

ENVIRONMENTAL PROTECTION



NRA

National Rivers Authority

South West Region

**River Dart Catchment
River Water Quality
Classification 1990**

NOVEMBER 1991

WQP/91/007

B L MILFORD

GORDON H BIELBY BSc
Regional General Manager

C V M Davies
Environmental Protection
Manager

ACKNOWLEDGEMENTS

The Water Quality Planner acknowledges the substantial contributions made by the following staff:

- R. Broome - Co-ordinator and Editor
- A. Burrows - Production of Maps and editorial support
- P. Grigorey - Production of Maps and editorial support
- B. Steele - Production of Forepage
- C. McCarthy - Administration and report compilation

Special thanks are extended to A. Burghes of Moonsoft, Exeter for computer support and the production of statistical schedules.

The following NRA sections also made valuable contributions:

- Pollution Control
- Field Control and Wardens
- Water Resources

Thanks also to R. Hamilton and J. Murray-Bligh for their contributions.

Suggestions for improvements that could be incorporated in the production of the next Classification report would be welcomed.

Further enquiries regarding the content of these reports should be addressed to:

Freshwater Scientist,
National Rivers Authority,
Manley House,
Kestrel Way,
EXETER,
Devon EX2 7LQ



RIVER WATER QUALITY IN THE RIVER DART CATCHMENT

LIST OF CONTENTS

	Page No.
1 Introduction	1
2 River Dart Catchment	1
3 National Water Council's River Classification System	3
4 1990 River Water Quality Survey	4
5 1990 River Water Quality Classification	4
6 Non-compliance with Quality Objectives	5
7 Causes of Non-compliance	5
8 Glossary of Terms	6
9 References	6
10 Appendices:	
10.1 River Quality Objectives including Monitoring points	
10.2 Basic Determinand Analytical Suite	
10.3 National Water Council (NWC) River Classification System	
10.4 NWC Criteria for Non-Metallic Determinands - Regional Variation	
10.4.1 NWC Criteria for Metallic Determinands - Regional Variation	
10.5 1990 River Water Quality Classification - tabular format	
10.6 1990 River Water Quality Classification - map format	
10.7 Calculated Determinand Statistics used for Quality Assessment	
10.8 Compliant/Non-Compliant River Reaches	
10.9 Number of Samples Results exceeding quality standards	
10.10 Percentage Exceedance of Determinand Statistics from Quality Standard	
10.11 Identification of Possible Causes of Non-Compliance with River Quality Objectives	

National Rivers Authority South West Region

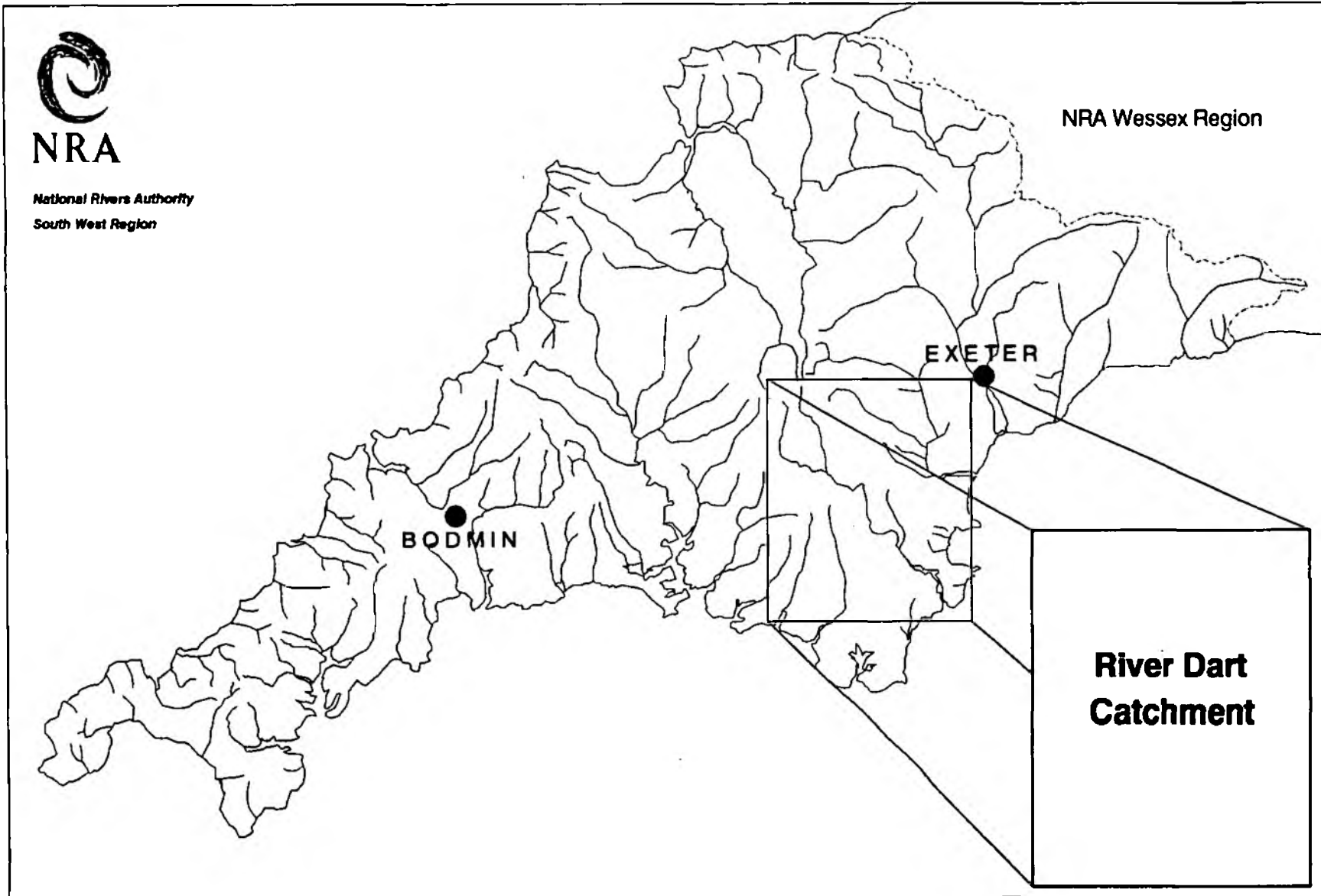


NRA

*National Rivers Authority
South West Region*

NRA Wessex Region

River Dart Catchment



**River Dart
Catchment**

1. INTRODUCTION

Monitoring to assess the quality of river waters is undertaken in thirty-two catchments within the region. As part of this monitoring programme samples are collected routinely from selected monitoring points at a pre-determined frequency per year, usually twelve spaced at monthly intervals. Each monitoring point provides data for the water quality of a river reach (in kilometres) upstream of the monitoring point.

River lengths have been re-measured and variations exist over those recorded previously.

Each water sample collected from each monitoring point is analysed for a range of chemical and physical constituents or properties known as determinands. The analytical results for each sample are entered into a computer database called the Water Quality Archive.

Selected data are accessed from the Archive so that the quality of each river reach can be determined based on a River Classification System developed by the National Water Council (NWC), (9.1).

This report presents the river water quality classification for 1990 for monitored river reaches in the River Dart catchment.

2. RIVER DART CATCHMENT

The River Dart flows over a distance of 47.2 km from its source to the tidal limit, (Appendix 10.1). Water quality was monitored at ten locations on the main river; five of these sites were sampled at approximately monthly intervals. The site at Totnes Weir, which is a National Water Quality monitoring point, was sampled fortnightly. Four sites were sampled on twenty occasions during 1990 because of no recent water quality data.

Throughout the Dart catchment eight secondary tributaries of the River Dart and one secondary tributary of the River Hems were monitored. In addition Venford Reservoir (2.5 km) was monitored at one location at approximately monthly intervals.

The River Hems flows over a distance of 10.8 km from its source to the tidal limit, (Appendix 10.1) and was monitored at two locations. The site at Portbridge was sampled at approximately monthly intervals and the site at Littlehempston was sampled on twenty occasions during 1990 because of no recent water quality data.

The Bidwell Brook flows over a distance of 8.9 km from its source to the tidal limit, (Appendix 10.1) and was monitored at two sites. The site at Dartington Lodge was sampled at approximately monthly intervals. The site at Tigley was sampled on twenty occasions during 1990 because of no recent water quality data.

The River Harbourne flows over a distance of 19.5 km from its source to the tidal limit, (Appendix 10.1) and was monitored at three locations. Two sites were sampled at approximately monthly intervals and the site at Leigh Bridge was sampled on twenty occasions during 1990 because of no recent water quality data.

The River Wash flows over a distance of 7.2 km from its source to the tidal limit, (Appendix 10.1) and was monitored at one location at approximately monthly intervals.

2.1 SECONDARY TRIBUTARIES

The River Ashburn and Black Brook flow over a distance of 10 km and 7.9 km respectively from their source to the confluence with the River Dart, (Appendix 10.1) and were both monitored at one location on twenty occasions during 1990 because of no recent water quality data.

The River Mardle and the East Dart River flow over a distance of 10.1 km and 17.9 km respectively from their source to the confluence with the River Dart, (Appendix 10.1) and were both monitored at two locations. One site on each watercourse was sampled at approximately monthly intervals and one site was sampled on twenty occasions during 1990 because of no recent water quality data.

Holly Brook (6.6 km), River Swincombe (6.6 km) and Cherry Brook (8km), were all monitored at approximately monthly intervals at one location between their source and confluence with the River Dart, (Appendix 10.1). Monitoring points are all located in the lower reaches of these streams.

The East Webburn River flows over a distance of 10.8 km from its source to the confluence with the River Dart, (Appendix 10.1) and was monitored at two locations at approximately monthly intervals.

The Am Brook flows over a distance of 6.7 km from its source to the confluence with the River Hems, (Appendix 10.1) and was monitored at two locations at approximately monthly intervals.

2.2 TERTIARY TRIBUTARIES

Dean Burn flows over a distance of 9.7 km from its source to the confluence with the River Mardle, (Appendix 10.1) and was sampled at one site on twenty occasions during 1990 because of no recent water quality data.

