NATIONAL RIVERS AUTHORITY WELSH REGION

SEWAGE TREATMENT WORKS REMEDIAL STRATEGY

PHASE 2 REPORT

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EXECUTIVE SUMMARY

The objective of this strategy is to identify those Dwr Cymru Welsh Water (DCWW) Sewage Treatment Works (STWs) which are having adverse environmental impacts on receiving waters and to identify priorities for remedial action. Biological, aesthetic and water quality criteria have been developed to assess and prioritise the impact of 882 STWs operated by DCWW in the Welsh Region. The strategy has been developed over two phases. Phase 1 has already been reported (May 1992) and this report covers Phase 2 during which assessment of all STWs has been completed and the final ranking of STWs for remedial action has been determined.

593 works have been assessed as having no environmental impact (category A), 268 works have been assessed as having an environmental impact (category B) and 21 works have been abandoned since the strategy was begun.

Inland and tidal STWs were prioritised separately and ranked in order of their environmental impact based on up to six criteria. These rankings will form the basis of discussions between the NRA and DCWW on the priorities for spending on STW improvements in their AMP2 (Asset Management Plan) Investment Programme, which covers the 20 year period from 1995 onwards.

The strategy makes recommendations that the NRA should conduct consent reviews of all category B works in line with an agreed timetable of improvements by DCWW. All category A works consents should also be reviewed to ensure they are environmentally protective and where appropriate to convert them to descriptive consents. The resourcing of, and methodology for, carrying out these reviews should be considered by the Regional Consenting Group.

The strategy also makes recommendations on future NRA monitoring programmes required to assess the performance of sewage treatment works. The recommendations are consistent with those already issued through the Statutory and (draft) Permissive Sampling guidelines. Recommendations are also made for the future biological assessment of STW impacts. As a priority, biological assessments should be carried out on all sewage works following remedial action, and only when satisfactory improvements have been demonstrated should these works be dropped from the prioritised list for improvements. Improvements in receiving water biological quality should also be assessed following removal of discharges from abandoned works.

In the longer term a rolling programme of biological assessments of sewage works should be implemented and the resource implications of various rolling programme options should be considered by the Regional Biology Group.

TERMS OF REFERENCE:

To identify those Dŵr Cymru Welsh Water sewage treatment works which will require remedial measures to overcome adverse environmental impacts, and to identify priorities for expenditure.

1.0 <u>INTRODUCTION</u>

In the NRA's Welsh Region, sewage treatment and disposal services are provided to an equivalent population of 2.6 million. Dwr Cymru Welsh Water (DCWW) operate 882 sewage treatment works (STWs) which between them treat about 50% of this population. Effluent discharges from these works have the potential to do serious harm to the aquatic environment unless they comply with suitable, environmentally protective consents. The NRA has been carrying out a strategic review of all DCWW STWs in order to identify those which are having an adverse environmental impact and which will require remedial work to improve effluent quality. This is in addition to, and irrespective of the requirements of the Urban Wastewater Treatment Directive (UWWTD) which will have to be met by DCWW as a priority for capital spending post-1995. The strategy has developed over two phases.

Phase 1 of the Strategy (Sewage Treatment Works Remedial Strategy - Final Report - November 1991) put the 882 DCWW STWs into one of the following three categories:-

- i) Category A: contained 283 works at which the existing information indicated that there was no current environmental impact. No improvement work was required provided that the receiving water quality continued to meet its objectives and the discharge continued to comply with an environmentally protective consent.
- ii) Category B: contained 126 works with confirmed or suspected environmental impact at which there was an urgent need for improvement work.
- iii) Category C: contained 473 works for which further data were needed before the extent of any environmental impact could be reliably determined and the works allocated to either Category A or Category B.

Phase 2 of the STW Strategy involved collecting the additional data for reclassifying the Category C works and confirming the classification of a number of others. Also DCWW asked for further information in order to confirm the environmental impact of 40 of the Category B works. This report covers the output from Phase 2 which had the following specific objectives.

1.1 Specific Objectives for Phase 2.

- o To collect the additional information necessary to confirm the environmental impact of the 40 Category B works at which DCWW asked for further investigations.
- o To collect further information to allow works currently in Category C to be reclassified into Category A or Category B.
- o To prioritise all the Category B works in terms of their requirements for future remedial action.

This information will be used to direct DCWW's AMP2 investment programme, relating to improvements at sewage treatment works for the 20 year period from 1995 onwards, and will also guide subsequent NRA programmes for the review of discharge consents and the environmental monitoring of sewage treatment works.

This strategy only covers discharges from sewage treatment works operated by DCWW where either just primary treatment or primary and secondary treatment takes place. Discharges of crude sewage, screened or macerated sewage, Combined Sewer Overflows (CSOs) and all discharges from works not operated by DCWW are not considered here. Parallel strategies are being run to identify future requirements for some of these other discharges. Discharges from private or other STWs will be addressed by a separate strategy in due course.

2.0 <u>STRATEGIC APPROACH</u> (See following flow diagram for summary)

2.1 Assessment of Environmental Impact

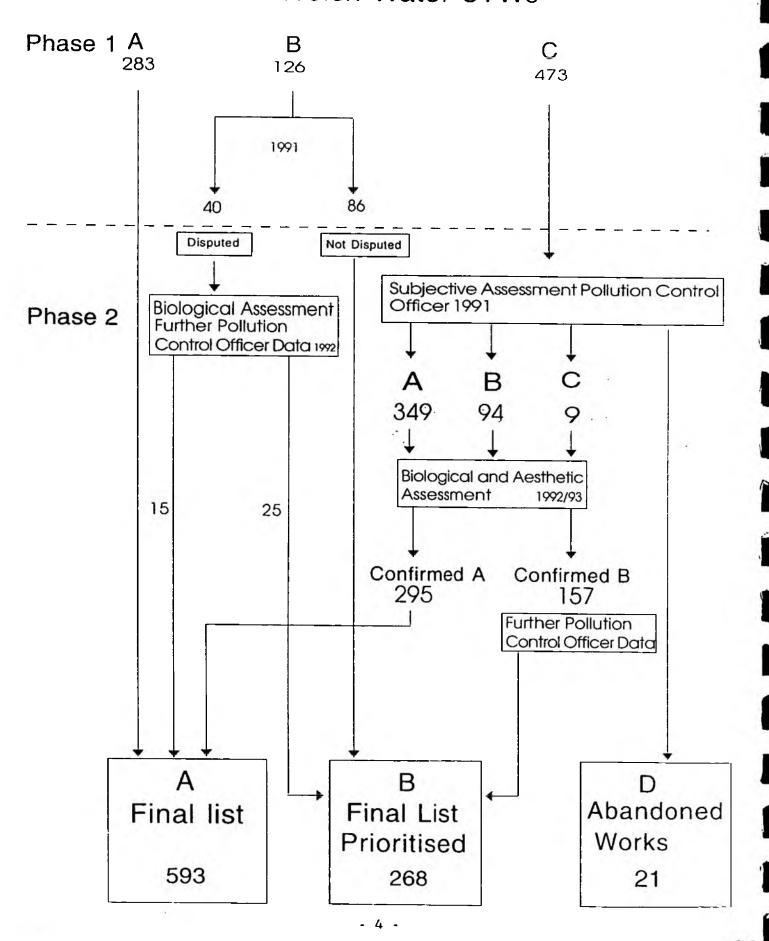
In the past, programmes for improvement work at STWs have been drawn up on the basis of a number of criteria including cost, operational requirements, and on-site factors. The NRA requires environmental considerations to be given greater weighting in assessing future schemes, and the proposed priorities for further action are based on the environmental impact of discharges from STWs and the importance attached to reducing their impact.

Phase 1 assessed the works in terms of their environmental impact with regard to certain available criteria (see Phase 1 Report, Appendix 2 for further details). The following general criteria were used in the Phase 2 assessment and are described in detail in Appendix 1.

- o Compliance with the receiving water quality objectives.
- o Compliance with EC Directives.
- o Impact on receiving water uses.
- o STW features
- o Improvement work planned or carried out

In addition biological impact data collected during July - September in 1991 and 1992 were used to give each inland STW a biological impact rating (see Appendix 2 for further details). The criteria used for this were briefly:

Coastal and Inland Waters Welsh Water STWs



- o Decrease in BMWP score between upstream and downstream of the discharge.
- o Decrease in the abundance of pollution sensitive taxa between upstream and downstream of the discharge.
- o Presence of sewage fungus in the mixing zone of the discharge.
- o Presence of sewage fungus downstream of the mixing zone.

During the 1992 biological surveys an extended set of criteria were also used to assess the Aesthetic Impact of each STW on the receiving water. (See Appendix 3 for further details).

2.2 Disputed Category B Works from Phase 1

In order to reassess and confirm the ranking of the 40 disputed Category B works from Phase 1, more information was gathered from the relevant Pollution Control Officers during 1992 and 1993. This included the above criteria which are detailed in Appendix 1. As a result a number were reclassified as A and others were subjected to further biological assessments.

2.3 Category C Works from Phase 1

These were works where existing information indicated a suspected or potential environmental impact associated with the discharge, but where further information was needed to confirm such an impact.

Initially, in February 1992, all Category C works were subjectively placed in Category A or Category B, by Area Pollution Control Officers, based on existing information and local knowledge. The resulting categorisations were sent for information to DCWW and were used to prioritise biological impact assessment surveys on the inland STWs. The biological surveys were completed over two years with the subjective B works being surveyed first.

Further information (on receiving water quality, uses affected etc. see Appendix 1) was obtained from the relevant Pollution Control Officers for those STWs where the biological assessment showed an environmental impact on the receiving water. The above criteria were then used, with the biological assessment to produce the final ranking of Category B works.

2.4 Use of Biological Impact Assessment

All those Disputed Category B and Category C inland STWs from Phase 1, which were shown in Phase 2 to be having a biological impact rating of 1 or 2, were placed into Category B. Those not having a biological impact (ie. with a rating of 0) were placed into Category A. Where the biological impact was solely due to a decrease in abundance of high scoring taxa, the substrate quality at the biological sampling sites was checked and, if substrate type alone could account for the upstream and downstream difference, the biological impact was ignored and the works was

placed into Category A. Any works placed into Category B, but which were considered by Pollution Control staff not to need remedial work (usually because the problems had already been rectified) remained in Category B but comments were recorded. These works will need to be reassessed biologically before they can be moved into Category A (see Recommendations).

Where a STW discharged to a standing water (on which the standard biological assessment techniques could not be used) and there was evidence of significant biological impact in the receiving water (eg. eutrophication), then a subjective biological impact rating of 2 was assigned. Where there was no significant impact a rating of 0 was assigned.

2.5 Undisputed Category B Works from Phase 1

These STWs have remained in Category B without further assessment in Phase 2. However, even though they were undisputed Category B works in 1991, some do not appear to be having a biological impact on the receiving water and are therefore ranked well down the list of priorities. They must remain in Category B until a further assessment of their impact has been made by Pollution Control, after which, if appropriate, they may be placed into Category A.

2.6 Category A Works from Phase 1

These works from Phase I of the strategy have remained in Category A for this phase of the strategy.

2.7 Output from Phase 2

Appendices 5 - 7 separately list those STWs which discharge to inland and tidal waters in the Northern Division, South Eastern Division and South Western Division respectively and show the category to which each works has been assigned.

2.8 Abandoned Works

Twenty one works, which were previously in Category B, have been abandoned since Phase 1 was completed and these have been put into a third Category D and are listed separately in Appendix 8.

3.0 PRIORITISATION OF CATEGORY B WORKS FOR REMEDIAL ACTION

The criteria used in the final prioritisation of the Category B works are detailed in Appendix 4. These criteria were selected on the basis of availability, consistency and reliability from the larger databases collected in both phases. Different criteria were used for inland and tidal discharges, primarily because biological techniques for assessing tidal discharges are not well established and couldn't be used. Also Long Term River Quality Objectives are not applicable to tidal waters. Data on the impact of tidal discharges were therefore much more limited and greater emphasis has been given to location of the outfall and impacts on uses.

