfechan	SH6802075810	23245
Conwy Morfa	SH7574078840	23246
Deganwy	SH7750079450	25034
Penrhyn Bay	SH8312081630	25045
Colwyn Bay Rhos Abbey Hotel	SH8450080490	25042
Colwyn Bay Cayley Promenade	SH8493079610	25041
Colwyn Bay Marine Road	SH8527079370	25020
Old Colwyn	SH8662078750	23492
Llanddulas	SH9070078800	3597
Abergele (Pensarn)	SH9445079000	3601
Towyn	SH9650079600	25436
Splash Point	SJ0190082700	3610
Ffrith, Prestatyn	SJ0460083600	3611
Barkby Beach	SJ0653084500	3614
Point of Ayr, Talacre	SJ1210085900	3617

#### **Appendix 4. Salmonella and Enterovirus Sampling 2001**

It was considered desirable that there should be a trigger mechanism to initiate Enterovirus and Salmonella monitoring.

The following criteria triggered Enterovirus and Salmonella monitoring:-

1. Non compliance with I standard in 2000 for Total or Faecal Coliforms
2. Positive Enterovirus result in 2000 triggered Enterovirus sampling in 2001
3. Positive Salmonella result in 2000 triggered Salmonella sampling in 2001
4. Non-compliance with Faecal Coliform or Total Coliform I value standards within the 2001 bathing season (i.e. two or more samples out of the planned twenty exceeding the I-value numerical limit during the monitoring period – if time permits)
5. Significant increase in the amount of sewage derived litter observed in a 10 metre band either side of the Bathing Water sample transect. A scoring system based on the Garber assessment for sewage debris was used, which then triggered sampling. Details of the Garber assessment are given in Appendix 5.

## Appendix 5 "GARBER" ASSESSMENT

The "Garber" assessment consists of a visual examination of an area of beach (i) extending approximately 50 metres to one side of the sample point along the strandline, (ii) in a 3 metre wide strip down the beach from the strandline to the water's edge, and (iii) 50 metres back to the sampling point along the water's edge. In addition collection of some information regarding weather conditions and beach use is made. The parameters examined with the determinand numbers are listed below. Those used to set the basis for a virus trigger are marked with a "+".

4 Time of High Tide (Hours)	6834 Obnoxious Sewage Odours (Waters Edge)(0-3)
28 Wind Direction (Degrees)	6835 Obnoxious Sewage Odours (In Between)(0-3)
76 Water Temperature (Celsius)	6836 Obnoxious Sewage Odours (Strandline)(0-3)
1192 Sea State	6845 Sanitary Towels (In Between)(0-3)
2153 Cloud Cover	6846 Sanitary Towels (Strandline)(0-3)
2159 Wind Speed	6847 Sanitary Towels (Waters Edge)(0-3)
6769 Contraceptives/Tampon Applicators-Watersedge 0-3	6848 Sewage Debris (In Between)(0-3)
6770 Contraceptives/Tampon Applicators(Inbetween)0-3	6849 Sewage Debris (Strandline)(0-3)
6771 Contraceptives/Tampon Applicators(Strandline)0-3	6850 Sewage Debris (Waters Edge)(0-3)
6809 Grease/Scum (In Between)(0-3)	7409 Intact Human Faeces @ Strandline
6810 Grease/Scum (Strandline)(0-3)	7414 Intact Human Faeces - Strandline To Waters Edge
6811 Grease/Scum (Waters Edge)(0-3)	7420 Intact Human Faeces @ Waters Edge

All determinands above which have been listed without units are measured on a scale of 0 - 3 as follows:-

- 0 - absence of coded material
- 1 - trace of coded material
- 2 - some at intervals (1-5 items)
- 3 - sufficient to be objectionable (>5 items)

Listed below are brief notes to clarify filling in the log sheet for Garber conditions.

### 1. High Water

Time of high water in British Summer Time nearest to the time of sampling in hours and minutes.

### 2. Wind

Wind direction using the first 2 digits of compass bearing.