Walla Brook flows over a distance of 7.3 km from its source to the confluence with the East Dart River, (Appendix 10.1) and was sampled at one location on twenty occasions during 1990 because of no recent water quality data.

The West Webburn River flows over a distance of 10.2 km from its source to the confluence with the East Webburn River, (Appendix 10.1) and was monitored at one location at approximately monthly intervals.

Each sample was analysed for a minimum number of determinands (Appendix 10.2) plus additional determinands based on local knowledge of the catchment. In addition, at selected sites, certain metal analyses were carried out.

The analytical results from all of these samples have been entered into the Water Quality Archive and can be accessed through the Water Act Register, (9.2).

3. NATIONAL WATER COUNCIL'S RIVER CLASSIFICATION SYSTEM

3.1 River Quality Objectives

In 1978 river quality objectives (RQOs) were assigned to all river lengths that were part of the routine monitoring network and to those additional watercourses, which were not part of the routine network, but which received discharges of effluents.

For the majority of watercourses long term objectives were identified based on existing and assumed adequate quality for the long term protection of the watercourse. In a few instances short term objectives were identified but no timetable for the achievement of the associated long term objective was set.

The RQOs currently in use in the River Dart catchment are identified in Appendix 10.1.

3.2 River Quality Classification

River water quality is classified using the National Water Council's (NWC) River Classification System (see Appendix 10.3), which identifies river water quality as being one of five quality classes as shown in Table 1 below:

Table 1 - National Water Council - River Classification System

<u>Class</u>	<u>Description</u>
1A	Good quality
1B	Lesser good quality
2	Fair quality
3	Poor quality
4	Bad quality

Using the NWC system, the classification of river water quality is based on the values of certain determinands as arithmetic means or as

95 percentiles (5 percentiles are used for pH and dissolved oxygen) as indicated in Appendices 10.4.1 and 10.4.2.

The quality classification system incorporates some of the European Inland Fisheries Advisory Commission (EIFAC) criteria (Appendix 10.3) recommended for use by the NWC system.

4. 1990 RIVER WATER QUALITY SURVEY

The 1990 regional classification of river water quality also includes the requirements of the Department of the Environment quinquennial national river quality survey. The objectives for the Department of the Environment 1990 River Quality Survey are given below:

- 1) To carry out a National Classification Survey based on procedures used in the 1985 National Classification Survey, including all regional differences.
- 2) To classify all rivers and canals included in the 1985 National Classification Survey.
- 3) To compare the 1990 Classification with those obtained in 1985.

In addition, those watercourses, which were not part of the 1985 Survey and have been monitored since that date, are included in the 1990 regional classification of river water quality.

5. 1990 RIVER WATER QUALITY CLASSIFICATION

Analytical data collected from monitoring during 1988, 1989 and 1990 were processed through a computerised river water quality classification programme. This resulted in a quality class being assigned to each monitored river reach as indicated in Appendix 10.5.

The quality class for 1990 can be compared against the appropriate River Quality Objective and previous annual quality classes (1985-1989) also based on three years combined data, for each river reach in Appendix 10.5.

The river water classification system used to classify each river length is identical to the system used in 1985 for the Department of the Environment's 1985 River Quality Survey. The determinand classification criteria used to determine the annual quality classes in 1985, subsequent years and for 1990 are indicated in Appendices 10.4 and 10.4.1.

Improvements to this classification system could have been made, particularly in the use of a different suspended solids standard for Class

2 waters. As the National Rivers Authority will be proposing new classification systems to the Secretary of State in the near future, it was decided to classify river lengths in 1990 with the classification used for the 1985-1989 classification period.

The adoption of the revised criteria for suspended solids in Class 2 waters would not have affected the classification of river reaches.

The river quality classes for 1990 of monitored river reaches in the catchment are shown in map form in Appendix 10.6.

The calculated determinand statistics for pH, temperature, dissolved oxygen, biochemical oxygen demand (BOD), total ammonia, un-ionised ammonia, suspended solids, copper and zinc from which the quality class was determined for each river reach, are indicated in Appendix 10.7.

6. NON-COMPLIANCE WITH QUALITY OBJECTIVES

Those monitored river reaches within the catchment, which do not comply with their assigned (RQO), are shown in map form in Appendix 10.8.

Appendix 10.9 indicates the number of samples analysed for each determinand over the period 1988 to 1990 and the number of sample results per determinand, which exceed the determinand quality standard.

For those non-compliant river reaches in the catchment, the extent of exceedance of the calculated determinand statistic with relevant quality standard (represented as a percentage), is indicated in Appendix 10.10.

7. CAUSES OF NON-COMPLIANCE

For those river reaches, which did not comply with their assigned RQOs, the cause of non-compliance (where possible to identify) is indicated in Appendix 10.11.

8. GLOSSARY OF TERMS

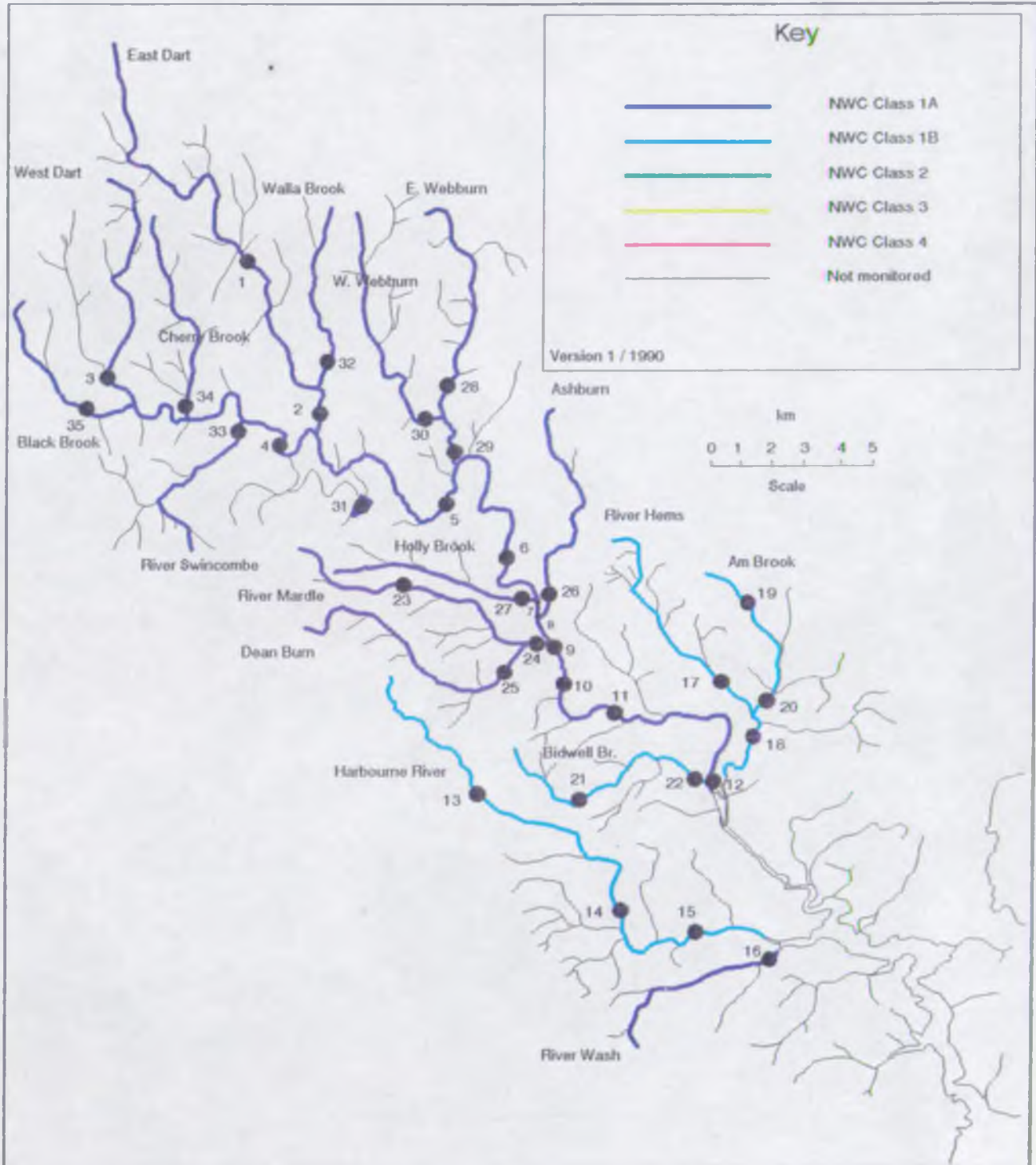
RIVER REACH	A segment of water, upstream from sampling point to the next sampling point.
RIVER LENGTH	River distance in kilometres.
RIVER QUALITY OBJECTIVE	That NWC class, which protects the most sensitive use of the water.
95 percentiles	Maximum limits, which must be met for at least 95% of the time.
5 percentiles	Minimum limits, which must be met for at least 95% of the time.
BIOLOGICAL OXYGEN DEMAND (5 day carbonaceous ATU)	A standard test measuring the microbial uptake of oxygen - an estimate of organic pollution.
pH	A scale of acid to alkali.
UN-IONISED AMMONIA	Fraction of ammonia poisonous to fish, NH ³ .
SUSPENDED SOLIDS	Solids removed by filtration or centrifuge under specific conditions.
USER REFERENCE NUMBER	Reference number allocated to a sampling point.
INFERRED STRETCH	Segment of water, which is not monitored and whose water quality classification is assigned from the monitored reach upstream.