The prioritisations were performed in two stages:

Firstly STWs were grouped on the basis of the number of category 2, 1 or 0 scores they received for all six criteria. So, for example, STWs scoring 4 x Category 2 scores and 2 x Category 1s were grouped above STWs scoring 3 x Category 2 scores and 3 Category 1s, and so on.

Secondly, within each group, works were ranked against each of the inland or tidal criteria in turn and in descending order of their perceived importance as measures of environmental impact. The priority orders for the two sets of criteria are given below. They were determined following numerous trials and data manipulations and gave the most consistent and acceptable descriptions of priorities across the Region. The end result is a string of scores which determines the ranking of a works within each group.

The criteria used and the order in which they were applied in the second stage of the ranking exercise were as follows:-

Inland Water Impact Criteria

- 1. Cause of EC Directive failure in receiving water.
- 2. Biological Impact caused by the STW.
- 3. Aesthetic Impact caused by the STW.
- 4. Cause of LTRQO failure in receiving water.
- 5. Constraints caused by the STW on the receiving water uses.
- 6. Hydraulic overloading of the STW.

Tidal Water Impact Criteria

- 1. Cause of EC Directive failure in receiving water.
- 2. Position of outfall in relation to low water.
- 3. Aesthetic Impact caused by the discharge.
- 4. STW discharging to a specially designated area.
- 5. Constraints caused by the STW discharge on the receiving water uses.

Tables 1 and 2 show the rankings for all the inland and tidal (respectively) Category B STWs in the Region from those with the greatest, most severe impact to those with least impact.

STWs on which remedial work has already been carried out, but which have not yet been reassessed to determine the environmental impact of the improved effluent quality, remain in the lists. Any works on which improvements have been carried out during the last three years are identified by a "l" in the "Recent Work Done" column of Tables 1 and 2.

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Consent Ref.	Works Name	Works Grid Ref	1		ing 3				AREA	Work Recently done	Biologically Assessed?
1	BOWSTREET (PENRHYNCOCH)	SN 61900-8420		2 2	2	2	2	2	w	по	yes
2 BG0007701	NARBERTH EAST	SN 12300-1520	00 (0 2	2	2	2	2	W	yes	yes
CM0017601		SJ 12170-5931		0 2		2	2	2	N	no	yes
-	LUDCHURCH	SN 15000-1070	00 (0 2	2	2	2	1	W	по	no
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AL1003501	WEOBLEY	SO 39580-5203	3D (0 2	2	2	0	1	E	yes	yes
	LLANGEFNI	SH 46400-745	00 (0 1	. 2	2	2	1	N	yes	yes
	BUCKLEY TY GWYN	SJ 27890-622	20 (0 1	. 2	2	2	0	N	yes	yes
	CROSSHANDS	SN 56300-1230	00 1	0 3	. 2	2	1	2	W	по	yes
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AH1001901 34	KINGSTONE & MADLEY	SO 42550-370	00	0	0 0	2	2	0	E	no	yes
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BP003400:	1 AMROTH	SN 17300-072	00	0	2 1	. 0	1	0	W	no	yes
	1 NORTON (OLD)	SO 30630-666	20	0	2 1	. 0	0	1	E	no	yes
	1 LLANRUG	SH 53100-641			2			1	N	yes	yes
	1 GORSGOCH	SN 47600-505			2 1			1	W	yes	yes
CM001830		SJ 08300-435				. 0		1	N	no	yes
42											
	1 ST ISHMAELS	SM 83200-068			2			٥	W	no	yes
	1 CLYNDERWEN	SN 12100-183		0		0		0	W	no	yes
	1 GRAIANRHYD	SJ 21440-560				. 0		0	N	yes	yes
	1 CERRIGYDRUDION	SH 95160-483		٥		0		0	N	no	yes
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49 BD0044301	CARDW	cu	05200 03500		_	_						
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BG0012001 59	LANGDON	SN	10500-07300	O	1	1	1	1	2	W	пO	yes
CG0075801	LLANGYBI	SH	43000-40300	0	1	1	1	0	2	N	по	yes
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CG0152101	DOLWYDDELAN	SH	73900-52400	0	1	1	0	1	2	N	по	yes
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BN0013701	HENLLAN	SN	35400-40200	0	1	1	0	U	2	W	no	уeа
CG0085701	BETHEL	SH	51600-65200	0	1	0	2	1	1	N	yes	yes
67											• •	• • •
	LLANPAES (A)	SH	60800-77700	0	1	0	0	2	0	N	yes	yes
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BN0015801			29500-46300								no	no
AH1002001	LITTLE DEWCHURCH	so	53450-31160	0	0	0	2	1	1	E	yes	no
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CG0023201	BWLCHYLLYN	SH	50400-55200	0	1	1	1	0	0	N	yes	yes
95	COLDEN CROVE	SN	59080-20280	0	1	1	0	1	1	W	yes	yes
85 BJ0078801	GOLDEN GROVE		18200-37400	0	1		-	1	1	W	no	yes
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AL1000602	BROMYARD (NEW)	SO 65980-54500	0	1	1	0	0	1 E	no	yes
AH1001201	HEREFORD (ROTHERWAS)	SO 53210-38450	0	1	1	0	0	1 E	yes	yes
CG0110001	DINAS MAWDDWY	SH 85900-14400	0	1	1	0	0	1 N	-	yes
CM0077901	NANTGLYN (UPPER AND LOWER TIL	ER SJ 00730-62290	0	1	1	0	0	1 h	l no	yes
BH0050901	CILYCWM	SN 75430-39600	0	1	1	0	0	1 9	no	yes
BG0001201	BONCATH	SN 20200-39100	0	1	1	0	0	1 9		yes
CM0007901	DOLYWERN	SJ 22440-37250	0	1	1	0	0	1 1	-	yes
105										
CM0045401	RHYDUCHAF	SH 90250-37950	0	1	1	0	0	0 1	on I	yes
CM0032401	BRYNEGLWYS	SJ 14250-47250	0	1	1	0	0	0 1	no no	yes
CM0029001	CHURTON	SJ 42460-56350	0	1	1	0	0	0 1	no no	yes
CM0107601	HENLLAN	SJ 01920-68540	Ď	1	1	0	0	0 1	yes yes	yes
CM0075801	HOPE	SJ 30540-58070	0	1	1	0	0	0 1	no no	yes
AN0214601	TRELLECH	SO 49900-05900	0	1	1	0	0	0 E	no no	yes
AB0044801	USK	ST 38800-99600	0	1	1	0	0	0 1	no i	yes
CG0133701	TREGARTH	SH 60800-68500	0	1	1	0	0	0 1	I no	yes
CM0044301	WHITFORD	SJ 15140-78180	0	1	1	0	0	0 1	l no	yes
CM0001301	WORTHENBURY	SJ 42100-45900	0	1	1	0	0	0 1	l no	yes
CM0049001	TREFNANT	SJ 06100-71710	0	1	1	0	0	0 1	i no	yes
AW1000901	CLYRO	SO 21700-43800	0	1	1	0	0	0 8	no no	y e s
AB0034101	ABERBAIDEN	SO 26300-14700	0	1	1	0	0	0 1	no no	yes
AW1000601	BUILTH ROAD	SO 02140-53100	0	1	1	0	0	0 1	по по	yes
AB0046601	LLANGYBI	ST 37700-96600	0	1	1	0	0	0 1	E no	yes
CG0070001	BRITHDIR	SH 77000-19400	0	1	1	0	0	0 1	i no	yes
CG0012701	DINAS	SH 26800-36400	0	1	1	0	0	0 1	∛ yes	yes
CG0043601	CAPEL CURIG	SH 73700-56800	0	1	1	0	0	0 1	i no	y e s
CG0109401	TALYBONT (DYFED)	SN 65700-89100	0	1	1	0	0	0 1	i no	yes
AW1002301	HAY-ON-WYE	SO 23190-43260	0	1	1	0	0	0 1	E no	yes
BP0044503	LLANBOIDY	SN 21990-22760	0	1	1	0	0	0 1	i no	yes
BE0016301	FOUR ROADS	SN 44600-09300	0	1	1	Ð	0	0 1	V yes	no
AG0017801	DROPE (WESTBURY HOMES)	ST 10000-70000	0	1	1	0	0	0 1	no 1	yes
AW1005201	RHAYADER	SN 97800-67400	0	1	1	0	0	0 1	e no	yes
BP0087901	KEESTON	SM 90800-18700	0	1	1	0	0	0 1	ves v	yes
BA1002401	HIRWAUN	SN 93680-06740	0	1	1	0	0	0 1	v no	yes
BJ0078601	BETHLEHEM	SN 68200-25180	0	1	1	0	0	0 1	ves yes	yes
BG0018701	HERMON	SN 20900-32300	0	1	1	0	0	0 1	ves	yes
AC0140201	RAGLAN	SO 41500-07300	0	1	1	0	0	0 1	yes -	yes
CG0110301	LLANDDEUSANT	SH 34700-84900	0	1	1	0	0	0 1	v no	yes
CG0110701	RHYDYCLAFDY	SH 32800-34600	0	1	1	0	0	O 1	on V	yes
CG0089401	ROWEN	SH 76000-71700	0	1	1	0	0	0 1	no no	yes
BG0019001	CROESGOCH	SM 82700-30600	0	1	1	0	0	0 1	no no	yes
BN0168801	CLARACH	SN 59900-83900	0	1	1	0	0	0 1	no no	yes
BC0002501	REYNOLDSTON	SS 46600-90900	0	1	1	0	0	0 1	∛ yes	yes
BP0013501	RHYDLEWIS	SN 34560-47300	0	1	1	0	0	0 1	yes	yes
AW1004401	NEWBRIDGE-ON-WYE	SO 01450-58170	0	1	1	0	0	0	E no	yes
BH0055701	NEWGALE	SM 85600-22200	0	1	1	0	0	0 1	no N	yes
BG0017601	PUNCHESTON	SN 01000-29800	0	1	1	0	0	0 1	w yes	yes
AG0010801	DROPE	ST 10800-75900	0	1	1	0	0	0	E no	yes
AC0085601	BRYNMAWR (BLACKROCK)	SO 20500-12400	0	1	1	0	0	0	E no	yes
AH1002401	MORDIFORD (PENTALOE CLOSE)	SO 57610-37300	0	1	1	0	0	0	E no	yes
CM0006001	LLANDRILLO	SJ 03550-37480	0	1	1	0	0	0	N no	yes
CM0021701	PONTFADOG	SJ 24170-38440	0	1	1	0	0	0	N no	yes
BN0269501	LLANYBRI	SN 33350-12870	0	1	1	0	0	0	on W	yes
AW1005101	PRESTEIGNE	SO 32400-64300	0	1	1	0	Ģ	0	E yes	ye s
AW1001101	CROSS GATES	SO 08900-64680	0	1	1	0	0	0	E yes	yes
CG0077701	PENTREFOELAS	SH 87000-51300	0	1	1	0	0	0	N no	yes
AH1002901	PANDY	SQ 33560-22730	0	1	1	0	0	0	E yes	yes
CG0110101	GALLTYFOEL	SH 58300-62700	0	1	1	0	0	0	N no	yes
CM0018901	LLANSANNAN	SH 93710-66010	0	1	1	0	0	0	N yes	yes
CM0123501	MELIN-Y-WIG	SJ 04090-48680	0	1	1	0	0	0	N no	yes
AL1003401	ULLINGSWICK (DINMARSH)	SO 58670-48930	0	1	1	0	0	0	E no	yes
AD0000901	TRECASTLE	SN 88000-29000	0	1	1	0	0	0	E no	yes
AH1003701	TARRINGTON	SO 61520-41490		1	1	0	0	0	E no	yes
	kington	SO 30640-57000	0	_		0	0	0	E yes	yes
AD0001701	TALYBONT	SO 12200-22800		_		-	0	0	E no	yes
	l Gyrn Goch	SH 40350-48630		1	1	0	0	0	N no	yes
AG0007801	PONTSTICILL	SO 05900-10700	0	1	1	0	0	0	E no	yes
AD000250:	L LITTLE MILL	SO 33600-02600	0	1	1	0	0	0	E no	yes
AN011560	L PENYBONT	SO 11630-63840		1	1	0	0	0	E no	yes
AC014070	L LLANDDEW	SO 05200-30900		1	1	0	0	0	E no	yes
BG000040	l maenclochog	SN 07600-26800	0	1	1	0	0	0	₩ по	yes
AW100270	LLANDEGLEY	SO 13760-63080	0	1	1	0	0	0	E no	yes
AB004610	1 LLANELLEN	SO 30300-11100	0	1	1	0	0	0	E yes	yes
AW100530	1 TALGARTH	SO 15100-34700	0	1	1	0	0	0	E no	yes
CM009500	1 HANMER ARROWRY	SJ 46130-38980	3 0	1	1	a	0	0	N yes	yes
AW100380	1 LLANWRTHWL	SN 97700-63050	o C	1	1	0	0	0	E no	yes

