ENVIRONMENT AGENCY

SOUTH WEST
REGION

PRELIMINARY ASSESSMENT OF THE WATER QUALITY BEFORE AND DURING COMMISSIONING OF THE INTERIM FALMOUTH SEWAGE TREATMENT SCHEME

Report No. TWQ/98/01

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1. SUMMARY

The Environment Agency is monitoring the impact of the Falmouth Interim Sewage Treatment Scheme on water quality in the Carrick Roads, Penryn River and Percuil River. The objectives are as follows:

assessment of water quality before and after commissioning of the scheme

assessment of the dispersion of the sewage effluent plume from the Black Rock discharge using dye and spore tracers.

assessment of the impact of the sewage effluent plume from the Black Rock discharge on marine macro benthos in the vicinity of the outfall

During the commissioning surveys, the discharge was operated in such a way that sewage effluent was discharged at the maximum rate which will be used following full scheme commissioning. Therefore concentrations reported here are representative of those that can be expected during normal operating conditions.

This report describes the surveys undertaken at Falmouth between 12th March 1998 and 23rd April 1998, which assess the water quality before and during the commissioning of the Interim Scheme.

Impact of the new discharge on the classified shellfish harvesting area

The results of surveys carried out during scheme commissioning do not indicate any deterioration in water quality over the classified shellfish harvesting area.

However, to provide additional protection for the shellfishery South West Water have been instructed to reduce the normal operating period for the discharge by 1 hour.

Impact of the new discharge on the recreational waters south of the new discharge

The interim scheme has resulted in the removal of the unsatisfactory old Middle Point outfall. Bacteria levels, even in the immediate vicinity of the new outfall are at least an order of magnitude lower than those seen in the past near the old outfall. The conversion of the Pennance Point outfall to a storm discharge only will benefit recreational users in the vicinity.

Future Monitoring

The Agency plans to undertake an extensive programme of post-scheme monitoring, to include the following:

i. Undertake a minimum of 4 background surveys to provide a data set comparable with that obtained prior to scheme commissioning. The samples will be collected from the sites shown in Figure 2.

ii. Monitor closely the performance of the sewerage system, in particular the frequency and timing of discharges from the new outfall outside the discharge window, and the daily volumes being discharged.

iii. Undertake a minimum of two large scale tracer and water quality surveys, including the monitoring of the impact of the discharge on bathing waters (designated and non-designated) and on the classified shellfish harvesting area.

iv. Undertake an assessment of the impact of the effluent plume on marine macro benthos in the vicinity of the outfall.

2. DETAILS OF SURVEYS, SAMPLING METHODS, AND LABORATORY ANALYSES

The surveys undertaken to date are as follows:

DATE	SURVEY DETAILS - ALL TIMES GMT
12-Mar-98	Pre-commissioning water quality survey - HW 04:42 and 17:05, Springs
17-Mar-98	Pre-commissioning freshwater discharge, dye, drogue, and *B.globigii* tracing - HW 07:33 and 19:49, Springs, Winds -SW to W, 2 to 8 knots
20-Mar-98	Pre-commissioning water quality survey - HW 09:11 and 21:34, Neaps
27-Mar-98	Pre-commissioning water quality survey - HW 04:24 and 16:53, Springs
07-Apr-98	Pre-commissioning water quality survey - HW 01:59 and 14:35, Neaps
15-Apr-98	Middle Point catchment connection survey, dye, drogue, bacterial and *B.globigii* tracing - HW 07:10 and 19:24, Springs, Winds N to NW, 9 to 25 knots
21-Apr-98	Middle Point catchment connection survey, dye, drogue, and bacterial tracing HW 12:15 and 00:48, Neaps, Winds Southerly 9 to 16 knots
23-Apr-98	Middle Point catchment connection survey, dye, drogue, and bacterial tracing HW 02:08 and 14:48, Intermediates, Winds S veering W, B6 to 7

During the period covered by the surveys discussed in this report, the consented tidal windows are as follows:

BLACK ROCK DISCHARGE AND TIDAL INFORMATION FOR FALMOUTH

	SPRING	INTERMEDIATE	NEAP
Discharge Start	HW-0:45	HW-0:30	HW-0:15
Discharge End	HW+4:15	HW+4:30	HW+4:45
Tidal Height	5.0m or more	4.5m to 4.9m	4.4m or less
Mean Tidal Range	4.7m		2.3m

Note: Following a review of the results of these surveys, the end of the tidal window was brought forward by one hour for all tidal states.

All sampling was conducted in accordance with standard Agency procedures. All samples were analysed by the Environment Agency Laboratory in Exeter except for the bacterial samples collected on the 7th and 21st April 1998 which were analysed by the Public Health Laboratory in Truro. Both laboratories hold full UKAS accreditation for all analytical methods used.
For the four pre-commissioning water quality surveys, laboratory analysis was undertaken for the following determinands:

Total Coliforms	BOD	Orthophosphate
Faecal Coliforms	Salinity	Filtered Ammonia
Faecal Streptococci	Suspended Solids	Total Oxidised Nitrogen

Wind speeds presented in knots were measured from the survey boat using an anemometer, whilst those presented as Beaufort Force were estimated from the survey boat. Wind directions were obtained using a compass on the survey boat.

3. SURVEY DETAILS

All times are in GMT, and wind directions are quoted as the bearing from which the winds blow. Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) for March and April 1998 are presented in Appendix 1.

B. globigii is a bacterial spore which is commonly used in surveys to trace the movement and dispersion of water. *B. globigii* does not suffer from significant mortality in the sea over a number of days. When injected continuously into the effluent, the concentrations in samples collected from the sea can be used to obtain the dilution of the effluent in the sea.

3.1 Pre-Commissioning Spring Tide Water Quality Survey - 12th March 1998

This was the first of four surveys carried out in the weeks leading up to the commissioning of the scheme.

Figure 1 shows the locations of the water quality sampling sites used during the survey. The grid references are listed in Table 1. All samples were collected from just below the surface.

Environmental Conditions

The survey took place on a Spring tide (5.1m height, 4.3m range) between 07:53 and 18:35. Predicted High Waters at Falmouth were 04:42 and 17:05.

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 11th March were both 0.0mm, and on the 12th March were trace and 0.2mm respectively.

Wind speed, direction, and cloud cover were recorded on board the survey vessel as follows:

Time (GMT)	Wind Speed (Knots)	Wind Direction	Cloud Cover
07:53	1	Northerly	3/8
08:24	4	Northerly	7/8
09:35	6	Northeasterly	3/8
11:05	8	Northwesterly	4/8
11:46	11	Northerly	7/8
12:32	8	Northerly	7/8
14:33	10	North Northwest	8/8
15:03	10	Northwesterly	8/8
15:59	9	Northwesterly	8/8
17:25	11	Northwesterly	8/8
18:04	8	Northwesterly	7/8
18:30	8	Northwesterly	7/8

Summary of Events

There were four sampling runs as follows:

Run No.	Time	HW Relative Time	Run Central Time
Run 1	07:53 to 09:35	HW+3:11 to HW+4:53	HW+4:02
Run 2	11:05 to 12:55	HW-6:00 to HW-4:10	HW-5:05
Run 3	14:24 to 16:07	HW-2:41 to HW-0:58	HW-1:50
Run 4	16:55 to 18:35	HW-0:10 to HW+1:30	HW+0:40

The survey results for all determinands are tabulated in Appendix 2. For each survey, the geometric means for Faecal Coliforms and Faecal Streptococci have been calculated for each location. The data and means are presented in Tables 3 and 4 and the means are plotted in Figures 4 and 5 respectively.

3.2 Pre-Commissioning Neap Tide Water Quality Survey - 20th March 1998

This was the second of four surveys carried out in the weeks leading up to the commissioning of the scheme.

Figure 1 shows the locations of the water quality sampling sites used during the survey. The grid references are listed in Table 1. All samples were collected from just below the surface.

Environmental Conditions

The survey took place on a Neap tide (4.4m height, 2.8m range) between 08:10 and 19:01. Predicted High Waters at Falmouth were 09:11 and 21:34.

Wind speed, direction, and cloud cover were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed (Knots)	Wind Direction	Cloud Cover
08:26	Light airs	Northerly	0/8
09:50	Light airs	Northerly	0/8
11:29	1	Southerly	0/8
12:41	5	Southerly	4/8
13:03	6	Southerly	6/8
14:36	1	Southwesterly	8/8
15:10	1	Southerly	7/8
15:50	Light airs		8/8
17:38	8	Northerly	1/8
19:01	9	Northerly	0/8

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 19th and 20th March were 0.0mm.

Summary of Events

There were four sampling runs as follows:

Run No.	Time	HW Relative Time	Run Central Time
Run 1	08:10 to 10:12	HW-1:01 to HW+1:01	HW
Run 2	11:08 to 13:12	HW+1:57 to HW+3:01	HW+2:29
Run 3	14:15 to 15:54	HW+4:04 to HW+5:43	HW+4:53
Run 4	17:15 to 19:01	HW-4:19 to HW-2:33	HW-3:26

The survey results for all determinands are tabulated in Appendix 2. For each survey, the geometric means for Faecal Coliforms and Faecal Streptococci have been calculated for each location. The data and means are presented in Tables 3 and 4 and the means are plotted in Figures 4 and 5 respectively.

3.3 Pre-Commissioning Spring Tide Water Quality Survey - 27th March 1998

This was the third of four surveys carried out in the weeks leading up to the commissioning of the scheme.

Figure 1 shows the locations of the water quality sampling sites used during the survey. The grid references are listed in Table 1. All samples were collected from just below the surface.

Environmental Conditions

The survey took place on a Spring tide (5.4m height, 5.0m range) between 06:37 and 18:07. Predicted High Waters at Falmouth were 04:24 and 16:53.
Wind speed, direction, and cloud cover were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed	Wind Direction	Cloud Cover
06:54	Light airs	Southwesterly	8/8
07:38	Light airs	Southwesterly	8/8
10:12	Light airs	Southwesterly	8/8
10:39	Moderate	Southwesterly	8/8
11:15	Light airs	Southwesterly	8/8
13:44	Moderate	Southwesterly	8/8
14:26	Fresh	Southerly	8/8
14:40	Moderate	Southerly	8/8
16:36	Light airs	Southwesterly	8/8
17:48	Light airs	Southerly	8/8

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 26th March were 3.8mm and 4.6mm respectively, and on the 27th March were 3.2mm and 3.6mm respectively.

Summary of Events

There were four sampling runs as follows:

Run No.	Time	HW Relative Time	Run Central Time
Run 1	06:37 to 08:30	HW+2:13 to HW+4:06	HW+3:10
Run 2	10:12 to 11:45	HW+5:48 to HW-5:08	HW-5:54
Run 3	13:36 to 15:01	HW-3:17 to HW-1:52	HW-2:34
Run 4	16:36 to 18:07	HW-0:17 to HW+1:14	HW+0:28

The survey results for all determinands are tabulated in Appendix 2. For each survey, the geometric means for Faecal Coliforms and Faecal Streptococci have been calculated for each location. The data and means are presented in Tables 3 and 4 and the means are plotted in Figures 4 and 5 respectively.

3.4 Pre-Commissioning Neap Tide Water Quality Survey - 7th April 1998

This was the last of four surveys carried out in the weeks leading up to the commissioning of the scheme.

Figure 2 shows the locations of the water quality sampling sites used during the survey. The grid references are listed in Table 1. All samples were collected from just below the surface.

Environmental Conditions

The survey took place on a Neap tide (4.4m height, 2.7m range) between 06:25 and 16:51. Predicted High Waters at Falmouth were 01:59 and 14:35.

Wind speed, direction, and cloud cover were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed (Knots)	Wind Direction	Cloud Cover
06:37	3	Westerly	Showers
07:35	4	Northerly	
09:55	2	Northerly	2/8
10:47	4	Southerly	2/8
12:47	7	Northwesterly	7/8
13:21	10	Northerly	6/8
14:05	3	Northerly	3/8
15:33	6	Southerly	7/8
15:53	2	Northerly	6/8
16:51	8	Northerly	4/8

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 6th April were 1.2mm and 0.4mm respectively, and on the 7th April were 0.0mm and 0.6mm respectively.

Summary of Events

Water samples were collected from just below the surface in accordance with standard Agency sampling procedures. There were four sampling runs as follows:

Run No.	Time	HW Relative Time	Run Central Time
Run 1	05:25 to 07:52	HW+3:26 to HW+5:53	HW+4:39
Run 2	08:31 to 10:32	HW-6:04 to HW-4:03	HW-5:03
Run 3	11:27 to 12:48	HW-3:08 to HW-1:47	HW-2:27
Run 4	14:11 to 15:51	HW-0:24 to HW+1:16	HW+0:26

The survey results for all determinands are tabulated in Appendix 2. For each survey, the geometric means for Faecal Coliforms and Faecal Streptococci have been calculated for each location. The data and means are presented in Tables 3 and 4 and the means are plotted in Figures 4 and 5 respectively.

3.5 Pre-Commissioning Spring Tide Freshwater Discharge - 17th March 1998

South West Water needed to empty the storage tunnel of 'ground' water which had collected in the tunnel before commissioning commenced, to allow a tunnel inspection and hand-over from the contractors. There was some flexibility in the timing of this operation (about 1 week), and ideally the survey would have taken place in moderate southerly winds. However, the wind was firmly fixed in the northern sector for most of the survey window, and the day of the survey proved to be the closest to this objective. The discharge was required within the consented Spring tidal window of HW-0:45 to HW+4:15.

The objectives of the survey were as follows:

i. To measure the dilutions in the plume to the south of the outfall at the surface and at depth.

ii. To monitor the plume trajectories at different release times within the consented release window, in particular at the beginning and end of the window.

iii. To undertake the survey in moderate onshore winds (ie. SSE-SSW) if possible.

The survey included two continuous releases of *B. globigii* spores into the pumped discharge, one at the beginning of the discharge window (70 minutes duration) and one at the end of the discharge window (80 minutes duration), marked on four occasions by pulses of dye. The dye patches were mapped whilst samples were collected for determination of *B. globigii* concentrations and salinity.

Environmental Conditions

The survey took place on a Spring tide (5.0m height, 3.9m range) between 06:41 and 15:46. Predicted High Waters at Falmouth were 07:33 and 19:49. Wind speed and direction were recorded on board the survey vessel as follows:

Time (GMT)	Wind Speed (knots)	Wind Direction
06:59	2	West Southwesterly
07:33	4	West Southwesterly
08:15	4	Southwesterly
09:00	8	Southwesterly
09:55	7	Southwesterly
10:27	5	Southwesterly
11:41	5	Southwesterly
13:30	7	Westerly
14:46	7	Southwesterly

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 16th and 17th March were 0.0 mm.

Summary of Events

The first release of *B. globigii* spores from the Black Rock outfall was carried out at the beginning of the tidal window between 06:49 (HW-0:43) and 08:00 (HW+0:27). The discharge was pumped at an average rate of 330 l/s which approaches that of the commissioned scheme, but the computed dilutions are calculated for an average pump rate of 347 l/s. The spores were released into the pumped discharge at an average rate of 1.04×10^{10}/second. The beginning of the spore plume was marked by injecting 10 litres of green fluorescein dye (Patch 1) into the final effluent sampling chamber which emerged at the Black Rock outfall at HW-0:34. Approximately 12 litres of red rhodamine dye (Patch 2) were added to mark the end of the spore plume at HW+0:12. Two drogues were deployed in each dye patch with sails set at 1m and 5m below the surface. The movements of the dye and drogues were monitored by two survey vessels which also took surface and depth water samples and temperature/salinity/depth (TSD) profiles.

Dye patch 1 (Figure 6) was followed south for 3 hours 20 minutes until HW+2:53. During this period the patch was traced on five occasions, two TSD profiles were taken, and a total of 66 samples were collected.

Dye patch 2 (Figure 7) was followed south for 2 hours 49 minutes until HW+3:07. During this period the patch was traced on three occasions, three TSD profiles were taken, and a total of 67 samples were collected.

The second release of *B. globigii* spores was carried out at the end of the tidal window between 10:28 (HW+2:55) and 11:48 (HW+4:15). The beginning of the spore plume was marked by injecting 10 litres of fluorescein dye (Patch 3) which emerged at the Black Rock outfall at HW+3:09. Approximately 12 litres of rhodamine dye (Patch 4) marked the end of the spore plume at HW+4:05. Two drogues were deployed in each dye patch with sails set at 1m and 5m below the surface. The movements of the dye and drogues were again monitored by the two survey vessels which also took surface and depth water samples and temperature/salinity/depth (TSD) profiles.

Dye patch 3 (Figure 8) was followed for 4 hours 7 minutes until HW-4:58. During this period the patch was traced on four occasions, two TSD profiles were taken, and a total of 47 samples were collected.

Dye patch 4 (Figure 9) was followed for 4 hours 4 minutes until HW-4:03. During this period the patch was traced on three occassions, four TSD profiles were taken, and a total of 63 samples were collected.

Results

The survey results are tabulated in Appendix 2. The *B. globigii* spore dilutions in surface waters have been calculated from an initial concentration in the effluent of 3×10^6

spores per 100ml, and are presented in Figure 10. Dilutions are generally greater than 5000 at a distance of approximately 1500m to the south of the new outfall. The minimum dilution of 86 was measured 250m south of the outfall.

3.6 Commissioning Spring Tide Survey - 15th April 1998

The objectives of the survey were as follows:

i. To monitor the bacterial concentrations in the plume to the south on the ebb tide.

ii. To monitor the impact of re-entrainment into the estuary to the north of the boundary of the classified shellfish harvesting area on the following flood tide.

The discharge was required within the consented spring tidal window of HW-0:45 to HW+4:15.

Environmental Conditions

The survey took place on a Spring tide (5.0m height, 3.9m range) between 05:01 and 19:04. Predicted High Waters at Falmouth were 07:10 and 19:24. Wind speed and direction were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed	Wind Direction
05:01	13 knots	Northerly
05:20	20 knot squall	Northerly
05:30	B4	Northerly
05:49	B2-3	Northwesterly
06:17	B3-4	Northwesterly
11:21	17 knots	North Northwesterly
12:00	25 knots	North Northwesterly
13:21	16 knots	Northwesterly
14:35	13 knots	Northwesterly
17:13	13 knots	Northwesterly
18:48	9 knots	Westerly

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 14th April were 6.8mm and 1.2mm respectively, and on the 15th April were 2mm and 4.6mm respectively.

Summary of Events

South West Water started to release effluent at 09:30 (HW+2:20) at an average rate of 380l/s. Average concentrations of Faecal Coliforms and Faecal Streptococci per 100ml measured in the effluent were 2.0×10^7 and 2.3×10^6 respectively. *B. globigii* spores were released from the outfall at the end of the tidal window between 09:59 (HW+2:49) and 11:25 (HW+4:15) at an average rate of 7.67×10^9/second.

The effluent plume was marked by injecting 15 litres of Fluorescein dye at a rate of 3

litres per minute for the discharge period from HW+4:10 to HW+4:15. South West Water stopped discharging at the end of the prescribed tidal window at HW+4:15.

The dye patch was mapped on three occassions as it moved south (see Figure 11), and a total of 49 surface and 9 depth samples were taken for bacterial and spore analysis between HW+4:11 and HW-3:54. By this time the patch was very dispersed and situated mid way between Pendennis Point and St Anthony Head. Vertical profiling of temperature and salinity was also undertaken in the centre of the dye patch at HW+4:26 and HW+5:50.

For the remainder of the survey between HW-2:21 and HW-0:20, water sampling on the flood tide continued from a predetermined grid (Figure 3 and Table 2) extending from Pendennis Point to St Mawes Bank and across the MAFF line. A total of 100 samples had been collected by the end of the survey.

Results

The survey results are tabulated in Appendix 2. The Faecal Streptococci concentrations in surface waters over the survey period are presented in Figures 12a. Plume values greater than 500 Faecal Streptococci per 100ml (depicted by the yellow dots) range from 560 to 3400 over an area approximately 200m wide extending 1500m south of the outfall. Levels outside this area to the south are reduced to below 330 per 100ml, and to the north into Carrick Roads, concentrations are all less than 10 per 100ml.

The Faecal Coliform concentrations in surface waters over the survey period are presented in Figures 12b. Plume values greater than 2000 Faecal Coliforms per 100ml (depicted by the yellow dots) range from 2100 to 5800 (boil sample) over an area approximately 150m wide extending 1200m south of the outfall. Levels outside this area to the south are reduced to below 1300 per 100ml.

Results for Faecal Coliform concentrations measured during the period between HW-3:22 and HW-1:21 are presented in Figure 13. Values range from <10 to 45 per 100ml.

3.7 Commissioning Neap Tide Survey - 21st April 1998

Environmental Conditions

The survey took place on a Neap tide (4.2m height, 2.4m range) between 03:59 and 11:51. Predicted High Waters at Falmouth were 23:25 (20th April) and 12:15.

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 20th April were 2.8mm and 2.0mm respectively, and on the 21st April were 13.8mm and 6.4mm respectively

Wind speed and direction were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed (Knots)	Wind Direction
04:14 (HW+4:48)	12	Southeaterly
04:40 (HW+5:15)	10	Southerly
05:25 (HW+6:00)	9	Southerly
06:05 (HW-6:09)	11	Southerly
06:33 (HW-5:41)	11	Southerly
07:09 (HW-5:06)	12	Southerly
09:12 (HW-3:03)	13	Southerly
09:42 (HW-2:32)	16	Southerly
10:41 (HW-1:33)	15	South Southeasterly

Summary of Events

The survey represented the predicted worst case conditions of southerly wind and Neap tide with respect to the behaviour of the plume at the end of the discharge window. The discharge was required within the consented Neap tidal window of HW-0:15 to HW+4:45. The movements of the dye patch are presented in Figure 14.

Effluent was discharged from the Black Rock outfall for approximately one hour, finishing at HW+4:45. At HW+4:34, a total of 12.5 litres of Fluorescein dye were injected into the final effluent sampling chamber and emerged at the outfall in darkness at approximately HW+4:42. The dye patch was mapped on four occassions as it moved south, and was located just south of Black Rock Buoy at the turn of the tide. A total of 31 surface and 7 depth samples were taken for bacterial analysis across the leading edge of the dye patch between HW+4:52 and HW-4:25 by which time the patch had returned to the vicinity of the outfall.

For the remainder of the survey between HW-4:25 and HW-0:24, water sampling on the flood tide continued from a predetermined grid (Figure 3 and Table 2) extending from Pendennis Point to St Mawes Bank and across the MAFF line. The dye patch continued to move north and by HW-1:05, close to high slack water, it was very disperse and situated to the north of Trefusis Point. Additional water samples were collected from the dye patch at this time. A total of 89 samples had been collected by the end of the survey

Results

The survey results are tabulated in Appendix 2. Average concentrations of Faecal Coliforms and Faecal Streptococci per 100ml measured in the effluent during the survey were 7.6×10^6 and 1.8×10^6 respectively. The Faecal Streptococci concentrations in surface waters over the survey period are presented in Figure 15a. Plume values greater than 500 Faecal Streptococci per 100ml (depicted by the yellow dots) range from 520 to 4700 over an area approximately 200m wide extending 800m south of the outfall. Levels outside this area to the north into Carrick Roads were generally less than 10 per 100ml. These levels are of a similar magnitude to those measured during the Spring tide survey conducted on 15th April, although the southerly

distance moved by the plume to the Low Water turn was only half that encountered on the Spring tide survey.

The Faecal Coliform concentrations in surface waters over the survey period are presented in Figures 15b. Plume values greater than 2000 Faecal Coliforms per 100ml range from 2060 to 11400 (boil sample) over an area approximately 200m wide extending 800m south of the outfall. In the area between the outfall and the MAFF line sampled between HW-4:33 to HW-4:25, Faecal Coliform values ranged from 130 to 960 per 100ml.

Results for Faecal Coliform concentrations measured during the flood tide period between HW-3:06 and HW-0:38 are presented in Figure 16. Although the dye patch was observed to travel into the classified shellfish harvesting area on the flood tide, concentrations of Faecal Coliforms measured in the effluent plume were very low, in the range of <10 to 60 Faecal Coliforms per 100ml.

3.8 Commissioning Intermediate Tide Survey - 23rd April 1998

As a further test of the scheme, it was decided to carry out a survey under an intermediate tidal state. In the light of the results from the Neap tide survey conducted on 21 April 1998, this intermediate tide survey aimed to follow and sample that part of the effluent plume released one hour before the end of the consented window ie. ending at HW+3:30.

Environmental Conditions

The survey took place on an Intermediate tide (4.8m height, 3.6m range) between 05:28 and 15:00. Predicted High Waters at Falmouth were 02:08 and 14:48. Wind speed, direction, and wave height were recorded onboard the survey vessel as follows:

Time (GMT)	Wind Speed	Wind Direction	Wave Ht.
05:36 (HW+3:28)	B6 to B7	Southerly	2-3m
12:33 (HW-2:15)	B4 gusty	Veering Westerly	1m choppy
13:20 (HW-1:27)	B6 gusty	West Northwest	

Daily rainfall totals measured at Camborne and Culdrose (9am to 9am the following day) on the 22nd April were 21.2mm and 13.2mm respectively, and on the 23rd April were 2.8mm and 1.0mm respectively.

Summary of Events

Effluent was discharged from the Black Rock outfall for approximately two hours, finishing at HW+4:30. At HW+3:20, 12.5 litres of Fluorescein dye were injected into the final effluent sampling chamber and emerged at the Black Rock outfall at HW+3:28. The movements of the dye patch are presented in Figure 17.

During the period between emergence and HW+4:22, the visible extent of the patch was mapped three times and water samples were collected. At HW-6 the dye patch was very

indistinct with its northern visible boundary situated 500m south of Pendennis Point. The dye patch was mapped on a further two occasions at HW-5 and HW-4.31 at which time its northern visible boundary was near to the outfall and very dispersed. The early dispersal of the dye compared to previous surveys underlines the higher rate of mixing afforded by the wave action.

Due to amount of rainfall preceding and throughout the survey, it was necessary to operate the Black Rock outfall outside the tidal window for storm sewage discharge in line with the consent. Storm discharges commenced at HW-5:12 and continued throughout the remainder of the survey for a period of four minutes in every ten reducing to four minutes in every twenty towards the end of the survey. Water sampling on the flood tide continued from a predetermined grid (Figure 3 and Table 2) extending from Pendennis Point to St Mawes Bank and across the MAFF line. A total of 61 samples had been collected by the end of the survey at HW+0:12.

Results

The survey results are tabulated in Appendix 2. Average concentrations of Faecal Coliforms and Faecal Streptococci per 100ml measured in the effluent during the survey were 6.6×10^6 / 100 ml and 9.2×10^5 / 100 ml respectively. The Faecal Streptococci concentrations in surface waters over the survey period are presented in Figure 18a, and Faecal Coliform concentrations are presented in Figures 18b, 19, 20, and 21.

During the survey a discharge of storm sewage was occurring. Out of a total of 43 samples collected along and north of the boundary of the shellfishery six were found to contain concentrations greater than 100 Faecal Coliforms per 100ml. Two samples exceeded 300 Faecal Coliforms per 100ml. All other results were well below 100 Faecal Coliforms per 100ml.

The Agency consent was based on the flow figures submitted in application by South West Water. Sewerage modelling undertaken in advance of the scheme monitoring indicated that storm discharges outside the tidal window would take place approximately 30 times per year. Whilst April was a very wet month, the Agency will be assessing the frequency of storm discharges in the future.

4. DISCUSSION

During the commissioning phase, the opportunity was taken to examine Faecal Coliform concentrations inside the classified shellfish harvesting area to the north of the new discharge to assess the impact of the discharge on this area.

Additionally, we have assessed the impact of the discharge on recreational waters to the south of the new discharge. Whilst no recognised standards exist for recreational waters, we have been advised that the Environmental Health Officer of Carrick District Council makes reference to a figure of 50 Faecal Streptococci per 100 ml. We have examined the performance of the new outfall against this figure. We have, however, to point out that this figure is tighter than that which currently applies to identified EC Bathing Waters

(which is a Guide value of 100 Faecal Streptococci per 100 ml as a 90 percentile), and thus has no legal standing even at bathing beaches.

4.1 Impact of the discharge on classified oyster fishery north of the new discharge

On 21st April 1998 (Neap tides), sewage effluent, which had been marked with green dye, released 4¾ hours after High Water (HW) at the end of the consented discharge window was observed to travel north into the classified shellfish harvesting area on the following flood tide. However, concentrations of Faecal Coliforms measured in the effluent plume were very low, in the range of <10 to 60 Faecal Coliforms per 100ml.

On 23rd April 1998 (Intermediate tides), sewage effluent marked with green dye was discharged 3½ hours after HW. The plume was tracked on the ebb tide and the following flood tide. Approximately 2 hours after Low Water the plume had dispersed to such an extent it was no longer visible. At this stage the plume had not reached the boundary of the classified shellfishery.

Towards the end of this survey a discharge of storm sewage was occurring. Out of a total of 43 samples collected along and north of the boundary of the shellfishery ('MAFF line') six were found to contain concentrations greater than 100 Faecal Coliforms per 100ml. Two samples exceeded 300 Faecal Coliforms per 100ml. All other results were well below 100 Faecal Coliforms per 100ml.

The Fal Estuary Shellfishery achieves class B under the Shellfish Hygiene Directive. MAFF have advised DETR that a water quality standard of 300 Faecal Coliforms /100ml in 75% of samples should be achieved to protect class B shellfisheries.

Between 1990 and 1993 the NRA carried out routine monitoring of bacterial concentrations at a site within the sampling grid over the shellfishery. This historic data set shows that over a range of tidal conditions Faecal Coliform concentrations frequently exceeded 100 Faecal Coliforms per 100ml. The maximum concentration recorded at this site was 2,500 Faecal Coliforms per 100ml.

4.2 Impact of the discharge on recreational waters south of the new discharge

The surveys of water quality in the Fal Estuary carried out before scheme commissioning show concentrations of bacteria over the old Middle Point discharge of up to 960,000 Faecal Streptococci and 4,100,000 Faecal Coliforms per 100 ml. The maximum concentrations recorded in the "surface boil" over the new discharge point to date are 9,400 Faecal Streptococci per 100 ml and 22,000 Faecal Coliforms per 100 ml. It is acknowledged that the data set for the old outfall is much larger than that for the new outfall, but nevertheless there seems little doubt that this represents a considerable improvement.

5. CONCLUSIONS

5.1 Impact of the new discharge on the classified shellfish harvesting area

The results of surveys carried out during scheme commissioning do not show any deterioration in water quality over the classified shellfish harvesting area.

However, to provide additional protection for the shellfishery South West Water have been instructed to reduce the normal operating period for the discharge by 1 hour.

5.2 Impact of the new discharge on the recreational waters south of the new discharge

The interim scheme has resulted in the removal of the unsatisfactory old Middle Point outfall. Bacteria levels, even in the immediate vicinity of the new outfall are at least an order of magnitude lower than those seen in the past near the old outfall. The conversion of the Pennance Point outfall to a storm discharge only will benefit recreational users in the vicinity.

6. FUTURE MONITORING

The Agency plans to undertake an extensive programme of post-scheme monitoring, to include the following:

i. Undertake a minimum of 4 background surveys to provide a data set comparable with that obtained prior to scheme commissioning. The samples will be collected from the sites shown in Figure 2.

ii. Monitor closely the performance of the sewerage system, in particular the frequency and timing of discharges from the new outfall outside the discharge window, and the daily volumes being discharged.

iii. Undertake a minimum of two large scale tracer and water quality surveys, including the monitoring of the impact of the discharge on bathing waters (designated and non-designated) and on the classified shellfish harvesting area.

iv. Undertake an assessment of the impact of the effluent plume on marine macro benthos in the vicinity of the outfall.