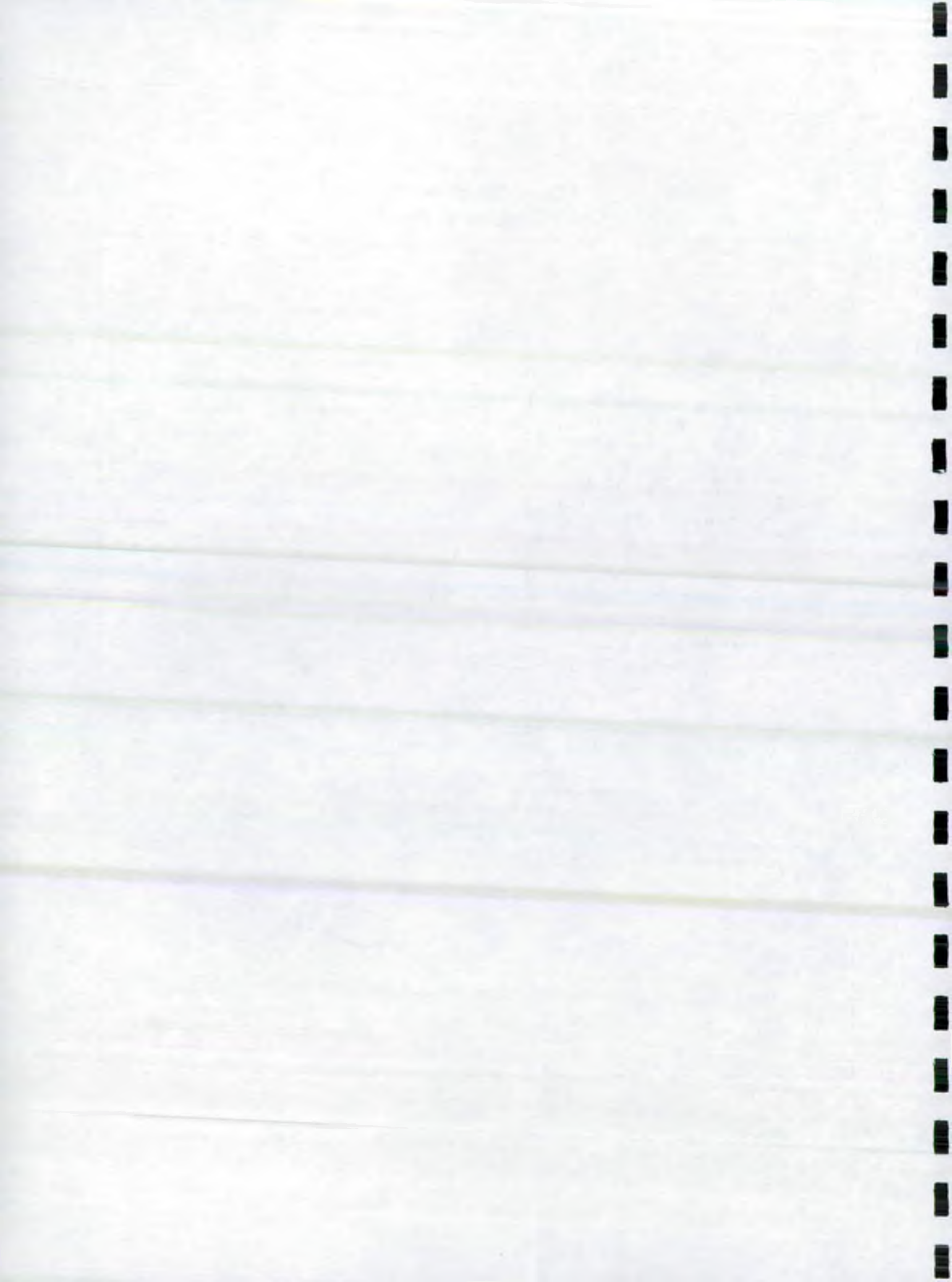
9. REFERENCES

Reference

- 9.1 National Water Council (1977). River Water Quality: The Next Stage. Review of Discharge Consent Conditions. London.
- 9.2 Water Act 1989 Section 117
- 9.3 Alabaster J. S. and Lloyd R. Water Quality Criteria for Freshwater Fish, 2nd edition, 1982. Butterworths.

Dart Catchment River Quality Objectives





BASIC DETERMINAND ANALYTICAL SUITE FOR ALL CLASSIFIED RIVER SITES

pH as pH Units
Conductivity at 20 C as uS/cm
Water temperature (Cel)
Oxygen dissolved % saturation
Oxygen dissolved as mg/l O
Biochemical oxygen demand (5 day total ATU) as mg/l O
Total organic carbon as mg/l C
Nitrogen ammoniacal as mg/l N
Ammonia un-ionised as mg/l N
Nitrate as mg/l N
Nitrite as mg/l N
Suspended solids at 105 C as mg/l
Total hardness as mg/l CaCO₃
Chloride as mg/l Cl
Orthophosphate (total) as mg/l P
Silicate reactive dissolved as mg/l SiO₂
Sulphate (dissolved) as mg/l SO₄
Sodium (total) as mg/l Na
Potassium (total) as mg/l K
Magnesium (total) as mg/l Mg
Calcium (total) as mg/l Ca
Alkalinity as pH 4.5 as mg/l CaCO₃

MVC RIVER QUALITY CLASSIFICATION SYSTEM

River Class	Quality criteria	Remarks	Current potential uses
	Class limiting criteria (95 percentile)		
1A Good Quality	<ul style="list-style-type: none"> (i) Dissolved oxygen saturation greater than 80% (ii) Biochemical oxygen demand not greater than 3 mg/l (iii) Ammonia not greater than 0.4 mg/l (iv) Where the water is abstracted for drinking water, it complies with requirements for A2* water (v) Non-toxic to fish in EIFAC terms (or best estimates if EIFAC figures not available) 	<ul style="list-style-type: none"> (i) Average BOD probably not greater than 1.5 mg/l (ii) Visible evidence of pollution should be absent 	<ul style="list-style-type: none"> (i) Water of high quality suitable for potable supply abstractions and for all abstractions (ii) Game or other high class fisheries (iii) High amenity value
1B Good Quality	<ul style="list-style-type: none"> (i) DO greater than 60% saturation (ii) BOD not greater than 5 mg/l (iii) Ammonia not greater than 0.9 mg/l (iv) Where water is abstracted for drinking water, it complies with the requirements for A2* water (v) Non-toxic to fish in EIFAC terms (or best estimates if EIFAC figures not available) 	<ul style="list-style-type: none"> (i) Average BOD probably not greater than 2 mg/l (ii) Average ammonia probably not greater than 0.5 mg/l (iii) Visible evidence of pollution should be absent (iv) Waters of high quality which cannot be placed in Class 1A because of the high proportion of high quality effluent present or because of the effect of physical factors such as canalisation, low gradient or eutrophication (v) Class 1A and Class 1B together are essentially the Class 1 of the River Pollution Survey (RPS) 	<ul style="list-style-type: none"> Water of less high quality than Class 1A but usable for substantially the same purposes
2 Fair Quality	<ul style="list-style-type: none"> (i) DO greater than 40% saturation (ii) BOD not greater than 9 mg/l (iii) Where water is abstracted for drinking water it complies with the requirements for A3* water (iv) Non-toxic to fish in EIFAC terms (or best estimates if EIFAC figures not available) 	<ul style="list-style-type: none"> (i) Average BOD probably not greater than 5 mg/l (ii) Similar to Class 2 of RPS (iii) Water not showing physical signs of pollution other than hunic colouration and a little foaming below weirs 	<ul style="list-style-type: none"> (i) Waters suitable for potable supply after advanced treatment (ii) Supporting reasonably good coarse fisheries (iii) Moderate amenity value

Poor Quality	(i) DO greater than 10% saturation (ii) Not likely to be anaerobic (iii) BOD not greater than 17 mg/l. This may not apply if there is a high degree of re-aeration	Similar to Class 3 of RPS	Waters which are polluted to an extent that fish are absent only sporadically present. May be used for low grade industrial abstraction purposes. Considerable potential for further use if cleaned up
-----------------	---	---------------------------	--

4 Bad Quality	Waters which are inferior to Class 3 in terms of dissolved oxygen and likely to be anaerobic at times	Similar to Class 4 of RPS	Waters which are grossly polluted and are likely to cause nuisance
------------------	---	---------------------------	--

DO greater than 10% saturation	Insignificant watercourses and ditches not usable, where the objective is simply to prevent nuisance developing
--------------------------------	---

- Notes
- (a) Under extreme weather conditions (eg flood, drought, freeze-up), or when dominated by plant growth, or by aquatic plant decay, rivers usually in Class 1, 2, and 3 may have BODs and dissolved oxygen levels, or ammonia content outside the stated levels for those Classes. When this occurs the cause should be stated along with analytical results.
 - (b) The BOD determinations refer to 5 day carbonaceous BOD (ATU). Ammonia figures are expressed as NH₄. **
 - (c) In most instances the chemical classification given above will be suitable. However, the basis of the classification is restricted to a finite number of chemical determinands and there may be a few cases where the presence of a chemical substance other than those used in the classification markedly reduces the quality of the water. In such cases, the quality classification of the water should be down-graded on the basis of biota actually present, and the reasons stated.
 - (d) EIFAC (European Inland Fisheries Advisory Commission) limits should be expressed as 95 percentile limits.

EEC category A2 and A3 requirements are those specified in the EEC Council directive of 16 June 1975 concerning the Quality of Surface Water intended for Abstraction of Drinking Water in the Member State.