NORTHERLY = 00 (0 degrees)  
EASTERLY = 09 (90 degrees)

SOUTHERLY = 18 (180 degrees)  
WESTERLY = 27 (270 degrees)

eg a wind blowing from the North West = 31

### 3. Temperature

Water temperature degrees Celsius

### 4. Sea State

State of sea coded as:

0 Calm (Glassy)	Wave height	0 m
1 Calm (Rippled)	Wave height	0 - 0.1 m
2 Smooth (Wavelets)	Wave height	0.1 - 0.5 m
3 Light	Wave height	0.5 - 1.25 m
4 Moderate	Wave height	1.25 - 2.5 m
5 Rough	Wave height	2.5 - 4.0 m

6 Very Rough	Wave height	4.0 - 6.0 m
7 High	Wave height	6.0 - 9.0 m
8 Very High	Wave height	9.0 - 14.0 m
9 Phenomenal	Wave height	Over 14.0 m

5. Cloud Cover

Amount of cloud cover recorded on a scale of 0 to 4:

- 0 - Sun obscured
- 1 - Weak sun, no shadows
- 2 - Weak sun, shadows
- 3 - Sun occasionally obscured by clouds
- 4 - Bright sunshine

6. Wind Speed

Beaufort scale wind force.:

- 0 - Calm
- 1 - Light airs
- 2 - Light breeze
- 3 - Gentle breeze
- 4 - Moderate breeze
- 5 - Fresh breeze
- 6 - Strong breeze

7. Garber Scheme Coded Materials

A transect should be examined of 50 metres either side of an imaginary line passing at a right angle from the shore to the sea through the grid reference if the sampling point.

The quantification of coded materials is clearly subjective but to attempt some standardisation the following has been suggested:-

- 0 - Absence of coded materials
- 1 - Trace of coded materials
- 2 - Some at intervals (1 - 5 items)
- 3 - Sufficient to be objectionable (> 5 items)

Position on beach.

Strandline of last high tide

Between strandline and water's edge

At water's edge

7a Intact Human Faeces

Record even small faecal particulates that may arise from crude outfalls.

7b Grease / Scum / Slick

This should be sewage derived grease/scum, usually in a visible plume or slick from an outfall.

7c Sewage Debris

This is sewage derived materials other than contraceptives, tampon applicators and intact sanitary towels. It may include cotton buds, toilet paper, hair, backing strips of sanitary towels etc.

7d Condoms / Tampon Applicators

Often only the thick rubber rings from condoms may be found.

7e Sanitary Towels

Complete sanitary towels with absorbent material still present.

7f Noxious Sewage Odours

Distinctive sewage smells - not to be confused with decaying seaweed or agricultural smells.

**Appendix 6 Future Risk of Non-Compliance with Imperative and Guideline Standards  
Based on Historical Compliance Data**

**EC Identified Bathing Waters in Wales**

**Notes**

1. The risk assessment has been undertaken with monitoring data collected over the period 1990 to 2001 (inclusive) where available. Where water company investment schemes have been introduced data has only been used after the scheme completion date.
2. Bathing Waters highlighted in italics have been assessed with only two years data (2000 to 2001). These results should be treated with caution as the minimum data requirement for such an assessment is usually 3 years with the ideal of 5+ years of data.
3. The table can be interpreted as follows:

**%age Risk of Non-Compliance**

**Predicted Compliance**

< 10

Should achieve 'G' Compliance 9 out of 10 bathing seasons on average

10-20

Should achieve 'G' Compliance 8 out of 10 bathing seasons on average

The above should be considered as the relatively consistent 'G' compliance achievers and will include the bathing waters which achieve Blue Flags generally year on year.

21-50

Should achieve 'G' Compliance 5 to 7 times out of 10 bathing seasons. Could reasonably be expected to improve with investment and other measures to achieve consistent 'G' compliance

> 51

Would achieve < 5 times out of 10 bathing seasons. None or only occasional 'G' compliance achieved.

4. The risk assessment has been completed for all 76 bathing waters in the Welsh operational region (includes West Kirby).