FIGURES

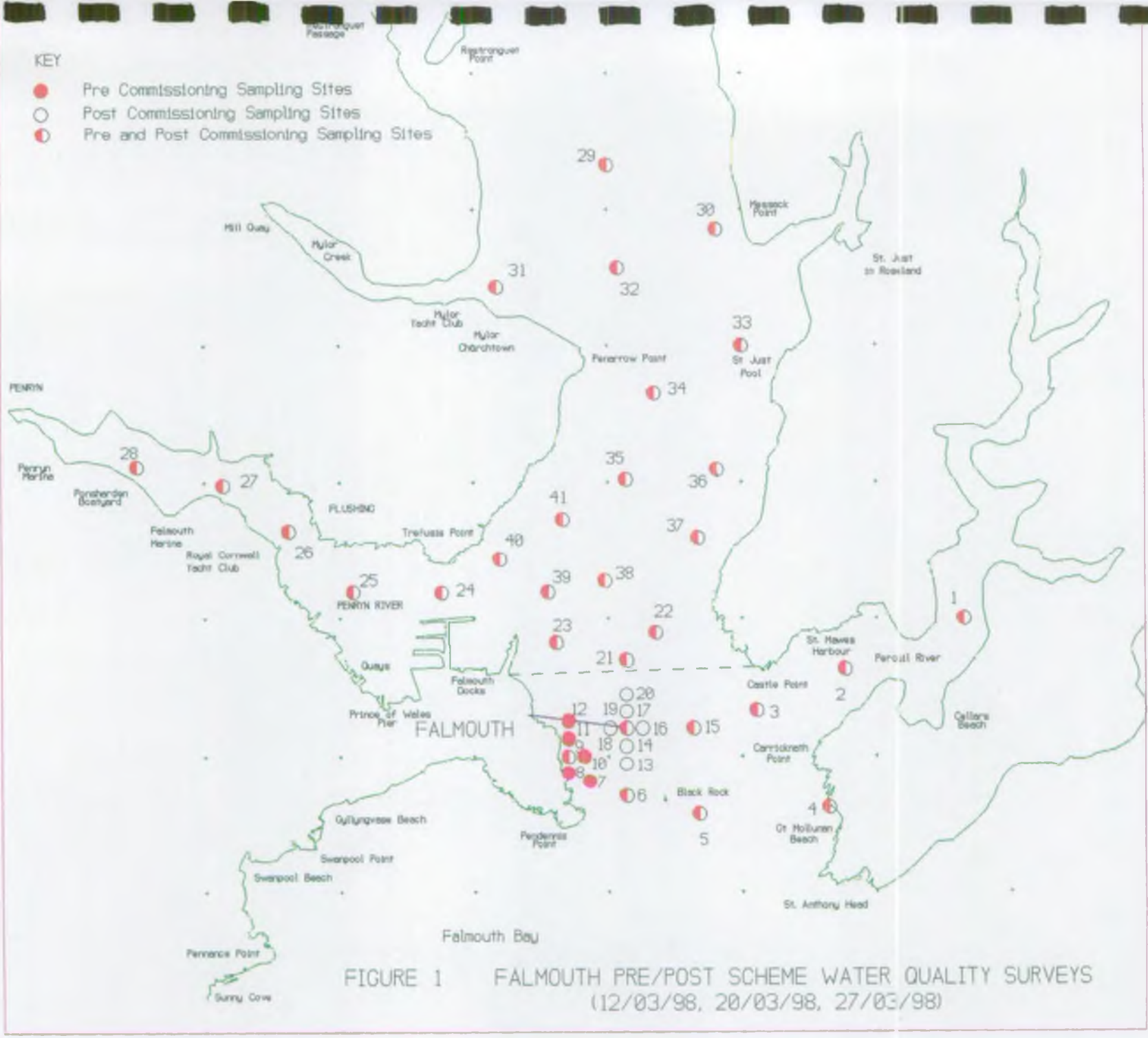


FIGURE 1 FALMOUTH PRE/POST SCHEME WATER QUALITY SURVEYS
(12/03/98, 20/03/98, 27/03/98)

FIGURE 2 FALMOUTH PRE/POST SCHEME WATER QUALITY SURVEYS 07/04/98

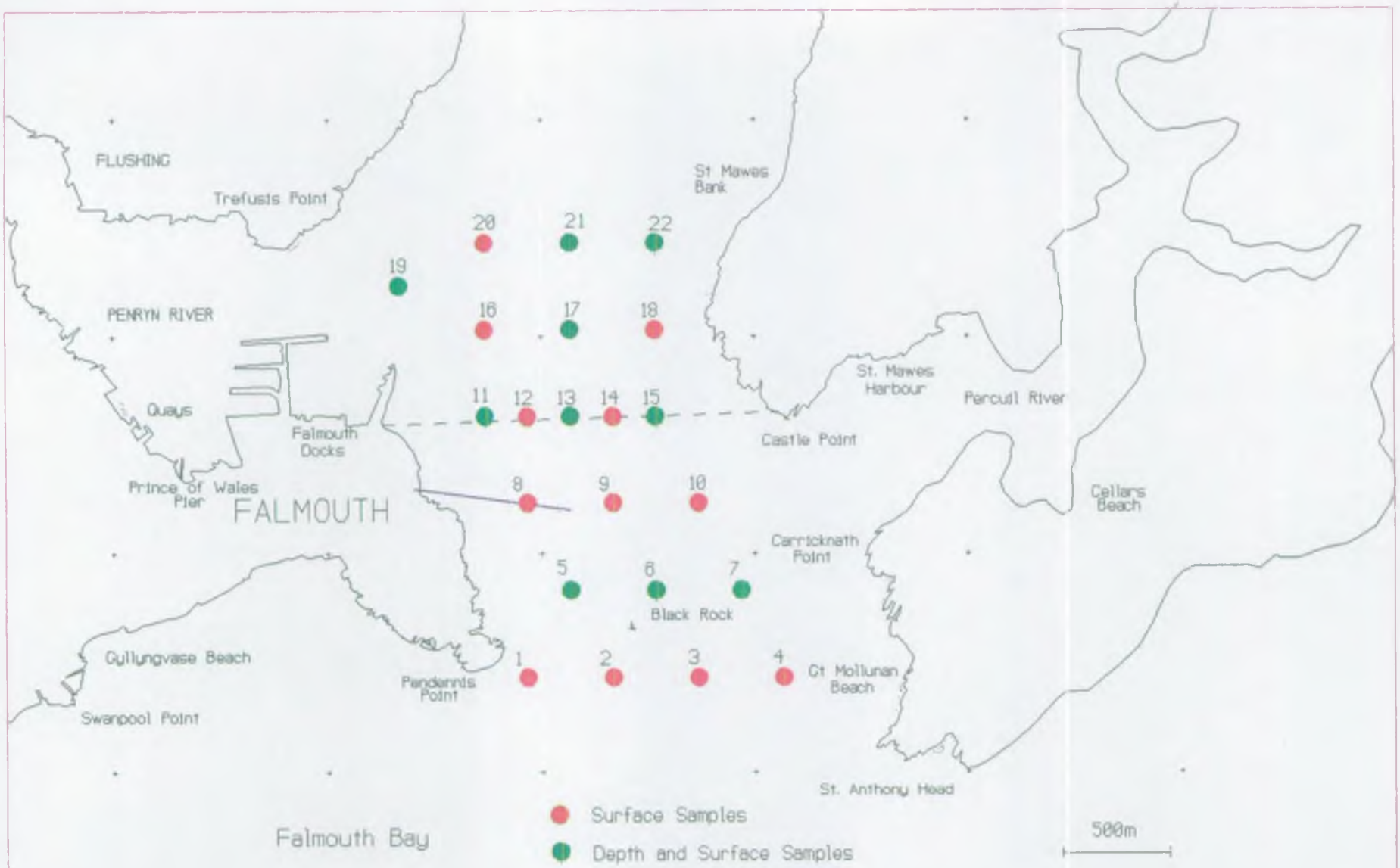


FIGURE 3 FALMOUTH SCHEME COMMISSIONING SAMPLING GRID (15/04/98, 21/04/98, 23/04/98)

Figure 4 Falmouth Pre-Scheme Water Quality Surveys

Faecal Coliform Results (Geometric Mean Over Four Tidal States)

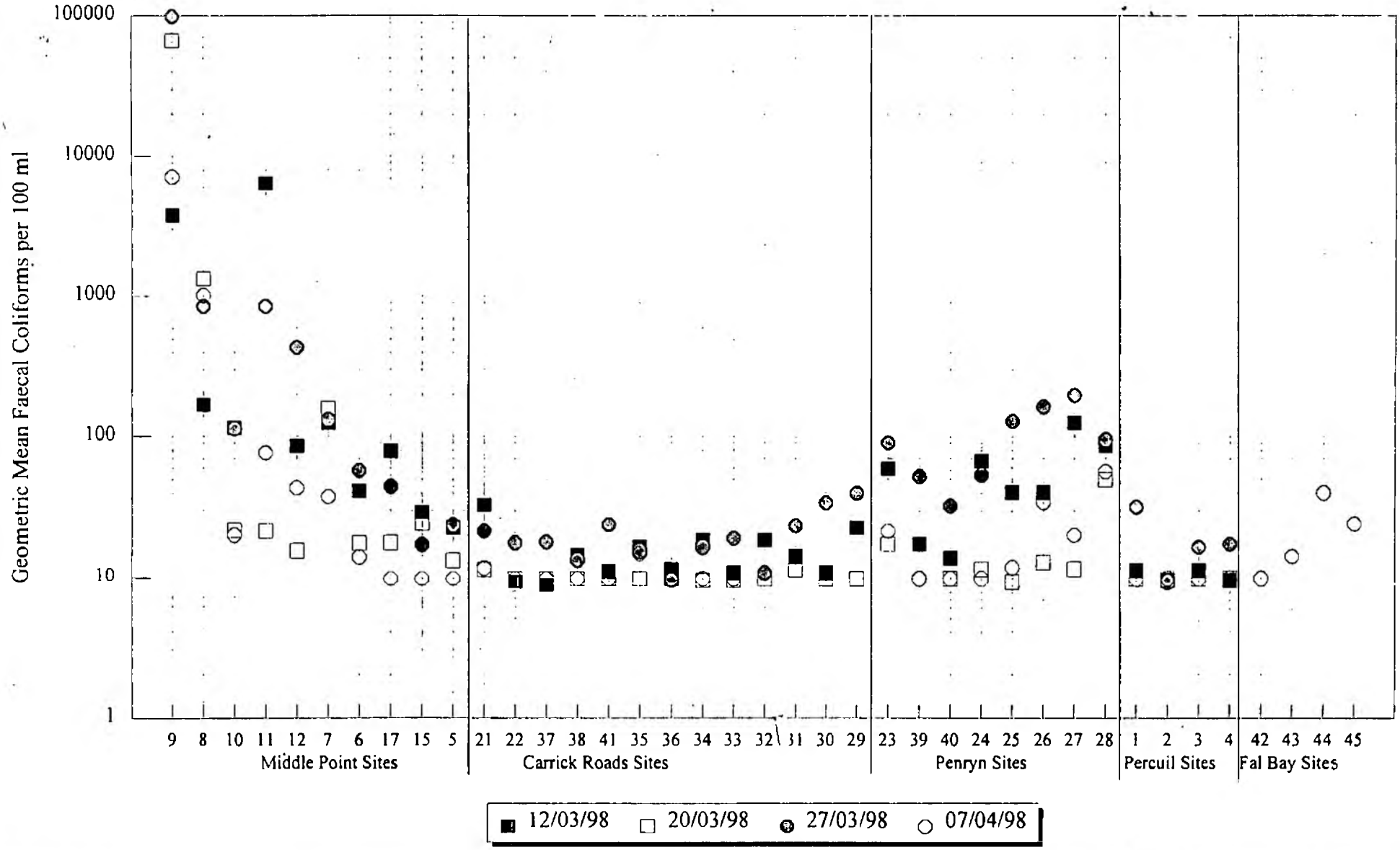
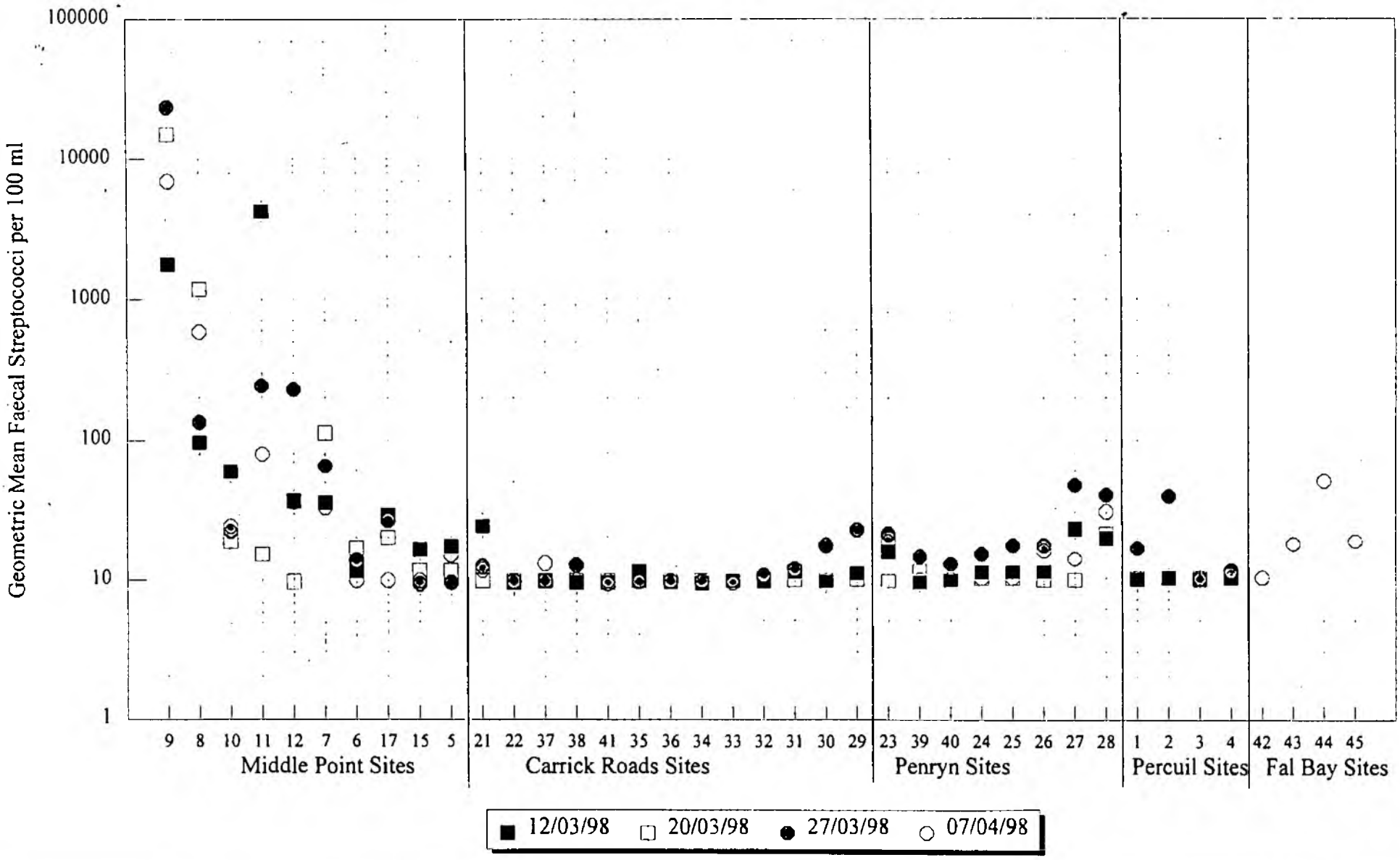


Figure 5 Falmouth Pre-Scheme Water Quality Surveys

Faecal Streptococci Results (Geometric Mean Over Four Tidal States)



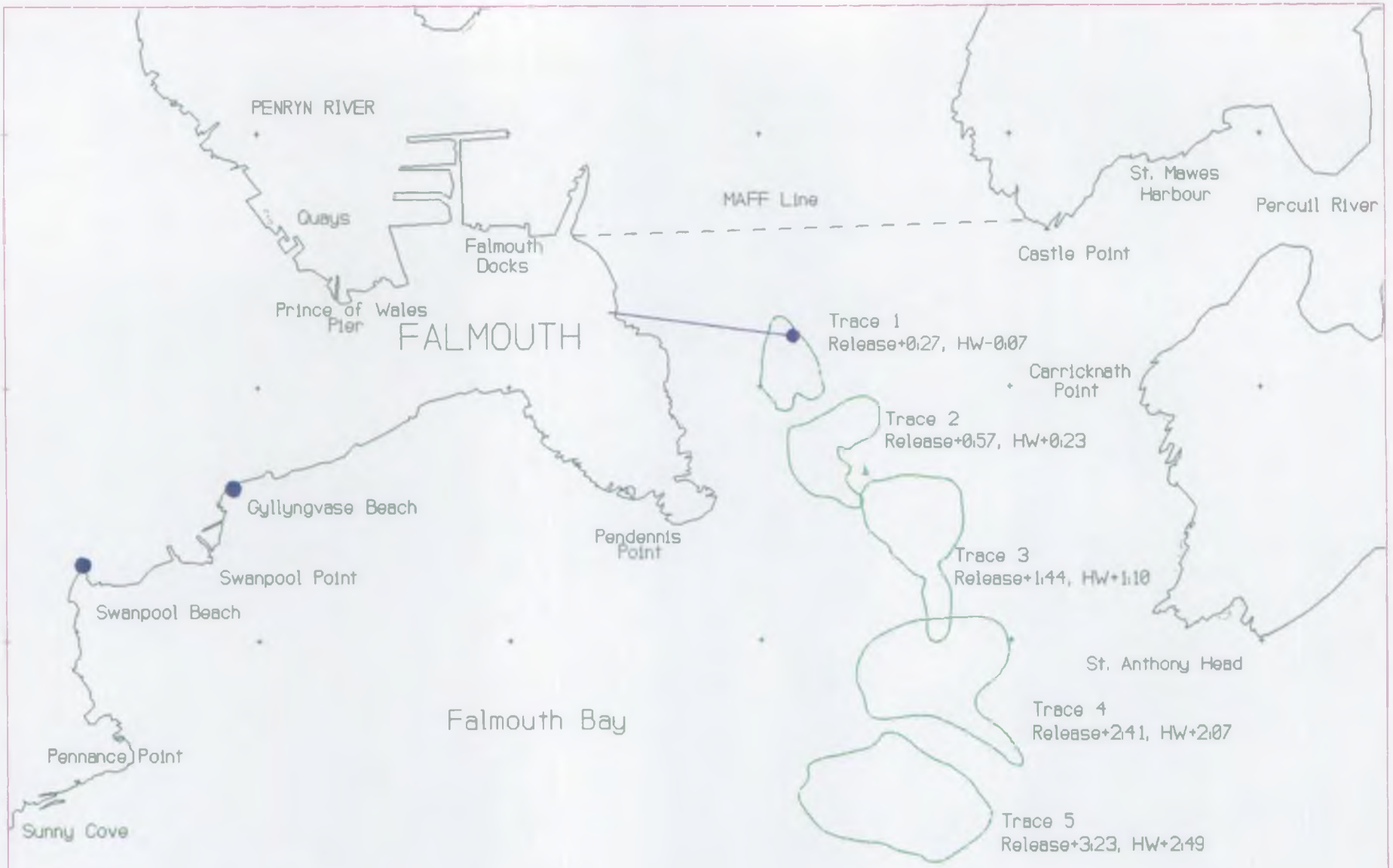


FIGURE 6 FALMOUTH SPRING TIDE DYE RELEASE 17/03/98, PATCH 1 06:59 (HW-0:34)
(Visible extents of dye)

FIGURE 7 FALMOUTH SPRING TIDE DYE RELEASE 17/03/98, PATCH 2 07:45 (HW+0:12)
(Visible extents of dye)

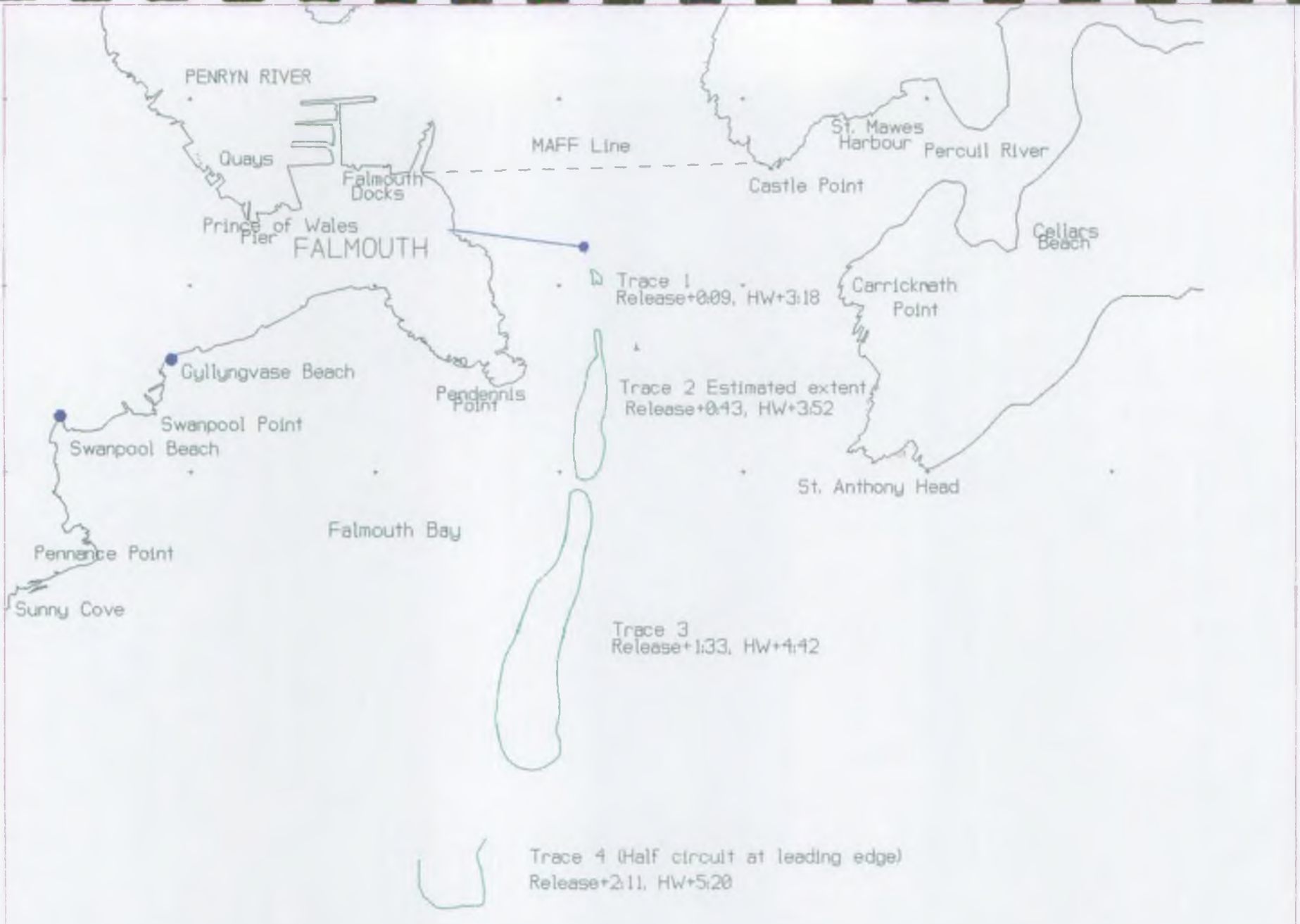


FIGURE 8 FALMOUTH SPRING TIDE DYE RELEASE 17/03/98, PATCH 3 10:42 (HW+3:09)
(Visible extents of dye)

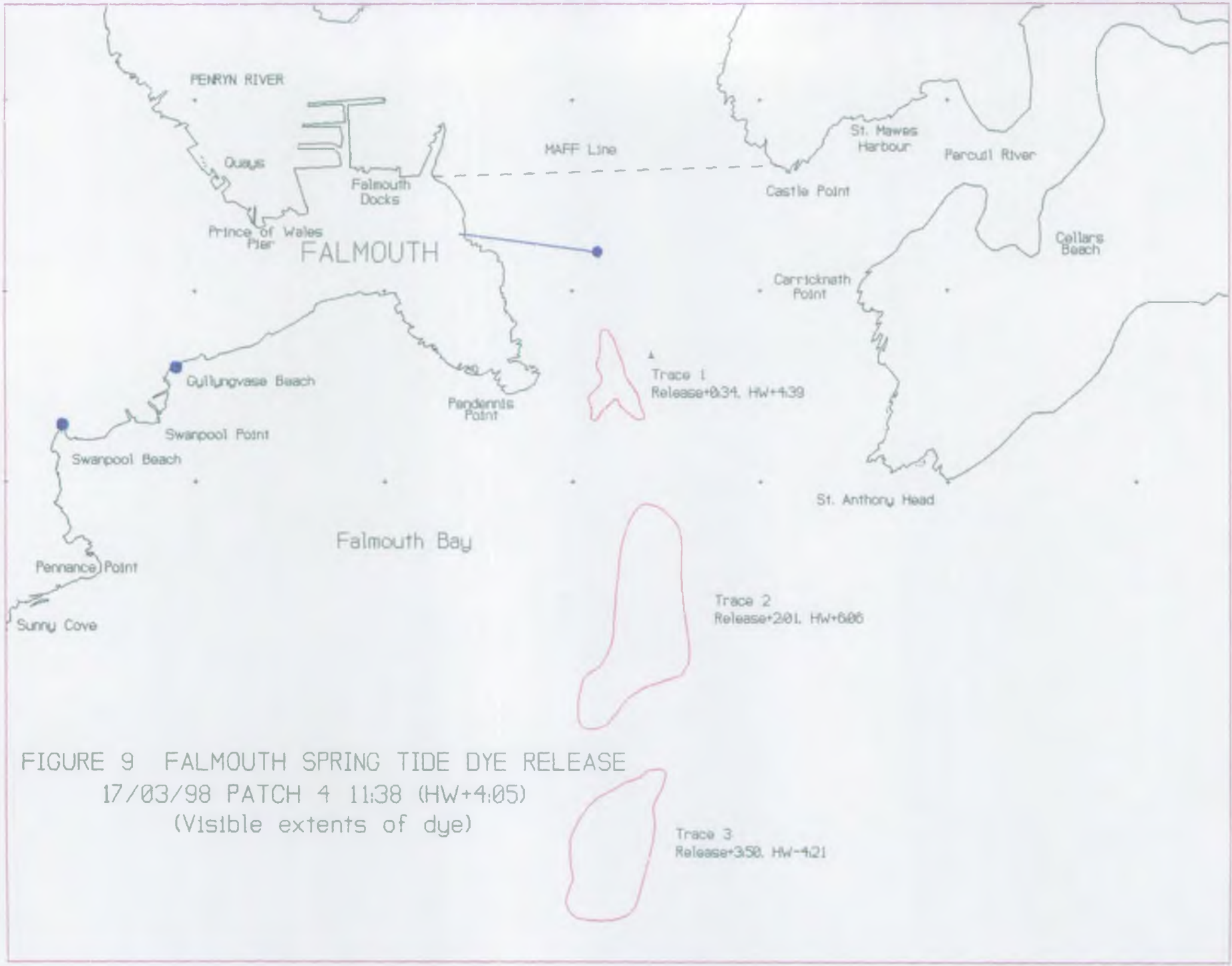


FIGURE 9 FALMOUTH SPRING TIDE DYE RELEASE
17/03/98 PATCH 4 11:38 (HW+4:05)
(Visible extents of dye)

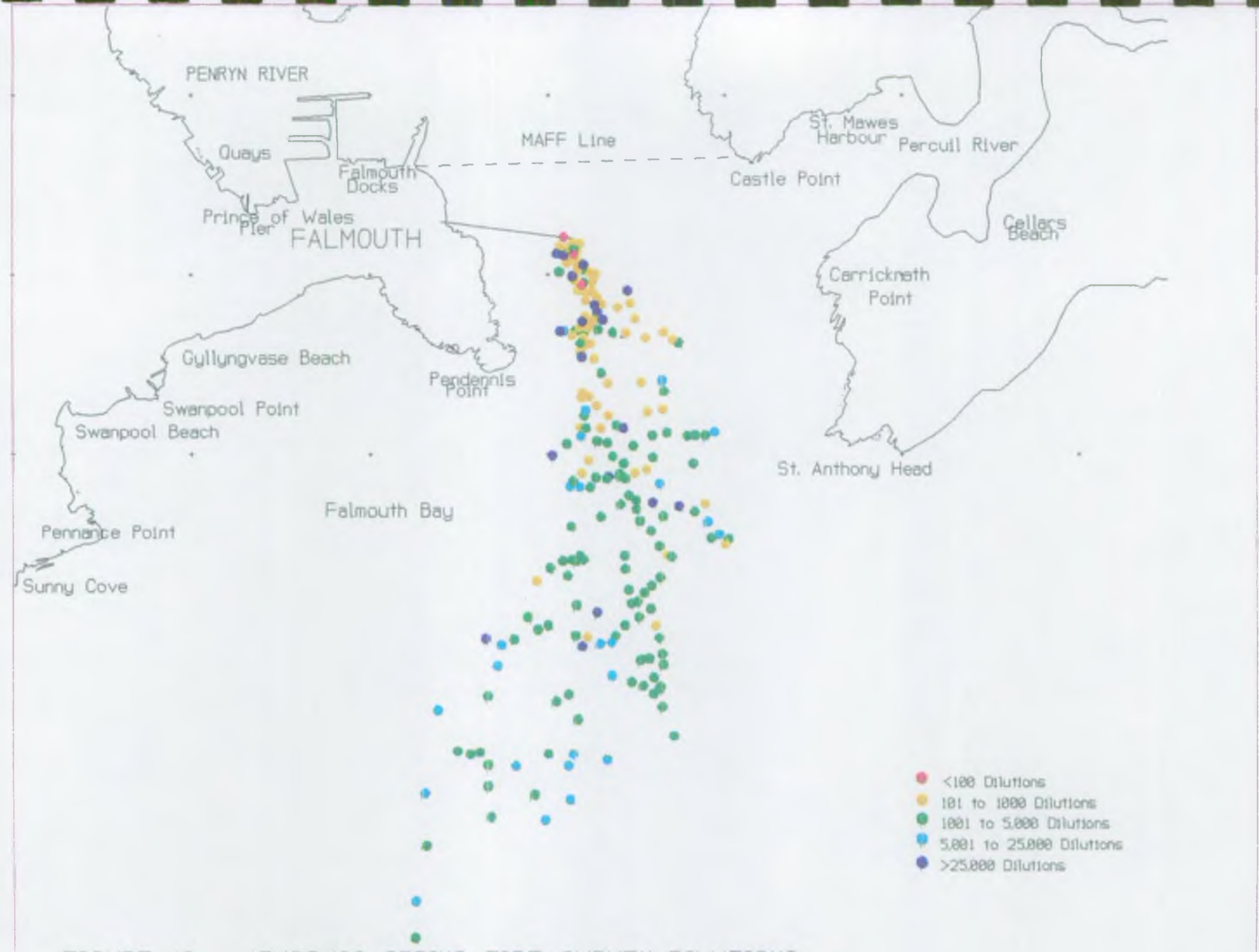


FIGURE 10 17/03/98 SPRING TIDE SURVEY DILUTIONS

FIGURE 11 15/04/98 SPRING TIDE SURVEY

DYE PATCH TRACES

(Visible extents of dye)