Ammonia Conversion Factors

(mg NH₄/l to mg N/l)

Class 1A	0.4 mg NH ₄ /l = 0.31 mg N/l
Class 1B	0.9 mg NH ₄ /l = 0.70 mg N/l
	0.5 mg NH ₄ /l = 0.39 mg N/l

NWC RIVER CLASSIFICATION SYSTEM

CRITERIA USED BY NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION FOR NON-METALLIC DETERMINANDS

River Class	Quality Criteria
1A	Dissolved oxygen % saturation greater than 80% BOD (ATU) not greater than 3 mg/l O Total ammonia not greater than 0.31 mg/l N Non-ionised ammonia not greater than 0.021 mg/l N Temperature not greater than 21.5 C pH greater than 5.0 and less than 9.0 Suspended solids not greater than 25 mg/l
1B	Dissolved oxygen % saturation greater than 60% BOD (ATU) not greater than 5 mg/l O Total ammonia not greater than 0.70 mg/l N Non-ionised ammonia not greater than 0.021 mg/l N Temperature not greater than 21.5 C pH greater than 5.0 and less than 9.0 Suspended solids not greater than 25 mg/l
2	Dissolved oxygen % saturation greater than 40% BOD (ATU) not greater than 9 mg/l O Total ammonia not greater than 1.56 mg/l N Non-ionised ammonia not greater than 0.021 mg/l N Temperature not greater than 28 C pH greater than 5.0 and less than 9.0 Suspended solids not greater than 25 mg/l
3	Dissolved oxygen % saturation greater than 10% BOD (ATU) not greater than 17 mg/l O
4	Dissolved oxygen % saturation not greater than 10% BOD (ATU) greater than 17 mg/l O

STATISTICS USED BY NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION

Determinand	Statistic
Dissolved oxygen	5 percentile
BOD (ATU)	95 percentile
Total ammonia	95 percentile
Non-ionised ammonia	95 percentile
Temperature	95 percentile
pH	5 percentile
Suspended solids	95 percentile arithmetic mean

NWC RIVER CLASSIFICATION SYSTEM

CRITERIA USED BY NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION FOR METALLIC DETERMINANDS

SOLUBLE COPPER

Total Hardness (mean) mg/l CaCO ₃	Statistic	Soluble Copper*	
		Class 1 ug/l Cu	Class 2
0 - 10	95 percentile	< = 5	> 5
10 - 50	95 percentile	< = 22	> 22
50 - 100	95 percentile	< = 40	> 40
100 - 300	95 percentile	< = 112	> 112

* Total copper is used for classification until sufficient data on soluble copper can be obtained.

TOTAL ZINC

Total Hardness (mean) mg/l CaCO ₃	Statistic	Total Zinc		
		Class 1 ug/l Zn	Class 2	Class 3
0 - 10	95 percentile	< = 30	< = 300	> 300
10 - 50	95 percentile	< = 200	< = 700	> 700
50 - 100	95 percentile	< = 300	< = 1000	> 1000
100 - 300	95 percentile	< = 500	< = 2000	> 2000

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 CATCHMENT : DART (07)

1990 Map Position Number	River	Reach upstream of	User Reference Number	National Grid Reference
1	EAST DART RIVER	POSTBRIDGE	R07B001	SX 6478 7893
2	EAST DART RIVER EAST DART RIVER	CLAPPER BRIDGE DARTMEET DART CONFLUENCE (INFERRED STRETCH)	R07B002	SX 6720 7320
3	WEST DART RIVER	TWO BRIDGES	R07B003	SX 6080 7499
4	WEST DART RIVER	HUCCABY	R07B004	SX 6588 7292
5	DART	NEW BRIDGE	R07B005	SX 7116 7090
6	DART	QUEEN OF THE DART	R07B006	SX 7342 6900
7	DART	BUCKFAST ABBEY	R07B007	SX 7430 6730
8	DART	BELOW BUCKFAST PLATING(DART BRIDGE)	R07B038	SX 745 668
9	DART	AUSTIN'S BRIDGE	R07B008	SX 7500 6600
10	DART	BELOW BUCKFASTLEIGH STW	R07B053	SX 7536 6531
11	DART	RIVERFORD BRIDGE	R07B009	SX 7720 6372
12	DART	TOTNES WEIR	R07B010	SX 8010 6122
13	HARBOURNE RIVER	HARBOURNEFORD	R07A001	SX 7175 6232
14	HARBOURNE RIVER	LEIGH BRIDGE	R07A002	SX 7710 5666
15	HARBOURNE RIVER HARBOURNE RIVER	BEENLEIGH NORMAL TIDAL LIMIT (INFERRED STRETCH)	R07A003	SX 7973 5660
16	WASH WASH	TUCKENHAY NORMAL TIDAL LIMIT (INFERRED STRETCH)	R07A004	SX 8176 5590
17	HEMS	PORTBRIDGE	R07B011	SX 7889 6588
18	HEMS	LITTLEHEMPSTON	R07B012	SX 8115 6237
19	AM BROOK	COLLACOMBE BRIDGE	R07B016	SX 8107 6745
20	AM BROOK AM BROOK	PISHACRE BRIDGE HEMS CONFLUENCE (INFERRED STRETCH)	R07B017	SX 8190 6445
21	BIDWELL BROOK	TIGLEY	R07B018	SX 7573 6086
22	BIDWELL BROOK BIDWELL BROOK	DARTINGTON LODGE DART CONFLUENCE (INFERRED STRETCH)	R07B019	SX 7990 6150
23	MARDLE	COMBE	R07B013	SX 7030 6810
24	MARDLE	RAILWAY BRIDGE BUCKFASTLEIGH	R07B014	SX 7472 6612
25	DEAN BURN DEAN BURN	B3380 BRIDGE MARDLE CONFLUENCE (INFERRED STRETCH)	R07B052	SX 7328 6511
26	ASHBURN ASHBURN	DART BRIDGE DART CONFLUENCE (INFERRED STRETCH)	R07B050	SX 7456 6678
27	HOLY BROOK HOLY BROOK	NORTHWOOD BUCKFAST DART CONFLUENCE (INFERRED STRETCH)	R07B020	SX 7401 6767

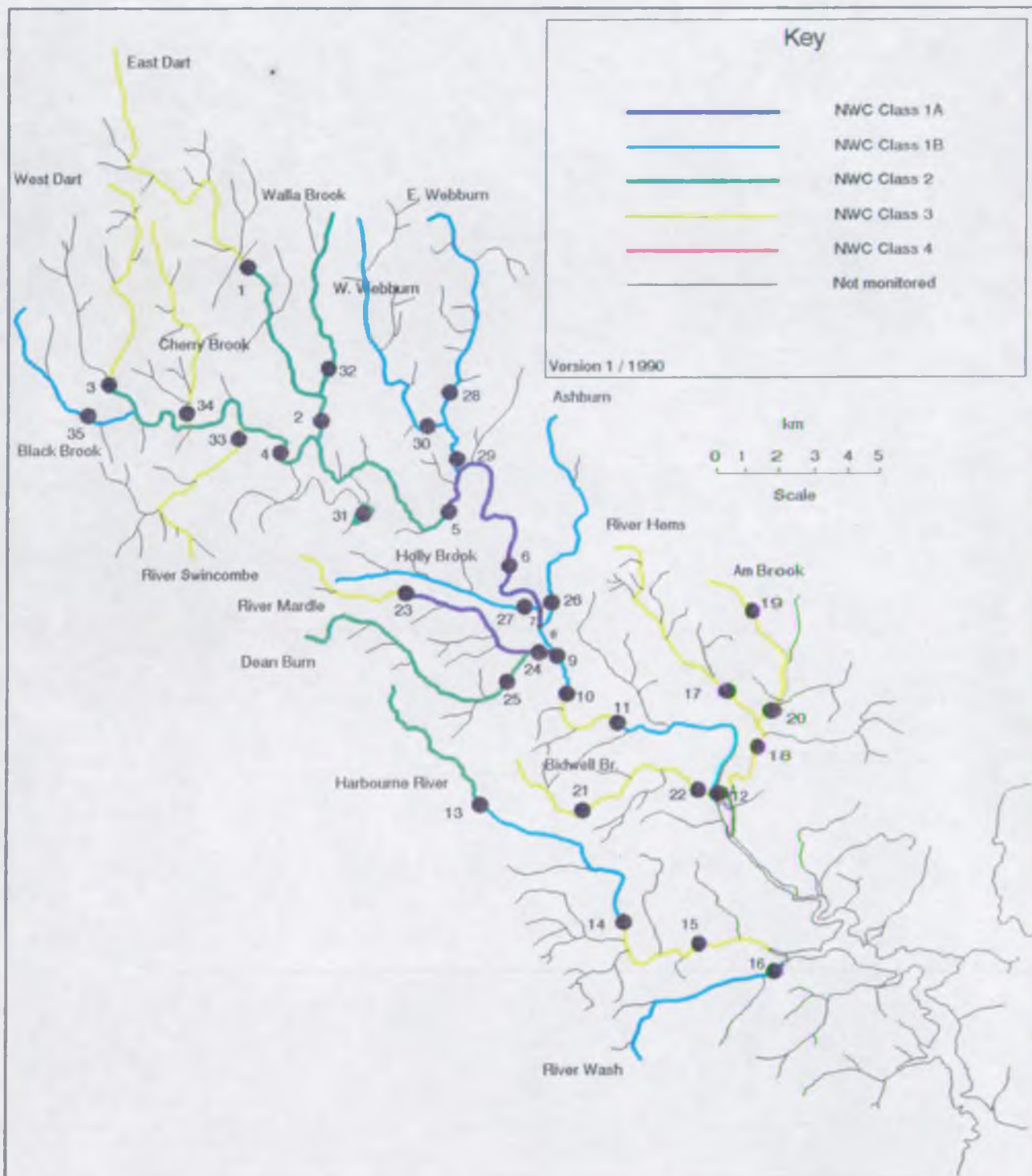
Reach Length (km)	Distance from source (km)	River Quality Objective	85 NWC Class	86 NWC Class	87 NWC Class	88 NWC Class	89 NWC Class	90 NWC Class
10.2	10.2	1A	1A	1B	1A	1A	1B	3
7.6	17.8	1A	1A	1B	1A	1A	1B	2
0.1	17.9	1A	1A	1B	1A	1A	1B	2
7.9	7.9	1A	1A	2	1A	1A	2	3
8.4	16.3	1A	1A	2	1A	1A	2	2
9.0	25.3	1A	1A	1A	1A	1A	1B	2
6.9	32.2	1A	1A	1A	1A	1A	1A	1A
2.7	34.9	1A	1A	1A	1A	1A	1A	1A
0.7	35.6	1A	1A	1A	1A	1A	1A	1A
1.0	36.6	1A	1A	1A	1A	1A	1A	1B
0.8	37.4	1A	1A	1B	1B	1B	1A	1B
3.5	40.9	1A	1A	1B	1B	1B	1A	3
6.3	47.2	1A	1A	2	1B	1B	1B	1B
4.4	4.4	1B	1B	1A	1A	1A	1A	2
9.7	14.1	1B	1A	1A	1A	1B	2	1B
3.8	17.9	1B	1A	1A	1A	1B	2	3
1.6	19.5	1B	1A	1A	1A	1B	2	3
7.0	7.0	1A	1A	1A	1A	1B	1B	1B
0.2	7.2	1A	1A	1A	1A	1B	1B	1B
4.9	4.9	1B	1B	1B	3	3	3	3
5.9	10.8	1B	1B	1B	3	3	3	3
2.2	2.2	1B	2	3	3	3	3	3
3.7	5.9	1B	2	1B	2	2	3	3
0.8	6.7	1B	2	1B	2	2	3	3
3.5	3.5	1B	2	3	3	2	2	3
5.2	8.7	1B	2	3	3	2	2	3
0.2	8.9	1B	2	3	3	2	2	3
4.5	4.5	1A	1A	1A	1A	1A	1A	3
5.6	10.1	1A	1A	1A	1A	1A	1A	1A
8.2	8.2	1A	1A					2
1.5	9.7	1A	1A					2
9.8	9.8	1A	1B					1B
0.2	10.0	1A	1B					1B
6.5	6.5	1A	1A	2	1A	1B	1B	1B
0.1	6.6	1A	1A	2	1A	1B	1B	1B