**Summary of EC Bathing Waters at Risk of Future Non-Compliance (greater than 5% risk) with the 'Imperative' Standards of the Bathing Waters Directive at the Start of the 2002 Bathing Season**

<b><u>EC Bathing Water</u></b>	<b><u>Percentage Risk of Non-Compliance</u></b>	<b><u>Data Period</u></b>	<b><u>Likely Source of Microbial Contamination</u></b>
Rhyl	44.87	1998-01	CSO's and increased Urban Runoff
Llandudno West	26.42	1999-01	Increased Urban Runoff and CSO's
Centre of Llangrannog Bay	17.85	1993-01	Streams and Continuous Discharge (Some improvements have been made to the discharge but further improvements are planned for early in AMP3)
Clarach South	17.16	1998-01	Riverine
Prestatyn Central	16.40	1990-01	Continuous Discharge (Due to planning problems the scheme has been delayed from AMP2)
Aberdyfi	14.23	1996-01	Riverine
Llandudno North	14.23	1999-01	Increased Urban runoff and CSO's
Limeslade	13.86	1999-01	CSOs (Mumbles)
Cemaes	13.38	1999-01	Riverine and Continuous Discharge (Improvements to this discharge were completed in 1999)
Criccieth East	11.05	1995-01	Streams and CSOs
Aberafan Slip	10.98	1990-01	Riverine and CSOs. The Continuous Discharges were improved prior to the 2000 bathing season. CSO improvements planned in AMP3
Penmaenmawr	10.92	1995-01	Streams and Continuous Discharge (improvements due for completion early in AMP3)
Sandy Cove	8.82	1998-01	Riverine and Continuous Discharge (improvements due for completion early in AMP3)
Newport North	8.76	1990-01	<u>Riverine</u>
Poppit West	8.76	1990-01	Riverine
Coppet Hall	8.70	1996-01	Stream
Broadhaven Central	8.64	1990-01	Streams and Continuous Discharge (Studies still awaited to confirm impact of discharge)
Benllech	8.53	1992-01	Streams
Llandanwg Central	8.46	1990-01	Continuous Discharge (improvements due for completion early in AMP3)
Amroth Central	6.44	1990-01	Streams
Abersoch South	6.21	1990-01	Riverine and Continuous Discharge (improvements due for completion early in AMP3)

**Summary:**

**Likely Source of Impact**

**No. of Bathing Waters**

Continuous Discharge  
CSOs  
Streams/Riverine  
Streams and Continuous Discharge  
Streams and CSOs  
Increased Urban Runoff and CSO's

2  
1  
7  
6  
2  
3

**Future Risk of Non-Compliance with Guideline Standards Based on Historical Compliance Data at the end of the 2001 Bathing Season**

EC Bathing Water	Percentage Risk of Non-Compliance	Determinand Most At Risk	Data Period
Jacksons Bay	100.00	Faecal Coliforms	1998-01
Rhyl	100.00	Faecal Coliforms	1998-01
Centre of Llangrannog Bay	99.99	Faecal Coliforms	1993-01
Whitmore Bay Central	99.99	Faecal Coliforms	1998-01
Cemaes	99.98	Faecal Coliforms	1999-01
Swansea Bay	99.97	Faecal Coliforms	1999-01
Colwyn Bay	99.94	Faecal Coliforms	1999-01
Coppet Hall	99.74	Faecal Streptococci	1996-01
Southerndown	99.72	Faecal Coliforms	1990-01
Aberafan Slip	99.28	Faecal Coliforms	1990-01
Prestatyn Central	99.24	Faecal Coliforms	1990-01
Aberdyfi	99.11	Faecal Coliforms	1996-01
Benllech	98.93	Faecal Coliforms	1992-01
Llandanwg Central	98.16	Faecal Coliforms	1990-01
Llandudno North	96.28	Faecal Coliforms	1999-01
Sandy Cove	92.10	Faecal Coliforms	1998-01
Penmaenmawr	90.17	Faecal Coliforms	1995-01
Clarach South	85.74	Faecal Coliforms	1998-01
Aberystwyth North	83.78	Faecal Coliforms	1995-01
Sandy Bay	82.08	Faecal Coliforms	1991-01
Llandudno West	79.39	Faecal Streptococci	1999-01
Aberffraw	77.93	Faecal Coliforms	1996-01
Newport North	77.10	Faecal Coliforms	1990-01
Tywyn	76.25	Faecal Coliforms	1995-01
Cold Knap	73.51	Faecal Coliforms	1998-01
Criccieth East	71.75	Faecal Coliforms	1995-01
Trecco Bay	70.24	Faecal Coliforms	1991-01
Broadhaven Central	69.75	Faecal Coliforms	1990-01
Trearddur Bay	69.54	Faecal Streptococci	1992-01
Limeslade	69.36	Faecal Coliforms	1999-01
Pendine East	68.06	Faecal Coliforms	1990-01
Craig Du Beach Central	68.06	Faecal Coliforms	1998-01
Fairbourne	67.51	Faecal Coliforms	1990-01
Dale	64.70	Faecal Coliforms	1998-01
West Angle	64.55	Faecal Coliforms	1994-01
New Quay	62.89	Faecal Streptococci	1995-01
Aberystwyth South	61.99	Faecal Coliforms	1995-01
Abersoch South	61.95	Faecal Streptococci	1990-01
Saundersfoot	61.83	Faecal Coliforms	1996-01
Poppit West	54.67	Faecal Coliforms	1990-01
Porth Dafarch	51.57	Faecal Coliforms	1993-01
Talybont	48.68	Faecal Coliforms	1990-01
Borth	47.60	Faecal Streptococci	1990-01
Amroth Central	44.34	Faecal Coliforms	1990-01
Newquay Harbour	40.46	Faecal Streptococci	1995-01
Harlech North	37.04	Faecal Coliforms	1997-01
Duffryn	35.75	Faecal Coliforms	1990-01