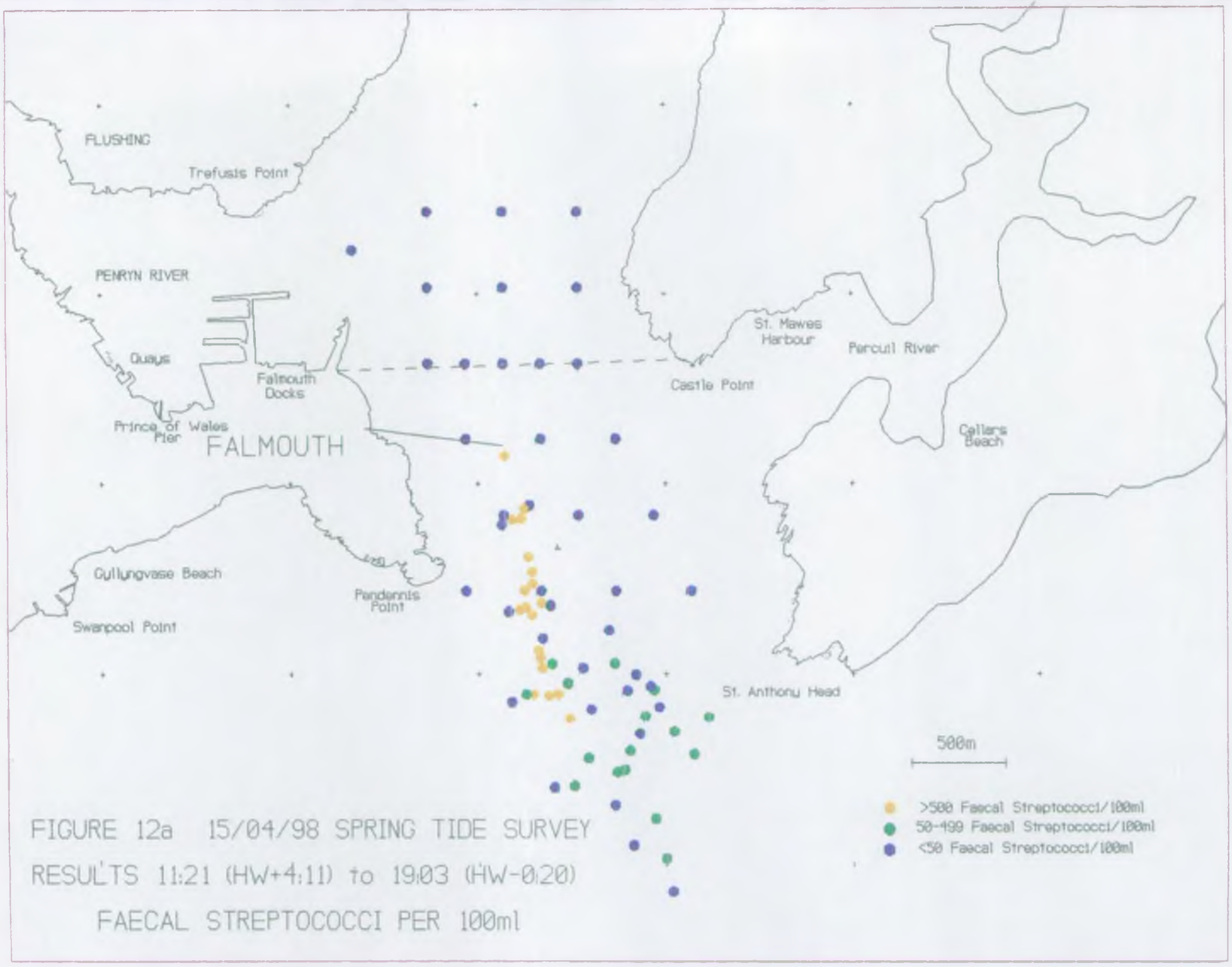


FIGURE 12a 15/04/98 SPRING TIDE SURVEY

RESULTS 11:21 (HW+4:11) to 19:03 (HW-0:20)

FAECAL STREPTOCOCCI PER 100ml

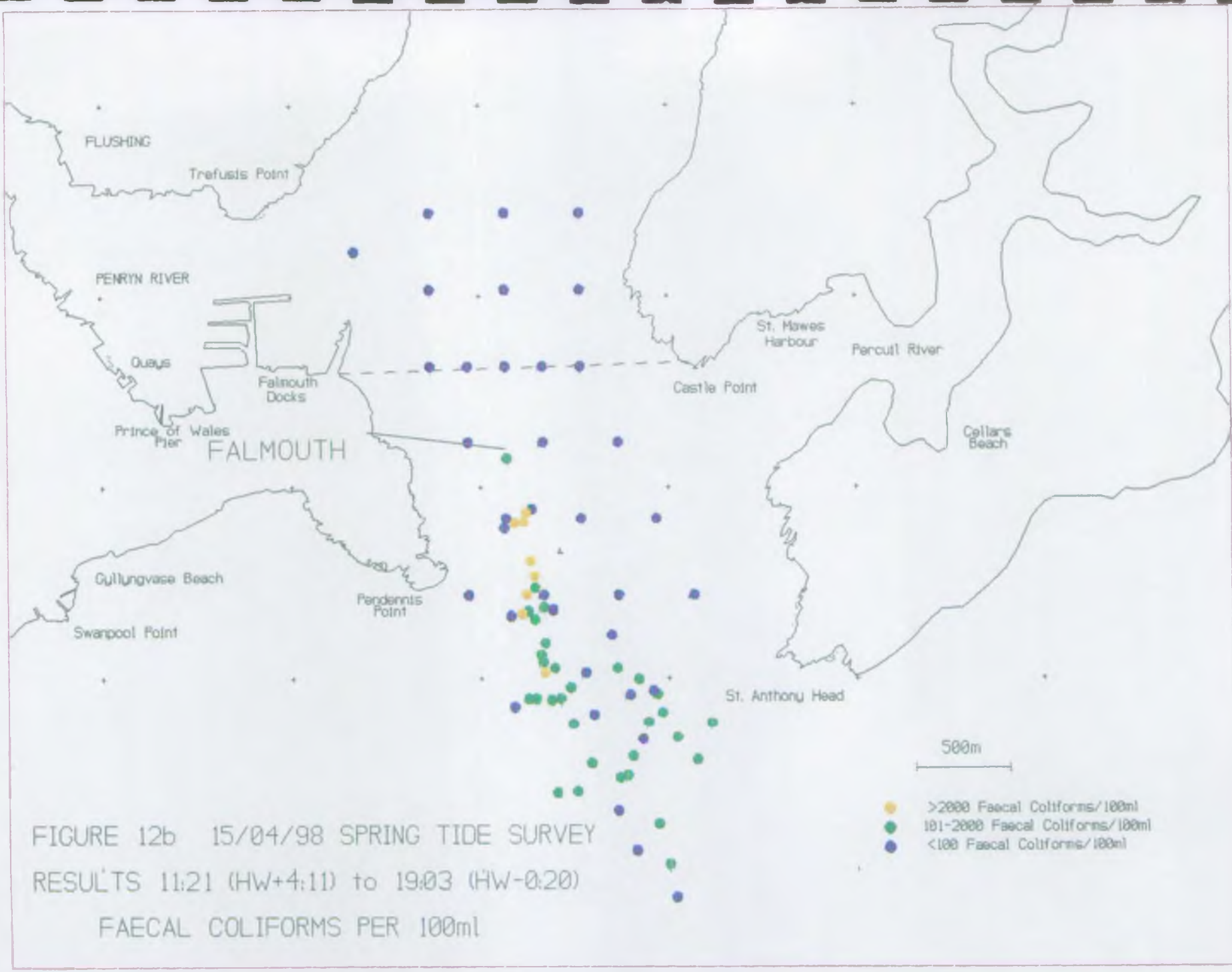


FIGURE 12b 15/04/98 SPRING TIDE SURVEY

RESULTS 11:21 (HW+4:11) to 19:03 (HW-0:20)

FAECAL COLIFORMS PER 100ml

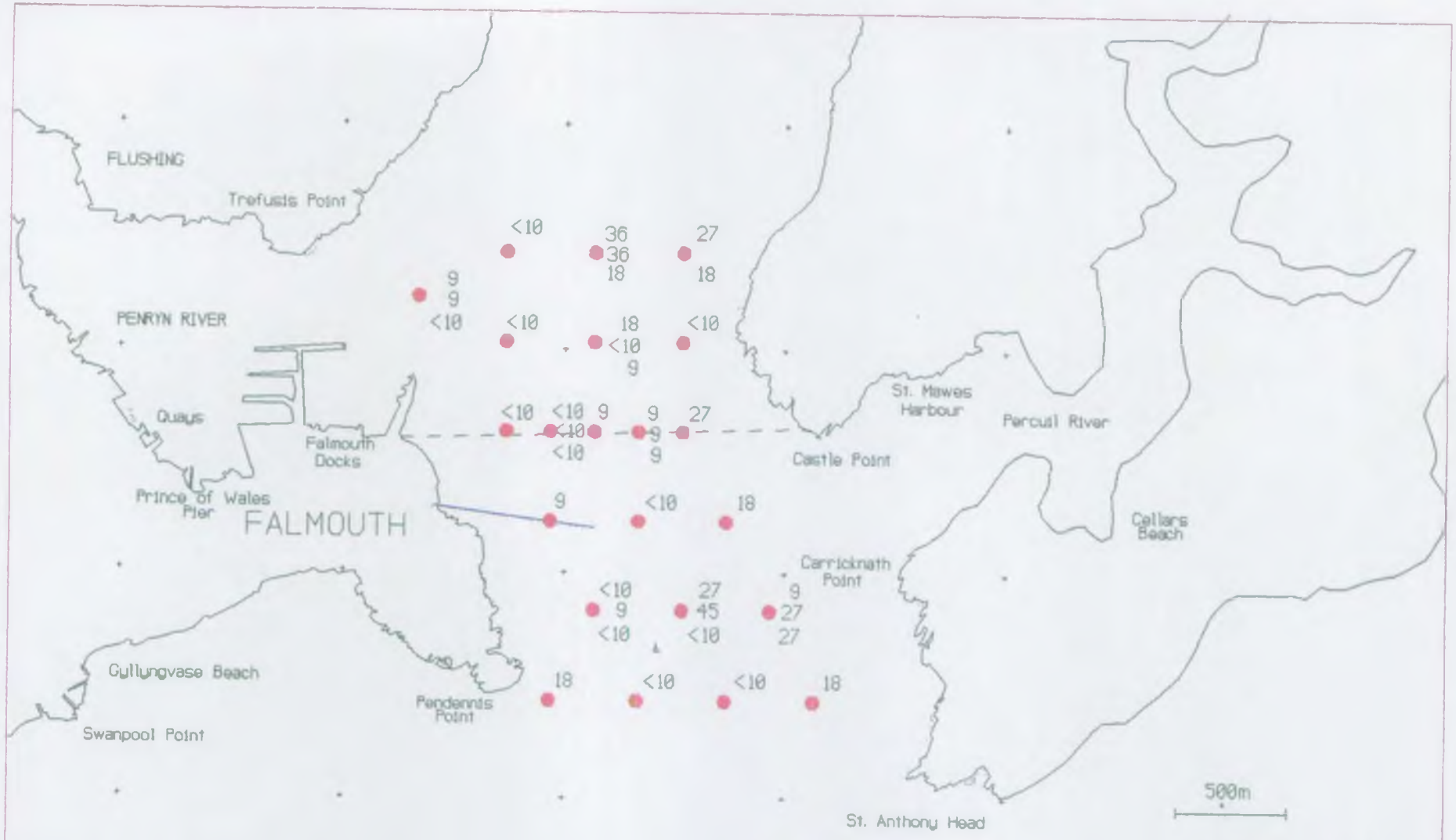


FIGURE 13 15/04/98 SPRING TIDE FAECAL COLIFORM RESULTS

FINAL SAMPLING RUN 17:02 (HW-3:22) TO 19:03 (HW-0:20)

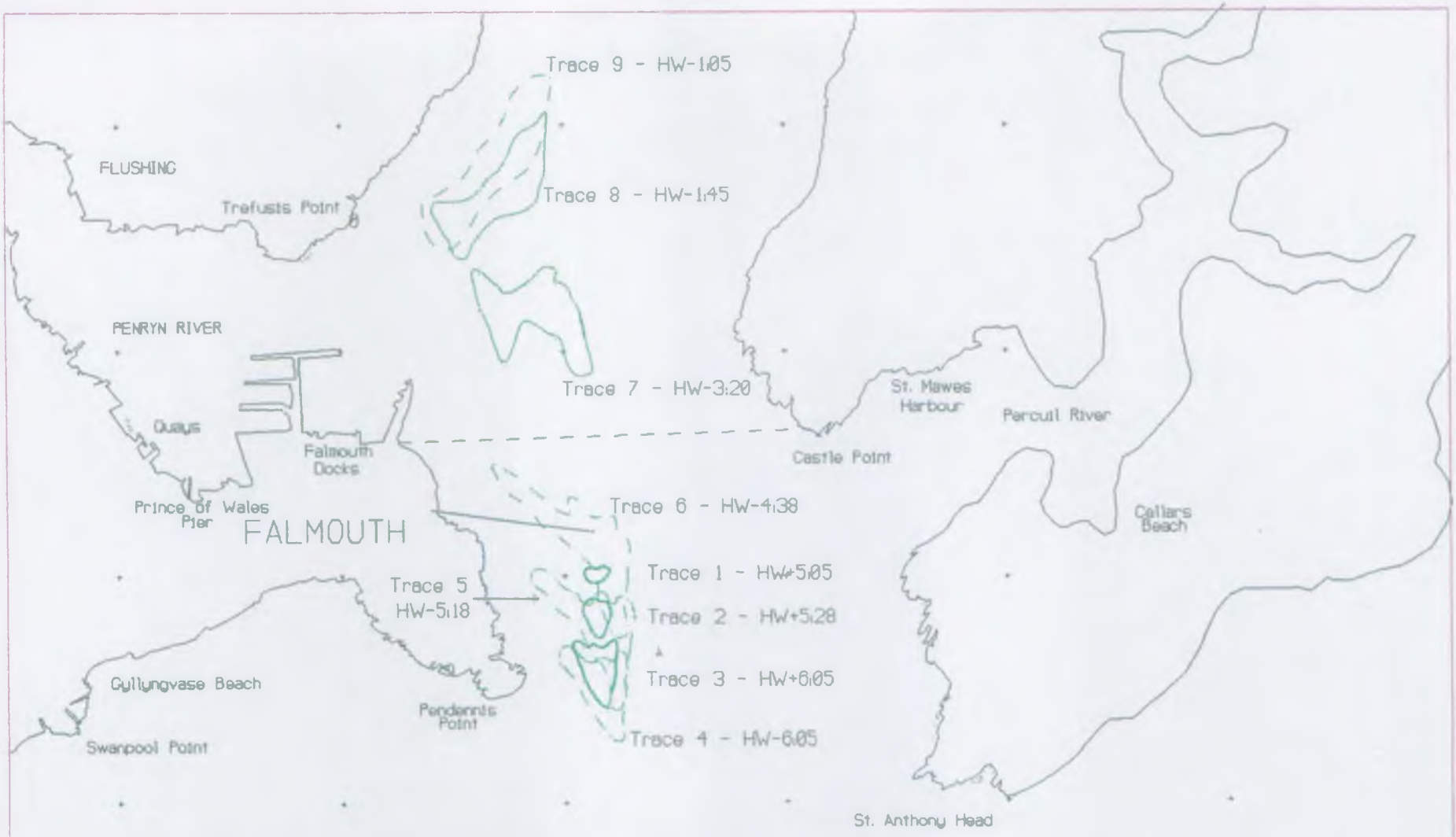


FIGURE 14 21/04/98 NEAP TIDE SURVEY

DYE PATCH TRACES

(Visible extents of dye)

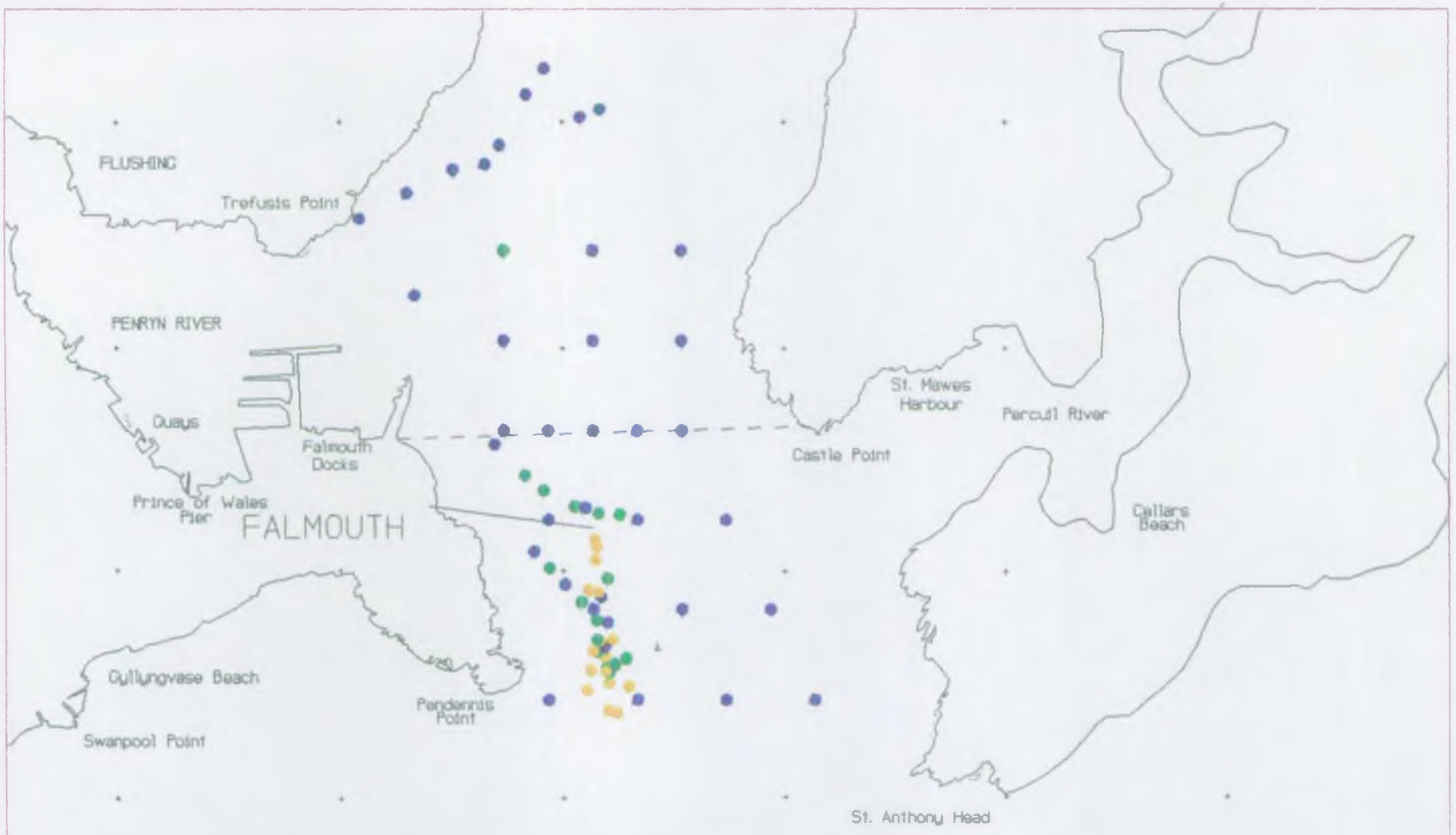


FIGURE 15a 21/04/98 NEAP TIDE SURVEY

RESULTS 04:18 (HW+4:52) to 11:36 (HW-0:38)

FAECAL STREPTOCOCCI PER 100ml

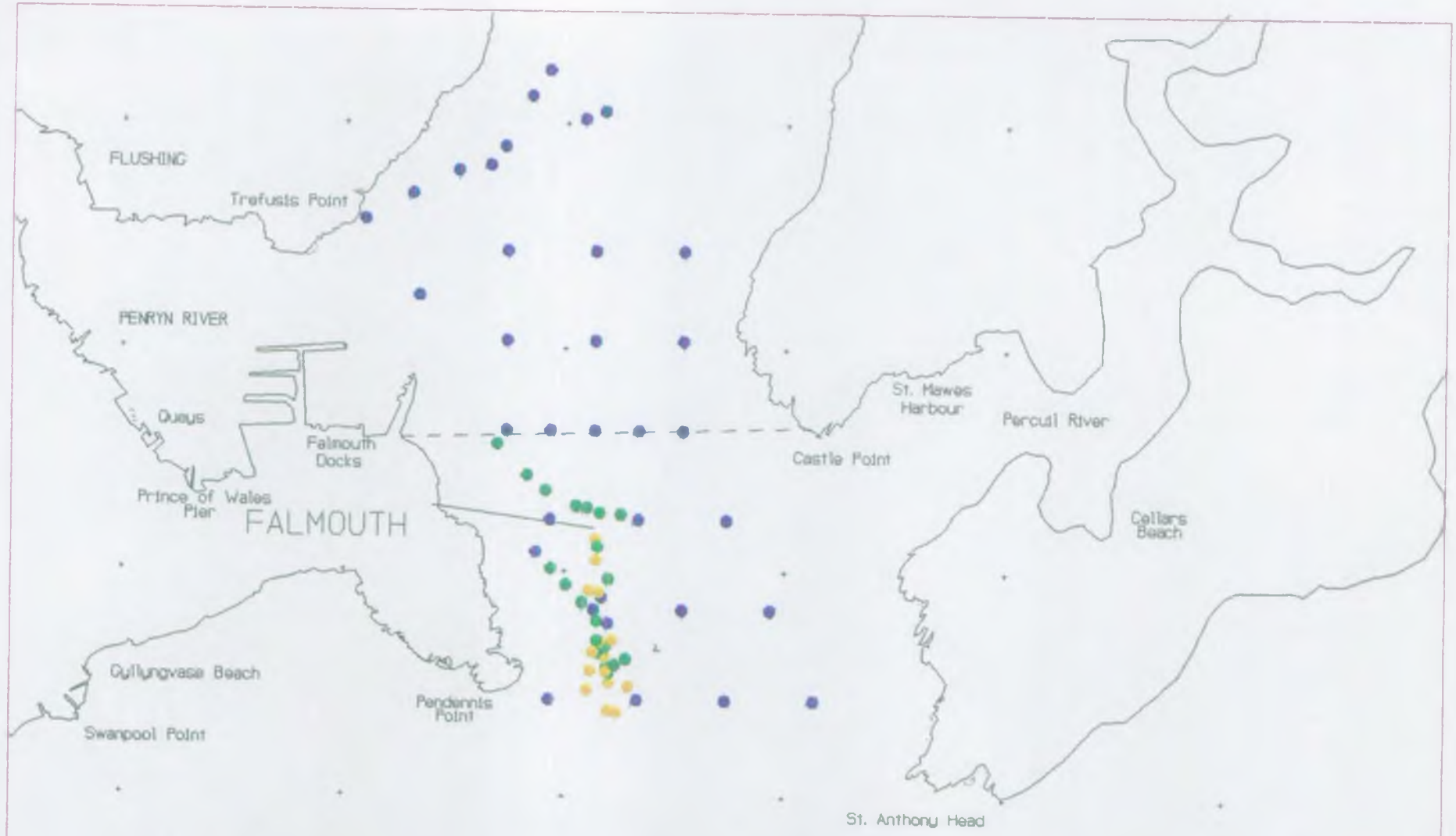


FIGURE 15b 21/04/98 NEAP TIDE SURVEY

RESULTS 04:18 (HW+4:52) to 11:36 (HW-0:38)

FAECAL COLIFORMS PER 100ml

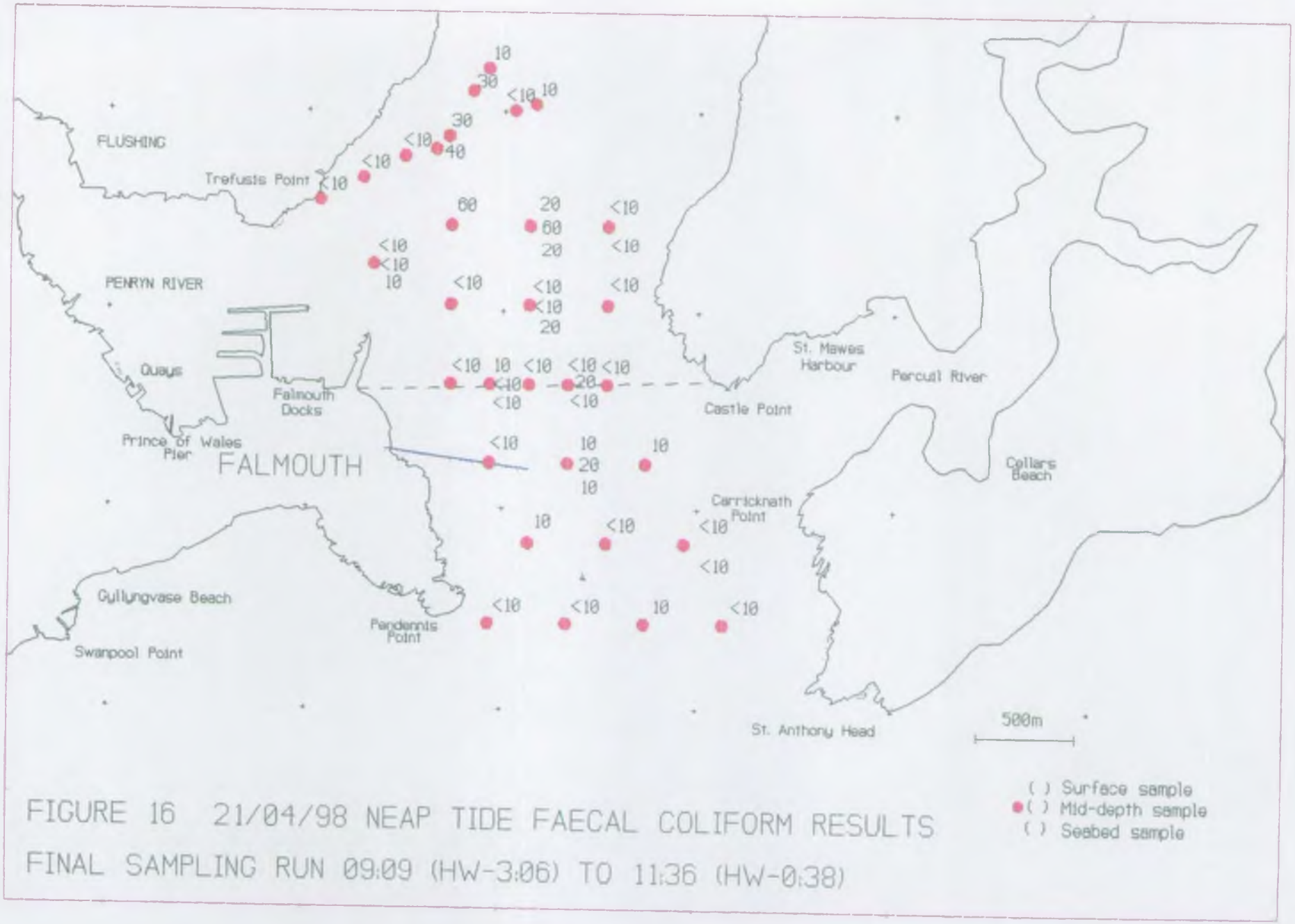


FIGURE 16 21/04/98 NEAP TIDE FAECAL COLIFORM RESULTS

FINAL SAMPLING RUN 09:09 (HW-3:06) TO 11:36 (HW-0:38)

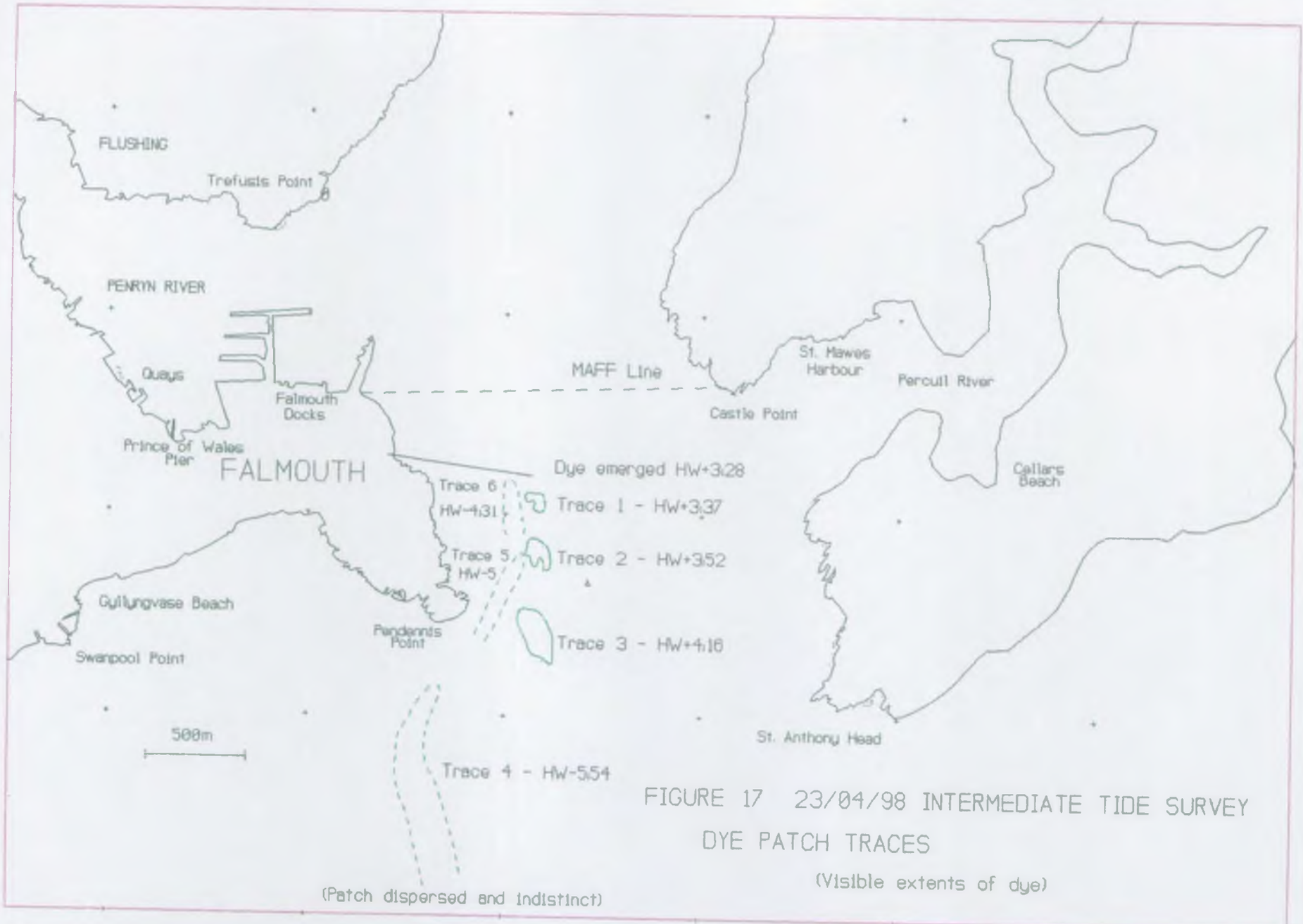


FIGURE 17 23/04/98 INTERMEDIATE TIDE SURVEY

DYE PATCH TRACES

(Visible extents of dye)