Consent	Works Name	Works Grid											
Ref.	Walla tidling	Ref								Recently			
		*	1	2	3	4	5	6		done			
			- -		- - -						- -		
AN0179401 AN0035901	LLWYNON (OLD WTW AND LLWYNON	H SO 01300-11200 SO 00378-30142			1	0	0		E	no	-	es	
175	CRADOC	50 003/8-30142	0	1	T	U	v	U	E	no	Y	es	
- · -	ST NICHOLAS	SM 89900-35700	0	1	0	0	1	ο	W	no	n	0	
176			•	_		•	_	•	•••	1.0	•••	_	
BG0037301	NANTERNIS	SN 36800-57100	0	1	0	0	0	1	W	yes	v	es	
CM0063901	PWLLGLAS	SJ 11950-54650	0	1	0	0	0	1	N	yes	-	es	
CG0078101	LLANFAGLAN	SH 46800-59400	0	1	0	0	0	1	N	no	У	es	
	LLANGERNYW	SH 87800-67580		1	0	0		1	N	yes	Y	es	
	CROSS INN AND NEBO	SN 54600-65200		1	0	0	-	1	W	yes	Y	es	
	STOKE LACY (WESTBURY)	SO 62390-50460		1	0	0	-	1	E	Уeз	_	es	
BN0085301		SN 64060-31820		1	0	0	-	1	W	no	-	es	
	GWALCHMAI EGLWYSBACH	SH 39500-75500 SH 80100-70900	0	1	0	0		1	N N	yes	-	es	
185	DOG TODACT	3A 80100-70900	·	_	u	٠	U	1	14	yes	Y	es	
	KINGSLAND	SO 45370-60560	0	1	0	0	٥	0	Е	no	V	es	
	CASTLEMORRIS	SM 90200-31600		1	0	ō	0	-	W	no	n		
AW1001701	VELINDRE	SO 18400-36700	0	1	0	0	0	0	Е	no		es	
AH1002201	MORETON-ON-LUGG	SO 51350-45180	0	1	0	0	0	0	E	no	-	es	
CG0134401	BRYNREFAIL (DEINIOLEN)	SH55700-63000	0	1	0	0	0	0	N	no	y	es	
	ASHFIELD ROW	SN 69430-28430	0	1	0	0	_	0	W	no	У	es	
	LLANGUNLLO	SO 21500-71000		1	0	0		0	E	no	Y	es	
AND106401		SO 43900-02050		1	0	0	_	0	E	no	Y	es	
	LUSTON & YARPOLE	SO 49100-63700		1	0	0	_	0	E	по	_	es	
	LLANARMON-YN-IAL CWM PENMACHNO	SJ 19000-55880		1	0	0	0	0	N	yes	-	es	
	PANDY TUDOR	SH 76790-48030 SH 86110-64330		1	0	0	0		N N	no	_	es 	
	PENYSTRYT	SJ 19500-51800		1	0	0	0	-	N	no no	-	es	
	LLANCARFAN	ST 05200-69600		1	ō	o	0	0	E	no	_	68 68	
	ROSS (NEW) LOWER CLEEVE	SO 58490-23320		ī	ō	ō	ō	-	Ē	no	-	es es	
BG0016901		SM 97400-22600		1	Ó	0	0	0	W	no	ne		
CG0108101	LLANIESTYN	SH 26700-33600	0	1	0	Ō	0	0	N	yes		es	
CM0078101	ST ASAPH	SJ 03220-75070	Q	1	0	0	0	0	N	no	_	ė s	
CM0062601	LLANYCHAN (RHEWL/GELLIFOR)	SJ 11420-61770	0	1	0	0	0	0	N	no	y	es	
CG00B6001	RHIWLAS	SH 57300-66200	0	1	0	0	0	0	N	yes	y	es	
205			_		_	_							
	CAPEL BANGOR DEVILS BRIDGE	SN 65000-80300 SN 73800-76700	0	0	1	0	1		₩ ₩-	no		ės	
207	DEVILS BRIDGE	SN /3800-/6/00	0	0	. 1	0	3,	1	¥i.	UO	no	•	
	TREMEIRCHION	SJ 06800-72610	0	0	1	0	1	n	N	yes	10	es	
208			•	٠	-	·	-	ŭ	••	, CD	γ.		
CM0105501	TATTENHALL	SJ 47830-59180	0	0	1	0	0	1	N	no	V	es	
CM0072901	CLAWDD NEWYDD	SJ 08250-52830	0	0	1	0	0	1	N	yes	ne		
BC0017801	CARWAY	SN 46000-06900	0	0	1	0	0	1	W	yes	по	0	
	HEREFORD (EIGN)	SO 52210-38760	0	0	1	0	0	1	E	yes	Ϋ́	es	
	CLARBESTON ROAD NO 1	SN 01200-20900	0			O		1	W	no	y	es	
	NEWCHAPEL	SN 22600-39200	0	0	1	0	0	1	W	yes	y	es	
214			_	_	_	_	_	_					
-	NARBETH WEST	SN 10300-14200		0		0	0	0	W	yes	-	es	
216	GLEWSTON (WILSON)	SO 55550-23370	0	٥	1	0	O	0	E	no	no	0	
	TIERS CROSS	SM 90300-10800	0	0	n	1	1	0	W	no	no	_	
217		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	•	٠	_	•	•	••		110	•	
CG0078701	LLANFROTHEN GARREG	SH 60900-42000	0	0	0	1	0	1	N	no	no	0	
218													
CM0009001	CAERWYS	SJ 13330-72890	0	0	0	0	1	1	N	yes	y.	eø	
219													
	GRAIGFECHAN	SJ 14430-54350	0	0	0	0		-	N	yes	y	es	
AL1002701		SO 39510-61140		0		0	0	_	E	yes	n	0	
	CLEHONGER	SO 44960-37900		0		0		_	E	no	-	es	
	GREAT GRAIG - CROSS ASH	SO 40600-20200		0		0		1	E	no	n		
CM0101301		SJ 27500-41620		0		0		1	N	no	n		
AL1000201 225	LEOMINSTER (BARONS CROSS)	SO 47350-58030	0	0	U	0	0	1	Е	no	У	es	
_	PENRHOS CAMP	SH 33900-33800	0	0	^	0	۸	٥	N	100	_	_	
	LEOMINSTER (WORCESTER RD)	SO 50330-58070		0	0			0	E	yes yes	n		
	LLANDDEWI RHYDDERCH	SO 35280-13100		0	0			-	E	no		es	
AN0180901		ST 47900-90700		0	0		0		E	yes	n		
	LLANBEDR D C	SJ 13520-59100		0	0	0	0	0	N	no		es	
AH1002301	MORDIFORD	SO 57090-38520	0	0	0	0	0	0	- · E-	no	n		
	CEFN MAIRWEN	SJ 02070-72100		0	0	0	0	0	N	no	ก	0	
***********			2 5 3 8 5		-							*===	

<u>Kev to Criteria</u>

- 1 Cause of EC Directive failure in receiving watercourse
- 2 Biological Impact caused by the STW
- 3 Aesthetic Impact caused by the STW
- 4 Cause of LTRQO failure in receiving water 5 Constraints caused by the STW on the uses of the receiving water 6 Hydraulic overloading of the STW

	. = = = = = = = = = = = = = = = = = = =									
Consent	Works		orks Grid							
Ref.		"		Kank	my	CI	ıte	LIA	Area	
Rel.	пате		Ref							Recently
							4	5		Done
				-						
BF0083607	LLANELLI	SS	50800-98800	2	1	2	1	2	W	no
BE0177701	BURRY PORT	CN	45300-00700	-	1		٦.	2	141	
									W	no
BC0000201	PWLL	SN	48300 00500	2	1	1	1	2	W	yes
CM0014201	HESWALL	SJ	24900-81790	1	1	2	1	2	N	no
CC0051701	PORTHMADOG	CU	57300-39000	,	1	2		•	N	
CG0051701	r OK I III WADOO	511	3/300-33000	-	-	2	•	4	14	no
BH0053401	PARCYSPLOTTS	SN	39800-17800	0	2	1	0	2	W	no
BP0062301	LLANGRANCG (SEPTIC TANK & OUTF	SN	30800-54200	0	1	2	1	2	W	no
						_		_		
BB00C34G1	COOPUTOV	C17	05050 30050			_	_	_		
BP0063401			95250-39060		1				W	no
BP0043802	OGOF MARTHA	SN	95390-37760	0	1	2	0	2	W	no
BP0151701	FISHGUARD	SN	96000-37700	0	0	2	٥	2	W	no
				_		_		_		
DD3006301	DOMEDONE (MODERNO MALIE)		02700 25500		_					
BB3006701	PENYBONT (MERTHYR MAWR)	55	87700-76600	1	2	1	1	U	W	у е в
BC0003201	BYNEA AND HALFWAY STW	SS	55300-98400	1	1	1	1	2	W	yes
										•
BD0077701	SAUNDERSFOOT	CM	12500-04900	3	1	1	^	2	W	
DF0077701	SHOWDERST OCT	314	12300-04900	_	•	-	٠	-	**	no
BC0003001	GOWERTON	SS	59600-97300	1	1	0	1	2	W	no
CM0058401	FLINT	SĴ	25780-72440	0	2	O	1	O	N	no
				-	_	_	_	•	••	
000115101	MAX I MAX PORTI		30000 60600			_		_		
	MALLTRAETH		39800-68500		1			1	N	no
CM0063501	BAGILLT (EAST)	SJ	22320-75520	0	1	2	1	1	N	по
CM0017801	CHESTER	SJ	39520-66590	0	1	1	1	2	N	yes
				-	_	_	_	-		,
	0			_	_		_	_		
BH0074101	CARDIGAN	SN	17200-46200	U	0	1	1	2	W	no
BF0147002	KIDWELLY	ŞN	39900-06200	1	1	0	1	0	W	yes
										-
CC0078501	CAERNARFON	СП	48100-61800	•	1	,	1	1	N	
CG00,0301	CAERTARYON	ąп	40100-01000		_	-	-	_	N	no
CM0037001	CONNAHS QUAY	SJ	30240-69380	O	1	1	1	0	N	no
CG0112001	CRESCENT	SH	63200-14800	0	1	1	0	1	N	no
CG0093701			58200-27160		ī				N	=
690033701	MANUELEX	311	30200-2/100	0	_	•	v	_	14	no
CG0113301	MAENTWROG	SH	66100-40300	0	1	1	0	0	N	no
CG0145101	LLANDANWG	SH	57170-28600	0	1	1	0	0	N	no
BD0062101	ABERARTH	CM	47900-64000		1	0	1	,	W	no
BF0002101	WELLIN .	311	4/300-04000	•	_	U		1	•	no
BC0018601	LLANNANT	SS	57200 99500	0	1	0	1	0	W	yes
cm0063601	BAGILLT (WEST)	SJ	21350-76630	0	1	0	1	0	N	no
CM0029801	GREENFIELD	SJ	19900-78160	0	1	0	1	0	N	no
250055301	LLANDEGFAN		F. C. D. C. D. D. D. C. D. D. C. D.		_			0	••	
CG0022301	LLANDEGRAN	SH	56200-72800	U	U	1	1	U	N	no
CG0093501	TREBORTH	SH	53900 70900	0	0	1	0	1	N	no
CG0144901	HADI.FCH	cu	56900-31900		n	1	n	n	N	no
C30144301	and appended ball	311	20200-31300		u	-	٠		14	110
					_	_	_	_		
	LLANFAIRPWLL		53000-71000					0	N	no
CG0084901	LLANGOED	SH	61300-79300	0	0	0	1	0	N	no
RPAACOOA	ST DAVIDS	CM.	74100-24500	0	n	٥	n	n	W	yes
										-
	OVERTON		46500-85000					0	W	no