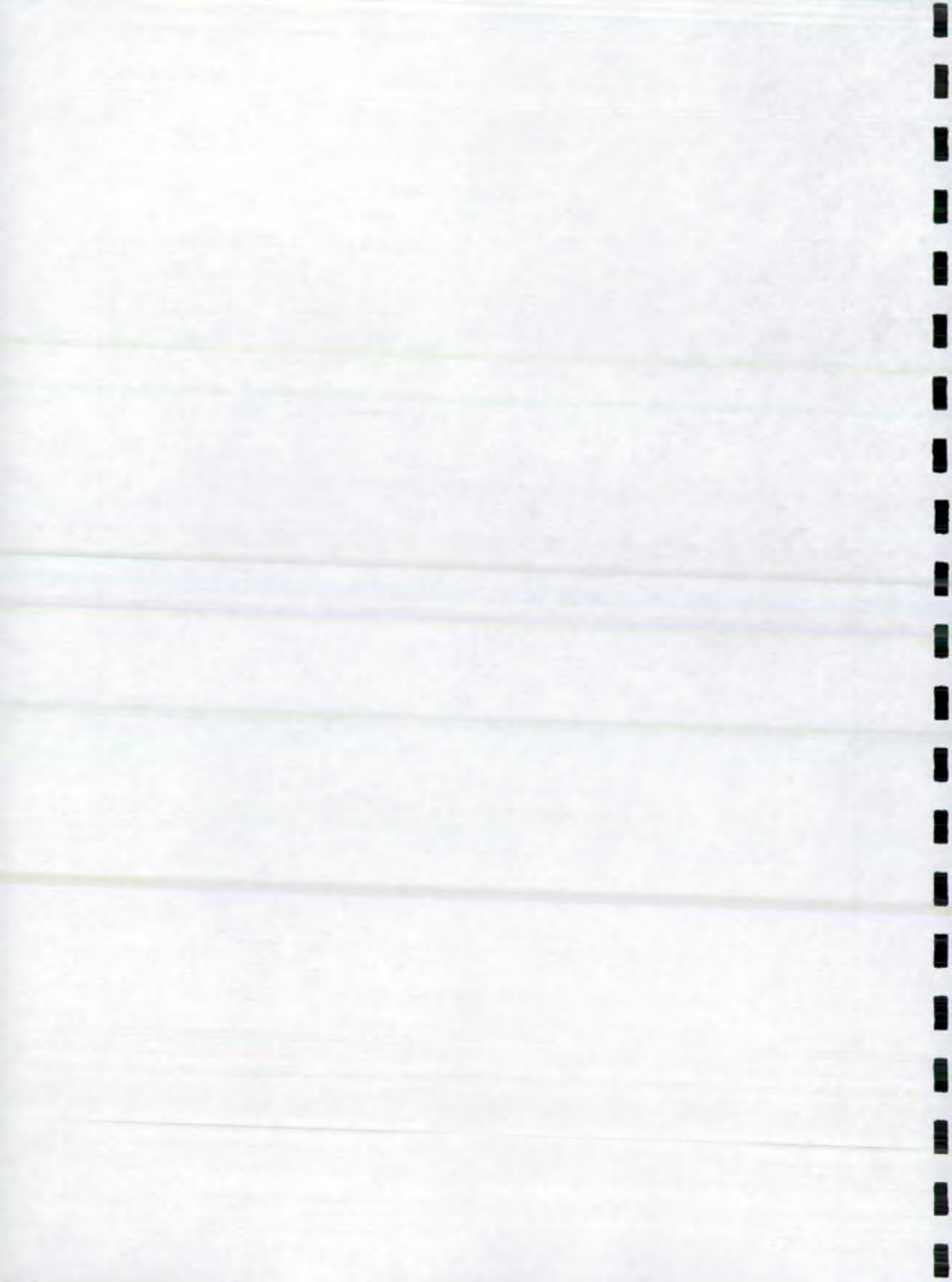
NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 CATCHMENT : DART (07)

1990 Map Position Number	River	Reach upstream of	User Reference Number	National Grid Reference
28 29	EAST WEBBURN RIVER WEBBURN	COCKINGFORD BUCKLAND BRIDGE	R07B036 R07B015	SX 7168 7508 SX 7189 7196
30	WEST WEBBURN RIVER WEST WEBBURN RIVER	PONSWORTHY BRIDGE WEBBURN CONFLUENCE (INFERRED STRETCH)	R07B037	SX 7011 7390
31	VENFORD BROOK VENFORD BROOK VENFORD BROOK	INFLOW, VENFORD RES. (UNMON. STRETCH) VENFORD RESERVOIR DART CONFLUENCE (UNMONITORED STRETCH)	R07B048	SX 6858 7105
32	WALLA BROOK WALLA BROOK	BABENY EAST DART CONFLUENCE (INFERRED STRETCH)	R07B051	SX 6730 7516
33	SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	SX 6475 7370
34	CHERRY BROOK CHERRY BROOK	LOWER CHERRYBROOK BRIDGE WEST DART CONFLUENCE (INFERRED STRETCH)	R07B032	SX 6311 7484
35	BLACKBROOK BLACKBROOK	TOR ROYAL WEST DART CONFL. (INFERRED STRETCH)	R07B049	SX 6017 7383

Reach Length (km)	Distance from source (km)	River Quality Objective	85	86	87	88	89	90
			NWC Class	NWC Class	NWC Class	NWC Class	NWC Class	NWC Class
6.9	6.9	1A		1A	1A	1A	1B	1B
3.9	10.8	1A	1A	1A	1A	1B	2	1B
8.7	8.7	1A		1A	1A	1A	1B	1B
1.5	10.2	1A		1A	1A	1A	1B	1B
0.9	0.9	1A						2
0.6	1.5	1A						
1.0	2.5	1A						
6.8	6.8	1A	1A					2
0.5	7.3	1A	1A					2
6.6	6.6	1A	1A	3	1A	1B	1B	3
6.7	6.7	1A	1B	2	1A	1A	1A	3
1.3	8.0	1A	1B	2	1A	1A	1A	3
6.0	6.0	1A	1B					1B
1.9	7.9	1A	1B					1B

Dart Catchment Water Quality - 1990





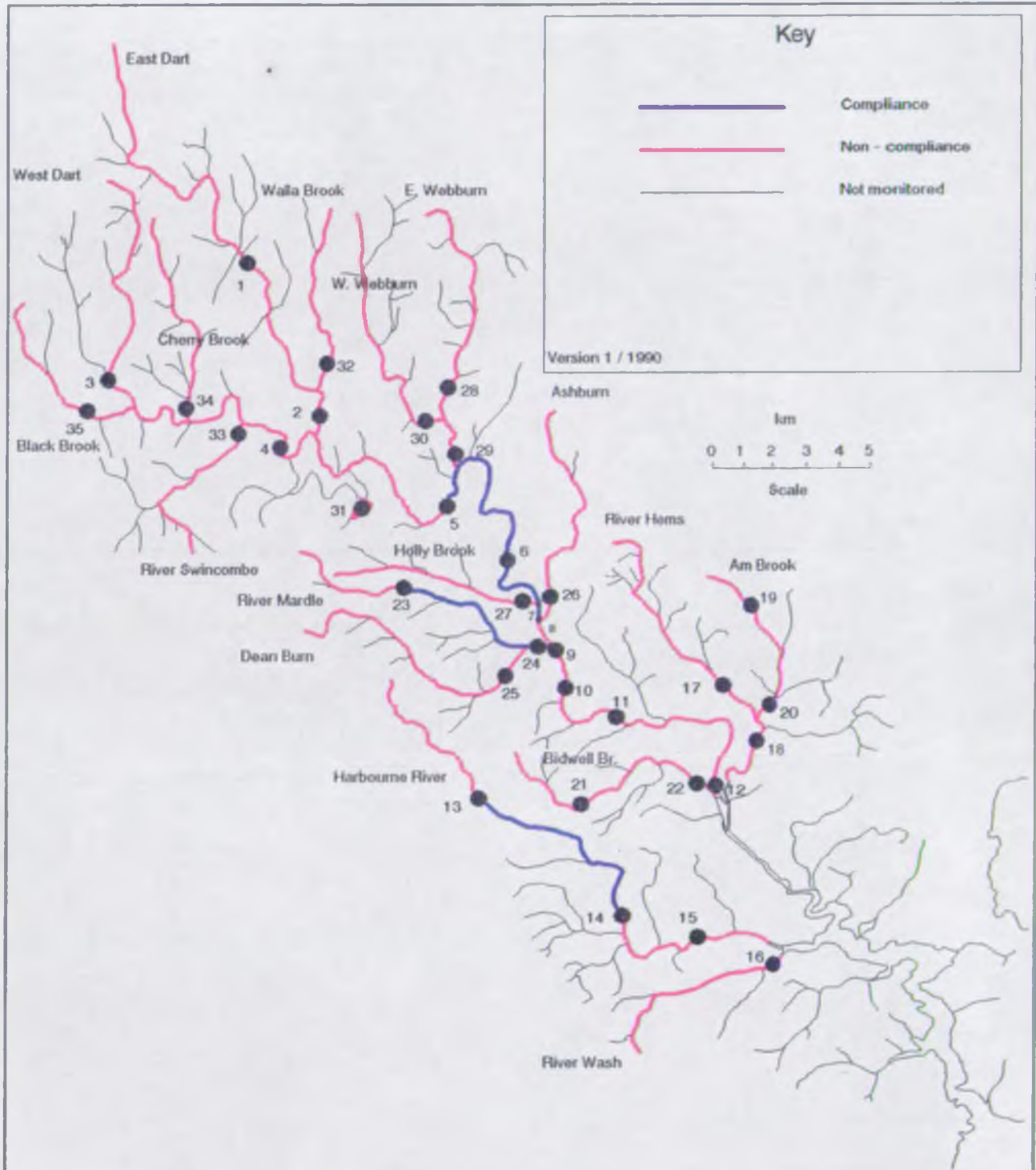
NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 CALCULATED DETERMINAND STATISTICS USED FOR QUALITY ASSESSMENT
 CATCHMENT : DNRT (07)