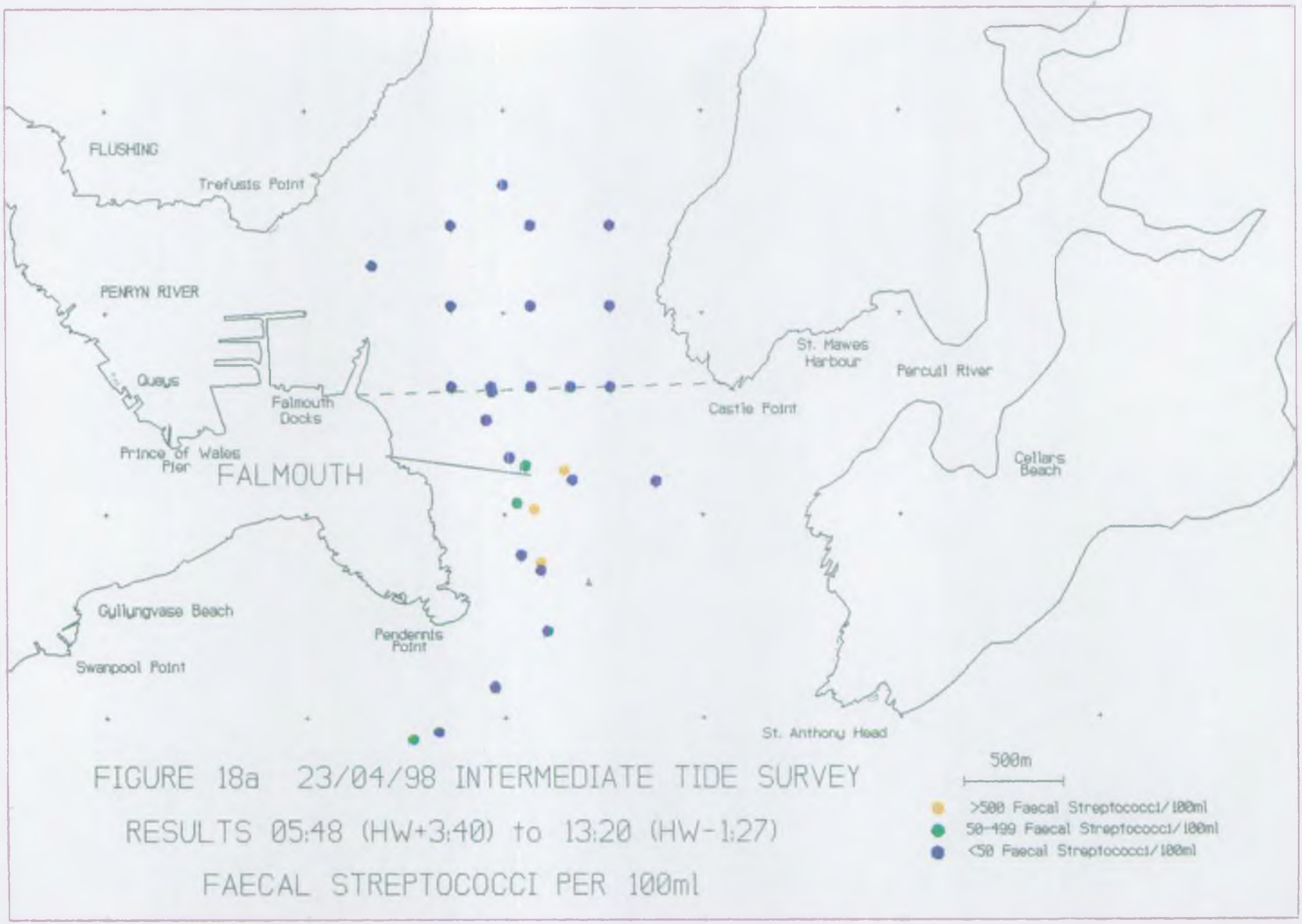


FIGURE 18a 23/04/98 INTERMEDIATE TIDE SURVEY

RESULTS 05:48 (HW+3:40) to 13:20 (HW-1:27)

FAECAL STREPTOCOCCI PER 100ml

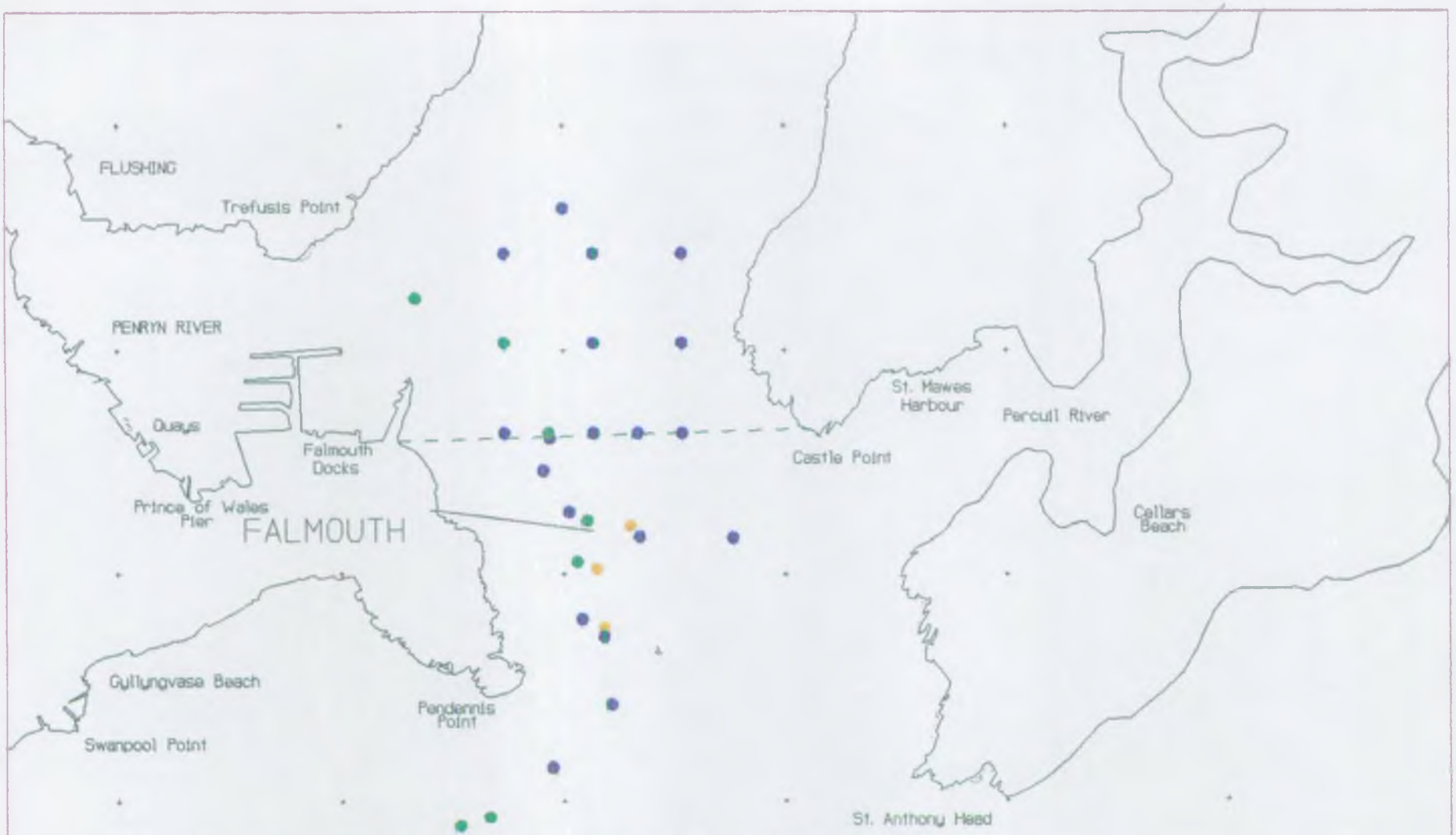


FIGURE 18b 23/04/98 INTERMEDIATE TIDE SURVEY

RESULTS 05:48 (HW+3:40) to 13:20 (HW-1:27)

FAECAL COLIFORMS PER 100ml

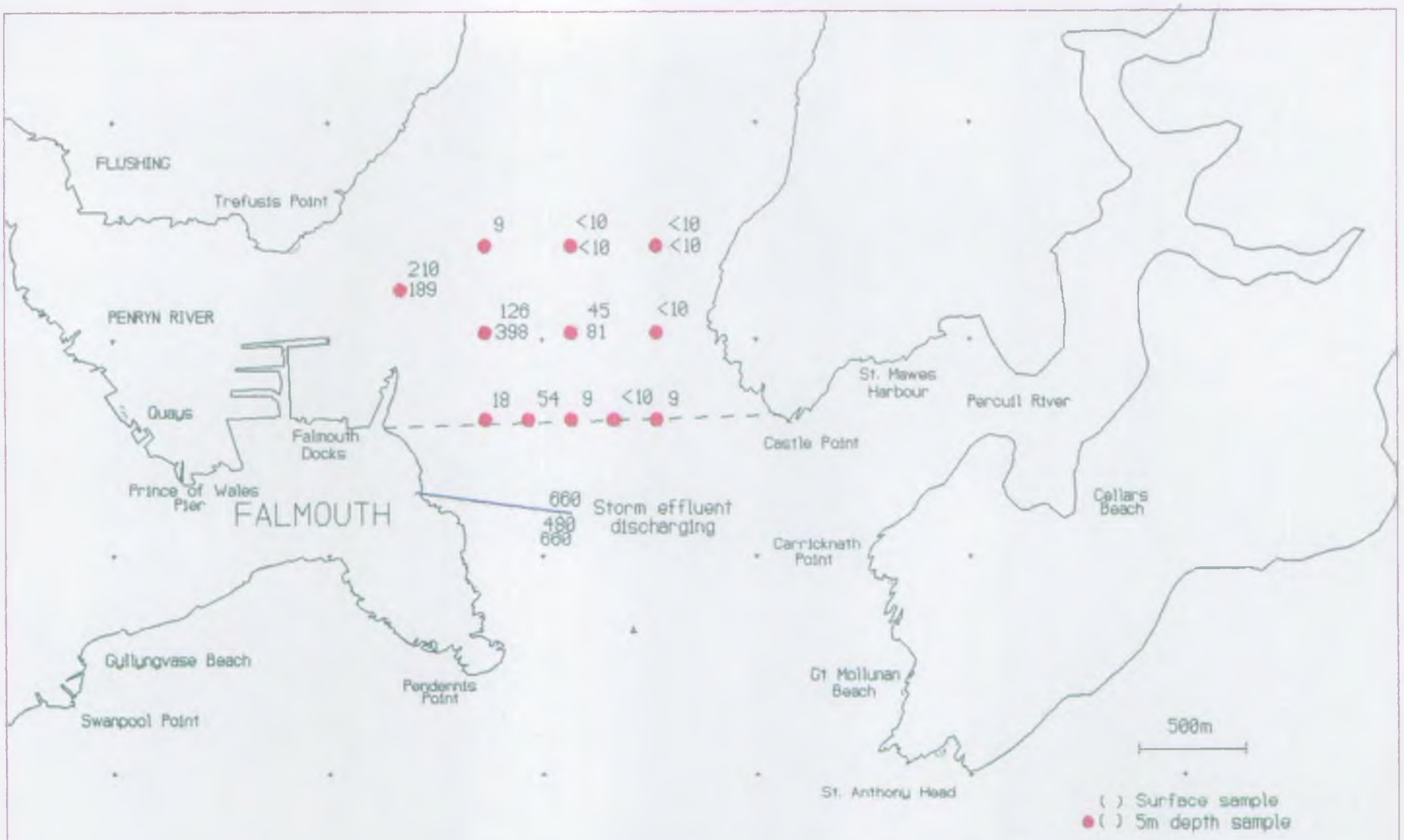


FIGURE 19 23/04/98 INTERMEDIATE TIDE FAECAL COLIFORM RESULTS

09:59 (HW-4:48) TO 12:12 (HW-2:36) GMT

FIGURE 20 23/04/98 INTERMEDIATE TIDE FAECAL COLIFORM RESULTS

12:15 (HW-2:32) TO 12:25 (HW-2:22) GMT

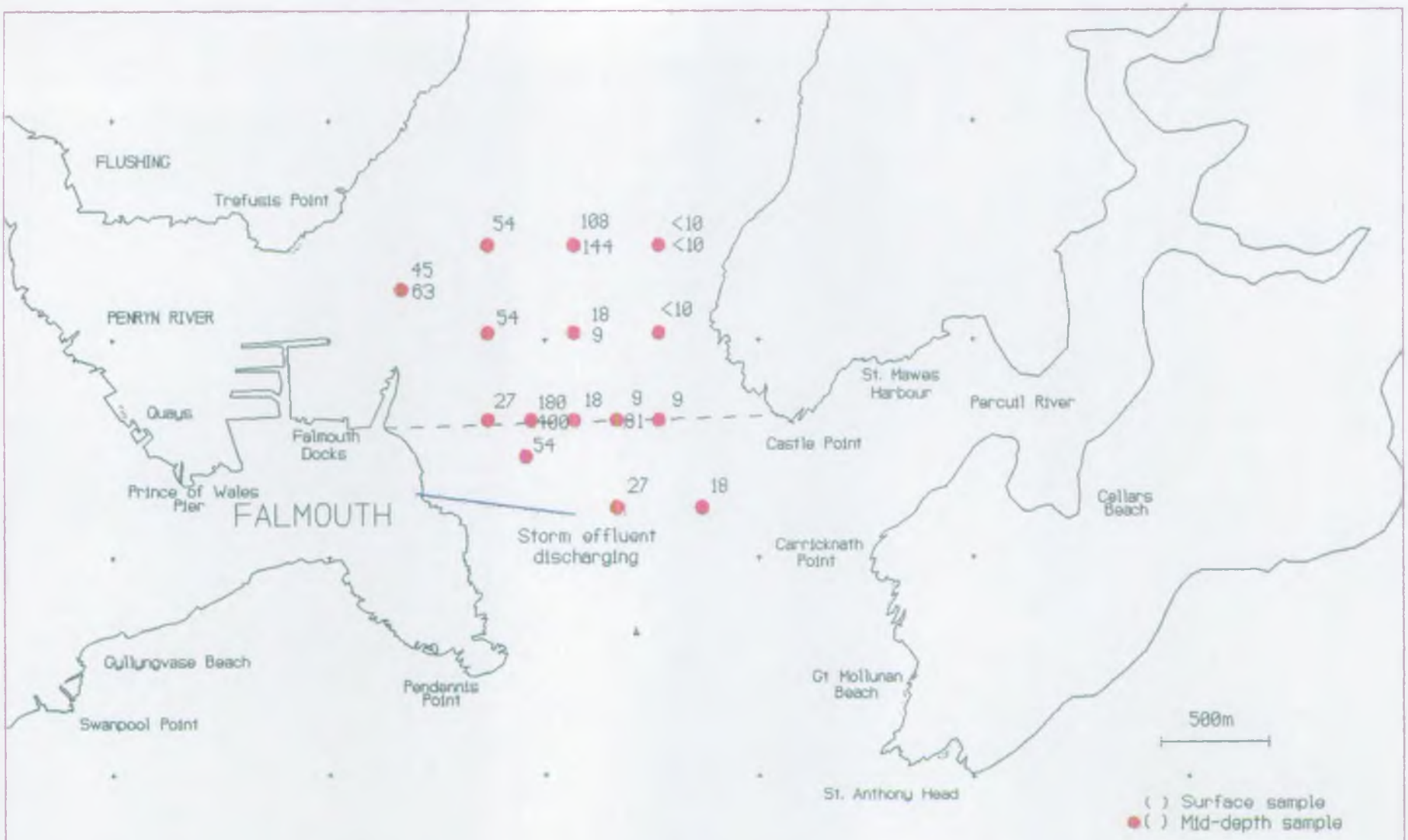


FIGURE 21 23/04/98 INTERMEDIATE TIDE FAECAL COLIFORM RESULTS

12:28 (HW-2:20) TO 13:20 (HW-1:27) GMT

TABLES

TABLE 1 FALMOUTH SCHEME MONITORING - WATER QUALITY LOCATIONS

Sites in ITALICS and normal type bold have been sampled for the pre commissioning surveys
Sites in BOLD and normal type are to be sampled for the post commissioning surveys

Site No.	Location	East	North	Lat.	Long.
1	EA Routine Monitoring - Percuil River, Lower Estuary	185650	33000	50° 09.552	5° 00.052
2	Percuil River off St Mawes Harbour	184766	32635	50° 09.291	5° 00.770
3	St Mawes Buoy	184106	32328	50° 09.092	5° 01.414
4	Gt Mollunan Beach	184640	31630	50° 08.728	5° 00.942
5	Black Rock Buoy	183675	31568	50° 08.717	5° 02.032
6	Middle Point New Outfall - 500m South	183135	31700	50° 08.732	5° 02.207
7	*Middle Point Existing Outfall - 250m SE*	*182860*	*31810*	*50° 08.786*	*5° 02.441*
8	*Middle Point Existing Outfall - 125m South*	*182700*	*31875*	*50° 08.818*	*5° 02.578*
9	Middle Point Existing Outfall	182700	32000	50° 08.903	5° 02.633
10	*Middle Point Existing Outfall - 125m East*	*182825*	*32000*	*50° 08.888*	*5° 02.477*
11	*Middle Point Existing Outfall - 125m North*	*182700*	*32125*	*50° 08.952*	*5° 02.586*
12	*Middle Point Existing Outfall - 250m North*	*182700*	*32250*	*50° 09.020*	*5° 02.590*
13	**Middle Point New Outfall - 250m South**	**183135**	**31950**	**50° 08.867**	**5° 02.215**
14	**Middle Point New Outfall - 125m South**	**183135**	**32075**	**50° 08.935**	**5° 02.220**
15	Middle Point New Outfall - 500m East	183635	32200	50° 09.013	5° 01.805
16	**Middle Point New Outfall - 125m East**	**183260**	**32200**	**50° 09.005**	**5° 02.119**
17	Middle Point New Outfall	183135	32200	50° 09.002	5° 02.224
18	**Middle Point New Outfall - 125m West**	**183010**	**32200**	**50° 08.999**	**5° 02.329**
19	**Middle Point New Outfall - 125m North**	**183135**	**32325**	**50° 09.070**	**5° 02.228**
20	**Middle Point New Outfall - 250m North**	**183135**	**32450**	**50° 09.137**	**5° 02.232**
21	Middle Point New Outfall - 500m North	183135	32700	50° 09.272	5° 02.241
22	West Narrows Buoy	183353	32898	50° 09.383	5° 02.148
23	Falmouth Docks east of Eastern Breakwater	182610	32827	50° 09.329	5° 02.686
24	Penryn River off Falmouth Docks	181758	33195	50° 09.510	5° 03.377
25	EA Routine Monitoring - Penryn River, Falmouth Road	181100	33200	50° 09.462	5° 03.754
26	Penryn River off Royal Cornwall Yacht Club	180622	33650	50° 09.712	5° 04.272
27	Penryn River off Falmouth Marina	180137	33983	50° 09.929	5° 04.758
28	EA Routine Monitoring - Penryn River, Trevissome	179500	34120	50° 09.946	5° 02.293
29	EA Routine Monitoring - Carrick Roads mid channel	183000	36330	50° 11.600	5° 02.737
30	Off Messack Point	183813	35856	50° 11.190	5° 01.995
31	Off Mylor Yacht Club	182176	35436	50° 10.754	5° 03.005
32	Mid channel between Messack Point and Mylor	183078	35576	50° 10.821	5° 02.282
33	St Just Pool	184000	35000	50° 10.530	5° 01.594
34	North Bank Buoy	183348	34653	50° 10.355	5° 02.098
35	EA Routine Monitoring - Vilt Buoy	183135	34023	50° 09.980	5° 02.292
36	St Mawes Bank Northernmost Buoy	183815	34095	50° 10.151	5° 01.633
37	St Mawes Bank Southernmost Buoy	183670	33599	50° 09.714	5° 01.795
38	Southern Carrick Roads - mid channel	182978	33283	50° 09.582	5° 02.393
39	Old EA Monitoring Site - Carrick Roads	182550	33200	50° 09.427	5° 02.843
40	Carrick Roads off Trefusis Point	182193	33440	50° 09.690	5° 03.040
41	Carrick Roads off Falmouth Bank	182664	33730	50° 09.816	5° 02.671

From 1/4/98 sites 29 to 32 were removed and locations added south of Pendennis Point as follows:

42	600m SSW of Black Rock	183500	31000	50° 08.363	5° 01.877
43	Middle Point New Outfall - 1000m South	183135	31200	50° 08.463	5° 02.190
44	150m South of Pendennis Point	182750	31300	50° 08.509	5° 02.516
45	650m South of Pendennis Point	182750	30800	50° 08.239	5° 02.499

TABLE 2 Falmouth Scheme Commissioning Grid Sampling Locations 15/4/98, 21/4/98, 23/4/98

Site	East	North	Lat	Long
1	182935	31430	50° 08.58	5° 02.37
2	183335	31430	50° 08.57	5° 02.03
3	183735	31430	50° 08.60	5° 01.69
4	184135	31430	50° 08.61	5° 01.36
5	**183135**	**31830**	**50° 08.80**	**5° 02.21**
6	**183535**	**31830**	**50° 08.81**	**5° 01.88**
7	**183935**	**31830**	**50° 08.82**	**5° 01.54**
8	182935	32230	50° 09.01	5° 02.39
9	183335	32230	50° 09.02	5° 02.06
10	183735	32230	50° 09.03	5° 01.72
11	**182735**	**32630**	**50° 09.23**	**5° 02.57**
12	182935	32630	50° 09.23	5° 02.41
13	**183135**	**32630**	**50° 09.23**	**5° 02.24**
14	183335	32630	50° 09.24	5° 02.07
15	**183535**	**32630**	**50° 09.24**	**5° 01.90**
16	182735	33030	50° 09.44	5° 02.59
17	**183135**	**33030**	**50° 09.45**	**5° 02.25**
18	183535	33030	50° 09.46	5° 01.92
19	**182335**	**33230**	**50° 09.54**	**5° 02.93**
20	182735	33430	50° 09.66	5° 02.60
21	**183135**	**33430**	**50° 09.67**	**5° 02.27**
22	**183535**	**33430**	**50° 09.67**	**5° 01.93**

Sites in BOLD require surface and depth samples

TABLE 3 FAECAL COLIFORM RESULTS SUMMARY

Site No.	12/03/98				20/03/98				27/03/98				07/04/98				12/03/98	20/03/98	27/03/98	07/04/98
	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	GEOMEAN	GEOMEAN	GEOMEAN	GEOMEAN
	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3				
9	865	3700	2300	27000	350	100000	270000	2100000	2100	340000	4100000	32000	10	234000	1160000	950	3755	66744	98380	7126
8	660	610	18	117	820	43000	350	260	1091	2000	802	300	20	86000	480	1290	171	1338	851	1016
10	54	99	9	3700	18	9	10	135	99	210	27	300	10	10	20	80	116	22	114	20
11	171	100000	46000	2200	36	10		27	45	310	135000	280	10	120	50	580	6450	21	852	77
12	36	54	36	770	81	9	9	9	27	81	55000	300	10	70	10	520	86	16	436	44
7	99	72	10	3500	280	10	1727	135	36	81	10	11000	10	10	10	2000	126	160	134	38
6	63	90	10	54	27	10	10	36	135	54	10	153	10	10	20	20	42	18	58	14
17	99	54	10	730	27	10	10	36	117	10	9	380	10	10	10	10	79	18	45	10
15	250	9	18	18	189	18	10	10	18	27	18	10	10	10	10	10	29	24	17	10
5	162	9	10	18	36	10	10	9	27	9	9	144	10	10	10	10	23	13	24	10
21	10	36	10	330	10	10	10	18	18	9	72	18	10	10	20	10	33	12	21	12
22	10	9	10	9	10	10	10	10	10	10	27	36	10	10	10	10	9	10	18	10
37	9	9	9	9	10	10	10	10	63	10	9	18	10	10	10	10	9	10	18	10
38	10	27	9	18	10	10	10	10	10	36	10	9	10	10	10	10	14	10	13	10
41	10	18	9	10	10	10	10		27	36	18	18	10			10	11	10	24	10
35	10	27	10	27	10	10	10	10	10	9	10	63	10	50	10	10	16	10	15	15
36	18	10	10	10	10	10	10	10	10	10	9	10	10	10	10	10	12	10	10	10
34	10	36	9	36	9	10	10	10	10	10	10	72	10	10	10	10	18	10	16	10
33	9	9	10	18	9	10	10	10	27	10	18	27	10	10	10	10	11	10	19	10
32	36	18	10	18	10	10	10	10	9	18	10	9					18	10	11	
31	10	45	9	10	18	10	10	10	9	27	27	45					14	12	23	
30	18	9	9	10	10	10	10	10	36	36	108	10					11	10	34	
29	27	36	27	10	10	10	10	10	9	117	135	18					23	10	40	
23	18	126	27	200	27	18	10	18	81	260	90	36	10	70	10	30	59	17	91	21
39	27	36	10	9	10	10	10	90	9	108	108	72	10	10	10	10	17	17	52	10
40	36	10	10	10	10	10	10	10	18	99	63	10	10	10	10	10	14	10	33	10
24	153	135	36	27	18	10	10	10	9	200	72	63	10	10	10	10	67	12	53	10
25	81	45	27	27	10	9	9	10	108	270	81	117	10	20	10	10	40	9	129	12
26	54	550	10	9	27	10	10	10	500	290	90	54	10	30	10	470	40	13	163	34
27	36	2400	162	18	18	10	10	10	63	144	4500	36	10	160	10	10	126	12	196	20
28	63	135	90	72	90	10	370	18	10	153	1545	36	10	10200	10	10	86	49	96	57
1	10	18	9	10	10	10	10	10	10	36	108	27	10	10	10	10	11	10	32	10
2	9	10	10	10	10	10	10	10	9	10	9	10	10	10	10	10	10	10	9	10
3	9	10	10	18	10	10	10	10	10	27	10	27	10	10	10	10	11	10	16	10
4	10	10	10	9	10	10	10	10	10	90	10	10	10	10	10	10	10	10	17	10
42													10	10	10	10				10
43													10	10	40	10				14
44													10	2600	10	10				40
45													10	50	70	10				24

NB. Values of <10 have been set at 10, and > values are in bold and set to the value

TABLE 4 FAECAL STREPTOCOCCI RESULTS SUMMARY																				
Site No.	12/03/98				20/03/98				27/03/98				07/04/98				12/03/98	20/03/98	27/03/98	07/04/98
	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	FS	GEOMEAN	GEOMEAN	GEOMEAN	GEOMEAN
	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3	HW	HW+3	LW	LW+3				
9	210	2400	3100	6100	54	**100000**	42000	230000	520	69000	963636	8727	10	620000	320000	1190	1757	15113	23437	6971
8	330	370	10	72	270	54000	560	240	290	135	153	54	30	11700	680	490	97	1183	134	585
10	45	18	10	1545	18	10	9	81	10	9	10	290	20	10	10	180	59	19	23	24
11	54	132000	41000	1117	10	10		36	63	9	68000	90	20	40	30	1660	4251	15	243	79
12	9	27	10	770	10	10	10	9	27	18	20000	280	20	10	10	870	37	10	228	36
7	18	9	9	1135	54	10	4200	72	18	18	10	5500	10	10	10	1200	36	113	65	33
6	10	18	10	10	9	10	10	90	45	10	9	9	10	10	10	10	12	17	14	10
17	18	10	10	410	18	10	10	90	45	9	10	126	10	10	10	10	29	20	27	10
15	81	9	10	10	18	10	10	10	9	10	9	10	10	10	10	10	16	12	9	10
5	90	10	10	10	10	10	10	18	10	9	10	10	50	10	10	10	17	12	10	15
21	10	27	10	126	10	10	10	10	10	10	27	9	10	10	20	10	24	10	12	12
22	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
37	10	10	10	10	10	10	10	10	10	10	10	10	10	30	10	10	10	10	10	13
38	9	10	10	10	10	10	10	10	10	27	10	10	10	10	10	10	10	10	13	10
41	10	10	10	9	10	10	10		10	9	9	10	10			10	10	10	9	10
35	10	10	10	18	10	10	10	10	10	10	10	9	10	10	10	10	12	10	10	10
36	10	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
34	10	9	10	9	10	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10
33	10	10	10	10	10	10	10	10	10	9	10	9	10	10	10	10	10	10	9	10
32	10	10	10	9	10	10	10	10	10	9	9	18					10	10	11	
31	10	10	18	10	10	10	10	10	10	27	9	9					12	10	12	
30	10	10	10	9	10	10	10	10	10	18	54	10					10	10	18	
29	10	9	18	10	10	10	10	10	10	36	72	10					11	10	23	
23	9	10	9	81	10	10	9	10	27	45	18	9	10	30	10	40	16	10	21	19
39	10	9	9	10	10	10	10	18	10	54	10	9	10	10	10	10	9	12	15	10
40	9	10	10	10	10	10	10	10	18	18	9	10	10	10	10	10	10	10	13	10
24	9	18	10	10	10	10	10	10	10	63	9	10	10	10	10	10	11	10	15	10
25	9	10	10	18	10	10	10	10	9	27	9	45	10	10	10	10	11	10	18	10
26	10	18	10	9	9	10	10	10	27	45	9	9	10	10	10	70	11	10	18	16
27	10	54	54	10	10	10	9	10	9	63	1000	9	10	10	40	10	23	10	48	14
28	18	27	9	36	10	10	230	9	10	45	570	10	10	860	10	10	20	21	40	30
1	10	10	10	9	10	10	10	10	10	45	18	10	10	10	10	10	10	10	17	10
2	10	10	10	10	10	10	10	10	9	10	2800	9	10	10	10	10	10	10	39	10
3	9	10	10	10	10	10	10	10	9	10	10	10	10	10	10	10	10	10	10	10
4	10	10	10	10	10	10	10	10	10	18	9	10	10	10	10	10	10	10	11	10
42													10	10	10	10				10
43													50	20	10	10				18
44													140	450	10	10				50
45													10	10	120	10				19

NB. Values of <10 have been set at 10, and > values are in bold and set to the value