Kev to Ranking Criteria

- 1 Cause of EC Directive Failure in receiving water 2 Position of outfall in relation to low water
- 3 Aesthetic Impact caused by STW
- 4 STW discharging to a specially designated area
 5 Constraints caused by the STW on the uses of the receiving water

4.0 <u>ACTION REPORT</u>

This section outlines the framework which will govern consent reviews and the improvement action programmes for STWs in each of the three categories. Requirements for future STWs performance monitoring programmes are discussed subsequently (section 5)

4.1 Category A Works.

No remedial action will be required at the 593 Category A works (Appendices 5,6,7) provided that the receiving water quality continues to meet objectives. It is therefore important to ensure that there has been no recent deterioration in receiving water quality, attributable to the discharge, since the original assessments were completed. A significant number of current assessments of STWs into Category A have not been biologically assessed. Where a biological assessment has never occurred at a Category A STW, this will be actioned for future monitoring.

However, it may be appropriate to consider consent reviews on the basis of chamical quality only at this stage in the knowledge that most Category A STWs serve small populations or are subject to high dilution in the receiving water. It is therefore proposed that Category A works consents are considered for review as follows:

4.1.1. Review of Category A STWs Consents

NRA initiated consent reviews and resources required will be considered by the Regional Consents Group. The objective of such reviews will be to maintain protection of the receiving water whilst achieving cost savings to the NRA where appropriate (e.g. conversion to Descriptive will reduce chemical monitoring workload and improve pollution prevention controls of the works process).

Category A STWs existing consents are generally of the following types:

- (a) Calculated, river needs consents to achieve RQO.
- (b) Minimum standard numeric consents (e.g. 150/150 WWA issued consents, 50/60 NRA issued consents).
- (c) Performance based consents (whether time-limited or not).
- (d) Descriptive consents (populations <-250).

Apart from exceptional cases, it is not considered necessary to initiate a regional review of consents within types (a) to (c) unless they are candidates for the issue of a Descriptive consent (see below). Such reviews may become necessary in the future as a result of national initiatives or statutory requirements.

For works with consents types (b) and (c), an important case to note is where such consents would legally allow the effluent to deteriorate within existing numeric consent limits and which may cause significant impact on the receiving waters; AMP2 Guidance does not allow for review of these consents in advance of the agreed programme. However, such works should be identified for inclusion in a sub-category A2. Such changes as may be possible within the DCWW investment programme will be utilised to effect

improvement of such works where necessary, taking account current priorities within Category B works. However, where anincrease in load would result as a consequence of an INCREASE IN FLOW arising from diversion of other discharges, then these will be treated as a new discharge and subject to review in line with AMP2 Guidance.

The Regional Consents group will identify all Category A works which will be reviewed to a Descriptive consent in line with AMP2 Guidance:

- (i) Population served is <-250. *
- (ii) Effluent contains no trade effluent.
- (iii) Appropriate treatment is provided (i.e. trickling filter, activated sludge plant, rotating biological contactor, reed bed or equivalent alternative system).
- (iv) The discharge is not close to an area with public access.
- (v) There is no significant environmental impact.

(NB Previous Regional criteria of 100:1 dilution or Warn-Brew prediction of 500mg/l BOD no longer apply)

* In exceptional cases only, descriptive consents for works with populations between 250 and 2000 may be considered.

4.2 Category B Works.

The NRA will require appropriate remedial action by DCWW to improve the quality of discharges from the 268 STWs in the Category B lists for inland and tidal water discharges. Those STWs which are ranked highest in the B lists are in most urgent need of attention and the DCWW investment programme should reflect these priorities. Improvements to these STWs should be completed within a timescale agreed with the NRA. There may however be other, overriding reasons, which have not been covered by this strategy, which will determine the priority of some works (eg. local political/public pressure or improvement schemes which link works by catchment area) but these will be the exception and will require adequate justification.

In consultation with DCWW, the NRA should review discharge consents for those works which do not at present have long-term, environmentally protective consents, in order to provide effective protection for the receiving waters. This will apply to all works in Category B whether they are meeting their current consents or not. DCWW will then need to take appropriate action to ensure compliance with these revised consents. It is recognised that this is a long-term objective which will only be achieved over an extended time period. The resource implications of reviewing these consents should be considered by the Regional Consenting Group.

It is also recognised that capital expenditure may already be planned or underway at certain STWs to improve discharge quality in order to comply with existing consent conditions. Wherever possible, scheduled capital expenditure for STWs improvements should be reviewed to ensure that work which is planned, or underway, will achieve compliance with new environmentally protective consents rather than existing ones.

Some works in Category B have already had remedial work carried out on them but any resulting improvements in receiving water quality have not yet been assessed. These works will be reassessed as a matter of priority in 1994 and if improvements are demonstrated will be dropped from the B list. However, the impact of other Category B works has been recently reassessed and, despite remedial work, no or inadequate improvements in receiving water quality have been demonstrated. Such works will require further consideration in the AMP2 (Asset Management Plan 2 1995-2015) investment programme.

4.3 Category D Works

The 21 works which have been abandoned since Phase 1 should have their consents revoked and an assessment of the recovery of the receiving water quality should be made as soon as possible. Wherever possible, routine chemical and biological monitoring data should be used to demonstrate such a recovery. All these abandoned works were previously in Category B and improvements in receiving water quality should therefore be evident.

4.4 Other Priorities for AMP2

It is of course recognised that the priorities arising from this strategy will have to be considered in the light of other demands for capital spending arising from EC Directives (eg. the UWWTD) and other initiatives (eg. AMP2 Guidelines), as well as other NRA strategies (eg. Bathing Waters Strategy, CSO Strategy) which may take priority in the investment programme.

4.5 Further Works

Following the commencement of a Total Discharge Strategy in Welsh Region a number of consents have been highlighted which are Dŵr Cymru Welsh Water owned STWs which have not been assessed within this strategy. Investigations should be made to establish if these works exist and if they are having an environmental impact, although this is considered unlikely. These STWs are listed in Appendix 8.

5.0 PERFORMANCE MONITORING PROGRAMMES - RECOMMENDATIONS

In principle, the NRA should continue to monitor the performance of sewage treatment works on a regular basis. Wherever possible biological and aesthetic techniques should be used to assess the impact of a discharge on receiving water quality, although chemical monitoring must continue for assessing numeric consent compliance in line with the guidance set out in the statutory monitoring programme. The chemical assessment of the quality of receiving waters at works not subject to statutory requirements, but where biological monitoring is not possible, should also continue.

5.1 Biological Monitoring

Biological impact assessments of receiving waters should continue and a rolling programme should be established to ensure that biological information is reasonably contemporary.

A suggested maximum period between surveys is three years, but the resource implications of such a rolling programme should be examined by the Regional Biology Group and an acceptable frequency of sampling determined within the resources available. Category A works with descriptive consents should be included in this programme. However, in order to conserve resources, Category A works should be omitted from this rolling programme if all the following criteria apply:

- o The works is compliant with an environmentally protective numeric consent.
- o There have been no changes in works operation which might lead to a deterioration in effluent quality.
- o The effluent dilution is greater than 100:1

Following any remedial works to improve discharge quality, a survey to assess aesthetic and biological improvements should be completed as a matter of priority. Only when environmental improvements have been confirmed should a works be dropped from the Category B list. Some works in Category B have been reassessed since remedial work was completed, but no or inadequate improvements in receiving water quality was evident and such works have remained in Category B.

The principle of self regulation and impact assessment of new discharges by the discharger is being considered at a National level. If implemented, this would reduce the requirements for biological assessments by the NRA.

In addition to techniques currently used to assess the biological impact of sewage treatment works discharges, it is recommended that the use of RIVPACS predicted:observed BMWP score ratios for the receiving water should be considered for inclusion in the biological impact assessment methodology. This technique gives an assessment of the baseline receiving water quality as well as a further measure of a discharge's impact. However, the RIVPACS model cannot currently be applied to small streams and the

implications of such a development should therefore be considered by the Regional Biology Group and recommendations made.

5.2 Chemical Monitoring

Consent compliance samples must be taken at all works with numeric consents, including Category A works (see Section 4.1.1 above) in accordance with the guidelines set out in the Statutory Monitoring Programme. Chemical monitoring should also be used to assess environmental impacts in receiving waters at sites where it is not possible to take biological samples (eg. due to deep water). Area Biologists should advise relevant Pollution Control Officers and Regional Water Quality Planning which works fall into this category each year so that necessary steps can be taken. Such sampling, along with any other requirements for chemical sampling (eg. for special investigations for consent determinations) should follow the Permissive Monitoring Programme Guidelines.

5.3 Aesthetic monitoring

Information from chemical and biological monitoring of STWs should be augmented by information on compliance with aesthetic standards. NRA staff visiting STWs to take consent compliance samples and/or carry out impact assessments should also complete an aesthetic assessment of the discharge. Standards used to assess aesthetic impact should be similar to those developed for protection of the Basic Amenity use. This may be time consuming for samplers where the discharge point is a long way from the works and the alternatives for collecting this information need to be examined. The methodology, reporting and resource implications of this recommendation should therefore be referred Pollution Control Operations Group consideration and implementation as appropriate.

6.0 <u>RECOMMENDATIONS</u>

 DCWW and the NRA should discuss investment priorities and timetables for conducting improvement work at those STWs which fall into Category B. The NRA's priorities for action should be determined by the ranking of the works in the Category B lists, but some well justified exceptions, which may override these priorities, are anticipated.

ACTION: 'K' liaison and WQ Planning

2. The relative priority of inland and tidal STWs improvements should be determined alongside the priorities arising from the Combined Sewer Overflow (CSO) and Bathing Water Strategies.

ACTION: 'K' liaison and WQ Planning

3. The NRA should conduct consent reviews of all Category B STWs, in a phased manner consistent with the timetable for improvement work agreed with DCWW within their AMP2 investment programme.

ACTION: Regional Consenting Group

4. The NRA should review the consents within Category A STWs where they are candidates for the issue of a Descriptive consent. Consents for Category A works which would legally allow the effluent to deteriorate within existing numeric consent limits which may cause significant impact on the receiving waters should be identified (Category A2). The NRA should determine a plan of action with the discharger to deal with these works.

ACTION: Regional Consenting Group

5. The Regional Consenting Group should draw up the guidelines and programme for implementing such reviews taking into account other priorities and available resources.

ACTION: Regional Consenting Group

6. Where they are not covered by routine biological monitoring sites, improvements in the biological quality of the receiving waters should be assessed, following the removal of discharges from the 21 abandoned works identified in this strategy. This should be completed in 1994.