Llanddona	33.92	Faecal Coliforms	1990-01
Pwllheli	25.27	Faecal Streptococci	1998-01
Barmouth	25.00	Faecal Coliforms	1990-01
Freshwater East	24.67	Faecal Streptococci	1994-01
Morfa Dinlle	21.32	Faecal Coliforms	1990-01
Rest Bay	20.86	Faecal Coliforms	1991-01
West Kirby	18.60	Faecal Streptococci	1998-01
Langland West	17.02	Faecal Coliforms	1999-01
Castle Beach Tenby	17.02	Faecal Coliforms	1997-01
Aberporth	16.80	Faecal Streptococci	1995-01
Pembrey	14.84	Faecal Coliforms	1990-01
Tresaith	13.75	Faecal Coliforms	1997-01
Tenby North	11.50	Faecal Streptococci	1997-01
Caerfai Bay	11.00	Faecal Streptococci	1991-01
Whitesands Central	10.59	Faecal Streptococci	1990-01
Newgale Central	10.30	Faecal Streptococci	1995-01
Barafundle	7.22	Faecal Streptococci	1994-01
Lydstep North Beach	6.10	Faecal Coliforms	1997-01
Oxwich West	3.50	Faecal Streptococci	1990-01
Rhossili at Hillend	2.83	Faecal Coliforms	1990-01
Llanddwyn	2.76	Faecal Streptococci	1993-01
Port Eynon West	2.59	Faecal Streptococci	1990-01
Broadhaven South	2.36	Faecal Streptococci	1991-01
Manorbier Beach	2.10	Faecal Streptococci	1997-01
Tenby South	1.07	Faecal Coliforms	1997-01
Rhosneigr	0.98	Faecal Coliforms	1990-01
Caswell Central	0.43	Faecal Streptococci	1999-01
Bracelet Bay	0.43	Faecal Streptococci	1999-01
Marloes Sands	0.14	Faecal Streptococci	1993-01

## Non EC Identified Bathing Waters in Wales

### Notes

1. The risk assessment has been undertaken with monitoring data collected over the period 1990 to 2001 (inclusive) where available. Where schemes have been introduced data has only been used after the scheme completion date.
2. Bathing Waters highlighted in italics have been assessed with only two years data (2000 to 2001). These results should be treated with caution, as the minimum data requirement for such an assessment is usually 3 years with the ideal of 5+ years of data.
5. The table can be interpreted as follows:

#### %age Risk of Non-Compliance

#### Predicted Compliance

< 10

Should achieve 'G' Compliance 9 out of 10 bathing seasons on average

10-21

Should achieve 'G' Compliance 8 out of 10 bathing seasons on average

The above should be considered as the relatively consistent 'G' compliance achievers and will include the bathing waters which achieve Blue Flags generally year on year.

21-51

Should achieve 'G' Compliance 5 to 7 times out of 10 bathing seasons. Could reasonably be expected to improve with investment and other measures to achieve consistent 'G' compliance

> 51

Would achieve < 5 times out of 10 bathing seasons. None or only occasional 'G' compliance achieved.