APPENDIX 1

DAILY REPORTING RAINFALL STATIONS — MARCH 1998 — 07-APR-1998

DAY	CAMBORNE	CULDROSE	ST.MAWGAN	PLYMOUTH	PRINCETOWN	BASTREET	N.HESSARY	CHIVENOR	GAWLISH	BURRINGTON	DUNKESWELL	~~EXETER~~ EXMINSTER
1	2.0	1.6	2.0	0.0	6.9	3.8	6.1	1.2	3.6	)	2.0	1.0
2	35.2	19.2	18.4	25.0	)	0.0	39.5	12.6	19.2	29.2	18.8	15.5
3	16.6	8.6	10.2	13.1	100.0	23.4	29.4	10.5	17.7	24.6	10.1	7.2
4	1.0	1.2	1.6	1.6	4.7	2.4	3.4	2.6	2.8	5.7	2.8	2.1
5	7.2	5.4	6.2	8.4	18.2	16.2	)	9.6	11.8	12.7	6.2	2.6
6	9.6	8.8	9.4	9.6	)	16.2	23.4	15.0	15.3	)	8.4	)
7	0.4	0.4	T	0.4	)	21.3	2.1	0.6	2.1	)	2.4	)
8	0.2	0.2	0.4	3.8	34.5	0.0	6.1	1.6	0.8	)	1.8	7.9
9	T	T	T	0.0	0.0	0.0	6.2	0.0	T	29.2	0.2	0.0
10	4.4	2.2	2.0	4.0	0.1	7.8	)	1.2	1.6	2.9	4.0	1.5
11	0.0	0.0	0.0	0.0	13.0	0.0	7.8	0.0	0.1	0.0	0.0	0.0
12	T	0.2	T	0.2	2.7	0.1	2.9	0.2	T	T	0.2	T
13	T	T	0.0	0.0	)	0.0	0.2	0.0	0.2	T	0.0	0.0
14	0.0	0.0	0.0	0.0	)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	T	0.0	3.3	0.1	0.2	0.0	0.1	0.4	0.4	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.6	0.2	0.8	0.0	)	1.0	0.1	1.6	1.6	1.0	4.4	1.2
24	4.4	2.4	5.4	3.8	)	3.9	9.7	10.0	8.3	10.8	6.4	4.4
25	13.0	13.0	19.8	1.6	)	20.0	45.5	16.0	33.6	22.9	14.6	6.7
26	3.8	4.6	4.4	5.0	79.8	9.9	14.7	1.0	3.2	2.3	2.4	0.1
27	3.2	3.6	2.8	2.6	)	)	3.7	1.0	1.0	)	1.2	)
28	0.2	0.4	T	0.0	)	0.1	0.2	0.2	0.1	)	0.0	)
29	0.6	0.6	0.6	1.2	6.4	1.6	3.5	0.8	3.9	6.1	0.4	2.6
30	T	0.4	0.0	0.2	)	0.0	)	0.2	0.1	0.0	0.2	T
31	T	0.0	T	0.0	0.2	0.1	T	1.0	1.0	0.4	1.2	1.7
TOTAL	102.4	73.0	84.0	80.5	269.8	127.9	204.8	86.9	128.1	148.2	88.1	54.5
AVERAGE	93.0	92.0	84.0	87.0	176.0	142.0	143.0	61.0	68.0	87.0	92.0	61.0
% OF AV.	110.1	79.3	100.0	92.5	153.3	90.1	143.2	142.5	188.4	170.3	95.8	89.3

CAMBORNE CULDROSE ST.MAWGAN PLYMOUTH PRINCETOWN BASTREET N.HESSARY CHIVENOR GAWLISH BURRINGTON DUNKESWELL ~~EXETER~~ EXMINSTER

NATIONAL GRID REFERENCES OF ABOVE SITES ARE :-

1	CAMBORNE	SW 628 407	7	N.HESSARY	SX 577 742
2	CULDROSE	SW 676 253	8	CHIVENOR	SS 494 347
3	ST.MAWGAN	SW 871 642	9	GAWLISH	SS 253 273
4	PLYMOUTH	SX 492 529	10	BURRINGTON	SS 606 168
5	PRINCETOWN	SX 586 741	11	DUNKESWELL	ST 128 076
6	BASTREET	SX 244 765	12	~~EXETER~~	~~SX 965 917~~
				EXMINSTER	SX 940 883

N.B. MONTHLY AVERAGES FOR GAWLISH ARE ESTIMATED.
N.B. MONTHLY AVERAGES FOR ~~EXETER (MANLEY)~~ ARE ESTIMATED.
N.B. LONG TERM AVERAGES USED ARE 1961-90

DAILY REPORTING RAINFALL STATIONS — APRIL 1998 — 30-APR-1998

DAY	CAMBORNE	CULDROSE	ST.MAWGAN	PLYMOUTH	PRINCETOWN	BASTREET	N.HESSARY	CHIVENOR	GAWLISH	BURRINGTON	DUNKESWELL	EXMINSTER
1	0.4	0.8	0.6	1.2	)	1.9	1.8	2.0	3.1	2.2	0.6	0.3
2	13.8	8.8	10.6	9.8	18.6	15.4	14.5	10.8	8.4	8.1	12.8	14.5
3	7.0	8.4	10.4	6.8	)	14.3	18.4	7.8	14.4	)	N/A	18.4
4	1.4	1.2	7.2	4.0	)	5.5	6.7	6.0	4.4	)	N/A	3.8
5	1.8	1.8	2.0	1.6	53.7	6.2	19.6	3.4	0.6	40.5	4.8	5.6
6	1.2	0.4	2.0	0.4	8.3	2.5	12.0	0.2	0.6	N/A	3.6	5.4
7	0.0	0.6	T	5.2	)	1.0	3.3	0.0	T	0.3	0.0	0.3
8	4.6	3.8	7.2	3.6	22.9	5.4	17.0	7.4	5.4	4.3	11.2	9.4
9	16.0	4.2	7.0	3.0	)	5.2	8.8	10.2	7.4	N/A	7.8	13.4
10	6.8	4.2	4.8	0.0	)	0.7	2.4	10.8	5.6	N/A	0.0	0.8
11	1.4	2.4	1.6	0.2	)	4.0	3.4	7.0	0.1	N/A	0.0	0.2
12	1.6	0.8	1.8	0.2	)	4.0	0.6	1.6	1.7	N/A	0.4	0.0
13	T	T	T	1.0	10.4	2.1	T	0.8	3.8	N/A	0.0	0.4
14	6.8	1.2	6.0	1.6	12.3	1.8	13.2	2.0	0.2	2.3	6.4	8.5
15	2.0	4.6	1.4	1.8	3.2	0.0	2.5	0.6	0.5	1.4	0.2	1.6
16	1.2	3.0	7.6	1.8	N/A	5.0	9.1	0.0	0.0	1.8	5.0	4.1
17	0.2	0.2	T	0.4	N/A	1.9	1.7	0.0	0.5	0.0	0.0	0.0
18	11.8	14.6	6.0	5.6	N/A	7.0	2.7	4.8	2.9	5.8	0.0	2.0
19	T	0.2	0.6	5.6	26.8	9.4	15.3	1.8	0.3	1.1	10.4	8.2
20	2.8	2.0	2.6	22.4	)	3.3	5.0	1.2	1.4	1.7	2.6	1.4
21	13.8	6.4	8.8	5.6	)	16.5	19.2	2.4	4.3	3.4	3.2	5.8
22	21.2	13.2	15.6	10.0	)	19.0	17.4	5.8	14.8	7.4	5.8	9.5
23	2.8	1.0	2.6	2.8	26.4	16.2	8.2	3.6	5.9	6.1	8.4	4.8
24	5.0	8.2	8.8	7.4	)	9.9	11.6	4.0	N/A	N/A	N/A	4.6
25	2.8	2.2	1.8	0.6	)	8.1	6.6	4.0	12.3	6.1	6.8	4.0
26	1.0	0.4	1.0	0.6	)	1.1	6.8	0.0	1.4	N/A	0.2	0.6
27	0.2	0.4	0.6	0.2	35.3	10.9	5.7	0.4	1.9	0.4	1.6	6.3
28	19.0	27.6	8.0	1.0	N/A	0.8	3.7	2.8	0.3	0.8	2.0	0.3
29	18.8	20.8	13.8	2.4	N/A	21.4	5.3	3.2	4.4	6.6	3.2	3.7
30												
TOTAL	165.4	143.4	140.4	106.8	217.9	200.5	242.5	104.6	106.6	100.3	93.8	134.2
AVERAGE	62.0	58.0	56.0	59.0	118.0	90.0	102.0	53.0	66.0	67.0	67.0	50.0
% OF AV	266.8	247.2	250.7	181.0	184.7	222.8	237.7	197.4	161.5	149.7	140.0	268.4
	CAMBORNE	CULDROSE	ST.MAWGAN	PLYMOUTH	PRINCETOWN	BASTREET	N.HESSARY	CHIVENOR	GAWLISH	BURRINGTON	DUNKESWELL	EXMINSTER

NATIONAL GRID REFERENCES OF ABOVE SITES ARE :-

1	CAMBORNE	SW 628 407	7	N.HESSARY	SX 577 742
2	CULDROSE	SW 676 253	8	CHIVENOR	SS 494 347
3	ST.MAWGAN	SW 871 642	9	GAWLISH	SS 253 273
4	PLYMOUTH	SX 492 529	10	BURRINGTON	SS 606 168
5	PRINCETOWN	SX 586 741	11	DUNKESWELL	ST 128 076
6	BASTREET	SX 244 765	12	EXMINSTER	SX 940 883

N.B. MONTHLY AVERAGES FOR GAWLISH ARE ESTIMATED.
N.B. MONTHLY AVERAGES FOR EXMINSTER ARE ESTIMATED
N.B. LONG TERM AVERAGES USED ARE 1961-90.

APPENDIX 2

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
12 March 1998										
HW										
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	16:55	<1.0	<3.0	16.9	34.5	17.0	<10.0	<10.0	<10.0	0.24
2	17:04	<1.0	<3.0	19.4	34.8	14.7	<10.0	27.0	9.0	0.17
3	17:08	<1.0	<3.0	18.9	35.0	16.8	9.0	<10.0	9.0	0.15
4	17:10	<1.0	<3.0	19.6	34.7	17.3	<10.0	9.0	<10.0	0.19
5	17:13	<1.0	5.8	23.5	35.2	17.3	90.0	470.0	162.0	0.12
6	17:16	<1.0	<3.0	23.9	34.6	18.6	<10.0	144.0	63.0	0.19
7	17:17	<1.0	<3.0	25.0	34.7	17.5	18.0	300.0	99.0	0.17
8	17:20	<1.0	<3.0	26.8	34.4	27.1	330.0	1545.0	660.0	0.18
9	17:21	1.2	<3.0	29.1	34.5	29.3	210.0	2800.0	865.0	0.17
10	17:23	<1.0	<3.0	25.0	34.3	17.6	45.0	117.0	54.0	0.21
11	17:25	1.2	<3.0	25.5	34.6	21.3	54.0	270.0	171.0	0.17
12	17:27	<1.0	<3.0	24.8	34.6	17.8	9.0	189.0	36.0	0.18
15	17:32	<1.0	4.7	24.8	35.0	16.5	81.0	360.0	250.0	0.12
17	17:30	<1.0	<3.0	24.4	34.8	15.7	18.0	230.0	99.0	0.16
21	17:34	<1.0	<3.0	26.2	34.6	18.1	<10.0	63.0	<10.0	0.19
22	17:36	<1.0	<3.0	24.6	34.4	18.4	9.0	<10.0	<10.0	0.21
23	17:38	<1.0	<3.0	25.5	34.4	19.1	9.0	99.0	18.0	0.20
24	17:42	<1.0	3.4	25.7	34.1	19.1	9.0	310.0	153.0	0.26
25	17:44	<1.0	<6.0	22.1	34.0	18.3	9.0	280.0	81.0	0.28
26	17:46	<1.0	<3.0	22.6	34.1	17.6	<10.0	54.0	54.0	0.26
27	17:49	<1.0	<3.0	22.3	33.1	18.9	<10.0	72.0	36.0	0.38
28	17:52	<1.0	<3.0	22.8	31.5	24.5	18.0	230.0	63.0	0.60
29	18:04	<1.0	<3.0	22.1	34.3	19.1	<10.0	9.0	27.0	0.25
30	18:07	<1.0	<3.0	20.5	34.3	19.6	<10.0	9.0	18.0	0.25
31	18:12	<1.0	<3.0	20.3	33.4	25.5	<10.0	<10.0	<10.0	0.36
32	18:10	<1.0	<3.0	19.6	34.7	18.6	<10.0	9.0	36.0	0.19
33	18:15	<1.0	<3.0	21.2	34.3	20.5	<10.0	36.0	9.0	0.23
34	18:18	<1.0	6.0	21.9	34.4	20.4	<10.0	45.0	<10.0	0.22
35	18:20	<1.0	<3.0	15.8	34.1	22.8	<10.0	36.0	<10.0	0.28
36	18:22	<1.0	<3.0	15.8	34.3	20.5	<10.0	<10.0	18.0	0.24
37	18:25	<1.0	<3.0	17.3	34.1	19.2	<10.0	18.0	9.0	0.25
38	18:27	<1.0	<3.0	16.2	33.9	20.5	9.0	<10.0	<10.0	0.28
39	18:30	<1.0	<3.0	11.4	35.0	16.3	<10.0	45.0	27.0	0.13
40	18:33	<1.0	<3.0	13.0	35.0	15.7	9.0	54.0	36.0	0.12
41	18:35	<1.0	<3.0	12.3	34.2	19.2	<10.0	9.0	<10.0	0.23

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS					
12 March 1998					
HW+3					
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg
1	07:53	<1.0	3.9	27.5	32.8
2	08:00	<1.0	<3.0	27.1	34.2
3	08:03	1.1	<3.0	26.5	34.4
4	08:06	<1.0	<3.0	27.8	34.8
5	08:09	<1.0	<3.0	27.8	34.3
6	08:11	<1.0	<3.0	28.4	34.2
7	08:13	1.1	<3.0	33.2	34.2
8	08:15	<1.00	<3.0	29.2	34.3
9	08:16	1.3	<3.0	30.5	34.3
10	08:18	<1.0	<3.0	28.0	34.3
11	08:20	11.0	24.6	208.0	31.5
12	08:22	<1.0	<3.0	37.1	34.3
15	08:26	1.1	<3.0	28.0	34.2
17	08:24	<1.0	<3.0	27.5	34.2
21	08:30	1.2	<3.0	27.8	34.2
22	08:32	<1.0	<3.0	28.2	34.1
23	08:34	1.1	<3.0	28.0	34.3
24	08:37	<1.0	<3.0	28.0	34.2
25	08:40	1.3	<3.0	26.5	33.6
26	08:44	1.0	<3.0	22.7	29.4
27	08:49	1.4	<3.0	25.0	30.1
28	08:52	1.1	<3.0	26.7	30.9
29	09:05	1.6	<3.0	29.0	33.2
30	09:15	1.5	<3.0	28.0	34.0
31	09:09	1.1	<3.0	26.5	32.5
32	09:13	1.2	<3.0	28.4	33.7
33	09:17	<1.0	<3.0	28.0	34.1
34	09:19	1.2	<3.0	26.3	33.8
35	09:21	<1.0	<3.0	26.7	33.7
36	09:24	1.4	<3.0	34.8	34.5
37	09:26	1.0	<3.0	27.3	34.6
38	09:28	1.2	<3.0	26.9	33.8
39	09:30	<1.0	<3.0	27.3	34.2
40	09:33	1.1	<3.0	26.9	34.3
41	09:35	<1.0	<3.0	28.6	34.2

Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
25.2	<10.0	18.0	18.0	0.56
14.2	<10.0	18.0	<10.0	0.23
15.6	<10.0	<10.0	<10.0	0.20
18.6	<10.0	18.0	<10.0	0.15
21.5	<10.0	27.0	9.0	0.23
22.4	18.0	72.0	90.0	0.24
22.6	9.0	153.0	72.0	0.25
26.4	370.0	1727.0	610.0	0.22
55.2	2400.0	16000.0	3700.0	0.21
19.8	18.0	180.0	99.0	0.21
1340.0	132000.0	>100000.00	>100000.00	0.59
16.9	27.0	180.0	54.0	0.22
20.7	9.0	18.0	9.0	0.24
17.3	<10.0	117.0	54.0	0.23
16.2	27.0	171.0	36.0	0.23
21.6	<10.0	27.0	9.0	0.27
16.2	<10.0	171.0	126.0	0.24
17.2	18.0	220.0	135.0	0.26
20.4	<10.0	171.0	45.0	0.33
36.0	18.0	1727.0	550.0	1.02
26.3	54.0	2200.0	2400.0	1.02
22.7	27.0	330.0	135.0	0.64
32.1	9.0	90.0	36.0	0.41
23.5	<10.0	45.0	9.0	0.28
29.4	<10.0	81.0	45.0	0.49
26.4	<10.0	27.0	18.0	0.33
23.0	<10.0	<10.0	9.0	0.26
25.2	9.0	27.0	36.0	0.30
26.9	<10.0	54.0	27.0	0.32
23.2	9.0	18.0	<10.0	0.20
16.1	<10.0	<10.0	9.0	0.18
22.6	<10.0	63.0	27.0	0.31
17.2	9.0	126.0	36.0	0.23
17.9	<10.0	63.0	<10.0	0.23
21.2	<10.0	36.0	18.0	0.25

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS

12 March 1998

LW

Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	11:05	1.5	5.5	24.2	31.2	28.7	<10.0	9.0	9.0	1.04
2	11:17	1.2	<3.0	25.5	33.9	21.0	<10.0	<10.0	<10.0	0.35
3	11:20	1.4	<3.0	26.3	34.5	20.7	<10.0	<10.0	<10.0	0.23
4	11:23	1.0	<3.0	26.5	35.0	26.6	<10.0	<10.0	<10.0	0.13
5	11:26	1.0	<3.0	26.9	34.3	21.0	<10.0	<10.0	<10.0	0.24
6	11:29	1.2	<3.0	29.4	34.1	23.5	<10.0	<10.0	<10.0	0.28
7	11:30	<1.0	<3.0	28.6	34.2	25.7	9.0	27.0	<10.0	0.25
8	11:32	1.3	<3.0	27.5	34.3	18.2	<10.0	90.0	18.0	0.22
9	11:35	1.6	<3.0	39.2	34.5	109.0	3100.0	21000.0	2300.0	0.19
10	11:37	1.2	<3.0	29.0	34.3	18.9	<10.0	<10.0	9.0	0.24
11	11:39	5.0	5.0	85.6	34.2	406.0	41000.0	47000.0	46000.0	0.21
12	11:41	1.1	<3.0	31.5	34.4	17.3	<10.0	54.0	36.0	0.23
15	11:46	1.1	<3.0	28.6	34.2	21.0	<10.0	27.0	18.0	0.26
17	11:44	<1.0	<3.0	28.8	34.1	23.0	<10.0	9.0	<10.0	0.28
21	11:49	1.4	<3.0	28.2	34.0	22.0	<10.0	<10.0	<10.0	0.28
22	11:53	1.0	<3.0	29.2	34.3	22.4	<10.0	<10.0	<10.0	0.25
23	11:55	1.2	<3.0	34.2	34.3	18.9	9.0	36.0	27.0	0.25
24	11:58	1.0	<3.0	16.0	34.1	15.6	<10.0	36.0	36.0	0.25
25	12:02	1.2	<3.0	16.6	34.1	18.8	<10.0	45.0	27.0	0.26
26	12:05	1.0	<3.0	16.0	33.0	22.1	<10.0	54.0	<10.0	0.42
27	12:09	1.7	11.9	17.9	25.8	71.8	54.0	250.0	162.0	1.54
28	12:12	1.1	7.6	19.5	31.2	37.2	9.0	450.0	90.0	0.68
29	12:26	1.4	5.7	21.0	32.9	32.4	18.0	27.0	27.0	0.48
30	12:35	1.0	<3.0	18.9	33.7	23.0	<10.0	9.0	9.0	0.34
31	12:30	1.3	<3.0	18.1	30.9	31.5	18.0	9.0	9.0	0.72
32	12:32	<1.0	<3.0	18.1	33.4	23.0	<10.0	18.0	<10.0	0.36
33	12:36	1.3	<3.0	18.3	34.3	20.1	<10.0	<10.0	<10.0	0.26
34	12:38	1.0	<3.0	18.1	34.2	20.4	<10.0	<10.0	9.0	0.25
35	12:40	1.5	<3.0	18.1	34.0	20.7	<10.0	27.0	<10.0	0.28
36	12:44	1.0	<3.0	18.1	34.3	19.5	<10.0	9.0	<10.0	0.25
37	12:45	<1.0	<3.0	18.5	34.3	20.9	<10.0	<10.0	9.0	0.25
38	12:47	<1.0	<3.0	19.1	34.3	20.6	<10.0	27.0	9.0	0.25
39	12:50	<1.0	<3.0	21.0	34.2	20.4	9.0	9.0	<10.0	0.26
40	12:53	<1.0	<3.0	19.1	34.1	21.0	<10.0	9.0	<10.0	0.27
41	12:55	<1.0	<3.0	18.7	34.1	21.3	<10.0	9.0	9.0	0.28

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS					
12 March 1998					
	LW+3				
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg
1	14:24	1.1	<3.0	15.8	33.8
2	14:30	<1.0	<3.0	16.6	34.9
3	14:33	<1.0	<3.0	17.5	35.0
4	14:35	<1.0	<3.0	17.7	34.6
5	14:38	<1.0	<3.0	16.8	35.1
6	14:41	<1.0	<3.0	16.8	35.1
7	14:43	1.1	<3.0	20.8	34.6
8	14:45	1.0	<3.0	18.1	34.5
9	14:46	2.1	<3.0	28.6	34.5
10	14:47	1.6	<3.0	22.8	34.5
11	14:50	1.7	<3.0	26.1	34.4
12	14:52	<1.0	<3.0	19.9	34.3
15	14:54	<1.0	<3.0	15.8	35.2
17	14:56	<1.0	<3.0	16.6	35.1
21	14:58	1.0	<3.0	16.0	35.1
22	15:00	<1.0	<3.0	16.0	35.2
23	15:03	<1.0	<3.0	17.2	34.3
24	15:09	1.0	<3.0	17.9	34.2
25	15:11	<1.0	<3.0	17.5	34.1
26	15:14	<1.0	<3.0	17.0	34.2
27	15:16	1.1	3.0	16.2	32.9
28	15:21	1.1	<3.0	16.8	33.0
29	15:35	<1.0	<3.0	17.9	34.2
30	15:45	<1.0	<3.0	18.1	34.4
31	15:40	<1.0	<3.0	19.5	33.1
32	15:42	<1.0	<4.0	19.5	34.1
33	15:47	<1.0	<4.0	17.7	34.3
34	15:50	<1.0	<3.0	17.7	34.6
35	15:53	<1.0	<3.0	16.4	34.9
36	15:55	<1.0	<3.0	18.1	34.2
37	15:57	<1.0	<3.0	16.8	34.9
38	15:59	<1.0	<3.0	16.8	35.2
39	16:03	<1.0	<3.0	18.1	34.3
40	16:05	<1.0	<3.0	17.2	34.4
41	16:07	<1.0	<3.0	18.5	34.4

Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
20.4	9.0	<10.0	<10.0	0.39
11.1	<10.0	<10.0	<10.0	0.14
18.5	<10.0	45.0	18.0	0.15
13.6	<10.0	9.0	9.0	0.21
10.6	<10.0	72.0	18.0	0.13
10.6	<10.0	135.0	54.0	0.12
31.2	1135.0	7300.0	3500.0	0.18
22.3	72.0	410.0	117.0	0.21
84.0	6100.0	31000.0	27000.0	0.19
41.6	1545.0	5600.0	3700.0	0.21
64.2	1117.0	5800.0	2200.0	0.21
28.2	770.0	2400.0	770.0	0.23
7.9	<10.0	36.0	18.0	0.12
13.5	410.0	2000.0	730.0	0.13
9.7	126.0	757.0	330.0	0.12
8.9	<10.0	9.0	9.0	0.10
16.8	81.0	370.0	200.0	0.23
15.8	<10.0	27.0	27.0	0.25
14.7	18.0	36.0	27.0	0.26
13.0	9.0	27.0	9.0	0.25
22.4	<10.0	63.0	18.0	0.43
35.6	36.0	45.0	72.0	0.42
18.3	<10.0	<10.0	<10.0	0.25
15.4	9.0	27.0	<10.0	0.22
24.4	<10.0	9.0	<10.0	0.39
18.2	9.0	18.0	18.0	0.27
15.6	<10.0	<10.0	18.0	0.23
14.1	9.0	36.0	36.0	0.20
11.1	18.0	81.0	27.0	0.14
16.7	<10.0	9.0	<10.0	0.25
15.4	<10.0	27.0	9.0	0.14
13.0	<10.0	117.0	18.0	0.11
19.4	<10.0	27.0	9.0	0.25
17.3	<10.0	18.0	<10.0	0.22
19.2	9.0	18.0	<10.0	0.23

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS					
20 March 1998					
HW					
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg
1	08:10	1.2	<3.0	15.4	34.1
2	08:16	1.3	<3.0	16.2	34.9
3	08:18	<1.0	<3.0	16.2	34.9
4	08:22	1.2	<3.0	15.6	34.9
5	08:26	1.4	<3.0	16.4	34.9
6	08:29	1.1	<3.0	17.4	35.0
7	09:31	1.1	<3.0	18.2	34.5
8	08:33	1.2	<3.0	21.5	34.3
9	08:35	1.3	<3.0	18.7	34.5
10	08:36	1.2	<3.0	17.4	34.6
11	08:39	1.1	<3.0	17.0	34.7
12	08:41	<1.0	<3.0	18.4	34.5
15	08:44	1.4	<3.0	18.0	34.7
17	08:48	1.1	<3.0	18.0	34.7
21	08:50	1.2	<3.0	16.6	34.6
22	08:51	1.2	<3.0	17.6	34.2
23	08:54	1.3	<3.0	17.2	34.3
24	08:56	1.2	<3.0	16.4	33.8
25	09:08	1.3	<3.0	18.0	34.3
26	09:11	1.2	<3.0	17.4	33.5
27	09:15	1.6	<3.0	16.8	33.9
28	09:17	1.3	<3.0	19.9	26.4
29	09:40	1.3	<3.0	22.3	33.7
30	09:50	1.2	<3.0	18.9	34.4
31	09:45	1.2	<3.0	21.5	32.7
32	09:49	<1.0	<3.0	20.3	34.3
33	09:53	1.4	<3.0	19.3	34.2
34	09:55	<1.0	<3.0	19.7	33.6
35	09:56	<1.0	<3.0	20.1	33.7
36	09:59	1.3	<3.0	15.8	33.8
37	10:02	1.0	<3.0	18.9	33.6
38	10:05	1.2	<3.0	14.8	34.6
39	10:08	<1.0	<3.0	15.6	34.2
40	10:10	1.2	<3.0	16.4	33.9
41	10:12	<1.0	<3.0	15.4	34.0

Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
22.3	<10.0	<10.0	<10.0	0.26
16.9	<10.0	<10.0	<10.0	0.11
16.6	<10.0	<10.0	<10.0	0.13
13.2	<10.0	<10.0	<10.0	0.14
12.5	<10.0	72.0	36.0	0.13
16.2	9.0	99.0	27.0	0.13
20.8	54.0	450.0	280.0	0.20
35.6	270.0	1818.0	820.0	0.23
23.2	54.0	750.0	350.0	0.23
20.2	18.0	90.0	18.0	0.21
14.0	<10.0	63.0	36.0	0.20
15.1	<10.0	126.0	81.0	0.23
15.1	18.0	290.0	189.0	0.19
12.3	18.0	171.0	27.0	0.14
11.7	<10.0	<10.0	<10.0	0.17
16.3	<10.0	9.0	<10.0	0.25
14.3	<10.0	27.0	27.0	0.24
15.3	<10.0	45.0	18.0	0.33
39.5	<10.0	18.0	<10.0	0.25
22.4	9.0	81.0	27.0	0.36
20.1	<10.0	54.0	18.0	0.29
44.1	<10.0	310.0	90.0	1.43
38.0	<10.0	<10.0	<10.0	0.37
13.7	<10.0	<10.0	<10.0	0.24
25.2	<10.0	18.0	18.0	0.50
16.6	<10.0	<10.0	<10.0	0.24
13.4	<10.0	<10.0	9.0	0.26
22.0	<10.0	<10.0	9.0	0.37
20.3	<10.0	<10.0	<10.0	0.36
19.0	<10.0	9.0	<10.0	0.32
23.2	<10.0	18.0	<10.0	0.35
15.0	<10.0	9.0	<10.0	0.19
17.7	<10.0	9.0	<10.0	0.27
15.7	<10.0	<10.0	<10.0	0.32
15.0	<10.0	<10.0	<10.0	0.29

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
20 March 1998										
HW+3										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	(GMT)	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	11:08	1.1	<3.0	17.2	34.2	15.0	<10.0	<10.0	<10.0	0.29
2	11:17	1.0	<3.0	17.6	34.8	9.8	<10.0	<10.0	<10.0	0.17
3	11:20	1.1	<3.0	17.4	35.1	10.2	<10.0	<10.0	<10.0	0.11
4	11:23	1.0	<3.0	17.8	35.0	9.5	<10.0	<10.0	<10.0	0.13
5	11:25	1.2	<3.0	19.1	34.5	14.0	<10.0	<10.0	<10.0	0.21
6	11:26	1.0	3.0	18.2	34.4	12.9	<10.0	<10.0	<10.0	0.22
7	11:29	1.1	<3.0	18.4	33.8	20.0	<10.0	<10.0	<10.0	0.32
8	11:30	3.1	5.8	78.1	34.0	413.0	54000.0	67000.0	43000.0	0.23
9	11:33	19.3	14.7	608.0	31.2	3180.0	>100000.0	>100000.0	>100000.0	0.41
10	11:34	<1.0	<3.0	23.5	33.7	19.6	<10.0	19.0	9.0	0.33
11	11:35	1.3	<3.0	18.4	34.3	14.8	<10.0	<10.0	<10.0	0.23
12	11:38	<1.0	<3.0	19.1	34.4	18.3	<10.0	9.0	9.0	0.22
15	11:43	1.2	<3.0	19.5	34.6	16.6	<10.0	<10.0	18.0	0.17
17	11:40	<1.0	<3.0	19.7	33.9	19.6	<10.0	<10.0	<10.0	0.29
21	11:46	1.0	<3.0	19.5	33.7	20.5	<10.0	<10.0	<10.0	0.33
22	11:50	1.0	<3.0	19.5	34.0	18.7	<10.0	<10.0	<10.0	0.29
23	11:58	1.3	<3.0	18.4	34.5	16.3	<10.0	18.0	18.0	0.21
24	12:02	1.3	<3.0	18.7	34.1	16.2	<10.0	9.0	<10.0	0.24
25	12:10	1.4	<3.0	17.8	33.8	16.2	<10.0	<10.0	9.0	0.29
26	12:12	1.2	<3.0	15.2	34.1	10.7	<10.0	<10.0	<10.0	0.26
27	12:16	1.2	<3.0	14.4	33.8	16.3	<10.0	<10.0	<10.0	0.33
28	12:20	1.5	<3.0	14.6	32.6	24.6	<10.0	<10.0	<10.0	0.53
29	12:41	1.0	<3.0	16.9	32.7	35.2	<10.0	<10.0	<10.0	0.56
30	12:45	1.5	<3.0	17.7	34.0	18.9	<10.0	<10.0	<10.0	0.31
31	12:50	1.2	<3.0	18.7	33.2	24.0	<10.0	<10.0	<10.0	0.43
32	12:47	1.1	<3.0	20.0	33.5	22.9	<10.0	<10.0	<10.0	0.41
33	12:55	<1.0	<3.0	19.2	34.5	16.3	<10.0	<10.0	<10.0	0.24
34	12:53	1.2	<3.0	20.2	34.1	19.3	<10.0	<10.0	<10.0	0.31
35	13:03	1.1	<3.0	16.7	33.9	19.9	<10.0	<10.0	<10.0	0.32
36	12:58	1.4	<3.0	14.8	34.7	14.8	<10.0	<10.0	<10.0	0.20
37	13:00	1.1	<3.0	19.6	34.6	15.7	<10.0	<10.0	<10.0	0.22
38	13:12	<1.0	<3.0	15.6	34.0	18.5	<10.0	<10.0	<10.0	0.32
39	13:10	1.2	<3.0	14.8	34.3	14.7	<10.0	<10.0	<10.0	0.27
40	13:07	<1.0	<3.0	15.0	34.2	14.4	<10.0	<10.0	<10.0	0.28
41	13:05	1.0	<3.0	20.0	33.7	20.2	<10.0	<10.0	<10.0	0.37