ACTION: Area Biologists and WQ Planning

7. Following investment in remedial work by DCWW, biological assessments should be carried out on the improved STW effluents to reassess their impact on the receiving water quality. Only when satisfactory improvements have been demonstrated should works be dropped from the Category B list. This should be a high priority for the future biological work programme and, for the 76 inland works in Category B at which remedial work has already been done, biological assessments should be completed in 1994

ACTION: Area Biologists and WQ Planning

8. In the longer term a rolling programme of biological assessments of all sewage works should be implemented to ensure reasonably contemporary data is available. The frequency of surveys should be determined after the resource implications have been examined by the Regional Biology Group.

ACTION: WQ Planning

9. This rolling programme should include all those Category A STWs where a biological assessment has never been performed, and which are assumed to be having no environmental impact, to confirm that this is the case.

ACTION : WQ Planning

10. Chemical sampling should only be used to assess the environmental impact of STWs on receiving waters where biological sampling is impractical or for special investigations connected with consent determination. In both instances sampling should be consistent with the Permissive Monitoring Programme Guidelines.

ACTION: Pollution Control

11. Aesthetic impact criteria should be incorporated into the assessment of STWs effluents on a routine basis. PCOG should determine the methodology, frequency, reporting guidelines and appropriate training needs for this work.

ACTION : PCOG

12. An investigation of the likely environmental impact of the additional STWs indicated in Appendix 8 should be instigated.

ACTION : PCOG

APPENDIX 1.

Details of the Information used for the Assessment of the Environmental Impact of STWs in Phase 2.

For each criterion, a question is posed about the environmental impact of the given discharge. Answers to this question describe the degree of environmental impact associated with the discharge. Possible answers are listed below in order of the impact exerted upon the environment - i.e. the answer representing the most adverse impact is listed first. Information used to answer the questions was collected between June 1992 and May 1993. All information may not have been gathered for each works as the questions were posed to different groups of STWs at different stages of the strategy.

1) Compliance with Receiving Water Ouality Objectives

TO BE COMPLETED FOR DISCHARGES TO INLAND WATERS ONLY.

A) Question: What is the Long Term River Quality Objective target class for the receiving stretch? Please give informal LTRQO for unclassified receiving waters and indicate that it is an informal objective by placing in brackets (if in doubt please give objective for nearest downstream classified stretch).

Possible answers: 1A

1B

2

- B) Question: What is the current NWC/DOE class for the receiving stretch (1991 survey)?
- C) Question: What is the extent to which the receiving stretch (or, for unclassified streams, the nearest downstream stretch for which information is available) is compliant with the LTRQO?

Possible answers: - 2 Gross failure to meet LTRQO.

- 1 Marginal failure to meet LTRQO.
- O Compliant with LTRQO.
- N Receiving water quality better than LTRQO.
- D) Question: Does the STW cause non-compliance of the receiving stretch with the Long Term Water Quality Objective?

Possible answers: - 2 Strong likelihood that STW causes non-compliance.

- 1 STW may cause non-compliance.
- O STW does not cause non-compliance.
- E) Question: Is the STW discharge the sole / major cause of non-compliance or are other pollutant inputs also present?

Possible answers: - 2 STW is sole / major cause of non-compliance.

- 1 STW is one of a number of inputs causing non-compliance.
- O STW does not contribute to non-compliance.

F) Question: On the basis of samples taken over the past THREE years (31.6.89 - 31.6.92) does the receiving stretch comply with quality standards for dissolved oxygen? Use look-up table to assess compliance as a 95%-ile with the following standards:

Target class 1A: >80% saturation
Target class 1B: >60% saturation
Target class 2: >40% saturation

Possible answers: No (N)
Yes (Y)

G) Question: On the basis of samples taken over the past ONE year (31.6.91 - 31.6.92) does the receiving stretch comply with quality standards for dissolved oxygen? Use look-up table to assess compliance as a 95%-ile with standards listed for Question 9.

Possible answers: - No (N) Yes (Y)

H) Question: On the basis of samples taken over the past THREE years (31.6.89 - 31.6.92) does the receiving stretch comply with quality standards for biological oxygen demand? Use look-up table to assess compliance as a 95%-ile with the following standards:

Target class 1A: <3 mg/1 BOD5 (ATU)
Target class 1B: <5 mg/1 BOD5 (ATU)
Target class 2: <9 mg/1 BOD5 (ATU)

Possible answers: No (N)
Yes (Y)

I) Question: On the basis of samples taken over the past ONE year (31.6.91 - 31.6.92) does the receiving stretch comply with quality standards for biological oxygen demand? Use look-up table to assess compliance as a 95%-ile with standards listed for Question 11.

Possible answers: No (N) Yes (Y)

J) Question: On the basis of samples taken over the past THREE years (31.6.89 - 31.6.92) does the receiving stretch comply with quality standards for ammonia? Use look-up table to assess compliance as a 95%-ile with the following standards:

Target class 1A: <0.4 mg/l NH4⁺
Target class 1B: <0.9 mg/l NH4⁺

Target class 2: No standard. Please state whether ammonia load constrains coarse fishery use.

Possible answers: - No (N) Yes (Y)

K) Question: On the basis of samples taken over the past ONE year (31.6.91 - 31.6.92) does the receiving stretch comply with quality standards for ammonia? Use look-up table to assess compliance as a 95%-ile with standards listed for Question 13.

Possible answers: No (N)
Yes (Y)

2) Coastal / Estuarine Water Quality

TO BE COMPLETED FOR DISCHARGES TO TIDAL WATERS ONLY.

- A) Question: Does the discharge contribute to unacceptable dissolved oxygen levels in the receiving water?
 - Possible answers: 2 STW is sole / major cause of unacceptable dissolved oxygen levels.
 - 1 STW is one of a number of inputs causing unacceptable dissolved oxygen levels.
 - O STW has no adverse impact on dissolved oxygen levels.
- B) Question: Does the discharge contribute to unacceptable ammonia levels in the receiving water?
 - Possible answers: 2 STW is sole / major cause of unacceptable ammonia levels.
 - 1 STW is one of a number of inputs causing unacceptable ammonia levels.
 - O STW has no adverse impact on ammonia levels.
- C) Question: Does the discharge contribute to unacceptable bacterial concentrations (<u>E</u>. <u>coli</u> / coliforms) in the receiving water?
 - Possible answers: 2 STW is sole / major cause of unacceptable bacterial concentrations.
 - 1 STW is one of a number of inputs causing unacceptable bacterial concentrations.
 - O STW has no adverse impact on bacterial concentrations.
- D) Question: Does the discharge contribute to unacceptable nutrient levels in the receiving water?
 - Possible answers: 2 STW is sole / major cause of unacceptable nutrient levels.
 - 1 STW is one of a number of inputs causing unacceptable nutrient levels.
 - O STW has no adverse impact on nutrient levels.

- E) Question: Does the receiving water provide adequate dilution and dispersion to meet microbial and aesthetic requirements?
 - Possible answers: 2 Dilution / dispersion unsatisfactory to meet microbial and aesthetic requirements.
 - 1 Dilution / dispersion unacceptable to meet aesthetic requirements alone.
 - O Adequate dilution / dispersion available.
- F) Question: Is the receiving water specially designated for conservation purposes in any way? Indicate what the designation is.
 - Possible answers: 1 Receiving water designated for conservation
 - O Receiving water not designated for conservation
- G) Question: Where is the outfall in relation to Mean Low Water Springs?
 - Possible answers: 2 Above MHWS
 - 1 Between MHWS and MLWS
 - O Below MLWS
- 3) Compliance with EC Directives
- A) Question: Does the STW cause non-compliance of the receiving stretch with any EC Directives?
 - Possible answers: 2 Strong likelihood that STW causes non-compliance.
 - 1 STW may cause non-compliance.
 - O STW does not cause non-compliance.
- B) Question: Is the STW discharge the sole / major cause of non-compliance or are other pollutant inputs also present?
 - Possible answers: 2 STW is sole / major cause of non-compliance.
 - 1 STW is one of a number of inputs causing non-compliance.
 - 0 STW does not contribute to non-compliance.
- C) Question: Which directives(s) (if any) does the receiving stretch fail to comply with?

Possible answers: - Name the Directive.

- 4) Receiving Water Uses
- A) Question: Where is the closest downstream potable abstraction?
 - Possible answers: 0 No potable abstraction within 1000 metres downstream.
 - 1 Potable abstraction 500 1000 metres downstream.
 - 2 Potable abstraction within 500 metres downstream.

B) Question: Is there a bathing beach in the vicinity of the discharge?

Possible answers: 0 No bathing use in vicinity of discharge.

- 1 Non EC identified bathing water influenced by discharge.
- 2 EC identified bathing water influenced by discharge.
- C) Question: How much other water contact recreation is in the vicinity of the discharge?

Possible answers: 0 Negligible water contact recreation in vicinity of discharge.

- 1 Occasional water contact recreation in vicinity of discharge.
- 2 Frequent water contact recreation in vicinity of discharge.
- D) Question: Is there a shellfishery in the vicinity of the discharge?

Possible answers: 0 No shellfishery influenced by discharge.

- 1 Shellfishery in vicinity of discharge but discharge has no known public health impact.
- 2 Discharge has known public health impact on shellfishery.
- E) Question: What is the fishery status of the receiving water?

Possible answers: - 0 Cyprinids only.

- 1 Migratory salmonids.
- 2 Resident Salmonids.
- F) Question: What is the Amenity use of the receiving water?

Possible answers: - 0 Little or none.

- 1 Moderate.
- 2 High.
- G) Question: What is the conservation status of the receiving water?

Possible answers: - 0 No site with significant conservation status within receiving stretch.

- 1 Non-designated or locally important conservation site within receiving stretch.
- 2 Designated conservation site within receiving stretch.
- H) Question: Does the discharge prevent or place any constraints on any of the receiving water uses listed above?

Possible answers: 0 No constraints on receiving water recognised uses.

- 1 Marginal constraints on receiving water recognised uses (please indicate which uses).
- 2 Significant constraints on receiving water recognised uses (please indicate which uses).

5) STW Features

- A) Question: What is the hydraulic loading of the STW?
 - Possible answers: 0 Works currently operating within design loading: no overloading foreseeable.
 - 1 Works operating at limit of design load and/or at risk from future development in the sewerage catchment area.
 - 2 Works currently grossly overloaded.
- B) Question: Is there any planned development in the sewerage catchment?
 - Possible answers: 0 No significant development planned in sewerage catchment.
 - 1 Significant development planned in sewerage catchment within next twenty years.
 - 2 Significant development planned in sewerage catchment within next ten years.
- C) Question: Is there any toxic or trade effluent in the works discharge?
 - Possible answers: 0 No toxic or trade effluent component in works discharge.
 - 1 Significant toxic or trade effluent component in works discharge.
- D) Question: What is the general state of the works?
 - Possible answers: 0 Satisfactory
 - Unsatisfactory (e.g. equipment frequently not operating or in poor repair, inadequate maintenance etc.).
- E) Question: Have there been any recent changes at the works?
 - Possible answers: 0 No recent changes (within three years).
 - Recent changes (e.g. plant upgrading, operational improvements, increase in loading).
- F) Question: Outline the nature of any recent changes which have been made at the works.
- G) Question: What is the approximate date at which any changes were made at the works?
- H) Question: Outline the nature of any planned changes you are aware of and whether you think the changes will lead to any improvement or deterioration in performance.
- I) Question: When will the planned work be completed?

J) Question: Is the discharge compliant with the consent?

Possible answers: - 0 Compliant with consent.

1 Formal sampling.

2 Prosecution pending.

K) Question: Is consent environmentally protective?

Possible answers: - 0 Yes.

1 No.

L) Question: Enter the number of public complaints received over the past 12 months (31.6.91 - 31.6.92) relating to separate incidents associated with the discharge.