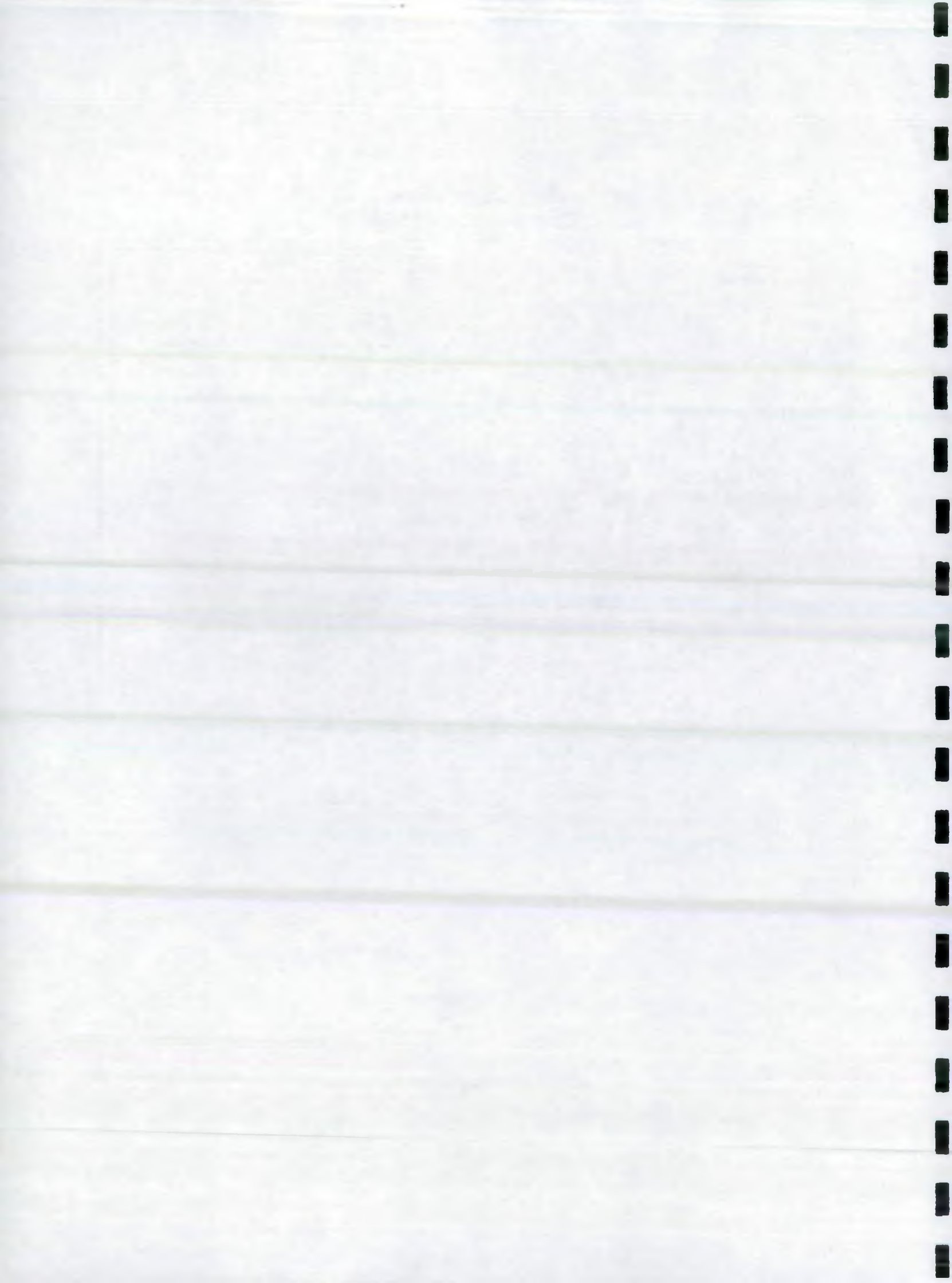
River	Reach upstream of	User Ref. Number	90 NMC Class	Calculated Determinand Statistics used for Quality Assessment																			
				pH Lower Class 5%ile		pH Upper Class 95%ile		Temperature Class 95%ile		DO (%) Class 5%ile		BOD (ATU) Class 95%ile		Total Ammonia Class 95%ile		Union. Ammonia Class 95%ile		S.Solids Class Mean		Total Copper Class 95%ile		Total Zinc Class 95%ile	
DNRT DNRT RIVER	ROSDERIDGE	[R07B001]	3	3	4.7	1A	6.8	1A	15.9	2	52.9	1A	2.2	1A	0.059	1A	0.010	1A	1.7	1A	5.0	1A	9.9
DNRT DNRT RIVER	CLAFFER BRIDGE DARTMEET	[R07B002]	2	1A	5.2	1A	6.8	1A	14.7	1A	81.7	1A	2.0	1A	0.037	1A	0.010	1A	1.9	2	5.7	1A	11.4
WEST DNRT RIVER	TWO BRIDGES	[R07B003]	3	3	4.6	1A	6.2	1A	17.7	1A	88.0	1A	1.9	1A	0.066	1A	0.010	1A	1.4	2	5.9	1A	18.2
WEST DNRT RIVER	HUCKNEY	[R07B004]	2	1A	5.5	1A	7.0	1A	16.4	1B	76.5	1A	2.3	1A	0.041	1A	0.010	1A	1.7	2	11.8	1A	12.7
DNRT	NEW BRIDGE	[R07B005]	2	1A	5.4	1A	7.0	1A	18.0	1A	86.1	1B	3.3	1A	0.053	1A	0.010	1A	2.1	2	5.7	1A	8.3
DNRT	QUEEN OF THE DNRT	[R07B006]	1A	1A	6.1	1A	7.1	1A	20.8	1A	90.2	1A	1.7	1A	0.020	1A	0.010	1A	2.9	1A	6.9	1A	50.8
DNRT	HUCKFAST ABBEY	[R07B007]	1A	1A	6.4	1A	7.0	1A	21.0	1A	89.8	1A	1.8	1A	0.030	1A	0.010	1A	1.9	1A	6.2	1A	9.2
DNRT	BELOW HUCKFAST PLACING(DNRT BRIDGE)	[R07B008]	1A	1A	6.4	1A	7.3	1A	20.8	1A	92.3	1A	1.7	1A	0.047	1A	0.010	1A	3.2	1A	6.0	1A	41.7
DNRT	MULLEN'S BRIDGE	[R07B009]	1B	1A	6.6	1A	7.8	1A	20.8	1B	64.4	1A	2.2	1A	0.040	1A	0.010	1A	3.5	1A	5.8	1A	8.0
DNRT	BELOW HUCKFASTLEIGH STW	[R07B010]	1B	1A	6.7	1A	7.6	1A	20.0	1A	92.0	1A	2.6	1B	0.410	1A	0.010	1A	3.7	1A	6.0	1A	22.0
DNRT	RIVERFORD BRIDGE	[R07B011]	3	1A	6.9	1A	8.6	1A	20.7	1A	83.6	1A	2.3	1A	0.148	3	0.027	1A	6.9	1A	11.3	1A	18.8
DNRT	MOINES WEIR	[R07B012]	1B	1A	6.8	1A	7.6	1A	18.8	1B	75.3	1B	3.1	1A	0.258	1A	0.010	1A	8.0	1A	7.0	1A	13.0
HARBORNE RIVER	HARBORNEFORD	[R07A001]	2	1A	6.7	1A	8.2	1A	16.1	1A	80.7	2	6.3	1A	0.112	1A	0.010	1A	4.1	-	-	-	-
HARBORNE RIVER	LEIGH BRIDGE	[R07A002]	1B	1A	7.0	1A	8.1	1A	16.5	1B	80.0	1B	3.8	1B	0.575	1A	0.010	1A	7.6	1A	12.6	1A	11.7
HARBORNE RIVER	BEENLEIGH	[R07A003]	3	1A	7.4	1A	8.3	1A	15.5	1B	69.6	2	5.9	1B	0.433	1A	0.010	3	26.3	1A	8.8	1A	30.8
WASH	TUCKENHY	[R07A004]	1B	1A	7.5	1A	8.2	1A	16.0	1A	85.9	1B	3.4	1B	0.424	1A	0.010	1A	8.0	1A	5.6	1A	10.6
HEMS	ROSDERIDGE	[R07B011]	3	1A	7.2	1A	8.0	1A	16.0	3	28.0	2	6.6	2	1.520	1A	0.020	3	53.5	1A	53.0	1A	50.0
HEMS	LITTLEHEMPSTON	[R07B012]	3	1A	7.6	1A	8.3	1A	16.0	1B	72.3	2	7.8	2	1.142	3	0.022	3	27.6	1A	7.4	1A	22.6
JAM BROOK	COLLACOMBE BRIDGE	[R07B016]	3	1A	7.3	1A	8.2	1A	15.9	2	56.3	2	6.5	3	3.748	3	0.057	3	31.6	1A	50.0	1A	51.0
JAM BROOK	FISHPORE BRIDGE	[R07B017]	3	1A	7.7	1A	8.3	1A	15.0	1B	64.3	2	5.7	3	2.983	3	0.073	1A	19.1	1A	6.0	1A	9.0
BIDWELL BROOK	TIGLEY	[R07B018]	3	1A	7.4	1A	8.2	1A	15.5	2	51.6	2	6.3	1B	0.408	1A	0.010	3	25.1	1A	10.8	1A	52.9
BIDWELL BROOK	DARTINGTON LODGE	[R07B019]	3	1A	7.5	1A	8.2	1A	16.0	2	44.8	3	9.2	2	0.979	1A	0.010	1A	11.9	1A	9.1	1A	20.9
MARBLE	COMBE	[R07B013]	3	1A	6.0	1A	6.9	1A	16.9	3	16.7	1A	1.7	1A	0.020	1A	0.010	1A	2.1	2	9.8	1A	13.8
MARBLE	RAIDWAY BRIDGE HUCKFASTLEIGH	[R07B014]	1A	1A	7.2	1A	8.4	1A	18.0	1A	83.6	1A	2.4	1A	0.104	1A	0.010	1A	23.6	1A	24.5	1A	44.2
DEAN BURN	R3380 BRIDGE	[R07B052]	2	1A	6.5	1A	8.1	1A	16.0	1B	76.8	1A	3.0	1A	0.176	1A	0.010	1A	19.9	2	47.8	1A	103.0
ASHBURN	DNRT BRIDGE	[R07B050]	1B	1A	6.9	1A	8.6	1A	19.9	1A	89.1	1B	3.8	1A	0.148	1A	0.010	1A	7.7	1A	6.0	1A	20.6
HOLY BROOK	NORTHWOOD HUCKFAST	[R07B020]	1B	1A	6.7	1A	7.6	1A	18.7	1B	76.9	1A	2.1	1A	0.067	1A	0.010	1A	4.8	1A	6.0	1A	12.4
EAST WEBBURN RIVER	COCKINGFORD	[R07B036]	1B	1A	6.6	1A	7.2	1A	16.0	1B	76.0	1A	2.2	1A	0.108	1A	0.010	1A	4.7	1A	10.5	1A	12.0
WEBBURN	HUCKLAND BRIDGE	[R07B015]	1B	1A	6.5	1A	7.2	1A	14.9	1B	61.9	1A	1.8	1A	0.037	1A	0.010	1A	2.3	1A	5.4	1A	7.4
WEST WEBBURN RIVER	PONSNOTHY BRIDGE	[R07B037]	1B	1A	6.6	1A	7.1	1A	14.9	1B	74.9	1A	1.7	1A	0.044	1A	0.010	1A	2.3	1A	5.0	1A	9.7
VENFORD BROOK	VENFORD RESERVOIR	[R07B048]	2	1A	5.3	1A	6.4	2	22.0	1A	87.0	1A	1.8	1A	0.070	1A	0.010	1A	2.5	-	-	-	-