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS					
20 March 1998					
LW					
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg
1	14:15	1.1	<3.0	15.0	33.6
2	14:25	1.1	<3.0	14.4	34.8
3	14:27	1.3	<3.0	15.4	35.0
4	14:30	1.2	<3.0	14.6	35.2
5	14:35	1.3	<3.0	18.3	34.4
6	14:36	1.2	<3.0	16.3	34.6
7	14:38	2.2	<3.0	44.3	34.4
8	14:39	2.0	<3.0	26.4	34.6
9	14:40	10.4	6.5	187.0	33.5
10	14:42	1.0	<3.0	17.9	34.4
11	14:44	No result	<3.0	69.7	No result
12	14:45	1.1	<3.0	15.6	34.3
15	14:49	1.1	<3.0	16.5	34.1
17	14:47	1.1	<3.0	16.5	34.2
21	14:53	1.0	<3.0	17.1	34.2
22	14:51	1.0	<3.0	17.3	34.1
23	14:54	1.0	<3.0	14.8	34.5
24	14:56	1.1	<3.0	17.7	34.3
25	14:57	1.0	<3.0	13.8	34.3
26	15:00	1.3	<3.0	23.3	34.0
27	15:04	1.2	<3.0	17.5	30.8
28	15:10	1.3	<3.0	17.4	16.0
29	15:23	1.1	<3.0	22.5	32.8
30	15:25	1.0	<3.0	18.3	33.5
31	15:32	1.0	<3.0	16.3	33.4
32	15:28	1.0	<3.0	18.1	33.5
33	15:37	<1.0	<3.0	16.8	34.1
34	15:35	1.1	<3.0	17.4	33.9
35	15:45	1.1	<3.0	16.3	33.7
36	15:40	<1.0	<3.0	17.0	33.9
37	15:42	<1.0	<3.0	17.7	33.9
38	15:54	1.0	<3.0	17.4	33.9
39	15:52	1.0	<3.0	16.3	34.4
40	15:50	<1.0	<3.0	16.5	34.3
41	15:47	1.0	<3.0	16.3	33.6

Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
12.5	<10.0	<10.0	<10.0	0.43
11.9	<10.0	<10.0	<10.0	0.19
19.6	<10.0	<10.0	<10.0	0.15
11.7	<10.0	<10.0	<10.0	0.12
12.5	<10.0	<10.0	<10.0	0.26
21.5	<10.0	<10.0	<10.0	0.22
185.0	4200.0	3500.0	1727.0	0.23
53.7	560.0	680.0	350.0	0.20
1020.0	42000.0	630000.0	270000.0	0.29
16.3	9.0	<10.0	<10.0	0.25
308.0	No result	No result	No result	0.23
16.6	<10.0	9.0	9.0	0.27
20.8	<10.0	<10.0	<10.0	0.32
20.2	<10.0	<10.0	<10.0	0.31
18.3	<10.0	<10.0	<10.0	0.29
19.6	<10.0	<10.0	<10.0	0.32
16.9	9.0	18.0	<10.0	0.25
15.8	<10.0	<10.0	<10.0	0.27
14.7	<10.0	9.0	9.0	0.27
17.1	<10.0	<10.0	<10.0	0.32
36.4	9.0	<10.0	<10.0	0.82
173.0	230.0	11000.0	370.0	3.53
40.7	<10.0	<10.0	<10.0	0.54
25.6	<10.0	<10.0	<10.0	0.39
15.4	<10.0	<10.0	<10.0	0.39
23.4	<10.0	<10.0	<10.0	0.41
17.7	<10.0	<10.0	<10.0	0.30
20.1	<10.0	<10.0	<10.0	0.33
17.7	<10.0	<10.0	<10.0	0.32
16.8	<10.0	<10.0	<10.0	0.31
19.9	<10.0	<10.0	<10.0	0.34
17.6	<10.0	<10.0	<10.0	0.33
10.7	<10.0	9.0	<10.0	0.23
14.1	<10.0	<10.0	<10.0	0.24
18.2	<10.0	<10.0	<10.0	0.34

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
20 March 1998										
LW+3										
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	17:15	2.0	<3.0	11.6	33.7	9.1	<10.0	<10.0	<10.0	0.35
2	17:24	1.2	<3.0	13.2	35.1	9.1	<10.0	<10.0	<10.0	0.12
3	17:26	<1.0	<3.0	13.6	35.0	8.0	<10.0	9.0	<10.0	0.12
4	17:30	1.2	<3.0	14.1	34.9	11.6	<10.0	<10.0	<10.0	0.14
5	17:35	<1.0	<3.0	13.6	35.0	8.9	18.0	27.0	9.0	0.15
6	17:38	1.2	<3.0	16.8	34.9	18.7	90.0	200.0	36.0	0.16
7	17:39	1.1	<3.0	15.9	35.0	17.1	72.0	230.0	135.0	0.15
8	17:41	1.2	<3.0	18.3	34.7	22.0	240.0	530.0	260.0	0.18
9	17:43	54.0	51.9	870.0	27.8	4690.0	230000.0	3700000.0	2100000.0	0.48
10	17:46	1.2	<3.0	21.9	35.1	12.2	81.0	230.0	135.0	0.12
11	17:47	1.2	<3.0	16.3	34.7	12.2	36.0	63.0	27.0	0.19
12	17:49	1.0	<3.0	14.5	34.7	10.8	9.0	36.0	9.0	0.19
15	17:54	1.0	<3.0	14.3	35.1	8.6	<10.0	27.0	<10.0	0.12
17	17:51	1.2	<3.0	15.7	35.0	16.9	90.0	90.0	36.0	0.15
21	17:58	<1.0	<3.0	14.3	34.8	10.7	<10.0	9.0	18.0	0.17
22	17:56	1.0	<3.0	14.3	34.9	9.6	<10.0	<10.0	<10.0	0.15
23	18:00	<1.0	<3.0	14.8	34.6	14.7	<10.0	63.0	18.0	0.23
24	18:04	1.0	<3.0	16.3	34.3	11.6	<10.0	9.0	<10.0	0.26
25	18:06	1.2	<3.0	14.8	34.3	8.9	<10.0	9.0	<10.0	0.25
26	18:09	1.5	<3.0	13.9	34.4	9.3	<10.0	27.0	<10.0	0.21
27	18:11	1.2	<3.0	13.0	33.9	14.3	<10.0	<10.0	<10.0	0.28
28	18:13	1.4	<3.0	14.8	33.0	17.1	9.0	<10.0	18.0	0.43
29	18:35	1.0	<3.0	19.0	33.6	27.3	<10.0	<10.0	<10.0	0.40
30	18:38	1.1	<3.0	15.2	34.4	14.3	<10.0	<10.0	<10.0	0.24
31	18:43	1.1	<3.0	17.2	33.3	22.9	<10.0	9.0	<10.0	0.38
32	18:41	1.1	<3.0	15.0	34.8	11.1	<10.0	<10.0	<10.0	0.18
33	18:45	1.0	<3.0	14.8	34.5	12.2	<10.0	<10.0	<10.0	0.21
34	18:47	<1.0	<3.0	14.3	34.7	10.2	<10.0	9.0	<10.0	0.18
35	18:48	1.0	<3.0	15.4	34.5	12.6	<10.0	<10.0	<10.0	0.23
36	18:50	<1.0	<3.0	16.8	34.4	14.6	<10.0	<10.0	<10.0	0.25
37	18:53	<1.0	<3.0	13.4	35.0	10.2	<10.0	<10.0	<10.0	0.14
38	18:55	1.0	<3.0	14.8	34.8	15.8	<10.0	18.0	<10.0	0.17
39	18:57	<1.0	<3.0	16.5	34.5	16.3	18.0	90.0	90.0	0.23
40	18:59	<1.0	<3.0	18.1	34.5	14.9	<10.0	<10.0	<10.0	0.24
41	19:01	No Sample								

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
27 March 1998										
HW										
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	16:36	1.4	4.0	16.0	34.5	18.3	<10	<10	<10	0.14
2	16:46	1.2	<3	15.8	34.8	18.4	9.0	9.0	9.0	0.13
3	16:50	1.2	<3	15.8	34.8	19.0	9.0	<10	<10	0.13
4	16:54	1.3	<3	16.4	34.7	18.6	<10	9.0	<10	0.15
5	16:58	1.2	<3	17.1	35.0	16.7	<10	54.0	27.0	0.11
6	17:02	1.1	<3	17.1	35.0	19.1	45.0	144.0	135.0	0.11
7	17:06	1.0	<3	17.1	35.0	19.6	18.0	63.0	36.0	0.11
8	17:08	1.2	<3	18.9	35.0	22.2	290.0	2200.0	1091.0	0.11
9	17:14	1.5	<3	19.9	34.8	25.1	520.0	3100.0	2100.0	0.11
10	17:18	1.2	<3	16.4	35.0	22.1	<10	117.0	99.0	0.11
11	17:22	1.1	<3	17.3	35.0	17.7	63.0	54.0	45.0	0.11
12	17:24	1.2	<3	16.9	35.0	17.7	27.0	63.0	27.0	0.12
15	17:32	1.1	<3	17.5	35.1	17.4	9.0	99.0	18.0	0.12
17	17:28	1.2	<3	17.3	35.1	19.9	45.0	260.0	117.0	0.12
21	17:34	<1	<3	16.0	34.8	20.2	<10	18.0	18.0	0.13
22	17:38	1.0	<3	16.9	34.7	16.7	<10	<10	<10	0.14
23	17:42	1.2	<3	16.9	34.7	16.8	27.0	99.0	81.0	0.14
24	16:45	1.1	<3	16.4	34.6	15.3	<10	27.0	9.0	0.17
25	16:49	1.0	<3	21.2	34.6	16.8	9.0	126.0	108.0	0.16
26	16:51	1.2	<3	16.4	34.5	16.4	27.0	740.0	500.0	0.16
27	16:55	1.4	<3	16.2	34.2	16.8	9.0	171.0	63.0	0.20
28	16:59	1.3	<3	15.8	34.1	14.0	<10	18.0	<10	0.22
29	17:27	<1	<3	16.9	34.4	16.4	<10	9.0	9.0	0.18
30	17:31	1.1	<3	16.9	34.5	18.6	<10	18.0	36.0	0.18
31	17:35	1.0	<3	16.9	34.2	15.5	<10	9.0	9.0	0.20
32	17:37	1.2	<3	16.5	34.4	17.4	<10	<10	9.0	0.18
33	17:39	<1	<3	16.5	34.3	17.1	<10	36.0	27.0	0.16
34	17:43	1.1	14.4	17.3	34.2	21.6	<10	9.0	<10	0.20
35	17:47	<1	11.8	16.0	34.7	16.2	<10	45.0	<10	0.14
36	17:53	<1	<3	17.3	34.8	16.7	<10	72.0	<10	0.14
37	17:57	<1	<3	17.1	34.7	16.9	<10	72.0	63.0	0.15
38	17:48	<1	<3	16.2	34.9	15.6	<10	9.0	<10	0.14
39	17:44	<1	<3	21.2	34.7	18.4	<10	72.0	9.0	0.17
40	18:03	1.0	<3	16.4	34.6	17.4	18.0	18.0	18.0	0.16
41	18:07	1.4	<3	16.3	34.9	18.3	<10	36.0	27.0	0.11

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
27 March 1998										
HW+3										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	(GMT)	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	06:37	1.3	<3	10.4	33.9	21.5	45.0	54.0	36.0	0.24
2	06:44	1.1	<3	15.4	33.4	19.4	<10	36.0	<10	0.17
3	06:50	1.1	<3	11.9	34.8	19.4	<10	72.0	27.0	0.17
4	06:54	<1	<3	13.4	34.8	20.3	18.0	117.0	90.0	0.17
5	06:56	1.0	<3	13.6	34.7	18.8	9.0	36.0	9.0	0.11
6	07:03	1.0	<3	20.0	34.8	18.4	<10	90.0	54.0	0.12
7	07:03	<1	<3	16.7	34.9	18.7	18.0	153.0	81.0	0.10
8	07:06	<1	<3	14.7	34.9	24.4	135.0	2200.0	2000.0	0.10
9	07:09	6.6	4.0	168.0	31.5	1130.0	69000.0	680000.0	340000.0	0.57
10	07:12	<1	<3	19.1	34.7	18.3	9.0	300.0	210.0	0.12
11	07:17	1.3	<3	19.1	34.9	33.9	9.0	330.0	310.0	0.10
12	07:20	<1	<3	15.4	34.9	19.7	18.0	210.0	81.0	<0.1
15	07:24	1.1	<3	16.5	34.4	18.8	10.0	18.0	27.0	0.15
17	07:33	<1	<3	13.2	34.5	19.1	9.0	45.0	10.0	0.14
21	07:26	<1	<3	16.2	34.5	17.3	<10	18.0	9.0	0.13
22	07:30	<1	<3	12.6	34.5	17.7	<10	36.0	<10	0.13
23	07:38	1.1	<3	12.5	34.5	17.7	45.0	310.0	260.0	0.13
24	07:49	1.0	<3	16.2	34.3	20.3	63.0	300.0	200.0	0.16
25	07:00	1.0	<3	16.4	34.2	20.3	27.0	300.0	270.0	0.18
26	07:08	1.0	<3	16.4	33.6	22.9	45.0	530.0	290.0	0.26
27	07:13	1.2	<3	15.8	32.3	27.6	63.0	600.0	144.0	0.46
28	07:21	1.2	3.8	16.7	33.6	24.5	45.0	410.0	153.0	0.25
29	07:25	1.1	<3	20.4	32.7	40.0	36.0	240.0	117.0	0.42
30	07:40	1.1	<3	17.8	33.5	29.1	18.0	90.0	36.0	0.31
31	07:50	1.1	<3	16.5	34.2	16.7	27.0	27.0	27.0	0.21
32	07:55	1.2	<3	17.3	33.5	26.4	9.0	36.0	18.0	0.30
33	08:00	1.1	<3	17.8	33.7	26.7	9.0	<10	<10	0.27
34	08:05	1.2	<3	16.7	34.0	22.6	<10	18.0	<10	0.23
35	08:08	1.1	<3	17.3	33.9	27.3	<10	<10	9.0	0.25
36	08:11	1.1	<3	22.5	33.9	23.7	<10	27.0	<10	0.26
37	08:16	<1	<3	16.9	34.1	21.3	<10	<10	<10	0.22
38	08:24	1.1	<3	16.2	34.6	17.2	27.0	54.0	36.0	0.14
39	07:41	1.3	<3	15.6	34.4	20.0	54.0	350.0	108.0	0.18
40	07:45	1.3	<3	16.2	34.6	18.7	18.0	108.0	99.0	0.15
41	08:30	1.0	<3	16.4	34.5	18.4	9.0	45.0	36.0	0.16

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS

27 March 1998

LW

Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	10:12	1.5	6.9	15.8	31.0	42.6	18	108	108	0.68
2	10:26	1.2	<3	30.6	33.9	19.3	2800	27	9	0.20
3	10:31	1.1	<3	14.9	34.3	18.0	<10	9	<10	0.14
4	10:35	<1	<3	16.0	34.7	16.1	9	9	<10	0.12
5	10:39	<1	<3	16.5	34.2	20.0	<10	36	9	0.19
6	10:41	<1	<3	17.3	34.1	20.4	9	27	10	0.22
7	10:45	<1	<3	16.0	34.2	19.8	<10	36	<10	0.21
8	10:50	1.1	<3	18.4	34.9	25.1	153	1545	802	0.14
9	10:54	42.2	69.2	930.0	29.1	4166.0	963636	5700000	4100000	0.62
10	11:00	1.0	<3	21.3	34.2	19.0	<10	63	27	0.25
11	11:05	5.5	6.4	75.4	34.5	308.0	68000	>130000	135000	0.22
12	11:08	2.5	<3	33.9	34.8	110.0	20000	64000	55000	0.17
15	11:15	<1	<3	14.1	34.5	21.8	9	36	18	0.23
17	11:12	<1	6.4	14.5	34.3	20.7	<10	36	9	0.27
21	11:19	<1	<3	13.8	34.3	22.0	27	90	72	0.26
22	11:21	<1	<3	16.5	34.2	21.4	<10	27	27	0.24
23	11:25	1.0	<3	13.6	34.7	18.8	18	81	90	0.16
24	10:25	1.0	<3	12.8	34.3	19.3	9	90	72	0.19
25	10:28	1.2	<3	16.7	34.2	19.8	9	153	81	0.22
26	10:32	<1	<3	16.5	33.8	22.7	9	310	90	0.42
27	10:40	2.4	112.0	27.4	27.7	115.0	1000	15000	4500	1.23
28	10:46	1.8	53.1	20.8	30.8	84.2	570	5800	1545	0.71
29	11:01	1.2	3.9	22.3	31.9	54.3	72	450	135	0.54
30	11:06	<1	<3	20.2	32.7	40.6	54	260	108	0.43
31	11:10	<1	<3	17.3	33.5	23.8	9	27	27	0.31
32	11:16	<1	<3	16.9	33.2	28.3	9	45	<10	0.37
33	11:20	1.1	<3	17.5	33.7	26.1	<10	18	18	0.28
34	11:24	<1	<3	20.4	33.9	21.8	<10	<10	<10	0.25
35	11:24	<1	<3	14.5	34.0	24.5	<10	<10	<10	0.25
36	11:32	<1	<3	14.1	33.9	26.1	<10	36	9	0.26
37	11:35	<1	<3	15.8	34.1	22.8	<10	<10	9	0.24
38	11:33	1.2	<3	15.0	34.1	22.3	<10	9	<10	0.24
39	11:30	<1	<3	16.9	34.7	23.5	<10	153	108	0.17
40	11:42	1.2	<3	13.4	34.6	19.1	9	117	63	0.17
41	11:45	<1	<3	16.2	34.1	21.8	9	9	18	0.24

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
27 March 1998										
LW+3										
Site No.	Time (GMT)	BOD mg/l	Solids mg/l	Ortho-Phosphate (Filtered) ug/l	Salinity g/kg	Saline Ammonia (Filtered) ug/l	Faecal Strep no./100ml	Total Coliforms no./100ml	Faecal Coliforms no./100ml	T.O.N (Saline filtered) mg/l
1	13:36	1.9	6.1	11.2	33.4	20.9	<10	27.0	27.0	0.31
2	13:44	1.1	<3	13.6	34.7	18.7	9.0	18.0	<10	0.14
3	13:48	1.1	<3	13.8	34.9	17.2	<10	9.0	27.0	0.11
4	13:54	1.1	<3	13.2	34.5	17.1	<10	<10	<10	0.16
5	13:58	1.0	12.1	13.8	35.0	17.8	<10	220.0	144.0	0.13
6	14:00	<1	21.0	15.5	35.0	29.0	9.0	250.0	153.0	0.13
7	14:08	2.2	<3	24.2	34.8	50.3	5500.0	12000.0	11000.0	0.15
8	14:16	1.9	<3	15.1	34.7	19.8	54.0	400.0	300.0	0.13
9	14:18	3.7	4.6	43.4	34.5	112.0	8727.0	67000.0	32000.0	0.15
10	14:22	1.1	<3	16.1	34.9	23.2	290.0	600.0	300.0	0.12
11	14:26	1.2	<3	16.8	34.8	25.0	90.0	480.0	280.0	0.13
12	14:28	1.3	<3	15.9	34.8	23.6	280.0	883.0	300.0	0.14
15	14:36	<1	<3	14.4	35.1	17.5	<10	81.0	<10	0.11
17	14:32	1.2	<3	16.3	35.0	21.5	126.0	500.0	380.0	0.11
21	14:40	<1	<3	14.2	35.0	18.9	9.0	36.0	18.0	<0.1
22	14:42	<1	<3	13.6	35.1	17.4	<10	54.0	36.0	<0.1
23	14:56	<1	<3	14.4	34.9	18.4	9.0	81.0	36.0	0.11
24	13:49	1.0	3.1	13.4	34.6	16.5	<10	72.0	63.0	0.15
25	13:51	<1	<3	14.2	34.6	19.7	45.0	350.0	117.0	0.15
26	13:55	1.1	<3	15.5	34.4	16.5	9.0	54.0	54.0	0.15
27	13:59	1.6	5.5	13.8	34.0	17.4	9.0	81.0	36.0	0.20
28	14:05	1.4	<3	12.7	34.3	16.1	<10	54.0	36.0	0.15
29	14:17	1.0	3.5	13.8	33.9	19.8	<10	9.0	18.0	0.22
30	14:23	<1	<3	13.6	34.3	18.0	<10	18.0	<10	0.18
31	14:27	<1	3.3	16.6	34.2	19.3	9.0	63.0	45.0	0.18
32	14:31	<1	<3	16.6	34.8	17.7	18.0	54.0	9.0	0.11
33	14:35	<1	<3	13.8	34.5	16.5	9.0	27.0	27.0	0.14
34	14:37	1.1	<3	13.4	34.8	18.1	<10	108.0	72.0	0.12
35	14:39	1.1	<3	13.8	34.8	17.7	9.0	90.0	63.0	0.12
36	14:43	1.0	3.5	15.1	34.6	16.9	<10	<10	<10	0.13
37	14:47	<1	<3	12.3	34.8	16.6	<10	27.0	18.0	0.10
38	14:50	1.1	<3	16.4	35.0	21.9	<10	36.0	9.0	0.14
39	14:54	1.0	<3	13.6	34.9	17.8	9.0	108.0	72.0	0.11
40	14:57	<1	<3	16.6	34.7	18.0	<10	9.0	<10	0.13
41	15:01	1.0	<3	16.6	34.7	17.7	<10	9.0	18.0	0.13

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
7 April 1998										
HW										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	GMT	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	14:11	1.4	<3	20.0	33.4	15.0	<10	<10	10	0.16
2	14:21	1.1	<3	13.8	34.3	14.0	<10	<10	<10	0.14
3	14:33	<1	<3	14.2	34.6	16.1	<10	<10	<10	0.14
4	14:37	<1	<3	14.4	34.7	13.6	<10	<10	<10	0.12
5	14:43	1.1	<3	21.1	32.4	40.2	50	30	10	0.34
6	15:09	1.0	<3	16.5	33.4	24.3	<10	<10	<10	0.26
7	15:15	1.1	<3	16.7	32.9	27.3	10	20	<10	0.30
8	15:19	1.2	<3	20.7	33.1	32.9	30	60	20	0.26
9	15:29	1.0	12.1	25.0	33.2	63.3	<10	40	10	0.32
10	15:25	1.2	11.7	20.0	32.7	33.8	20	20	<10	0.33
11	15:31	<1	<3	20.9	32.8	33.8	20	<10	<10	0.33
12	15:37	<1	<3	19.8	32.9	26.2	20	<10	<10	0.31
15	15:51	1.2	<3	14.0	34.2	19.7	<10	<10	<10	0.16
17	15:47	<1	<3	15.9	33.4	22.3	<10	<10	<10	0.24
21	14:14	<1	<3	16.5	32.9	24.1	<10	<10	<10	0.30
22	14:18	<1	<3	16.1	32.9	25.2	<10	<10	<10	0.32
23	14:24	<1	<3	15.5	33.1	23.5	<10	<10	<10	0.31
24	14:30	<1	<3	15.2	32.6	25.0	<10	<10	<10	0.32
25	14:34	1.2	<3	14.6	33.0	18.2	<10	10	<10	0.27
26	14:38	1.2	<3	11.9	33.7	8.3	<10	<10	<10	0.18
27	14:42	1.4	<3	10.9	33.4	13.3	<10	<10	<10	0.23
28	14:48	1.4	<3	9.6	32.7	16.9	<10	<10	<10	0.34
29	14:51	<1	<3	15.0	35.0	21.1	<10	20	<10	<0.1
30	15:03	1.2	<3	17.5	32.6	35.9	50	40	<10	0.33
31	14:57	1.3	<3	22.7	32.8	51.6	140	130	<10	0.31
32	14:53	<1	<3	16.1	34.7	22.5	<10	<10	<10	0.14
33	15:06	1.1	<3	15.0	33.6	22.6	<10	<10	<10	0.25
34	15:10	<1	<3	14.8	33.5	24.1	<10	<10	<10	0.25
35	15:14	1.2	<3	18.2	33.1	27.5	<10	<10	<10	0.30
36	15:18	1.1	<3	15.9	33.4	23.7	<10	<10	<10	0.26
37	15:22	1.1	<3	15.5	33.2	23.5	<10	<10	<10	0.28
38	15:26	1.1	<3	15.5	33.4	22.6	<10	<10	<10	0.26
39	15:30	1.2	<3	17.9	33.4	21.6	<10	<10	<10	0.24
40	15:34	1.1	<3	13.2	33.4	16.9	<10	<10	<10	0.24
41	15:40	<1	<3	15.2	33.7	18.2	<10	<10	<10	0.23

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
7 April 1998										
HW+3										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	GMT	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	05:25	<1	<3	11.3	31.9	20.8	<10	<10	10	0.51
2	05:37	1.3	<3	10.7	33.9	11.9	<10	<10	10	0.20
3	05:41	1.0	<3	11.8	34.1	11.9	<10	<10	<10	0.16
4	05:43	1.2	<3	21.2	34.9	19.4	<10	<10	<10	0.11
5	05:47	<1	<3	23.5	31.3	39.5	<10	<10	<10	0.51
6	06:05	1.0	<3	23.7	30.4	49.1	<10	<10	<10	0.62
7	06:11	<1	<3	19.2	31.7	35.2	<10	<10	<10	0.47
8	06:15	3.4	<3	83.8	31.8	495.0	11700	104000	86000	0.39
9	06:19	16.2	37.3	144.0	30.1	901.0	620000	2750000	234000	0.55
10	06:21	1.2	<3	81.2	31.1	38.0	<10	<10	<10	0.51
11	06:25	<1	<3	20.6	32.0	28.4	40	120	120	0.38
12	06:29	1.3	<3	20.6	32.0	29.5	10	80	70	0.40
15	06:39	1.2	<3	22.4	31.7	33.2	<10	<10	<10	0.42
17	06:35	<1	<3	22.0	30.9	42.4	<10	<10	<10	0.54
21	06:14	1.2	3.0	22.6	30.5	45.2	<10	<10	<10	0.57
22	06:20	<1	<3	21.4	31.7	35.9	<10	<10	<10	0.45
23	06:24	1.1	<3	20.2	32.8	23.7	30	120	70	0.28
24	06:32	1.2	<3	14.8	33.3	13.6	<10	<10	<10	0.23
25	06:36	1.5	<3	13.6	33.4	11.7	<10	40	20	0.24
26	06:42	1.3	<3	13.6	33.4	13.1	<10	40	30	0.25
27	06:54	1.5	<3	12.4	31.6	14.2	10	290	160	0.64
28	07:06	1.1	<3	25.9	11.6	24.2	860	11000	10200	5.00
29	05:51	1.2	<3	24.1	31.1	41.7	<10	<10	<10	0.52
30	05:59	1.0	<3	26.7	30.4	53.1	20	<10	<10	0.63
31	06:03	1.4	<3	20.0	32.4	46.0	450	2800	2600	0.37
32	05:55	1.1	<3	19.8	31.9	33.0	<10	60	50	0.46
33	07:24	1.3	<3	18.1	32.3	30.1	10	<10	10	0.37
34	07:28	1.3	<3	26.1	29.3	53.1	<10	<10	<10	0.77
35	07:32	1.3	<3	22.0	28.9	53.1	<10	40	50	0.79
36	07:36	<1	<3	16.5	32.5	25.8	<10	<10	<10	0.37
37	07:40	1.2	9.9	21.0	28.7	53.2	30	10	10	0.79
38	07:44	1.1	11.0	16.9	32.1	28.7	<10	<10	<10	0.42
39	07:48	<1	<3	18.5	32.5	24.8	<10	<10	<10	0.38
40	07:50	1.1	<3	17.9	32.8	20.2	<10	<10	<10	0.34
41	07:52	1.2	<3	20.8	31.0	35.3	No result	No result	No result	0.55

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
7 April 1998										
LW										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	GMT	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	08:31	1.2	<3	12.3	31.7	22.5	<10	<10	<10	0.57
2	08:41	1.3	<3	11.1	33.5	18.6	10	<10	<10	0.26
3	08:47	1.2	<3	11.7	33.9	17.5	<10	<10	<10	0.18
4	08:51	1.3	<3	15.2	34.8	19.0	<10	<10	<10	<0.1
5	08:55	1.2	<3	19.5	32.3	32.5	<10	<10	<10	0.38
6	09:17	1.0	<3	20.9	30.5	45.2	<10	<10	20	0.58
7	09:27	1.1	10.3	24.6	29.8	52.5	<10	<10	<10	0.66
8	09:23	1.3	13.1	24.8	30.7	57.9	680	910	480	0.57
9	09:27	45.2	53.5	1160.0	27.3	6440.0	320000	3200000	1160000	0.66
10	09:31	1.1	<3	28.0	31.2	42.0	<10	<10	20	0.53
11	09:33	1.4	<3	21.5	30.5	42.4	30	30	50	0.55
12	09:39	1.2	<3	20.9	30.9	39.8	<10	<10	<10	0.50
15	09:47	1.1	<3	19.1	32.4	29.3	<10	<10	<10	0.36
17	09:43	<1	<3	20.9	31.3	38.9	<10	<10	<10	0.51
21	09:00	1.2	<3	20.9	30.6	40.0	20	<10	20	0.59
22	09:04	1.1	<3	20.7	31.1	37.2	<10	<10	<10	0.54
23	09:10	1.3	<3	19.5	31.0	36.6	<10	<10	<10	0.51
24	09:20	1.1	<3	14.0	33.3	16.6	<10	<10	<10	0.23
25	09:26	1.3	<3	11.7	33.7	14.3	<10	<10	<10	0.20
26	09:32	1.2	<3	12.3	33.0	15.2	<10	<10	10	0.36
27	09:38	1.3	<3	15.4	30.1	18.1	40	<10	<10	0.94
28	09:46	3.0	<3	11.7	31.9	15.5	10	<10	<10	0.54
29	08:59	1.1	<3	20.3	31.9	33.4	<10	<10	<10	0.42
30	09:11	1.1	<3	18.3	32.2	29.4	<10	20	40	0.40
31	09:07	1.0	<3	23.2	29.6	51.9	<10	<10	<10	0.74
32	09:03	<1	<3	17.8	32.5	28.2	120	100	70	0.39
33	10:06	1.2	<3	22.1	30.3	45.5	<10	<10	<10	0.66
34	10:10	<1	<3	19.7	30.8	27.4	10	<10	10	0.57
35	10:12	1.2	<3	20.9	29.8	40.8	<10	<10	<10	0.65
36	10:16	1.1	<3	20.5	32.4	34.6	<10	<10	<10	0.44
37	10:20	1.2	<3	19.4	31.6	38.9	<10	<10	<10	0.52
38	10:24	<1	<3	20.8	31.1	36.7	<10	<10	<10	0.53
39	10:28	<1	<3	21.8	31.1	36.7	<10	<10	<10	0.53
40	10:32	<1	<3	23.9	31.0	36.9	<10	<10	<10	0.55
41	10:30	<1	<3	21.4	30.6	35.9	?	?	?	0.54