6) Improvement work

A) Question: Should the works be in Category A or Category B of the STW Strategy?

Possible answers: - A Works satisfactory.

B Improvement work required in future.

B) Question: What would be the cost benefit of any improvement work?

Possible answers: - 0 Low: little benefit relative to cost of improvements at works.

1 Medium: moderate benefit relative to cost of improvements at works.

2 High: much benefit relative to costs of improvements at works.

- C) Question: Give comments on current problems, appropriate levels of treatment, and improvements required.
- D) Question: Will revenue or capital expenditure be required to bring about the required improvements?

Possible answers: - R Revenue expenditure

C Capital expenditure

- E) Question: What would be the consequences of doing nothing to improve the current situation?
- F) Question: What is the likely long term consent condition for BOD limits (95%-ile compliance)?

Possible answers: - 10 - 20

20 - 30

30 - 40

40 (minimum standard)

If the long term consent has already been determined, give the actual BOD limit.

G) Question: What is the likely long term consent condition for NH3 limits (95%-ile compliance)?

Possible answers: - <5

If the long term consent has already been determined, give the actual NH3 limit.

H) Question: Any further relevant comments about the sewage treatment works?

APPENDIX 2

Biological Impact Rating

The assessment was carried out by taking biological samples, using the standard 3 minute kick, upstream and downstream of the mixing zone of each discharge in order to apply BMWP scores, and noting the presence of sewage fungus within and downstream of the mixing zone. Four criteria were examined to derive a biological impact rating, namely:

1.	>40% decrease in BMWP score D/S cf. U/S ?	YES/NO
2.	Decrease in no. of > 3 high scoring taxa ?	YES/NO
3.	Sewage fungus present in mixing zone?	YES/NO
4.	Sewage fungus present D/S mixing zone?	YES/NO

Those STWs with a biological impact rating of 1 or 2 were assigned to Category B and those with a biological impact rating of 0 were assigned to Category A.

APPENDIX 3

NATIONAL RIVERS AUTHORITY - WELSH REGION

SEWAGE TREATMENT WORKS AESTHETIC IMPACT INSPECTION SHEET

Works:

Receiving Water:

NGR:

Inspected by:

Date:

Time:

Below

mixing zone

Weather conditions:

River flow:

Effluent flow:

Spate / Normal / Low / Very low

High / Normal / Low

Please score as follows:

0 Absent

1 Trace

2 Sufficient to be objectionable

Upstream of In mixing discharge zone Colour Turbidity Odour Grease / oil Foaming Excessive biological growth: - Sewage fungus - Non sewage fungus Sewage derived litter: - Plastic - Non plastic Terrestrial derived litter Identifiable

Photo taken:

faecal solids

Yes / No

Reference number:

COMMENTS:

Sediment

Method for Aesthetic Impact Assessment using information gathered at site visits

The data on aesthetic impact was summarised to a single value by summing the values for each factor in each zone (excluding terrestrial litter) and subtracting the total for the U/S zone from the total for the Mixing Zone + D/S Zone.

The higher the final value, the greater the aesthetic impact the STW is having on the receiving watercourse.

This method of assessing aesthetic impact was not carried out before 1992. For phase I of the strategy the aesthetic impact was assesed subjectively by taking into account the following factors:

- 1. Presence of sewage solids (eg. paper, plastic, detritus)
- 2. Presence of sewage fungus
- 3. Presence of sulphidic growths on the stream bed
- 4. "Discolouration" of water downstream of the discharge when compared with water upstream
- 5. Presence of sewage foam on the water surface
- 6. Compliance of the discharge with minimum standards of service.

Each works was then assigned a "Y" or a "N".

In order to be able to compare the two scoring systems those sampled in 92/93 were placed into bands:

- 2 Aesthetic Impact score > 10
- 1 Aesthetic Impact score > 0 <=10
- 0 No Aesthetic Impact recorded

Those assessed before 1992 were placed into the same bands using the following subjective method:

- 2 Large aesthetic impact in and below the mixing zone
- 1 Small aesthetic impact in and/or below the mixing zone
- 0 No aesthetic impact.

Criteria for prioritising Category B STWs

Criteria used to prioritise the Category B STWs for Remedial Action are listed below. For each criterion a question is posed about the environmental impact of the given discharge. Answers to this question describe the degree of environmental impact associated with the discharge. Possible answers are listed below in order of impact exerted on the environment. Information used to answer the questions was collected during June 1993.

ALL DISCHARGES:

- 1) Compliance with EC Directives
- A) Directive Failure: Does the STW cause non-compliance of the receiving stretch with any EC Directives?
 - Possible answers: 2 Strong likelihood that STW causes non-compliance.
 - 1 STW may cause non-compliance.
 - O STW does not cause non-compliance.
- B) Partial / Major cause: Is the STW discharge the sole / major cause of non-compliance or are other pollutant inputs also present?
 - Possible answers: 2 STW is sole / major cause of non-compliance.
 - 1 STW is one of a number of inputs causing non-compliance.
 - 0 STW does not contribute to non-compliance.
- C) Which Directive: Which directives(s) (if any) does the receiving stretch fail to comply with?
- 2) <u>Biological Impact</u>:
 - Information provided 2 Large biological impact
 - 1 Small biological impact
 - 0 No biological impact
- Aesthetic Impact: Where there is no objective assessment of aesthetic impact, a subjective judgement taking into account the following factors should be carried out:
 - 1. Presence of sewage solids (eg. paper, plastic, detritus)
 - 2. Presence of sewage fungus
 - 3. Presence of sulphidic growths on the stream bed.
 - 4. 'Discolouration' of water downstream of the discharge when compared with water upstream.
 - 5. Presence of sewage foam on the water surface.
 - 6. Compliance of the discharge with minimum standards of service.

And scored as follows:

- 2 Large aesthetic impact in and below mixing zone
- 1 Small aesthetic impact in and/or below mixing zone
- 0 No aesthetic impact

4) Compliance with Receiving Water Quality Objectives

INLAND WATERS ONLY:

- A) LTRQO: Provide the Long Term River Quality Objective target class (1A, 1B, or 2) for the receiving stretch. Please give informal LTRQO for unclassified receiving waters and indicate that it is an informal objective by placing in brackets (if in doubt please give objective for nearest downstream classified stretch).
- B) Partial / Major cause: If the receiving stretch (or, for unclassified streams, the nearest downstream stretch for which information is available) is not compliant with the LTRQO, is the STW discharge the sole / major cause of non-compliance or are other pollutant inputs also present?
 - 2 STW is sole / major cause of non-compliance.
 - 1 STW is one of a number of inputs causing non-compliance.
 - O STW does not contribute to non-compliance.

TIDAL WATERS ONLY:

- 5) <u>Position of Outfall</u>: Where is the outfall in relation to Mean Low Water Springs?
 - 2 Above MHWS
 - 1 Between MHWS and MLWS
 - O Below MLWS
- 6) <u>Special Designation</u>: Is the receiving water specially designated for conservation purposes in any way? Indicate what is the designation.
 - 1 Receiving water designated for conservation.
 - O Receiving water not designated for conservation.

ALL DISCHARGES:

- Constraints on uses: Does the discharge prevent or place any constraints on any of the following receiving water uses?
 Potable Abstraction, Bathing, Other Water Contact Recreation, Shellfishery, Fishery Status, Amenity Use, Conservation Status.
 If so indicate which use(s) and score as follows:
 - O No constraints on receiving water recognised uses.
 - 1 Marginal constraints on receiving water recognised uses (please indicate which uses).
 - 2 Significant constraints on receiving water recognised uses (please indicate which uses).
- 8) <u>Hydraulic loading</u>: Score as follows:
 - Works currently operating within design loading: no overloading forseeable.
 - 1 Works operating at limit of design load and/or at risk from future development in the sewerage catchment area.
 - 2 Works currently grossly overloaded.

CONSENT REFERENCE	WORKS NAME	CLASS/ UNCLAS		LTRQO	USES CONSTRAINED	COMMENTS
CM0040601	GRESFORD	С	FRESHWATER FISH	18	0	
CM0017601	RUTHIN	Ċ	FRESHWATER FISH	1B	2 AESTHETIC, migratory fish	NUMEROUS COMPLAINTS OF SSO'S AND STORM TANK DISCHARGE, HISTORY OF FISH KILLS.
CM0094701	KELSTERTON	บั		(2)	1	100
CMD082201	QUEENSFERRY	С			1	RQO failure / aesthetic impact. Will be tidal by end 1994
CG0043701	DYFFRYN ARDUDWY	ប		(1A)	0	
CG0134001	WAUNFAWR (ARFON)	С		1 A	0	
CG0014001	EFAILNEWYDD	U		(1A)	0	
CG0088601	BETWS YN RHOS	C		1 A	1 Stock Watering	PUMP RATE EXCESSIVE CAUSING POOR SETTLEMENT AND OVERFLOWING OF PRIMARY TANKS
CG0073901	LLANRUG	C		1A	0	RECENT WORK AND IMPROVED DOSING SHOULD HAVE IMPROVED BIOL. IMPACT. REASSESS
CM0018301	CORWEN	С		1A	0	High dilution available
CM0188501	GRAIANRHYD	U		1B	0	MORE ROUTINE DESLUDGING WOULD IMPROVE PERFORMANCE
CM0052101	CERRIGYDRUDION	C		1B	0	Low, slow flow in receiving stream
CG0089101	LLANBERIS	C		1A	2 FISHERIES, RECREATION	BMWP NOT POSSIBLE. ALGAL BLOOMS FROM EUTROPHICATION
CG005B001	PENTRAETH	U		2	0	NEW STORM TANK SHOULD REDUCE IMPACT
CM0011801	LLANFYNYDD	С		1B	0	RIVER DRIES UP IN SUMMER. EXTRA DILUTION AVAILABLE D/S, OUTFALL SHOULD BE MOVED
CG0078001	LLANGEFNI	С		IB	2 SALMONIDS, FOAMING	MODIFICATION TO WORKS ON GOING
CM0081001	BUCKLEY TY GWYN	C		3	2 FISHERY/AMENITY	
CM0029701	SYCHDYN	ט		(2)	1	NO DILUTION. COMPLAINTS ETC. CONSTRUCTION WORK AT TIME OF 1993 BIOLOGY SURVEY.
CG0058801	LLAN FFESTINIOG	υ		(1A)	0	PRONE TO ACTIVATED SLUDGE CARRY OVER
CG0171601	ARTHOG GLASFRYN TERRACE	U		(1A)	0	SEPTIC TANK TO SMALL DITCH
CM0055401	LLANASA	υ		(2)	0	DEVELOPMENT PROPOSALS - CONSERVATION MAY BECOME A SERIOUS FACTORINSUFFICIENT DILUTION
CG0171801	ARTHOG TERRACE	บ		(1A)	0	
CM0018701	LLANEFYDD	Ü		(1A)	1 STOCK WATERING	NEW WORK HAS HELPED WORKS PERFORMANCE
CM0030801	LEESWOOD	U		(1B)	1 AMENITY	
CG0029101	ABERGYNOLWYN	С	NWC/FISH	1A	0	
CG0075801	LLANGYBI	U		(1B)	0	Possible serious infiltration problem
CM0038001	NORTHOP	Ü		(1B)	0	INSUPPICIENT DILUTION
CG0023201	BWLCHYLLYN	υ		(1A)	0	
CM0022201	PANDY	c			2 fishery, amenity	
CG0114601	LLAN PENMACHNO	C		1A	1 AESTHETIC	
CG0152101	DOLWYDDELAN	C		1A	1 AESTHETIC	
CG0156201	DOLWYD .	U		(2)	1 STOCK WATERING	SEASONAL SOAKAWAY WAS INEFFECTIVE, GROUND CONDITIONS UNSUITABLE
CM0080401	MALPAS (WHITCHURCH ROAD)	U		(1B)	1 AMENITY	SEWAGE DERIVED DEBRIS. ULTIMATE CONSENT MAY NEED IMPROVEMENT 2ND STAGE REVIEW CONSENT.
CM0066101	TREUDDYN	C		1B	1 AMENITY	D/S SUMMER FLOWS V.LOW. POORLY NITRIFYING WORKS, SEWAGE DEBRIS. NEED BETTER SCREENING
CG0110001	DINAS MAWDDWY	C	NWC/FISH	1A	0	
CG0083401	BLAENAU FFESTINIOG	C		1A	0	
CG0023501	TAI LON	Ü		(1A)	0	SEPTIC TANK ONLY
CM0007901	DOLYWERN	c		1A	0	May be incorporated unto Chirk Valley Scheme, will transfer flows to Five Ford's.
CM0021801	GLYNCEIRIOG	c	(1A	0	May be incorporated into Chirk Valley Scheme, will transfer flows to Five Ford's.
CG0076001	TRAWSFYNYDD (FRONGALED)	C	NWC/FISH	1A	0	
CM0077901	NANTGLYN (UPPER AND LOWE			1 A	0	High volumes of surface water entering works
CG0012701	DINAS	U		(1A)	0	