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 CALCULATED DETERMINING STATISTICS USED FOR QUALITY ASSESSMENT
 CATCHMENT : DWY (07)

River	Reach upstream of	User Ref. Number	90 NWC Class	Calculated Determining Statistics used for Quality Assessment																			
				pH Lower		pH Upper		Temperature		DD (%)		BOD (AOU)		Total Ammonia		Union. Ammonia		S.Solids		Total Copper		Total Zinc	
				Class	5tile	Class	95tile	Class	95tile	Class	5tile	Class	95tile	Class	95tile	Class	95tile	Class	Mean	Class	95tile	Class	95tile
WILLA BROOK	EBERRY	R07B051	2	1A	6.0	1A	6.9	1A	15.0	1B	65.3	1A	2.0	1A	0.067	1A	0.010	1A	1.7	2	6.8	1A	6.0
SMITHS CREEK	PRIOR TO WEST DWY RIVER	R07B021	3	3	5.0	1A	6.7	1A	15.7	1B	75.0	1A	2.5	1A	0.044	1A	0.010	1A	1.8	1A	5.0	1A	16.9
CHERRY BROOK	LOWER CHERRYBROOK BRIDGE	R07B032	3	3	4.9	1A	6.7	1A	16.0	1A	87.8	1A	1.8	1A	0.059	1A	0.010	1A	1.7	1A	5.0	1A	20.5
BLACKBROOK	ILDR FORMAL	R07B049	1B	1A	5.5	1A	6.8	1A	17.7	1B	76.2	1A	2.0	1A	0.106	1A	0.010	1A	3.0	1A	7.7	1A	20.2

Dart Catchment Compliance - 1990





NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION

1990 RIVER WATER QUALITY CLASSIFICATION

NUMBER OF SAMPLES (N) AND NUMBER OF SAMPLES EXCEEDING QUALITY STANDARD (P)

OUTPOST : DIRT (07)

River	Reach upstream of	Upst Ref. Number	pH Lower		pH Upper		Temperature		DO (%)		BOD (RTU)		Total Ammonia		Union. Ammonia		S.Solids		Total Copper		Total Zinc	
			N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P
DIRT DIRT RIVER	FOREBRIDGE	R078001	21	1	21	-	21	-	21	1	21	-	21	-	19	-	21	-	21	-	21	-
	CLAPPER BRIDGE DIRTPOST	R078002	32	-	32	-	32	-	32	1	32	-	32	-	23	-	32	-	32	1	32	-
DIRT DIRT RIVER	TWO BRIDGES	R078003	21	2	21	-	21	-	21	-	21	-	21	-	15	-	21	-	21	1	21	-
	MUCCOCK	R078004	32	-	32	-	32	-	32	1	32	-	32	-	25	-	32	-	32	3	32	-
	NEW BRIDGE	R078005	26	-	26	-	26	-	26	-	26	1	26	-	19	-	26	-	26	1	26	-
	CLASH OF THE DIRT	R078006	20	-	20	-	20	-	20	-	20	-	20	-	15	-	20	-	20	-	20	-
	BLACKPAST ABBEY	R078007	35	-	35	-	34	-	34	-	35	-	35	-	23	-	35	-	35	-	35	-
	BELOW BLACKPAST PLACING(DIRT BRIDGE)	R078008	45	-	45	-	44	-	44	-	45	-	45	-	37	-	45	1	46	-	46	-
	AUSTIN'S BRIDGE	R078009	44	-	44	-	43	1	43	2	44	-	44	-	34	-	44	-	44	-	44	-
	BELOW BLACKPAST PLACING SW	R078010	17	-	17	-	17	-	17	-	17	-	17	2	17	-	17	-	17	-	17	-
	RIVERFORD BRIDGE	R078011	24	-	24	-	22	-	22	-	24	-	24	-	22	1	24	2	24	-	24	-
	FOUNES WEIR	R078012	65	-	65	-	64	-	64	7	65	3	65	1	63	-	65	9	65	-	65	-
HARCLINE RIVER	HARCLINEFORD	R078013	26	-	26	-	26	-	26	-	26	1	26	-	22	-	26	-	1	-	1	-
	LITTLEHERRON	R078014	20	-	20	-	19	-	19	-	20	-	20	-	18	-	20	-	20	-	20	-
	BRENSLEIGH	R078015	34	-	34	-	33	-	33	-	34	1	34	-	32	-	34	2	34	-	34	-
WASH	TUCKERHAY	R078016	33	-	33	-	33	-	33	1	33	1	33	4	32	-	33	1	33	-	33	-
HEMS	FOREBRIDGE	R078017	12	-	12	-	11	-	11	3	12	1	12	4	11	-	12	2	12	-	12	-
	LITTLEHERRON	R078018	34	-	34	-	35	-	34	-	34	2	34	3	31	1	34	4	35	-	35	-
LAW BROOK	WYLLACOCK BRIDGE	R078019	25	-	25	-	25	-	25	3	25	1	25	7	25	5	25	3	12	-	12	-
	FISHPOLE BRIDGE	R078020	25	-	25	-	25	-	25	-	25	1	25	2	25	1	25	4	19	-	19	-
REDWELL BROOK	HOLEY	R078021	28	-	28	-	28	-	28	1	28	1	28	-	19	-	28	1	28	-	28	-
	DRYDEN LODGE	R078022	25	-	25	-	24	-	24	6	25	1	25	2	24	-	25	2	25	-	25	-
MURCLE	COBE	R078023	20	-	20	-	20	-	20	1	20	-	20	-	10	-	20	-	20	1	20	-
	RAIDRY BRIDGE BLACKPASTLEIGH	R078024	32	-	32	-	32	-	32	-	32	-	32	-	28	-	32	4	32	-	32	-
DEAN BLISS	83380 BRIDGE	R078025	20	-	20	-	20	-	20	1	20	-	20	-	17	-	20	1	20	1	20	-
LASHBLISS	DIRT BRIDGE	R078026	20	-	20	-	20	-	20	-	20	1	20	-	16	-	20	2	20	-	20	-
BOLEY BROOK	BRENSLEIGH BLACKPAST	R078027	25	-	25	-	25	-	25	2	25	-	25	-	20	-	25	1	25	-	25	-
EAST MERRILAN RIVER	COCKINGFORD	R078028	32	-	32	-	32	-	32	1	32	-	32	-	32	-	32	-	32	-	32	-
	BLACKLAND BRIDGE	R078029	32	-	32	-	32	-	32	2	32	-	32	-	28	-	32	-	32	-	32	-
WEST MERRILAN RIVER	FORNORCHY BRIDGE	R078030	32	-	32	-	32	-	32	1	32	-	32	-	28	-	32	-	32	-	32	-
VENFORD BROOK	VENFORD RESERVOIR	R078031	13	-	13	-	13	1	13	-	13	-	13	-	11	-	13	-	13	-	13	-

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION

1990 RIVER WATER QUALITY CLASSIFICATION

NUMBER OF SAMPLES (N) AND NUMBER OF SAMPLES EXCEEDING QUALITY STANDARD (P)

CATCHMENT : DART (07)