FALMOUTH 1998 PRE SCHEME BASELINE SURVEY RESULTS										
7 April 1998										
LW+3										
Site No.	Time	BOD	Solids	Ortho-Phosphate	Salinity	Saline Ammonia	Faecal Strep	Total Coliforms	Faecal Coliforms	T.O.N
	GMT	mg/l	mg/l	(Filtered) ug/l	g/kg	(Filtered) ug/l	no./100ml	no./100ml	no./100ml	(Saline filtered) mg/l
1	11:27	1.4	<3	11.1	33.5	20.5	<10	<10	<10	0.22
2	11:41	1.2	<3	12.3	34.5	18.1	<10	<10	<10	0.13
3	11:47	1.0	<3	14.2	35.2	18.8	<10	<10	<10	0.10
4	11:55	<1	<3	14.6	34.6	17.5	<10	<10	<10	0.12
5	12:01	1.2	<3	15.0	35.0	17.9	<10	<10	<10	<0.1
6	12:27	1.1	<3	19.6	32.8	29.7	<10	30	20	0.32
7	12:33	2.2	<3	33.3	31.9	120.0	1200	2500	2000	0.42
8	12:41	1.9	<3	36.8	31.5	128.0	490	2800	1290	0.44
9	12:45	2.2	<3	37.6	31.5	135.0	1190	2200	950	0.43
10	12:43	1.2	<3	22.1	32.1	43.1	180	160	80	0.41
11	12:49	2.0	<3	34.5	31.7	135.0	1660	1070	580	0.46
12	12:51	1.6	<3	35.8	31.7	123.0	870	890	520	0.45
15	13:05	1.4	<3	14.4	35.0	16.4	<10	<10	<10	0.10
17	13:01	1.1	<3	19.1	33.0	22.2	<10	<10	<10	0.29
21	11:16	1.6	<3	16.0	33.3	23.0	10	<10	<10	0.26
22	11:22	1.0	<3	18.5	33.0	23.5	10	<10	<10	0.29
23	11:28	1.3	<3	20.5	32.3	28.5	40	130	30	0.38
24	11:32	1.0	<3	17.8	32.7	24.5	<10	<10	<10	0.35
25	11:38	1.1	<3	16.4	33.3	15.5	<10	<10	<10	0.26
26	11:44	1.4	<3	13.6	33.6	17.2	70	1150	470	0.21
27	11:50	1.7	<3	15.4	33.2	12.1	<10	<10	<10	0.28
28	11:54	1.7	3.5	11.9	32.2	28.2	10	40	<10	0.46
29	12:11	<1	<3	18.7	35.1	15.2	<10	<10	<10	0.10
30	12:25	1.0	<3	16.2	35.1	15.5	<10	<10	<10	<0.1
31	12:21	<1	<3	16.6	34.9	17.2	<10	<10	<10	<0.1
32	12:15	<1	<3	18.3	34.7	21.9	<10	<10	<10	0.12
33	12:10	1.0	<3	18.9	34.2	15.3	<10	<10	<10	0.16
34	12:14	1.3	<3	18.9	33.8	22.1	<10	<10	<10	0.20
35	12:18	1.1	<3	16.0	33.4	22.5	<10	<10	<10	0.24
36	12:24	1.1	<3	21.1	33.2	25.4	<10	<10	<10	0.28
37	12:28	<1	<3	21.5	32.2	31.1	<10	<10	<10	0.42
38	12:34	1.4	<3	19.3	33.4	21.3	<10	<10	<10	0.27
39	12:48	1.0	<3	16.4	32.9	24.2	<10	<10	<10	0.29
40	12:38	1.2	<3	14.8	33.3	17.8	<10	<10	<10	0.24
41	12:42	<1	<3	16.6	33.6	21.2	<10	<10	<10	0.25

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY, 17/03/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution	Comments
1	06:49:30	HW- 00 43	183431	32804	35 0	<10 0	300000	Background surface sample from MAFF line, tide ebbing, wind <1m/s WSW
2	06:57:10	HW- 00 35	183513	32924	34.9	<10.0	300000	Background surface sample from north of MAFF line
3	07:05:50	HW- 00 27	183349	32661	35.1	<10.0	300000	Background surface sample from MAFF line
1	07:07:20	HW- 00:25	183061	32153	34.8	27000	111	Dye patch 1 surface sample
2	07:10 00	HW- 00:23	183108	32062	34.9	26000	115	Dye patch 1 surface sample
3	07:12:20	HW- 00:20	183131	32075	34.9	23000	130	Dye patch 1 surface sample
4	07:15.00	HW- 00:18	183349	32758	35.1	<10 0	300000	Background depth sample from MAFF line, total depth (td) 15m
4	07:16:10	HW- 00:16	183199	32087	35.1	<10 0	300000	Dye patch 1 depth sample
5	07:21:10	HW- 00:11	183255	32703	35.2	<10 0	300000	Background depth sample from MAFF line, td 10 5m
151	07:29 00	HW- 00 04	183269	32001	34.8	13000	231	Dye patch 1 surface sample at western edge of patch
152	07.30.30	HW- 00:02	183252	31958	34 8	14000	214	Dye patch 1 surface sample
6	07:31:20	HW- 00:01	183149	32108	34.9	30000	100	Dye patch 1 surface sample
6	07:32.40	HW- 00:00	183182	32064	35 0	14182	212	Dye patch 1 surface sample, wind 4 kts WSW
153	07:32:50	HW- 00:00	183190	31936	34.8	35000	86	Dye patch 1 surface sample
154	07:33:30	HW+ 00:00	183199	31937	35.1	18	166667	Dye patch 1 depth sample, td 12 2m, mid patch
7	07:34:50	HW+ 00 01	183232	32010	35.0	9182	327	Dye patch 1 surface sample
155	07:35:40	HW+ 00:02	183147	31967	34.9	15000	200	Dye patch 1 surface sample
8	07:36.20	HW+ 00:03	183250	31907	34.9	13000	231	Dye patch 1 surface sample
156	07:37:10	HW+ 00:04	183064	32011	34 8	928	3233	Dye patch 1 surface sample at eastern edge of patch
9	07:38.30	HW+ 00 05	183278	31873	34 9	20000	150	Dye patch 1 surface sample at leading edge of patch
10	07:40:10	HW+ 00.07	183305	31837	34.9	10545	284	Dye patch 1 surface sample
11	07:42:50	HW+ 00 09	183349	31877	35.2	<10.0	300000	Dye patch 1 depth sample
157	07:51:40	HW+ 00.18	183090	32203	34.9	32000	94	Dye patch 2 boil sample
158	07:59:50	HW+ 00:26	183162	32123	35.0	16000	188	Dye patch 2 surface sample western edge
159	08:00:50	HW+ 00:27	183140	32111	34.9	9727	308	Dye patch 2 surface sample
160	08:01:50	HW+ 00 28	183089	32102	34 6	<10 0	300000	Dye patch 2 surface sample
12	08:02:20	HW+ 00 29	183397	31817	35.0	6300	476	Dye patch 1 surface sample
161	08 02.40	HW+ 00 29	183049	32111	34.6	<10 0	300000	Dye patch 2 surface sample
162	08 04:10	HW+ 00:31	183117	32134	34 7	1909	1572	Dye patch 2 surface sample
13	08 04:30	HW+ 00:31	183411	31834	35.1	54	55556	Dye patch 1 depth sample
163	08:05:50	HW+ 00:32	183161	32055	35.1	<10 0	300000	Dye patch 2 depth sample, td 11.6m, mid patch
164	08 07:10	HW+ 00:34	183190	32023	34.9	1198	2504	Dye patch 2 surface sample
165	08:08:20	HW+ 00:35	183198	31952	34.9	1090	2752	Dye patch 2 surface sample at surface drogue
14	08 08:20	HW+ 00:35	183450	31908	35 0	45	66667	Dye patch 1 surface sample out of plume to the North
166	08:09:20	HW+ 00:36	183212	31856	34 8	5400	556	Dye patch 2 surface sample
15	08.09.40	HW+ 00:36	183466	31841	35 0	11818	254	Dye patch 1 surface sample northern edge of plume
16	08:11:20	HW+ 00:38	183495	31753	35 0	12727	236	Dye patch 1 surface sample at shallow drogue
17	08:12:50	HW+ 00 39			35.0	10991	273	Dye patch 1 surface sample
18	08:14:30	HW+ 00 41			35 0	12000	250	Dye patch 1 surface sample, wind 4 kts SW
19	08:16:40	HW+ 00.43			35 0	18000	167	Dye patch 1 surface sample
20	08:18:10	HW+ 00 45			35 1	240	12500	Dye patch 1 surface sample out of dye
167	08:18:10	HW+ 00:45	183279	31790	35 0	<10 0	300000	Dye patch 2 surface sample at eastern edge
168	08:19:10	HW+ 00 46	183262	31747	34 9	6100	492	Dye patch 2 surface sample at surface drogue
21	08:19 40	HW+ 00 46			34 9	18000	167	Dye patch 1 surface sample concentrated dye
169	08:20.30	HW+ 00 47	183237	31735	34 9	3900	769	Dye patch 2 surface sample
170	08 21:00	HW+ 00 48	183241	31727	35 2	9	333333	Dye patch 2 depth sample, mid patch
22	08.21:10	HW+ 00 48	183561	31239	35 0	4700	638	Dye patch 1 surface sample
172	08.23:20	HW+ 00.50	183202	31676	34.9	1909	1572	Dye patch 2 surface sample
23	08:23:40	HW+ 00 50	183738	31619	35 0	1909	1572	Dye patch 1 surface sample out of dye to the East
171	08.24:30	HW+ 00.51	183155	31684	34 9	1423	2108	Dye patch 2 surface sample
24	08:25:10	HW+ 00 52	183704	31636	35 0	5400	556	Dye patch 1 surface sample at edge of patch
173	08:25:50	HW+ 00:52	183088	31683	35 0	207	14493	Dye patch 2 surface sample
25	08:26:40	HW+ 00 53	183654	31677	35 0	6700	448	Dye patch 1 surface sample
174	08:26:50	HW+ 00.53	183068	31682	34 8	<10 0	300000	Dye patch 2 surface sample
26	08:28:20	HW+ 00 55	183553	31646	35 1	6600	455	Dye patch 1 surface sample at deep drogue
175	08:28:30	HW+ 00:55	183223	31700	34.8	3800	789	Dye patch 2 surface sample
176	08:29:40	HW+ 00:56	183240	31614	34.8	3900	769	Dye patch 2 surface sample
27	08:30:00	HW+ 00 57	183445	31674	35 0	5400	556	Dye patch 1 surface sample at western edge
177	08:30 40	HW+ 00 57	183260	31532	34 9	5000	600	Dye patch 2 surface sample
28	08:31:20	HW+ 00:58	183367	31675	34.9	2600	1154	Dye patch 1 surface sample out of boil to the west
178	08:31.30	HW+ 00 58	183299	31452	34.8	2600	1154	Dye patch 2 surface sample
179	08:32:10	HW+ 00 59	183338	31398	34.9	6000	500	Dye patch 2 surface sample at southern edge
29	09.00 00	HW+ 01 27	183527	31402	35 1	3900	769	Dye patch 1 surface sample at deep drogue, wind 8 kts SW
30	09:02:00	HW+ 01:29	183558	31384	35 3	<10 0	300000	Dye patch 1 depth sample
180	09 02:50	HW+ 01.29	183555	30913	35.0	3700	811	Dye patch 2 surface sample at eastern edge
181	09 03:40	HW+ 01:30	183489	30895	35 0	3200	938	Dye patch 2 surface sample
182	09 04:40	HW+ 01 31	183402	30876	35.0	2400	1250	Dye patch 2 surface sample, wind 2m/s SW
183	09.05:50	HW+ 01 32	183330	30861	35 0	1727	1737	Dye patch 2 surface sample
184	09.06:50	HW+ 01:33	183267	30867	35 0	1387	2163	Dye patch 2 surface sample
31	09.07:40	HW+ 01:34	183645	31411	35.2	200	15000	Dye patch 1 surface sample out of plume to the north
32	09.08:50	HW+ 01:35	183655	31352	35.1	2400	1250	Dye patch 1 surface sample in plume to the north
33	09:10:10	HW+ 01:37	183648	31252	35.1	3000	1000	Dye patch 1 surface sample
185	09:10:10	HW+ 01 37	183235	30812	35.0	770	3896	Dye patch 2 surface sample
186	09:11:00	HW+ 01.38	183175	30812	35 0	500	6000	Dye patch 2 surface sample
187	09:11:50	HW+ 01:38	183119	30815	35 0	280	10714	Dye patch 2 surface sample
34	09:12.00	HW+ 01 39	183588	31103	35.1	2800	1071	Dye patch 1 surface sample
35	09.13:30	HW+ 01:40	183591	30979	35.1	2500	1200	Dye patch 1 surface sample
188	09:14:50	HW+ 01 41	183364	30986	35 0	1273	2357	Dye patch 2 surface sample
36	09:15:20	HW+ 01 42	183818	30945	35 2	2000	1500	Dye patch 1 surface sample

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY, 17/03/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution	Comments
189	09:16:00	HW+ 01:43	183404	30887	35.1	1454	2063	Dye patch 2 surface sample
190	09:17:10	HW+ 01:44	183454	30767	35.0	1545	1942	Dye patch 2 surface sample
37	09:17:30	HW+ 01:44	183888	30723	35.1	4300	698	Dye patch 1 surface sample
191	09:18:10	HW+ 01:45	183498	30693	35.0	2100	1429	Dye patch 2 surface sample, mid patch
38	09:19:00	HW+ 01:46	183966	30547	35.1	200	15000	Dye patch 1 surface sample
192	09:19:50	HW+ 01:46	183524	30657	35.2	<10.0	300000	Dye patch 2 depth sample, td 18m
39	09:22:00	HW+ 01:49	183940	31123	35.1	340	8824	Dye patch 1 surface sample out of plume to the east
193	09:22:20	HW+ 01:49	183580	30568	35.1	2500	1200	Dye patch 2 surface sample
40	09:23:10	HW+ 01:50	183888	31104	35.1	1090	2752	Dye patch 1 surface sample at edge of plume
194	09:23:10	HW+ 01:50	183627	30483	35.1	2500	1200	Dye patch 2 surface sample
195	09:23:50	HW+ 01:50	183670	30431	35.0	3200	938	Dye patch 2 surface sample
41	09:24:40	HW+ 01:51	183829	31105	35.1	1727	1737	Dye patch 1 surface sample
42	09:25:50	HW+ 01:52	183786	31100	35.1	1364	2199	Dye patch 1 surface sample
43	09:28:00	HW+ 01:55	183670	31120	35.1	2500	1200	Dye patch 1 surface sample, patch located off St Anthony light house
44	09:30:20	HW+ 01:57	183481	31045	35.1	2400	1250	Dye patch 1 surface sample at shallow drogue near western edge of patch
45	09:33:00	HW+ 02:00	183427	30945	35.1	1636	1834	Dye patch 1 surface sample
46	09:34:40	HW+ 02:01	183340	30872	35.1	54	55556	Dye patch 1 surface sample
47	09:38:40	HW+ 02:05	184018	30522	35.1	865	3468	Dye patch 1 surface sample at edge
48	09:40:10	HW+ 02:07	184002	30494	35.1	3500	857	Dye patch 1 surface sample at edge
49	09:50:50	HW+ 02:17	183409	30718	35.1	2000	1500	Dye patch 1 surface sample in most concentrated dye
196	09:50:50	HW+ 02:17	183631	30308	35.1	2900	1034	Dye patch 2 surface sample
197	09:52:00	HW+ 02:19	183582	30263	35.1	2100	1429	Dye patch 2 surface sample at surface drogue
50	09:52:40	HW+ 02:19	183404	30750	35.1	560	5357	Dye patch 1 depth sample, total depth 19m
198	09:52:50	HW+ 02:19	183541	30225	35.1	1909	1572	Dye patch 2 surface sample
199	09:54:10	HW+ 02:21	183503	30175	35.0	2000	1500	Dye patch 2 surface sample
200	09:57:00	HW+ 02:24	183530	30142	35.2	<10.0	300000	Dye patch 2 depth sample, td 18m
51	09:59:00	HW+ 02:26	183344	30680	35.1	874	3432	Dye patch 1 mid depth sample
201	09:59:30	HW+ 02:26	183512	30090	35.0	1545	1942	Dye patch 2 surface sample
202	10:00:40	HW+ 02:27	183433	30045	35.1	1162	2582	Dye patch 2 surface sample
203	10:01:50	HW+ 02:28	183380	29989	35.1	620	4839	Dye patch 2 surface sample
52	10:02:30	HW+ 02:29	183295	30648	35.1	1027	2921	Dye patch 1 surface sample at shallow drogue
204	10:02:50	HW+ 02:29	183291	29942	35.1	450	6667	Dye patch 2 surface sample
205	10:04:00	HW+ 02:31	183189	29928	35.1	81	37037	Dye patch 2 surface sample
53	10:06:20	HW+ 02:33	183628	30832	35.1	380	7895	Dye patch 1 surface sample
206	10:07:40	HW+ 02:34	183649	29826	35.0	1727	1737	Dye patch 2 surface sample
54	10:07:50	HW+ 02:34	183648	30652	35.1	919	3264	Dye patch 1 surface sample
207	10:08:30	HW+ 02:35	183643	29885	35.0	2000	1500	Dye patch 2 surface sample, wind 2m/s W
208	10:09:40	HW+ 02:36	183625	29976	35.1	2200	1364	Dye patch 2 surface sample at surface drogue
55	10:09:40	HW+ 02:36	183826	30677	35.2	793	3783	Dye patch 1 surface sample
209	10:10:40	HW+ 02:37	183606	30044	35.1	3400	882	Dye patch 2 surface sample at depth drogue
56	10:11:30	HW+ 02:38	183921	30527	35.1	2000	1500	Dye patch 1 surface sample
210	10:11:40	HW+ 02:38	183578	30135	35.1	2500	1200	Dye patch 2 surface sample
57	10:13:20	HW+ 02:40	183695	30423	35.1	829	3619	Dye patch 1 surface sample
211	10:13:50	HW+ 02:40	183469	30164	35.1	1545	1942	Dye patch 2 surface sample
212	10:15:00	HW+ 02:42	183454	30240	35.1	1727	1737	Dye patch 2 surface sample
58	10:15:20	HW+ 02:42	183518	30626	35.1	1455	2062	Dye patch 1 surface sample
213	10:16:10	HW+ 02:43	183434	30354	35.1	1727	1737	Dye patch 2 surface sample
59	10:16:10	HW+ 02:43	183521	30633	35.3	<10.0	300000	Dye patch 1 depth sample, total depth 19m
60	10:26:40	HW+ 02:53	183177	30427	35.1	892	3363	Dye patch 1 surface sample, shallow drogue retrieved, wind 5 kts SW
214	10:30:20	HW+ 02:57	183633	29707	35.1	2600	1154	Dye patch 2 surface sample
215	10:31:10	HW+ 02:58	183627	29696	35.1	1636	1834	Dye patch 2 surface sample
216	10:32:10	HW+ 02:59	183536	29712	35.0	1455	2062	Dye patch 2 surface sample
217	10:32:50	HW+ 02:59	183471	29732	35.1	2100	1429	Dye patch 2 surface sample
218	10:33:40	HW+ 03:00	183359	29766	35.1	500	6000	Dye patch 2 surface sample
219	10:36:20	HW+ 03:03	183707	29438	35.1	1545	1942	Dye patch 2 surface sample
220	10:37:40	HW+ 03:04	183642	29596	35.1	1545	1942	Dye patch 2 surface sample
221	10:38:30	HW+ 03:05	183595	29668	35.1	1545	1942	Dye patch 2 surface sample, retrieved surface drogue
222	10:39:40	HW+ 03:06	183596	29758	35.1	2000	1500	Dye patch 2 surface sample, retrieved depth drogue
223	10:40:50	HW+ 03:07	183570	29860	35.0	1636	1834	Dye patch 2 surface sample
61	10:44:00	HW+ 03:11	183140	32169	34.5	6900	435	Dye patch 3 surface boil sample
62	10:45:00	HW+ 03:12	183179	32168	34.6	4600	652	Dye patch 3 surface sample
63	10:46:30	HW+ 03:13	183147	32134	34.5	1198	2504	Dye patch 3 surface sample
64	11:03:00	HW+ 03:30	183216	31897	34.5	4300	698	Dye patch 3 surface sample at northern end of patch
65	11:04:50	HW+ 03:31	183194	31736	34.6	<10.0	300000	Dye patch 3 surface sample
66	11:06:10	HW+ 03:33	183184	31614	34.6	1117	2686	Dye patch 3 surface sample
67	11:07:30	HW+ 03:34	183190	31541	34.6	9	333333	Dye patch 3 surface sample at deep drogue
68	11:10:00	HW+ 03:37	183197	31345	34.6	3400	882	Dye patch 3 surface sample
69	11:11:30	HW+ 03:38	183210	31244	34.6	410	7317	Dye patch 3 surface sample at southern edge of dye
70	11:13:20	HW+ 03:40	183231	31324	34.6	3900	769	Dye patch 3 surface sample at western side
71	11:16:20	HW+ 03:43	183177	31204	35.0	480	6250	Start of CTD profile, dye patch 3 depth sample, total depth 13m
72	11:20:00	HW+ 03:47	183212	31145	34.6	2900	1034	End of CTD profile, dye patch 3 surface sample
73	11:35:00	HW+ 04:02	183187	31318	34.6	6100	492	Dye patch 3 surface sample at northern back edge
74	11:36:30	HW+ 04:03	183180	31150	34.6	5200	577	Dye patch 3 surface sample
75	11:38:40	HW+ 04:05	183139	30848	34.6	1818	1650	Dye patch 3 surface sample
76	11:41:00	HW+ 04:08	183128	30593	34.7	1351	2221	Dye patch 3 surface sample
229	11:41:20	HW+ 04:08	183117	32144	34.6	11261	266	Dye patch 4 surafce boil sample, wind 2m/s SW
77	11:42:40	HW+ 04:09	183133	30405	34.7	1144	2622	Dye patch 3 surface sample
78	11:43:50	HW+ 04:10	183107	30317	34.7	720	4167	Dye patch 3 surface sample out of dye at southern edge
230	11:44:30	HW+ 04:11	183201	32050	34.7	63	47619	Dye patch 4 surface sample

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY 17/03/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution	Comments
231	11:45:30	HW+ 04:12	183167	32040	34.6	9910	303	Dye patch 4 surface sample
79	11:46:00	HW+ 04:13	183197	30406	34.8	2700	1111	Dye patch 3 surface sample
232	11:46:30	HW+ 04:13	183173	32031	34.7	250	12000	Dye patch 4 depth sample, td 8m
80	11:47:20	HW+ 04:14	183154	30399	34.7	1441	2082	Dye patch 3 surface sample
81	11:48:30	HW+ 04:15	183080	30399	34.8	1099	2730	Dye patch 3 surface sample
233	11:48:40	HW+ 04:15	183137	31987	34.7	<10.0	300000	Dye patch 4 surface sample at surface drogue
234	11:49:50	HW+ 04:16	183169	31911	34.6	7300	411	Dye patch 4 surface sample
82	11:50:00	HW+ 04:17	183009	30360	34.6	740	4054	Dye patch 3 surface sample
235	11:50:50	HW+ 04:17	183182	31946	34.6	10000	300	Dye patch 4 surface sample
83	11:51:30	HW+ 04:18	182933	30290	34.7	3300	909	Dye patch 3 surface sample
236	11:51:40	HW+ 04:18	183167	32011	34.6	14000	214	Dye patch 4 surface sample
237	11:58:20	HW+ 04:25	183284	31691	34.6	1892	1586	Dye patch 4 surface sample
238	11:59:30	HW+ 04:26	183252	31729	34.6	6200	484	Dye patch 4 surface sample
239	12:00:40	HW+ 04:27	183211	31765	34.6	7500	400	Dye patch 4 surface sample
84	12:00:40	HW+ 04:27	182884	30088	34.8	2000	1500	Dye patch 3 surface sample quite near to front edge
240	12:01:00	HW+ 04:28	183214	31766	34.8	72	41667	Dye patch 4 depth sample, td 9m
241	12:03:10	HW+ 04:30	183177	31699	34.6	7200	417	Dye patch 4 surface sample
242	12:04:10	HW+ 04:31	183138	31661	34.6	9000	333	Dye patch 4 surface sample
85	12:04:40	HW+ 04:31			35.2	<10.0	300000	Dye patch 3 depth sample
243	12:05:20	HW+ 04:32	183182	31574	34.6	6800	441	Dye patch 4 surface sample
244	12:06:10	HW+ 04:33	183198	31599	34.6	7400	405	Dye patch 4 surface sample
245	12:07:00	HW+ 04:34	183200	31645	34.6	7900	380	Dye patch 4 surface sample
246	12:08:10	HW+ 04:35	183211	31726	34.6	6700	448	Dye patch 4 surface sample
247	12:18:20	HW+ 04:45	183424	31144	34.7	27	111111	Dye patch 4 surface sample
248	12:19:10	HW+ 04:46	183386	31162	34.6	1730	1734	Dye patch 4 surface sample
249	12:20:00	HW+ 04:47	183340	31218	34.6	4400	682	Dye patch 4 surface sample
250	12:20:50	HW+ 04:47	183274	31273	34.6	4800	625	Dye patch 4 surface sample
86	12:21:20	HW+ 04:48	182999	30045	34.8	2500	1200	Dye patch 3 surface sample at eastern edge
251	12:21:40	HW+ 04:48	183208	31226	34.6	6300	476	Dye patch 4 surface sample
87	12:22:30	HW+ 04:49	182940	30021	34.7	2300	1304	Dye patch 3 surface sample
252	12:23:30	HW+ 04:50	183205	31182	34.9	1364	2199	Dye patch 4 depth sample, td 12m
88	12:24:10	HW+ 04:51	182806	29966	34.8	2100	1429	Dye patch 3 surface sample
89	12:25:30	HW+ 04:52	182735	29934	34.8	550	5455	Dye patch 3 surface sample
253	12:26:00	HW+ 04:53	183184	31098	34.7	450	6667	Dye patch 4 surface sample
90	12:27:20	HW+ 04:54	182646	29970	34.8	63	47619	Dye patch 3 surface sample
254	12:27:30	HW+ 04:54	183105	31055	34.7	2500	1200	Dye patch 4 surface sample
255	12:30:40	HW+ 04:57	183023	30991	34.7	<10.0	300000	Dye patch 4 surface sample
91	12:31:50	HW+ 04:58	182487	29342	34.8	1818	1650	Dye patch 3 surface sample
256	12:33:00	HW+ 05:00	183189	30893	34.7	6600	455	Dye patch 4 surface sample
92	12:33:10	HW+ 05:00	182559	29325	34.8	680	4412	Dye patch 3 surface sample
93	12:34:40	HW+ 05:01	182658	29263	34.8	910	3297	Dye patch 3 surface sample
257	12:34:50	HW+ 05:01	183226	30965	34.7	4200	714	Dye patch 4 surface sample
258	12:36:10	HW+ 05:03	183276	31071	34.7	2500	1200	Dye patch 4 surface sample
94	12:36:30	HW+ 05:03	182815	29257	34.8	580	5172	Dye patch 3 surface sample at shallow drogue
259	12:37:10	HW+ 05:04	183297	31146	34.7	3400	882	Dye patch 4 surface sample
260	12:38:50	HW+ 05:05	183203	31216	34.7	2600	1154	Dye patch 4 surface sample at depth drogue
95	12:39:00	HW+ 05:06	182676	28982	34.8	892	3363	Dye patch 3 surface sample near leading edge
96	12:40:30	HW+ 05:07	182658	29148	34.8	991	3027	Dye patch 3 surface sample
261	12:40:50	HW+ 05:07	183333	31061	34.4	2900	1034	Dye patch 4 surface sample
262	12:42:50	HW+ 05:09	183435	30861	34.5	1090	2752	Dye patch 4 surface sample
97	12:43:50	HW+ 05:10	182612	29336	34.8	2400	1250	Dye patch 3 surface sample
263	12:44:00	HW+ 05:11	183496	30739	34.6	135	22222	Dye patch 4 surface sample
98	12:46:10	HW+ 05:13	182658	29654	34.9	937	3202	Dye patch 3 surface sample
99	12:47:50	HW+ 05:14	182713	29818	34.9	370	8108	Dye patch 3 surface sample at deep drogue
264	13:09:40	HW+ 05:36	183158	30154	34.6	2500	1200	Dye patch 4 surface sample
100	13:10:50	HW+ 05:37	182249	28324	34.9	660	4545	Dye patch 3 surface sample near end of plume
101	13:12:20	HW+ 05:39	182252	28521	34.7	480	6250	Dye patch 3 surface sample
102	13:14:00	HW+ 05:41	182262	28503	35.1	27	111111	Dye patch 3 depth sample total depth 20m
103	13:18:10	HW+ 05:45	182311	28826	34.8	946	3171	Dye patch 3 surface sample
104	13:20:00	HW+ 05:47	182304	29109	34.9	460	6522	Dye patch 3 surface sample
105	13:22:20	HW+ 05:49	182376	29576	34.9	126	23810	Dye patch 3 surface sample and retrieved deep drogue
106	13:34:30	HW+ 06:01	183181	29987	34.7	1225	2449	Dye patch 4 surface sample at surface drogue
107	13:44:40	HW- 06:04	183154	29988	34.7	1455	2062	Dye patch 4 surface sample at SW end of patch in clear water
108	13:45:50	HW- 06:03	183043	29625	34.8	1636	1834	Dye patch 4 surface sample inside patch
109	13:49:40	HW- 05:59	183219	29981	34.7	3600	833	Dye patch 4 surface sample
110	13:51:20	HW- 05:57	183356	29948	34.8	540	5556	Dye patch 4 surface sample
111	13:53:00	HW- 05:56	183521	29851	34.7	650	4615	Dye patch 4 surface sample
112	13:55:40	HW- 05:53	183504	30175	34.7	1117	2686	Dye patch 4 surface sample
113	13:58:20	HW- 05:50	183431	30428	34.7	1273	2357	Dye patch 4 surface sample
114	14:00:40	HW- 05:48	183464	30454	35.1	<10.0	300000	Dye patch 4 depth sample
121	14:06:10	HW- 05:42	183589	30727	34.5	36	83333	Dye patch 4 surface sample at deep drogue out of dye
122	14:08:30	HW- 05:40	183576	30706	35.1	<10.0	300000	Dye patch 4 depth sample total depth 13m at deep drogue
123	14:15:20	HW- 05:33	183165	29527	34.8	760	3947	Dye patch 4 surface sample at shallow drogue
124	14:19:30	HW- 05:29	182920	29102	34.8	2600	1154	Dye patch 4 surface sample at SW end out of dye
125	14:22:40	HW- 05:26	182998	29328	34.8	780	3846	Dye patch 4 surface sample on line to Black Rock
126	14:25:00	HW- 05:24	183113	29664	34.8	600	5000	Dye patch 4 surface sample
127	14:28:00	HW- 05:21	183275	30115	34.8	63	47619	Dye patch 4 surface sample
128	14:39:00	HW- 05:10	183137	29324	34.9	570	5263	Dye patch 4 surface sample at shallow drogue
129	14:44:10	HW- 05:04	181412	27347	34.9	490	6122	Dye patch 3 surface sample

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY, 17/03/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution	Comments
130	14:51:00	HW- 04:58	181396	27228	35.0	600	5000	Dye patch 3 surface sample
131	15:00:30	HW- 04:48	183120	29074	34.9	440	6818	Dye patch 4 surface sample at shallow drogue
132	15:05:20	HW- 04:43	183738	30708	34.6	108	27778	Dye patch 4 surface sample at deep drogue
133	15:12:30	HW- 04:36	183802	30595	35.2	<10.0	300000	Dye patch 4 depth sample at deep drogue total depth 16m, east side of patch not visible
134	15:20:20	HW- 04:28	183330	29292	34.9	440	6818	Dye patch 4 surface sample
135	15:23:10	HW- 04:25	183111	29259	34.9	540	5556	Dye patch 4 surface sample
136	15:25:40	HW- 04:23	182980	28964	34.9	460	6522	Dye patch 4 surface sample at shallow drogue
137	15:35:40	HW- 04:13	183527	29855	34.9	171	17544	Dye patch 4 surface sample halfway to deep drogue
138	15:38:30	HW- 04:10	183902	30620	34.8	189	15873	Dye patch 4 surface sample and retrieved deep drogue
139	15:43:20	HW- 04:05	183263	31828	35.1	<10.0	300000	Surface sample at Black Rock
140	15:45:40	HW- 04:03	183309	31746	35.1	<10.0	300000	Surface sample at outfall