CONSENT REFERENCE	WORKS NAME	CLASS/ UNCLASS	DIRECTIVE S	LTRQO	USES CONSTRAINED	COMMENTS
CM0018901	LLANSANNAN	С		1 A	0	
CG0133701	TREGARTH	С		1A	0	Consent not reach NRA min standards. Causes gross discolouration in mixing zone
CM0107601	HENLLAN	С		1A	0	DILUTION A PROBLEM
CM0123501	MELIN-Y-WIG	С		1A	0	
CM0075801	HOPE	С		18	0	
CM0006001	LLANDRILLO	U		1A	0	Very large dilution available
CM0049001	TREFNANT	C	Freshwater fish	1B	0	
CG0110301	LLANDDEUSANT	U		(1A)	0	
CM0095001	HANMER ARROWRY	ט		(2)	0	Sewage debris d/s outfall should be reduced due to COPA sacs.
CG0108301	GYRN GOCH	ט		(1A)	0	
CG0110701	RHYDYCLAFDY	С		1A	0	NORMALLY GOOD EFFLUENT. NOT REQUIRE CAPITAL WORKS
CM0044301	WHITFORD	-	0	(1B)	0	
CM0001301	WORTHENBURY	С		1B	0	Descriptive consent. small works, large dilution
CG0110101	GALLTYFOEL	С		(1A)	0	
CM0029001	CHURTON	υ		(2B)	0	DRY UPSTREAM OF OUTFALL
CG0109401	TALYBONT (DYFED)	C	NWC/FISH	1 A	0	
CG0089401	ROWEN	С		1A	0	Discharge pipe prone to blocking - causes backing up
CG0043601	CAPEL CURIG		Freshwater Fish	1A	0	Population figure may exceed 250 on maximum loading. PC never seen SF
CM0045401	RHYDUCHAF	υ		14	0 FISHERY	
CM0021701	PONTFADOG	С		1A	0	May be incorporated into Five Ford's scheme
CG0077701	PENTREFOELAS	C		1A	0	PC never seen sewage fungus
CG0070001	BRITHDIR	Ü		(1A)	0	
CM0032401	BRYNEGLWYS	C		1A	O FISHERY	
CG0085701	BETHEL	ט		2	1 STOCK WATERING	CONSENT SHOULD BE REVIEWED
CG0084001	LLANFAES (A)	ט		(2B)	2 AMENITY	WORKS WILL GO
CM0003401	LLANGERNYW	C		1 A	0	LOCALISED AESTHETIC IMPACT AT DISCHARGE
CG0078101	LLANFAGLAN	c		1A	0	
CM0063901	PWLLGLAS	С		1A	0	WORK HAS BEEN UNDERTAKEN. REASSESS
CG0058301	GWALCHMAI	ט		2	0	PROTECTIVE CONSENT NOW IN FORCE
CG0030701	EGLWYSBACH	Ü		1B	0	
CG0076501	CWM PENMACHNO	C		1 A	0	
CG0134401	BRYNREFAIL (DEINIOLEN)	c		1A	0	
CM0001601	PANDY TUDOR	บ		(1A)	0	NOT REQUIRE CAPITAL WORKS
CM0043501	PENYSTRYT	C		1A	0	REASONABLE WORKS
CM0062601	LLANYCHAN (RHEWL/GELLIFOR			18	0	BIOLOGICAL DATA NEEDS REVIEWING
CG0086001	RHIWLAS	c		1A	0	
CM0001201	LLANARMON-YN-IAL		FRESHWATER FISH	1 A	0	NO CAPITAL WORKS REQ.NEW WORKS
CG0108101	LLANIESTYN	Ü		(1A)	0	
CM0078101	ST ASAPH	С		1A	0	BUSINESS PARK WILL REQUIRE OUTFALL RELOCATION TO R. CLWYD, D/S ALWY/CLWYD CONFLUENCE.
CG0107601	FRIOG	ט		(1A)	0	
CM0095701	BARTON CODDINGTON LANE	ប			1 STOCK WATERING	
CM0024401	CILCAIN/PANTYMWYN	С		1A	0	DISCHARGES TO DRY RIVER BED IN SUMMER. VERY OLD WORKS

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CONSENT REFERENCE	WORKS NAME	CLASS/ DIRECTIVE UNCLASS	LTRQO	USES CONSTRAINED	COMMENTS	
CM0009601	TREMEIRCHION		1B	1 STOCK WATERING	LOW FLOW IN REC. W/C.	
CM0072901	CLAWDD NEWYDD	Ü	(1A)	0	DON FROM IN REC. W/C.	(
CM0105501	TATTENHALL	c	2	0	LOW DILUTION, WORKS PRONE TO BULKING SLUDGE	
CG0171701	ARTHOG CASTELL	U	(18)	0	SEPTIC TANK TO SMALL DITCH NOT BIOLOGICALLY SAMPLEABLE.	1
CG0155701	ARTHOG WESLEY TERRACE	ŭ		0	SEPTIC TANK TO SMALL DITCH. NOT BIOLOGICALLY SAMPLEABLE	ů.
CG0078701	LLANFROTHEN GARREG	C _	18	0		li .
CM0009001	CAERWYS	С	(1A)	1 FISH FARM	WORKS APPEARS STRUTURALLY UNSOUND. HOLIDAY PARK D/S COMPLAINS	OF AESTHETIC IMPACT
CM0101301	CEFN	С	1 A	0	V.OLD WORKS. PROGRESSIVELY EXPANDED TO HAVE INCREASING LOADS (ROM A COMBINED DRAINAGE S
CM0009201	GRAIGFECHAN	С	1A	0		i i
CG0041301	PENRHOS CAMP	U	(1A)	0	CAN HAVE LOW DILUTION. NO BIOLOGY 1993, UNSUITABLE SITES	
CM0049401	LLANBEDR D C	С	12	0	TIME LIMITED CONSENT. DILUTION A BIG PROBLEM	· ·
CM0067501	CEFN MAIRWEN	С	1A	0	V.LOW FLOW IN REC. W.C MOST OF YEAR. NOT BIOLOGICALLY SAMPLEAR	LE

APPENDIX 5	Northern Area	Area Category B Tidal STWs Prioritised
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CONSENT REFERENCE	WORKS NAME	ASSOCIATED DIRECTIVE	USES CONSTRAINED	COMMENTS
CM0014201	HESWALL	BATHING BEACH	2 BATHING, WATER CONTACT, FIS.	H Downgrades estuary quality. Severe aesthetic impact. PLANNING EMBARGO AREA
CG0051701	PORTHMADOG	Bathing Water	2 BATHING, AMENITY	Overloaded. Discharges outside set tidal state, may influence EC beaches.
CM0058401	FLINT	-	0	Impounded area - quality and aesthetic impacts.
CG0115101	MALLTRAETH		1 SHELLFISH, BASIC AMENITY	COPA SACKS COULD PREVENT SEWAGE DEBRIS ON FORESHORE, DOES NOT MEET DILUTION CRITERIA
CM0063501	BAGILLT (EAST)		1	Gross aesthetic impactNO DILUTION. MANY COMPLAINTS. PLANNING EMBARGO IN AREA
CM0017801	CHESTER		2 Migratory Fish	Aesthetic impact. High ammonia load to Dee Estuary.
CG0078501	CAERNARFON		1 AESTHETIC	NEEDS EVALUATION OF ESTUARY BY REAU. NEW LONG TERM CONSENT IN FORCE JUNE 1993.
CM0037001	CONNAHS QUAY		0	Aesthetic impact. Possible quality problems in Wepre Brook due to tidelocking.
CG0093701	LLANBEDR		1 Amenity	Causes public nuisance
CG0112001	CRESCENT		1 Amenity	AESTHETIC IMPACT
CG0113301	MAENTWROG	FISH	0	AESTHETIC IMPACT
CG0145101	LLANDANWG	EEC BEACH	0	AESTHETIC IMPACT. RAGS ADJACENT OUTFALL AREA
cm0063601	BAGILLT (WEST)		0	NO DILUTION. BAD STATE OF REPAIR
CM0029801	GREENFIELD		0	Aesthetic impact - discharges above low water.
CG0055301	LLANDEGFAN		0	Sludge discharged with effluent
CG0093501	TREBORTH		1	MAJOR SCHEME PROGRAMMED.
CG0144901	HARLECH	EEC BEACH	0	AESTHETIC IMPACT. SMALL RISK OF BEACH FAILURE. HYDRAULIC LOADING MAY BE PUMPING STATION PROBLEM
CG0084901	LLANGOED		0	Sludge discharged with effluent PROBABLY DOES NOT NEED DILUTION CRITERIA
CG0081101	LLANFAIRPWLL		0	Sludge discharged with effluent