6. There is a lack of valid data at some bathing waters owing to recent developments. Consequently these bathing waters are also not included in the assessment.

**Summary of Non EC Identified Bathing Waters at Risk of Future Non-Compliance  
(greater than 5% risk) with the 'Imperative' Standards of the Bathing Waters Directive  
at the Start of the 2002 Bathing Season**

<b><u>Non EC Bathing Water</u></b>	<b><u>Percentage Risk of Non- Compliance</u></b>	<b><u>Data Period</u></b>
<i>West Cross</i>	98.14	2000-01
<i>Carreg Wen</i>	93.08	2000-01
Llanelli Beach	82.44	1995-01
Llanstephan Beach	74.91	1994-01
Penarth Yacht Club	74.86	1997-01
<i>Ynyslas (Twyni Bach - Estuary)</i>	73.31	2000-01
Ferryside Beach	65.38	1996-01
Patch	61.54	1994-01
<i>Abercastle</i>	60.83	2000-01
Morfa Bychan (Pendine)	54.84	1997-01
St. Ishmael (Kidwelly)	53.26	1994-01
Llanina	49.16	1994-01
Nolton Haven	48.48	1994-01
<i>Splash Point</i>	44.87	2000-01
<i>Deganwy</i>	44.87	2000-01
Aberaeron North (North of groynes)	44.54	1994-01
Pwllgwaelod	44.22	1994-01
<i>Norton Road</i>	42.34	2000-01
<i>Swansea Bay - Sketty Lane</i>	42.34	2000-01
<i>Swansea Bay - Black Pill</i>	42.34	2000-01
Broughton Bay	34.13	1994-01
Llanon	31.40	1994-01
Aberaeron Harbour (Fourth Groyne North)	30.61	1994-01
Aberafan East	30.61	1994-01
Wisemans Bridge	29.85	1994-01
<i>Llanbedrog</i>	26.42	2000-01
<i>Penrhyn Bay</i>	26.42	2000-01
<i>Towyn</i>	26.42	2000-01
<i>Traeth Bach</i>	26.42	2000-01
<i>Plas Menai</i>	26.42	2000-01
<i>Jersey Marine West</i>	26.42	2000-01
<i>Mumbles - Knab Rock</i>	24.62	2000-01
<i>Mumbles Head Pier</i>	24.62	2000-01
Criccieth West End	21.53	1995-01
Gilfach yr Halen	21.13	1994-01
Watch House Bay, Barry	20.75	1994-01
Porth Eilian, Amlwch	19.93	1996-01
Porth Trwyn	17.16	1998-01
Little Haven	16.99	1994-01
Bendricks Beach, Barry	16.83	1997-01
Aberaeron South (Northern Groyne)	16.83	1994-01
Burry Port	15.54	1995-01
Penally	14.23	1999-01
Penbryn	12.81	1994-01
Newton Bay, Porthcawl	11.79	1997-01
<i>Red Wharf Bay</i>	9.63	2000-01
Gelliswick, Milford Haven	8.92	1994-01
Conwy Morfa	8.82	2000-01
Moelfre	8.82	2000-01
Llanddulas	8.82	2000-01
Ffrith, Prestatyn	8.82	2000-01

Barkby Beach	8.82	2000-01
Point of Ayr, Talacre	8.82	2000-01
Cwm yr Eglwys	8.82	1994-01
Llansantffraid	8.82	1994-01
Cwmtydu	8.82	1994-01
Colwyn Bay Marine Road	8.82	2000-01
Colwyn Bay Cayley Promenade	8.82	2000-01
Lleiniog Beach Penmon	8.82	2000-01
Abergele (Pensarn)	8.82	2000-01
New Quay, North Beach	8.82	2000-01
Little Quay (Cei Bach)	8.82	2000-01
Traeth Llugwy	8.58	1996-01
Fontygary Bay, Rhose	5.89	1997-01
Llanfairfechan	5.28	1994-01

**Summary of Non EC Identified Bathing Waters at Risk of Future Non-Compliance with  
Guideline Standards of the Bathing Waters Directive at the End of the 2001 Bathing  
Season**