River	Reach upstream of	User Ref. Number	pH Lower		pH Upper		Temperature		DO (%)		ECI (ATU)		Total Ammonia		Union. Ammonia		S.Solids		Total Copper		Total Zinc	
			N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P	N	P
MILLA BROOK	EMERY	R07B051	21	-	21	-	21	-	21	1	21	-	21	-	18	-	21	-	21	1	21	-
SHEDDING	PRIOR TO WEST DART RIVER	R07B021	32	1	32	-	32	-	32	1	32	1	32	-	19	-	32	-	32	-	32	-
CHERRY BROOK	LOWER CHERRYBROOK BRIDGE	R07B032	26	1	26	-	26	-	26	-	26	-	26	-	19	-	26	-	24	-	24	-
BLACKBROOK	TOR ROYAL	R07B049	21	-	21	-	21	-	21	1	21	-	21	-	19	-	21	-	21	-	21	-

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 PERCENTAGE EXCEEDENCE OF DETERMINAND STATISTICS FROM QUALITY STANDARDS
 CATCHMENT : DART (07)

River	Reach upstream of	User Ref. Number	PERCENTAGE EXCEEDENCE OF STATISTIC FROM QUALITY STANDARD									
			pH Lower	pH Upper	Temperature	DO (%)	BOD (ATU)	Total Ammonia	Un-ionised Ammonia	Suspended Solids	Total Copper	Total Zinc
EAST DART RIVER	POSTBRIDGE	R07B001	5	-	-	34	-	-	-	-	-	-
EAST DART RIVER	CLAPPER BRIDGE DARTMEET	R07B002	-	-	-	-	-	-	-	-	14	-
WEST DART RIVER	TWO BRIDGES	R07B003	8	-	-	-	-	-	-	-	18	-
WEST DART RIVER	HUCCABY	R07B004	-	-	-	4	-	-	-	-	135	-
DART	NEW BRIDGE	R07B005	-	-	-	-	10	-	-	-	13	-
DART	QUEEN OF THE DART	R07B006	-	-	-	-	-	-	-	-	-	-
DART	BUCKFAST ABBEY	R07B007	-	-	-	-	-	-	-	-	-	-
DART	BELOW BUCKFAST PLATING(DART BRIDGE)	R07B038	-	-	-	-	-	-	-	-	-	-
DART	AUSTIN'S BRIDGE	R07B008	-	-	-	19	-	-	-	-	-	-
DART	BELOW BUCKFASTLEIGH STW	R07B053	-	-	-	-	-	32	-	-	-	-
DART	RIVERFORD BRIDGE	R07B009	-	-	-	-	-	-	29	-	-	-
DART	TOTNES WEIR	R07B010	-	-	-	6	2	-	-	-	-	-
HARBOURNE RIVER	HARBOURNEFORD	R07A001	-	-	-	-	25	-	-	-	-	-
HARBOURNE RIVER	LEIGH BRIDGE	R07A002	-	-	-	-	-	-	-	-	-	-
HARBOURNE RIVER	BEENLEIGH	R07A003	-	-	-	-	17	-	-	5	-	-
WASH	TUCKENHAY	R07A004	-	-	-	-	13	37	-	-	-	-
HEMS	PORTBRIDGE	R07B011	-	-	-	53	32	117	-	114	-	-
HEMS	LITTLEHEMPSTON	R07B012	-	-	-	-	56	63	5	10	-	-
AM BROOK	COLLACOMBE BRIDGE	R07B016	-	-	-	6	29	435	171	26	-	-
AM BROOK	FISHACRE BRIDGE	R07B017	-	-	-	-	15	326	248	-	-	-
BIDWELL BROOK	TIGLEY	R07B018	-	-	-	14	26	-	-	-	-	-
BIDWELL BROOK	DARTINGTON LODGE	R07B019	-	-	-	25	84	40	-	-	-	-
MARDLE	COMBE	R07B013	-	-	-	79	-	-	-	-	95	-
MARDLE	RAILWAY BRIDGE BUCKFASTLEIGH	R07B014	-	-	-	-	-	-	-	-	-	-
DEAN BURN	B3380 BRIDGE	R07B052	-	-	-	4	-	-	-	-	117	-
ASHBURN	DART BRIDGE	R07B050	-	-	-	-	28	-	-	-	-	-
HOLY BROOK	NORTHWOOD BUCKFAST	R07B020	-	-	-	4	-	-	-	-	-	-
EAST WEBBURN RIVER	COCKINGFORD	R07B036	-	-	-	5	-	-	-	-	-	-
WEBBURN	BUCKLAND BRIDGE	R07B015	-	-	-	23	-	-	-	-	-	-
WEST WEBBURN RIVER	PONSWORTHY BRIDGE	R07B037	-	-	-	6	-	-	-	-	-	-
VENFORD BROOK	VENFORD RESERVOIR	R07B048	-	-	2	-	-	-	-	-	-	-

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 1990 RIVER WATER QUALITY CLASSIFICATION
 PERCENTAGE EXCEEDENCE OF DETERMINAND STATISTICS FROM QUALITY STANDARDS
 CATCHMENT : DART (07)

River	Reach upstream of	User Ref. Number	PERCENTAGE EXCEEDENCE OF STATISTIC FROM QUALITY STANDARD										
			pH Lower	pH Upper	Temperature	DO (%)	BOD (ATU)	Total Ammonia	Un-ionised Ammonia	Suspended Solids	Total Copper	Total Zinc	
WALLA BROOK	BABENY	R07B051	-	-	-	18	-	-	-	-	-	36	-
SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	1	-	-	6	-	-	-	-	-	-	-
CHERRY BROOK	LOWER CHERRYBROOK BRIDGE	R07B032	1	-	-	-	-	-	-	-	-	-	-
BLACKBROOK	TOR ROYAL	R07B049	-	-	-	5	-	-	-	-	-	-	-

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
IDENTIFICATION OF POSSIBLE CAUSES OF NON-COMPLIANCE WITH RQO
CATCHMENT : DART (07)

1990 Map Position Number	River	Reach upstream of	User Reference Number	Reach Length (km)	Possible causes of non-compliance
1	EAST DART RIVER	POSTBRIDGE	R07B001	10.2	UP-STREAM ABSTRACTIONS, CATCHMENT GEOLOGY, MOORLAND, DROUGHT
2	EAST DART RIVER	CLAPPER BRIDGE DARTMEET	R07B002	7.6	CATCHMENT GEOLOGY, MOORLAND ORIGINS
3	WEST DART RIVER	TWO BRIDGES	R07B003	7.9	MOORLAND ORIGINS
4	WEST DART RIVER	HUCCABY	R07B004	8.4	MOORLAND ORIGINS, DROUGHT
5	DART	NEW BRIDGE	R07B005	9.0	MOORLAND ORIGINS
9	DART	AUSTIN'S BRIDGE	R07B008	1.0	SEWAGE TREATMENT WORKS, UP-STREAM ABSTRACTIONS, DROUGHT
10	DART	BELOW BUCKFASTLEIGH STW	R07B053	0.8	SEWAGE TREATMENT WORKS
11	DART	RIVERFORD BRIDGE	R07B009	3.5	SEWAGE TREATMENT WORKS, FARMING ACTIVITIES
12	DART	TOTNES WEIR	R07B010	6.3	UP-STREAM ABSTRACTIONS, EUTROPHICATION, BLUE-GREEN ALGAE
13	HARBOURNE RIVER	HARBOURNEFORD	R07A001	4.4	DROUGHT
15	HARBOURNE RIVER	BEENLEIGH	R07A003	3.8	SEWAGE TREATMENT WORKS
16	WASH	TUCKENHAY	R07A004	7.0	SEWAGE TREATMENT WORKS, UP-STREAM ABSTRACTIONS
17	HEMS	PORTBRIDGE	R07B011	4.9	FARMING ACTIVITIES, SEPTIC TANK, DROUGHT
18	HEMS	LITTLEHEMPSTON	R07B012	5.9	FARMING ACTIVITIES
19	AM BROOK	COLLACOMBE BRIDGE	R07B016	2.2	FARMING ACTIVITIES, SEPTIC TANK
20	AM BROOK	FISHACRE BRIDGE	R07B017	3.7	
21	BIDWELL BROOK	TIGLEY	R07B018	3.5	DROUGHT
22	BIDWELL BROOK	DARTINGTON LODGE	R07B019	5.2	SEWAGE TREATMENT WORKS, FARMING ACTIVITIES
23	MARDLE	COMBE	R07B013	4.5	CATCHMENT GEOLOGY, MOORLAND, SEPTIC TANKS
25	DEAN BURN	B3380 BRIDGE	R07B052	8.2	MOORLAND, CATCHMENT GEOLOGY
26	ASHBURN	DART BRIDGE	R07B050	9.8	FARMING ACTIVITIES, DROUGHT, EUTROPHICATION
27	HOLY BROOK	NORTHWOOD BUCKFAST	R07B020	6.5	DROUGHT, SEWAGE TREATMENT WORKS
28	EAST WEBBURN RIVER	COCKINGFORD	R07B036	6.9	DROUGHT
29	WEBBURN	BUCKLAND BRIDGE	R07B015	3.9	DROUGHT
30	WEST WEBBURN RIVER	PONSWORTHY BRIDGE	R07B037	8.7	DROUGHT, UP-STREAM ABSTRACTION
31	VENFORD BROOK	VENFORD RESERVOIR	R07B048	0.6	DROUGHT
32	WALLA BROOK	BABENY	R07B051	6.8	MOORLAND ORIGINS, DROUGHT
33	SWINCOMBE	PRIOR TO WEST DART RIVER	R07B021	6.6	MOORLAND ORIGINS, DROUGHT

NATIONAL RIVERS AUTHORITY - SOUTH WEST REGION
 IDENTIFICATION OF POSSIBLE CAUSES OF NON-COMPLIANCE WITH RQO
 CATCHMENT : DART (07)

1990 Map Position Number	River	Reach upstream of	User Reference Number	Reach Length (km)	Possible causes of non-compliance
34	CHERRY BROOK	LOWER CHERRYBROOK BRIDGE	R07B032	6.7	MOORLAND ORIGINS, DROUGHT
35	BLACKBROOK	TOR ROYAL	R07B049	6.0	DROUGHT, EUTROPHICATION