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY, 15/04/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Faecal Strep. no./100ml	Total Coli. no./100ml	Faecal Coli. no./100ml	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution (D)	Comments
1	11:21:00	HW+ 04:11	183140	32144	650	3400	973	34.6	793	2686	Boil surface sample
2	11:21:10	HW+ 04:11	183143	32137	4800	28000	5700	34.6	5400	394	Boil seabed sample (8m)
3	11:28:00	HW+ 04:18	183150	32095	4200	18000	5800	34.7	200	10650	Boil mid-depth sample (4m)
4	11:33:00	HW+ 04:23	183272	31881	<10	<10	10	34.7	<10	213000	Surface sample out of dye eastern side of leading edge
5	11:34:30	HW+ 04:24	183245	31864	2200	6200	2100	34.7	2200	968	Surface sample eastern edge of dye at leading edge
6	11:36:30	HW+ 04:26	183229	31812	3400	9000	5100	34.6	3800	561	Surface sample mid patch at leading edge
7	11:38:10	HW+ 04:28	183181	31807	3200	10000	3100	34.6	3000	710	Surface sample western edge of dye at leading edge
8	11:39:30	HW+ 04:29	183126	31779	<10	<10	<10	34.7	<10	213000	Surface sample out of dye western side of leading edge
9	11:47:00	HW+ 04:37	183287	31532	2000	5500	2200	34.6	2200	968	Surface sample mid patch at leading edge
10	11:45:00	HW+ 04:35	183266	31611	2300	3300	3400	34.7	2500	852	Seabed sample 8.4m mid patch at leading edge
11	11:53:10	HW+ 04:43	183289	31469	820	2500	650	34.7	2100	1014	Mid depth sample 4.2m mid patch at leading edge
12	11:58:10	HW+ 04:48	183383	31356	<10	9	<10	34.7	<10	213000	Surface sample out of dye eastern side of leading edge
13	11:59:40	HW+ 04:49	183335	31369	600	1364	520	34.6	530	4019	Surface sample eastern edge of dye at leading edge tail
14	12:01:20	HW+ 04:51	183253	31347	982	4300	2000	34.7	1182	1802	Surface sample mid patch in clear water between leading patch tails
15	12:03:00	HW+ 04:53	183220	31335	2000	7900	2900	34.7	780	2731	Surface sample western edge of dye at leading edge tail
16	12:04:20	HW+ 04:54	183161	31324	<10	<10	<10	34.8	<10	213000	Surface sample out of dye western side of leading edge
17	12:08:40	HW+ 04:58	183245	31433	1027	3800	2100	34.7	1000	2130	Surface sample in middle of patch
18	12:10:20	HW+ 05:00	183286	31307	1063	4200	1000	34.7	1455	1464	Surface sample in middle of patch towards front
19	12:16:00	HW+ 05:06	183331	31080	610	2100	1091	34.7	883	2412	Seabed sample 13m mid patch at leading edge between tails
20	12:14:20	HW+ 05:04	183320	31120	1000	2200	919	34.7	1818	1172	Surface sample mid patch at leading edge between tails
21	12:22:30	HW+ 05:12	183340	31028	1636	4800	2400	34.7	1909	1116	Mid-depth sample 6.5m mid patch at leading edge between tails
22	12:27:50	HW+ 05:17	183557	31026	<10	<10	<10	34.7	18	118333	Surface sample out of dye eastern side of leading edge
23	12:29:50	HW+ 05:19	183475	30949	171	330	180	34.7	200	10650	Surface sample eastern edge of dye at leading edge tail
24	12:31:30	HW+ 05:21	183423	30893	550	2100	510	34.7	946	2252	Surface sample in eastern tail at drogue 2
25	12:33:10	HW+ 05:23	183374	30886	750	2100	928	34.7	991	2149	Surface sample mid patch in clear water between leading patch tails
26	12:36:40	HW+ 05:26	183292	30892	650	2200	1273	34.7	874	2437	Surface sample in western dye tail
27	12:39:00	HW+ 05:29	183252	30892	310	865	390	34.7	144	14792	Surface sample at western edge of western dye tail
28	12:40:50	HW+ 05:30	183176	30851	<10	<10	<10	34.8	<10	213000	Surface sample out of dye western side of leading edge
29	12:51:40	HW+ 05:41	183342	31182	45	270	81	34.7	72	29583	Depth sample northern edge of dye
30	12:57:30	HW+ 05:47	183338	31156	90	480	210	34.7	18	118333	Surface sample northern edge of dye
31	12:57:40	HW+ 05:47	183339	31151	72	630	153	34.7	45	47333	Mid depth sample northern edge of dye
32	13:10:30	HW+ 06:00	183599	30810	18	126	18	34.7	9	236667	Surface sample northern edge of dye
33	13:15:00	HW+ 06:05	183392	31050	135	550	310	34.7	108	19722	Surface sample northern edge in dye
34	13:18:00	HW- 06:06	183488	30762	560	2100	1126	34.6	1018	2092	Surface sample mid patch a third distance from northern edge
35	13:19:50	HW- 06:04	183584	30545	330	580	570	34.7	700	3043	Surface sample mid patch two thirds distance from northern edge
37	13:23:50	HW- 06:00	183725	30301	<10	9	<10	34.8	<10	213000	Surface sample southern edge in dye
38	13:26:00	HW- 05:58	183823	30094	<10	<10	<10	34.8	<10	213000	Surface sample out of dye in front of southern edge at drogue 3
39	13:33:10	HW- 05:50	183858	30673	<10	18	27	34.7	<10	213000	Surface sample out of dye eastern side of leading edge
40	13:34:50	HW- 05:49	183805	30583	135	270	117	34.7	117	18205	Surface sample eastern edge of dye at leading edge tail
41	13:39:50	HW- 05:44	183777	30483	330	1636	440	34.8	490	4347	Surface sample a third in from eastern edge at leading edge
42	13:42:50	HW- 05:41	183736	30471	250	600	280	34.8	370	5757	Surface sample two thirds in from eastern edge at leading edge
43	13:46:30	HW- 05:37	183509	30401	162	320	200	34.8	230	9261	Surface sample western edge of dye at leading edge tail
44	13:49:30	HW- 05:34	183402	30393	45	180	126	34.8	18	118333	Surface sample out of dye western side of leading edge
45	14:03:10	HW- 05:20	183725	31051	108	620	320	34.7	99	21515	Surface sample northern edge in dye
46	14:10:10	HW- 05:13	183792	30911	<10	18	9	34.8	<10	213000	Depth sample 12m northern edge of dye
47	14:16:10	HW- 05:07	183838	30993	36	280	126	34.8	27	78889	Mid depth sample 6m northern edge of dye
48	14:25:30	HW- 04:58	183936	30915	126	610	300	34.8	90	23667	Surface sample northern edge of dye
49	14:28:10	HW- 04:55	183888	30770	108	400	250	34.8	108	19722	Surface sample mid patch a third distance from northern edge
50	14:31:30	HW- 04:52	183941	30231	99	370	240	34.8	330	6455	Surface sample mid patch two thirds distance from northern edge
51	14:33:00	HW- 04:51	183998	30026	81	300	135	34.8	81	26296	Surface sample inside southern edge
52	14:38:40	HW- 04:45	184033	29855	<10	<10	<10	34.8	<10	213000	Surface sample out of dye eastern side of leading edge
53	15:06:20	HW- 04:17	184148	30564	162	510	270	34.8	153	13922	Surface sample a third of distance from southern edge into dye
54	15:09:00	HW- 04:15	184042	30682	99	320	162	34.8	200	10650	Surface sample middle of dye
55	15:11:30	HW- 04:12	183962	30820	45	189	210	34.8	<10	213000	Surface sample a third of distance from northern edge into dye
56	15:15:00	HW- 04:09	183915	30933	9	45	54	34.9	<10	213000	Surface sample northern edge in dye
57	15:18:10	HW- 04:05	183695	31225	<10	18	<10	34.8	153	13922	Surface sample northern edge out of dye
58	15:29:20	HW- 03:54	184226	30761	125	450	210	34.8	9	236667	Surface sample middle of dye
60	17:02:40	HW- 02:21	183000	31491	18	9	18	35.1	9	236667	Surface sample at Site 1
61	17:04:20	HW- 02:19	183325	31402	<10	54	<10	35.1	45	47333	Surface sample at Site 2
62	17:06:10	HW- 02:17	183720	31422	9	45	<10	35.1	<10	213000	Surface sample at Site 3
63	17:08:00	HW- 02:16	184166	31393	18	45	18	35	27	78889	Surface sample at Site 4
64	17:13:20	HW- 02:10	183890	31792	18	9	9	35	18	118333	Surface sample at Site 7, wind NW 13 kts, total depth 32m
65	17:14:30	HW- 02:09	183924	31804	<10	72	27	35	9	236667	Depth sample 20m at Site 7
66	17:19:40	HW- 02:04	183874	31835	9	45	27	35.1	<10	213000	Depth sample 10m at Site 7
67	17:26:10	HW- 01:57	183446	31797	9	9	27	35	<10	213000	Surface sample at Site 6
68	17:26:30	HW- 01:57	183450	31793	9	<10	<10	35	18	118333	Seabed sample 10m at Site 6
69	17:29:40	HW- 01:54	183511	31786	<10	72	45	35.1	<10	213000	Mid depth sample 5m at Site 6
70	17:35:20	HW- 01:49	183143	31809	<10	72	<10	35.1	<10	213000	Surface sample at Site 5
71	17:35:00	HW- 01:48	183133	31810	<10	9	<10	35.1	<10	213000	Seabed sample 12m at Site 5
72	17:38:50	HW- 01:45	183133	31884	9	<10	9	35	<10	213000	Mid depth sample 5m at Site 5
73	17:43:10	HW- 01:40	182947	32195	<10	<10	9	35	<10	213000	Surface sample at Site 8
74	17:44:40	HW- 01:39	183341	32186	9	18	<10	35	<10	213000	Surface sample at Site 9
75	17:46:30	HW- 01:37	183709	32215	<10	27	18	35.1	<10	213000	Surface sample at Site 10
76	17:51:20	HW- 01:32	183523	32596	<10	27	27	35	27	78889	Surface sample at Site 15
77	17:53:50	HW- 01:30	183259	32619	<10	9	9	35.1	<10	213000	Surface sample at Site 14
78	17:54:30	HW- 01:29	183259	32622	<10	54	9	35	<10	213000	Seabed sample 11m at Site 14
79	17:58:30	HW- 01:25	183320	32567	9	36	9	35.1	<10	213000	Mid depth sample 5m at Site 14
80	18:01:30	HW- 01:22	183108	32561	9	<10	9	35.1	9	236667	Surface sample at Site 13
81	18:04:00	HW- 01:20	182877	32607	<10	27	<10	35.1	<10	213000	Surface sample at Site 12
82	18:04:40	HW- 01:19	182892	32604	9	18	<10	35.1	<10	213000	Seabed sample 10m at Site 12
83	18:07:20	HW- 01:16	182926	32574	<10	54	<10	35	<10	213000	Mid depth sample 5m at Site 12
84	18:11:30	HW- 01:12	182734	32621	<10	<10	<10	35.1	9	236667	Surface sample at Site 11
85	18:14:00	HW- 01:10	182737	33056	<10	<10	<10	35.1	<10	213000	Surface sample at Site 16
86	18:16:20	HW- 01:07	183132	33112	<10	18	18	35	<10	213000	Surface sample at Site 17
87	18:16:30	HW- 01:07	183135	33113	<10	18	9	35.1	9	236667	Seabed sample 12m at Site 17
88	18:19:40	HW- 01:04	183168	33129	<10	45	<10	35	<10	213000	Mid depth sample 5m at Site 17
89	18:23:30	HW- 01:00	183554	33017	<10	9	<10	34.6	<10	213000	Surface sample at Site 18

FALMOUTH SCHEME - SPORE AND DYE TRACING SURVEY, 15/04/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Faecal Strep. no./100ml	Total Coli. no./100ml	Faecal Coli. no./100ml	Salinity (g/kg)	*B.Globigii* (No./100ml)	*B.Globigii* Dilution (D)	Comments
90	18:29:00	HW- 00:55	183562	33448	< 10	117	27	35	36	59167	Surface sample at Site 22
91	18:29:00	HW- 00:55	183562	33448	9	27	18	35	9	236667	Seabed sample 7.5m at Site 22
92	18:34:10	HW- 00:49	183124	33384	< 10	18	36	34.8	27	78889	Surface sample at Site 21
93	18:34:30	HW- 00:49	183127	33383	18	48	18	35	36	59167	Seabed sample 15m at Site 21, total depth 30m
94	18:37:20	HW- 00:46	183159	33388	< 10	54	36	35	< 10	213000	Mid depth sample 5m at Site 21
95	18:42:00	HW- 00:42	182758	33411	< 10	27	< 10	34.8	< 10	213000	Surface sample at Site 20
96	18:44:40	HW- 00:39	182341	33203	< 10	18	9	34.8	< 10	213000	Surface sample at Site 19
97	18:44:50	HW- 00:39	182344	33202	< 10	< 10	< 10	35	< 10	213000	Seabed sample 9m at Site 19
98	18:48:10	HW- 00:35	182404	33162	< 10	18	9	34.9	< 10	213000	Mid depth sample 5m at Site 19, wind W 9kts
99	18:58:20	HW- 00:25	183514	32616	9	9	< 10	35.1	18	118333	Surface sample at Site 15
100	19:00:50	HW- 00:23	183093	32619	< 10	< 10	9	35.1	< 10	213000	Surface sample at Site 13
59	19:03:40	HW- 00:20	182736	32654	< 10	< 10	< 10	34.7	9	236667	Surface sample at Site 11

FALMOUTH SCHEME - DYE AND BACTI TRACING SURVEY, 21/04/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Faecal Strep. no./100ml	Total Coli. no./100ml	Faecal Coli. no./100ml	Salinity (g/kg)	Comments
1	04:17:50	HW+ 04:52	183143	32144	4300	23000	11400	34.6	Surface sample in dye, green
2	04:21:00	HW+ 04:56	183150	32108	550	3400	1450	34.9	Seabed sample in dye, but not green, total depth (TD) 9m
3	04:25:20	HW+ 05:00	183145	32048	4700	12500	11500	34.6	4m sample in dye, green, total depth TD 8m
4	04:36:40	HW+ 05:11	183200	31964	140	1190	870	34.6	Surface sample eastern edge of dye at leading edge
5	04:37:40	HW+ 05:12	183160	31904	2200	15500	9700	34.6	Surface sample mid patch at leading edge
6	04:38:30	HW+ 05:13	183113	31913	790	4900	4300	34.7	Surface sample western edge of dye at leading edge
7	04:59:20	HW+ 05:34	183201	31771	20	140	80	34.7	Surface sample eastern edge of dye at leading edge
8	05:00:20	HW+ 05:35	183166	31686	2100	8300	6200	34.6	Surface sample mid patch at leading edge
9	05:01:10	HW+ 05:36	183152	31692	430	2300	1840	34.8	5m sample mid patch at leading edge, TD 10m
10	05:08:00	HW+ 05:43	183156	31640	100	680	380	34.9	Seabed sample mid patch at leading edge, TD 10m
11	05:09:50	HW+ 05:44	183135	31642	2000	12600	8100	34.7	Surface sample western edge of dye at leading edge
12	05:40:30	HW+ 06:15	183232	31584	80	640	600	34.7	Surface sample eastern edge of dye at leading edge
13	05:42:10	HW+ 06:17	183204	31383	1280	8600	6500	34.7	Surface sample mid patch at leading edge
14	05:43:20	HW+ 06:18	183108	31474	1200	7900	4400	34.7	Surface sample western edge of dye at leading edge
15	06:17:20	HW- 05:57	183188	31662	40	340	170	34.7	Surface sample northern edge of patch
16	06:18:00	HW- 05:57	183187	31621	570	3500	2060	34.7	Surface sample a fifth in from northern edge
17	06:19:00	HW- 05:56	183193	31558	780	4800	8700	34.8	Surface sample middle of patch
18	06:20:20	HW- 05:54	183205	31549	410	2200	1530	34.9	5m sample middle of patch
19	06:23:20	HW- 05:51	183197	31575	210	1070	720	34.9	Seabed sample middle of patch, TD 9m
20	06:26:00	HW- 05:49	183207	31509	1320	6800	5600	34.7	Surface sample a fifth in from southern edge of patch
21	06:27:30	HW- 05:47	183243	31373	1230	5800	4400	34.8	Surface sample mid patch at southern edge
22	06:29:10	HW- 05:45	183296	31491	530	2600	2200	34.8	Surface sample eastern edge of dye at southern edge
23	06:30:40	HW- 05:44	183123	31560	520	4700	3200	34.8	Surface sample western edge of dye at southern edge
24	06:32:30	HW- 05:42	183171	31884	<10	20	10	34.7	Drogue 2 and surface sample
25	07:02:00	HW- 05:13	183283	31611	250	1150	780	34.8	Surface sample eastern edge of dye at southern edge
26	07:03:00	HW- 05:12	183222	31694	780	4500	2800	34.8	Surface sample on NW transect across patch
27	07:03:50	HW- 05:11	183150	31780	470	1050	990	34.8	Surface sample on NW transect across patch, middle of patch
28	07:04:30	HW- 05:10	183082	31862	150	540	200	34.8	Surface sample on NW transect across patch
29	07:05:10	HW- 05:09	183009	31938	16	720	480	34.8	Surface sample on NW transect across patch at tail
30	07:06:10	HW- 05:08	182939	32009	210	1070	770	34.8	Surface sample on NW transect across patch at tail
31	07:06:50	HW- 05:08	182870	32084	10	290	110	34.8	Surface sample at NW corner of patch
32	07:41:50	HW- 04:33	183255	32254	280	1390	750	34.7	Surface sample at eastern edge of northern edge
33	07:42:40	HW- 04:32	183160	32260	250	870	760	34.7	Surface sample on WNW transect across northern edge of patch
34	07:43:30	HW- 04:31	183101	32283	40	1260	960	34.7	Surface sample mid patch on WNW transect across northern edge of patch
35	07:45:00	HW- 04:30	183052	32290	260	1290	820	34.8	5m sample mid patch on WNW transect across northern edge of patch, TD 9m
36	07:47:20	HW- 04:27	182913	32359	90	650	420	34.9	Surface sample in tail of WNW transect across northern edge of patch
37	07:48:10	HW- 04:26	182829	32426	110	570	360	34.8	Surface sample in tail of WNW transect across northern edge of patch
38	07:49:20	HW- 04:25	182693	32567	30	170	130	34.8	Surface sample in WNW corner of patch
39	09:09:20	HW- 03:05	184131	31391	10	<10	10	34.9	Surface sample at Site 4
40	09:12:00	HW- 03:03	183737	31438	<10	10	10	34.9	Surface sample at Site 3, wind 13 kt S
41	09:14:00	HW- 03:01	183398	31437	<10	10	<10	34.9	Surface sample at Site 2
42	09:16:10	HW- 02:58	183031	31430	<10	<10	<10	35	Surface sample at Site 1
43	09:21:20	HW- 02:53	183966	31877	<10	10	<10	34.9	Surface sample at Site 7
44	09:23:00	HW- 02:52	183934	31944	<10	<10	<10	35	Depth sample 10m at Site 7
45	09:28:00	HW- 02:47	183562	31793	<10	<10	<10	34.9	Surface sample at Site 6
46	09:34:40	HW- 02:40	183185	31898	<10	20	10	35	Surface sample at Site 5
47	09:36:40	HW- 02:38	182936	32196	<10	10	<10	35	Surface sample at Site 8
48	09:38:40	HW- 02:36	183352	32136	<10	20	10	34.9	Surface sample at Site 9
49	09:39:30	HW- 02:35	183388	32143	<10	<10	20	34.9	Mid depth sample 5m at Site 9, TD 12m
50	09:42:40	HW- 02:32	183317	32169	<10	<10	10	35	Seabed sample 10m at Site 9, wind 16 kt S
51	09:45:20	HW- 02:29	183747	32204	<10	40	10	34.9	Surface sample at Site 10
52	10:01:30	HW- 02:13	182731	32615	<10	20	<10	35	Surface sample at Site 11
53	10:02:50	HW- 02:12	182924	32620	<10	<10	10	34.9	Surface sample at Site 12
54	10:03:50	HW- 02:11	182946	32619	<10	10	<10	34.9	Mid depth sample 5m at Site 12
55	10:06:40	HW- 02:08	182962	32645	20	60	<10	34.9	Seabed sample 9m at Site 12
56	10:09:40	HW- 02:05	183116	32623	<10	40	<10	35	Surface sample at Site 13
57	10:10:50	HW- 02:04	183297	32610	<10	<10	<10	35	Surface sample at Site 14
58	10:11:40	HW- 02:03	183276	32636	<10	<10	20	34.9	Mid depth sample 5m at Site 14
59	10:14:00	HW- 02:01	183344	32633	<10	10	<10	35	Seabed sample 10m at Site 14
60	10:23:40	HW- 01:51	183516	32701	<10	<10	<10	35	Surface sample at Site 15
61	10:38:10	HW- 01:36	182330	33228	10	20	<10	34.8	Surface sample at Site 19
62	10:38:50	HW- 01:36	182326	33223	<10	20	<10	34.8	Mid depth sample 5m at Site 19
63	10:41:10	HW- 01:33	182360	33233	30	40	10	34.9	Seabed sample 9m at Site 19, wind 15 kt SSE
64	10:47:10	HW- 01:27	182748	33041	<10	20	<10	35	Surface sample at Site 16
65	10:49:10	HW- 01:25	183211	33056	<10	30	<10	34.9	Surface sample at Site 17
66	10:52:00	HW- 01:23	183212	33102	<10	30	<10	35	Mid depth sample 5m at Site 17
67	10:53:50	HW- 01:21	183136	33066	<10	60	20	35	Seabed sample 10m at Site 17, TD 11m
68	10:56:10	HW- 01:18	183538	33099	<10	40	<10	34.9	Surface sample at Site 18
69	10:57:30	HW- 01:17	183571	33476	<10	<10	<10	34.8	Surface sample at Site 22
70	10:58:30	HW- 01:16	183551	33529	<10	<10	<10	34.8	Seabed sample 5m at Site 22, TD 6.5m
71	11:00:10	HW- 01:14	183173	33430	<10	10	20	34.9	Surface sample at Site 21
72	11:01:20	HW- 01:13	183112	33446	30	60	60	34.9	Depth sample 10m at Site 21
73	11:04:30	HW- 01:10	183121	33511	<10	<10	20	35	Depth sample 19m at Site 21, TD 33m
74	11:07:40	HW- 01:07	182726	33421	60	50	60	35	Surface sample at Site 20
75	11:17:40	HW- 00:57	182653	33810	20	70	40	34.5	Surface sample in patch
76	11:19:20	HW- 00:55	182838	34104	30	70	30	34.8	Surface sample in patch
77	11:20:30	HW- 00:54	182915	34219	10	20	10	34.8	Surface sample in northern edge of patch
78	11:31:00	HW- 00:44	183158	34037	<10	10	10	34.9	Surface sample out of dye at Vilt Buoy
79	11:32:00	HW- 00:43	183054	34005	<10	20	<10	34.9	Surface sample in dye on transect from Vilt to Trefusis

FALMOUTH SCHEME - DYE AND BACTI TRACING SURVEY, 21/04/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Faecal Strep. no./100ml	Total Coli. no./100ml	Faecal Coli. no./100ml	Salinity (g/kg)	Comments
80	11:33:20	HW- 00:41	182717	33874	< 10	50	30	34.9	Surface sample in dye on transect from Vilt to Trefusis
81	11:34:20	HW- 00:40	182491	33774	< 10	< 10	< 10	34.7	Surface sample in dye on transect from Vilt to Trefusis
82	11:35:20	HW- 00:39	182280	33665	< 10	< 10	< 10	34.6	Surface sample out of dye on transect from Vilt to Trefusis
84	11:36:30	HW- 00:38	182063	33550	< 10	< 10	< 10	34.6	Surface sample out of dye on transect from Vilt to Trefusis
85	11:47:00	HW- 00:28	182763	32592	< 10	< 10	< 10	34.9	Surface sample at Site 11
86	11:47:50	HW- 00:27	182937	32583	< 10	< 10	< 10	35	Surface sample at Site 12
87	11:48:40	HW- 00:26	183131	32575	< 10	< 10	< 10	35	Surface sample at Site 13
88	11:49:20	HW- 00:25	183301	32599	< 10	< 10	< 10	35	Surface sample at Site 14
89	11:50:30	HW- 00:24	183528	32606	< 10	< 10	< 10	34.9	Surface sample at Site 15

FALMOUTH SCHEME - DYE AND BACTI TRACING SURVEY, 23/04/98

RESULTS

Sample No.	Time (GMT)	HW Rel.	NGR Easting	NGR Northing	Faecal Strep. no./100ml	Total Coli. no./100ml	Faecal Coli. no./100ml	Salinity (g/kg)	Comments
1	05:48:40	HW+03:40	183150	32023	4800	14000	7200	34.6	Sample 1 Surface
2	06:04:05	HW+03:56	183183	31761	2200	13000	5800	34.6	Sample 2 Surface
3	06:08:00	HW+04:00	183161	31708	450	1818	1727	34.9	Sample 3 Depth
4	08:41:00	HW-06:07	183083	31798	18	99	18	34.6	Sample 4 Surface
5	08:44:30	HW-06:03	183215	31424	9	18	9	34.6	Sample 5 Surface
6	08:46:40	HW-06:01	182949	31144	9	27	< 10	34.8	Sample 6 Surface
7	08:49:00	HW-05:59	182665	30917	45	838	400	34.7	Sample 7 Surface
8	09:07:50	HW-05:40	182518	30852	36	480	270	35.0	Sample 8 Depth
9	09:09:00	HW-05:39	182532	30876	440	1455	1364	34.8	Sample 9 Surface
10	09:34:10	HW-05:13	183025	32279	< 10	27	9	34.6	Sample 10 Surface
11	09:37:20	HW-05:10	183182	31722	< 10	63	18	34.8	Sample 11 Surface
12	09:54:30	HW-04:53	182940	32607	9	54	27	34.6	Sample 12 Surface
13	09:59:20	HW-04:48	182719	32645	9	72	18	34.6	Surface sample at Site 11
14	10:00:40	HW-04:47	182930	32676	< 10	72	54	34.6	Surface sample at Site 12
15	10:02:00	HW-04:46	183168	32643	< 10	54	9	34.5	Surface sample at Site 13
16	10:03:20	HW-04:44	183369	32682	< 10	27	< 10	34.5	Surface sample at Site 14
17	10:05:00	HW-04:43	183653	32718	< 10	< 10	9	34.5	Surface sample at Site 15
18	10:16:50	HW-04:31	183062	32053	126	1091	660	34.5	Surface sample in dye
19	10:18:20	HW-04:29	183075	32125	90	1009	480	34.9	5m Sample in dye
20	10:21:30	HW-04:26	183106	32239	210	1636	660	34.8	Seabed sample in dye, TD 10m
21	11:54:30	HW-02:53	183538	33435	< 10	9	< 10	34.8	Surface sample at Site 22
22	11:54:30	HW-02:53	183538	33435	< 10	9	< 10	34.8	5m sample at Site 22
23	11:57:30	HW-02:50	183138	33485	< 10	< 10	< 10	34.8	Surface sample at Site 21
24	11:57:30	HW-02:50	183138	33485	< 10	< 10	< 10	34.8	5m sample at Site 21
25	12:00:50	HW-02:47	182726	33478	9	< 10	9	34.6	Surface sample at Site 20
26	12:03:30	HW-02:44	182350	33206	18	400	210	34.7	Surface sample at Site 19
27	12:03:30	HW-02:44	182350	33206	27	250	189	34.8	5m sample at Site 19
28	12:07:20	HW-02:40	182800	32929	18	270	126	34.9	Surface sample at Site 16
29	12:07:20	HW-02:40	182800	32929	27	350	398	34.9	5m sample at Site 16
30	12:09:40	HW-02:38	183148	32988	18	90	45	34.9	Surface sample at Site 17
31	12:09:40	HW-02:38	183148	32988	36	81	81	34.9	5m sample at Site 17
32	12:11:40	HW-02:36	183483	33054	< 10	9	< 10	34.9	Surface sample at Site 18
33	12:15:10	HW-02:32	183515	32626	< 10	27	18	35.0	Surface sample at Site 15
34	12:17:30	HW-02:30	183323	32709	27	81	36	34.9	Surface sample at Site 14
35	12:17:30	HW-02:30	183323	32709	< 10	27	45	35.0	5m sample at Site 14
36	12:21:10	HW-02:26	183123	32621	18	108	63	35.0	Surface sample at Site 13
37	12:23:50	HW-02:24	182939	32581	9	1144	45	34.9	Surface sample at Site 12
38	12:23:50	HW-02:24	182939	32581	27	36	63	35.0	5m sample at Site 12
39	12:25:40	HW-02:22	182742	32625	9	45	63	34.9	Surface sample at Site 11
40	12:28:00	HW-02:20	182910	32463	< 10	126	54	35.0	Surface sample at Govenor Buoy
41	12:30:40	HW-02:17	183342	32168	< 10	72	27	34.9	Surface sample at Site 9
42	12:32:40	HW-02:15	183763	32163	9	18	18	35.0	Surface sample at Site 10
43	12:50:30	HW-01:57	182691	32652	9	72	27	34.9	Surface sample at Site 11
44	12:52:10	HW-01:55	182904	32653	< 10	360	180	35.0	Surface sample at Site 12
45	12:52:10	HW-01:55	182904	32653	36	892	400	35.0	Depth sample 5m at Site 12
46	12:54:40	HW-01:53	183082	32683	< 10	117	18	35.0	Surface sample at Site 13
47	12:56:50	HW-01:51	183307	32668	18	90	9	35.0	Surface sample at Site 14
48	12:56:50	HW-01:51	183307	32668	9	81	81	35.0	Depth sample 5m at Site 14
49	12:58:40	HW-01:49	183506	32687	9	36	9	35.0	Surface sample at Site 15
50	13:02:20	HW-01:45	183549	33015	9	9	< 10	35.0	Surface sample at Site 18
51	13:04:40	HW-01:43	183163	32994	< 10	72	18	35.0	Surface sample at Site 17
52	13:04:40	HW-01:43	183163	32994	9	81	9	35.0	Depth sample 5m at Site 17
53	13:08:30	HW-01:39	182757	32980	18	117	54	34.9	Surface sample at Site 16
54	13:13:30	HW-01:34	182341	33247	< 10	90	45	34.5	Surface sample at Site 19
55	13:13:30	HW-01:34	182341	33247	< 10	90	63	34.6	Depth sample 5m at Site 19
56	13:15:50	HW-01:32	182655	33378	< 10	135	54	34.5	Surface sample at Site 20
57	13:18:00	HW-01:30	183098	33440	27	230	108	34.7	Surface sample at Site 21
58	13:18:00	HW-01:30	183098	33440	81	189	144	34.8	Depth sample 5m at Site 21
59	13:20:20	HW-01:27	183498	33454	< 10	< 10	< 10	34.7	Surface sample at Site 22
60	13:20:20	HW-01:27	183498	33454	< 10	< 10	< 10	34.8	Depth sample 5m at Site 22
61	14:20:00	HW-00:28	183302	33218	9364	37000	22000	34.6	Boil Sample