EC Bathing Water	Percentage Risk of Non-Compliance	Determinand Most At Risk	Data Period
Penarth Yacht Club	100.00	Faecal Coliforms	1997-01
Bendricks Beach, Barry	100.00	Faecal Coliforms	1997-01
Watch House Bay, Barry	100.00	Faecal Coliforms	1994-01
Swansea Bay - Black Pill	100.00	Faecal Coliforms	2000-01
Carreg Wen	100.00	Faecal Coliforms	2000-01
West Cross	100.00	Faecal Coliforms	2000-01
Pwllgwaelod	100.00	Faecal Coliforms	1994-01
Ferryside Beach	100.00	Faecal Coliforms	1996-01
Llanelli Beach	100.00	Faecal Coliforms	1995-01
Ynyslas (Twyni Bach - Estuary)	100.00	Faecal Coliforms	2000-01
Llanstephan Beach	99.99	Faecal Coliforms	1994-01
Patch	99.99	Faecal Coliforms	1994-01
Splash Point	99.99	Faecal Coliforms	2000-01
Swansea Bay - Sketty Lane	99.98	Faecal Coliforms	2000-01
Port Dinorwic (Felinheli)	99.95	Faecal Coliforms	1994-01
New Quay, North Beach	99.93	Faecal Coliforms	2000-01
Newton Bay, Porthcawl	99.93	Faecal Coliforms	1997-01
St. Ishmael (Kidwelly)	99.91	Faecal Coliforms	1994-01
Aberaeron North (North of groynes)	99.86	Faecal Coliforms	1994-01
Jersey Marine West	99.85	Faecal Coliforms	2000-01
Norton Road	99.83	Faecal Coliforms	2000-01
Traeth Bach	99.81	Faecal Streptococci	2000-01
Colwyn Bay Cayley Promenade	99.41	Faecal Coliforms	2000-01
Little Quay (Cei Bach)	99.41	Faecal Coliforms	2000-01
Plas Menai	99.41	Faecal Coliforms	2000-01
Llanina	99.31	Faecal Coliforms	1994-01
Gilfach yr Halen	99.26	Faecal Coliforms	1994-01
Morfa Bychan (Pendine)	99.04	Faecal Coliforms	1997-01
Point of Ayr, Talacre	98.92	Faecal Coliforms	2000-01
Swansea Bay - County Hall	98.21	Faecal Coliforms	2000-01
Llanon	97.97	Faecal Coliforms	1994-01
Aberaeron Harbour (Fourth Groyne North)	97.26	Faecal Coliforms	1994-01
Aberafan East	96.90	Faecal Coliforms	1994-01
Conwy Morfa	96.84	Faecal Coliforms	2000-01
Abercastle	96.84	Faecal Coliforms	2000-01
Cwmtydu	96.84	Faecal Coliforms	1994-01
Colwyn Bay Marine Road	96.84	Faecal Coliforms	2000-01
Abergele (Pensarn)	96.84	Faecal Coliforms	2000-01
Wisemans Bridge	96.79	Faecal Coliforms	1994-01
Little Haven	96.75	Faecal Streptococci	1994-01
Fontygary Bay, Rhosee	95.43	Faecal Coliforms	1997-01
Penrhyn Bay	94.90	Faecal Coliforms	2000-01
Criccieth West End	94.47	Faecal Streptococci	1995-01

Gelliswick, Milford Haven	93.89	Faecal Coliforms	1994-01
Limpert Bay, Aberthaw	93.47	Faecal Coliforms	1997-01
Porth Eilian, Amlwch	92.96	Faecal Streptococci	1996-01
Deganwy	92.10	Faecal Coliforms	2000-01
Nolton Haven	91.36	Faecal Streptococci	1994-01
Porth Nefyn	91.13	Faecal Streptococci	1994-01
Cwm yr Eglwys	90.29	Faecal Coliforms	1994-01
Red Wharf Bay	88.55	Faecal Streptococci	2000-01
Llanbedrog	88.18	Faecal Coliforms	2000-01
Barkby Beach	88.18	Faecal Coliforms	2000-01
Aberarth	83.46	Faecal Coliforms	1994-01
Beaumaris	82.95	Faecal Coliforms	2000-01
Llantwit Major	82.95	Faecal Coliforms	2000-01
Goodwick Sands	82.95	Faecal Coliforms	2000-01
Old Colwyn	82.95	Faecal Coliforms	2000-01
Ynyslas (Northern Groyne - Sea)	82.95	Faecal Coliforms	2000-01
Cil Borth	78.61	Faecal Coliforms	1994-01
Penbryn	78.07	Faecal Coliforms	1994-01
Llanfairfechan	77.52	Faecal Coliforms	1994-01
Ffrith, Prestatyn	76.25	Faecal Coliforms	2000-01
Glen Beach	76.25	Faecal Coliforms	2000-01
Traeth Crigyll	76.25	Faecal Coliforms	2000-01
Traeth Llugwy	75.62	Faecal Streptococci	1996-01
Llansantffraid	74.34	Faecal Coliforms	1994-01
Broughton Bay	70.88	Faecal Coliforms	1994-01
Llanddulas	70.58	Faecal Streptococci	2000-01
Burry Port	70.39	Faecal Coliforms	1995-01
Moelfre	68.06	Faecal Coliforms	2000-01
Mumbles Head Pier	63.21	Faecal Coliforms	2000-01
Sandy Haven	61.83	Faecal Coliforms	1996-01
Towyn	58.52	Faecal Coliforms	2000-01
Mumbles - Knab Rock	55.96	Faecal Streptococci	2000-01
Aberaeron South (Northern Groyne)	55.96	Faecal Streptococci	1994-01
St. Brides Haven	53.30	Faecal Coliforms	1995-01
Aberdaron	51.11	Faecal Coliforms	1994-01
Druidston Haven	51.00	Faecal Streptococci	1999-01
Goodwick Harbour South	47.98	Faecal Coliforms	2000-01
Borth Wen, Rhoscolyn	47.34	Faecal Streptococci	1994-01
St. Davids, Benllech	46.47	Faecal Streptococci	1998-01
Porth Tywyn Mawr (Sandy Beach)	44.00	Faecal Streptococci	1995-01
Priory Bay, Caldy Island	41.42	Faecal Coliforms	1997-01
Three Cliffs Bay	37.59	Faecal Streptococci	1996-01
Penally	37.04	Faecal Coliforms	1999-01
Colwyn Bay Rhos Abbey Hotel	37.04	Faecal Coliforms	2000-01
Lleiniog Beach Penmon	37.04	Faecal Coliforms	2000-01
Porth Trwyn	32.31	Faecal Streptococci	1998-01
Mwnt	31.95	Faecal Streptococci	1994-01
Waterwynch Bay	29.88	Faecal Coliforms	1999-01
Mewslade East	26.61	Faecal Coliforms	1999-01
Porth Treacstell	26.44	Faecal Coliforms	1998-01
Abererch	25.66	Faecal Coliforms	1994-01

Pwll Du	24.74	Faecal Coliforms	1996-01
Church Bay	20.16	Faecal Streptococci	1995-01
<i>Llanrhystyd</i>	<i>17.02</i>	<i>Faecal Coliforms</i>	<i>2000-01</i>
Monkstone Beach (Nr Tenby)	11.50	Faecal Streptococci	1997-01
Abermawr	10.79	Faecal Coliforms	1996-01
<i>Swanlake Bay</i>	<i>7.55</i>	<i>Faecal Streptococci</i>	<i>2000-01</i>
Silver Bay, Rhoscolyn	7.40	Faecal Streptococci	1996-01
Porth Nobla, Llanfaelog	7.12	Faecal Streptococci	1996-01
Martin's Haven	4.76	Faecal Coliforms	1996-01
Porth Neigwl	4.11	Faecal Streptococci	1994-01
Abereiddy	3.73	Faecal Streptococci	1994-01
Warwick	3.62	Faecal Streptococci	1998-01
Porth Tyn Llanfaelog	3.62	Faecal Streptococci	1998-01
Rhossili	3.60	Faecal Coliforms	1999-01
Freshwater West	2.19	Faecal Streptococci	1994-01
Traethllyfn	2.10	Faecal Streptococci	1996-01
Cemlyn	1.30	Faecal Streptococci	1998-01
Westdale	0.10	Faecal Streptococci	1997-01
<i>Porthselau</i>	<i>0.01</i>	<i>Faecal Coliforms</i>	<i>2000-01</i>
Torbay/Crawley Woods	0.00	Faecal Coliforms	1999-01