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Consent	Works		Norks Grid	Class/	Category
Ref.	name		Ref	Unclass	
CM0110201	ABENBURY		36600-48420	С	A
CG0073701	ABERANGELL		84600-09800	บ	A
CG0158701	ABERCEGIR	SH	80360-60170	บ	A
CG0108201	ABERDARON	SH	17600-26400	U	A
CG0111201	ABERERCH		39600-36700	С	Α
CG0107701	ABERLLEFENI	SH	77000-09500	С	A
CM0019301	ABERWHEELER	SJ	09230-69490	С	A
CM0115201	ALDFORD	SJ	42150-59560	C	A
CM0128001	ALWEN RES. S/T	SH	96200-52800	U	A
CM0128002	ALWEN RES. WORKS	SH	95800-52900	U	A
CG0109301	ARTHOG - COUNCIL HOUSES	SH	62700-13600	U	A
CG0156601	ARTHOG MORFA MAWDDACH	SH	63030-13920	ŭ	A
CM0116001	BACKFORD	SJ	39730-71250	U	A
CM0001501	BALA	SH	93770-35560	С	A
CM0060701	BANGOR (ISYCOED)	ŜJ	39540-46030	С	A
CG0024001	BEDDGELERT	SH	59000-47600	С	Α
CG0076201	BETHANIA	SH	62600-50300	С	A
CG0069901	BETHESDA	SH	61200-67500	c	A
CM0026601	BETTWS GWERFIL GOCH	SJ	03080-46430	С	A
CG0108501	BETWS GARMON	ŞН	54300-56700	С	A
CG0099001	BETWS Y COED	SH	79550-57020	С	A
CG0114001	BODEDERN	SH	33300-80800	U	A
CG0062001	BODFFORDD		42900-76800	Ū	A
CG0127201	BODFUAN		30800-3865	Ü	A
CM0095601	BONTUCHEL		08440-57880	Ü	Α
CG0083701	BORTH (TALIESIN)		61400-89700	Ċ	A
CM0104201	BOTEGWEL		97190-76820	Ü	A
CG0078901	BOTWING		26600-30300	c	Ä
CM0149401	BOWLING BANK		39900-48200	Č	Ä
CM0189601	BRO MEUDWY		12800-50900	c	Ä
CG0086701	BRONABER		71100-31400	Ū	Ä
CM0072001	BRONINGTON		48650-40710	c	Ä
CM0111501	BROUGHALL		56600-41350	Ü	Ä
CG0014601	BRYNCIR		48000-44300	¢	A
CG0013001	BRYNCROES		23000-31400	Ü	A
CG0075901	BRYNCRUG		60600-03300	č	Ä
CG0109701	BRYNDU LLANFAELOG		34180-72290	บ	Ä
CG0076601	BRYNGWRAN			ប	
CM0003701	BURTON		34300-77400 31220-73880	บ	A
					A
CM0155201	BYLCHAU		97480-62980	Ü	A
CG0023601	CAEATHRO		49800-62000	C	Ä
CG0314301	CAPEL GARMON		81500-55300	c 	A
CG0023101	CAPEL UCHAF		42730-49980	U	A
CM0000501	CARROG		11740-43710	c	A
CG0059601	CEMAES ROAD		81800-04600	c	A
CG0012201	CHWILOG		43600-38100	c 	A
CM0094401	CLOCAENOG		08400-54130	Ţ	A
CMD021501	CLUTTON TATTENHALL		45780-54370	c	A
CG0109601	COED Y FRON		29600-29900	U	A
CM0154201	COLD HARBOUR		29200-63800	Ü	A
CG0061701	CORRIS ISAF (LOWER CORRIS)		75500-07400	С	A
CG0156001	CORRIS UCHAF		74800-08500	U	A
CG0109801	CRAIG DINAS	SH	80200-54400	ซ	A
CG0133001	CROESOR (3)	SH	63100-44600	U	A
CM0014501	CYPFYLLIOG	SJ	06390-57610	С	A
CM0149301	CYNWYD	SJ	05360-40910	C	A
CM0033101	CYNWYD GWALIA COTTAGES	SJ	05800-41500	ប	A
CG0086501	DAROWEN	SH	83200-01400	U	A
CM0028601	DENBIGH EGLWYSWEN	SJ	07630-65820	С	A
CM0095301	DERWEN	SJ	07130-50670	U	A
CG0169701	DERWENLAS	SN	72300-99200	U	A
CM0038801	DINMAEL.	SJ	00710-44690	С	A
CG0156401	DINORWIC (3) MINFFORDD	SH	58800-61500	U	A
CG0156501	DINORWIC (4) CHAPEL	SH	58700-61400	บ	A
CM0035901	DYSERTH	SJ	05150-79770	С	A
CM0108901	EASTWICK	SJ	37330-37450	U	A
CM0095201	EDGE (BRASSEY'S CONTRACT ROAD)			U	A
CM0112101	ERBISTOCK		35470-42030	Ċ	A
CM0190301	ERRIANALLT		19700-43200	Ü	A
CM0142601	ERYRYS		20170-58110	บ	A
CG0072901	ESGAIREILIOG (CEINWS)		75900-06000	บ	A
CM0021401	FARNDON		41330-53870	c	A
CM0095101	FENNS BANK		51230-38960	บ	Ä
CM0102701	FFRITH		28740-55150	Ü	A
CM0102701	FIVE FORDS (WREXHAM)		36230-48370	Ċ	Ä
CM001/901	FLINT MOUNTAIN		23750-70200	Ü	Ä
CM0010901	FLINT THE MEADOWS		24000-72800	บ	A
C1010101	. DITT IND PROPERTY	Ju	_ 1000- /2000	5	^

Consent	Works	Works Grid	Class/	Category
Ref.	name	Ref	Unclass	cacagazy
CM0190001	FOUR CROSSES	SJ 03400-42900	Ü	A
CG0012401 CM0077301	FOURCROSSES	SH 40200-39100	C	A
CM0101501	FRON GOCH FRONCYSYLLTE	SH 90560-39120 SJ 27110-41960	C	A
CG0029001	GANLLWYD	SH 72700-24100	c	A A
CG0080001	GARNDOLBENMAEN	SH 49600-42900	Ċ	Ä
CG0080501	GARNEDDWEN	SH 76400-08700	č	A A
CG0060501	GELLILYDAN	SH 68600-40000	Ü	A
CM0045101	GLANYRAFON	SJ 02460-42640	ប	A
CG0064201	GLASFRYN	SH 91800-50100	Ü	A
CG0171501	GLYN MALDEN	SH 70730-18200	ប	A
CM0026801	GLYNDYFRDWY	SJ 15270-42950	С	A
CG0108901	GRAIG	SH 80240-74220	ប	A
CM0018801	GROES BRONALLT	SJ 00660-65090	U	A
CG0108801	GROESFFORDD	SH 76900-75700	U	A
CM0022601	GWYTHERIN	SH 87880-61570	U	A
CM0022001	HALTON	SJ 30420-40550	С	A
CG0081001	HENRYD	SH 76800-74700	U	A
CM0149701	HIGHER LANES	SJ 47950-42970	ប	A
CM0102001	HOLT	SJ 40190-54520	C	A
CM0094801	HORSEMANS GREEN	SJ 45130-40850	ŭ	A
CM0044801	ISYCOED MARSHLEA	SJ 39820-50820	U ••	A
CM0115601	KINNERTON LOWER	SJ 34490-62100	Ü	A
CM0077501 CM0057101	LAVISTER	SJ 37730-58510	C	A
CG0033501	LIXWM (WHEELER HILL) LLAN-LLANBRYNMAIR	SJ 16600-70100 SH 88600-00400	Ü	A A
CG0013501	LLANAELHAEARN	SH 38400-45400	บ	A
CM0022101	LLANARMON DYFFRYN CEIRIOG	\$J 15970-32870	Ç	A
CM0094601	LLANARMON MAES Y LLAN	SJ 18570-56090	Ċ	Ä
CG0114201	LLANBRYNMAIR	SH 89300-02600	Ċ	A
CM0045201	LLANDDERFEL	SH 98310-37010	Ü	 A
CG0085601	LLANDECWYN (CILFOR)	SH 62050-37820	บ	A
CG0107201	LLANDEGAI IND EST.2	SH 58900-71100	Ü	A
CG0065701	LLANDYFRYDOG	SH 44800-87200	บ	A
CM0079601	LLANDYRNOG	SJ 09830-64380	С	A
CG0114301	LLANEGRYN	SH 61600-05700	c	A
CG0035301	LLANEILIAN YN RHOS	SH 86500-76400	U	A
CM0074401	LLANELIDAN	SJ 10800-50380	U	A
CG0114504	LLANERCHYMEDD	SH 45140 86260	С	A
CG0110901	LLANFACHRETH	SH 75300-22300	ប	A
CG0089901	LLANFAES (B)	SH 60900-77800	U	A
CG0110201	LLANFAETHLU	SH 31700-87000	U	A
CM0062801	LLANFAIR DYFFRYN CLWYD	SJ 13640-56040	Ü	A
CM0079101	LLANFAIR TALHAIARN	SH 93070-70500	c	A
CM0151001 CM0160701	LLANFIHANGEL GLYN MYFYR LLANFOR	SH 99140-49180 SH 93950-36450	c c	A
CG0019201	LLANGAFFO	SH 44600-67700	C	A A
CM0005401	LLANGOLLEN	SJ 23450-42360	c	A
CMD066201	LLANGOWER	SH 90440-32340	c	Ä
CG0064301	LLANLLECHID	SH 62100-68600	Ü	A
CG0087501	LLANLLYFNI	SH 46000-51900	Ċ	A
CG0040501	LLANNOR	SH 35000-37000	บ	A
CG0019101	LLANRWST	SH 79400-61900	С	A
CM0000801	LLANUWCHLLYN	SH 88100-30300	c	A
CG0155601	LLANYMAWDDWY	SH 90300-18700	σ	A
CM0111801	Llanynys	SJ 10190-62920	υ	A
CG0014201	LLANYSTUMDWY (A)	SH 47300-38300	С	A
CG0015101	LLANYSTUMDWY (B)	SH 47200-38400	c	A
CM0013201	LLIDIART ANNIE	SJ 18820-44450	С	A
CG0013501	LLITHFAEN	SH 36000-42400	U	A
CG0077201	LLYNFAES	SH 41100-78100	U	A
CM0189501	LYNTON & CAEFNOR	SH 10700-61300	U C	λ
CG0083001	MACHYNLLETH	SH 74200-00800 SH 74350-01940	c c	A A
CG0126301 CM0071201	MACHYNLLETH DYFI BRIDGE MAES-Y-GROES	SJ 19190-63490	ט	A
CM0189701	MAESHWYLFA LLANRHAEADR	SH 08700-62400	ซ	Ä
CG0312701	MALLWYD	SH 86200-12300	U	Ä
CM0045601	MARLI GLASCOED	SH 99970-73700	U	A
CG0030601	MELIN Y COED	SH 81200-60600	Ü	Ä
CM0027201	MIN-Y-RHOS	SJ 14690-47440	Ċ	A
CM0031001	MOLD	SJ 24730-63160	บ	A
CG0314302	MOUNTAIN VIEW	SH 80700-55600	บ	A
CG0030801	МУМУТНО	SH 30500-30100	ប	A
CM0012701	NANNERCH	SJ 16860-69250	U	A
CG0027601	NANT PERIS	SH 60500-58200	С	A
CG0071301	NANTGWYNANT	SH 63200-51100	С	A
CG0023901	NANTMOR	SH 59800-46000	c	A
CG0077501	NEBO (CONWY)	SH 83520-56010	ប	A

Consent	Works	Works Grid	Class/	Category
Ref.	name	Ref	Unclass	
CG0094101	NEWBOROUGH	SH 42800-65300	C	λ
CM0066501	NOMANSHEATH	SJ 50910-47780	Ū	 A
CM0045001	OLD CRYMBAL EYTON	SJ 32900-43700	Ū	A
CM0188601	OVERTON	SJ 36620-41640	¢	λ
CM0190101	PANDY'R CAPEL	SJ 08700-50400	U	A
CG0022801	PANTGLAS	SH 47000-47200	ប	A
CG0155401	PANTPERTHOG	SH 74800-04200	U	λ
CM0055301	PARC	SH 87740-33880	c	A
CG0012301 CG0109001	PENCAENEWYDD PENCAERNEISIOG	SH 40900-40800 SH 35400-73500	บ บ	A
CM0155401	PENIEL	SJ 03280-63000	ซ	A A
CG0134101	PENISARWAEN	SH 55000-63600	č	Ä
CM0118501	PENLEY	SJ 41480-40460	Ü	Α
CG0014901	PENMORFA	SH 55100-40300	Ū	A
CG0075401	PENNAL	SH 70200-00100	υ	A
CG0013601	PENPRYS	SH 34800-39700	U	A
CM0190201	PENRHALLT	SJ 14500-42700	С	A
CG0013901	PENRHOS	SH 34800-34200	U	λ
CM0109001	PENTRE COED	SJ 35670-37600	Ü	A
CM0095501	PENTRE LLYN CYMMER	SH 97380-52850	Ü	A
CG0073301	PENTREFELIN PENTREUCHAP (1)	SH 52940-39540	Ü	λ
CG0078201 CM0029601	PENTREOCHAF (1) PENYFFORDD	SH 35700-38800 SJ 31120-60880	U U	A A
CG0110501	PISTYLL	SH 32400-42000	บ	Ä
CM0028701	PONTFAEN	SJ 27970-37030	č	A
CG0074601	PONTLLYFNI	SH 43300-52700	บ	Ä
CG0015001	PRENTEG	SH 59000-41300	U	λ
CM0155301	PRION	SJ 04780-62070	U	Α
CM0044201	RHOSESMOR	SJ 21000-68150	U	A
CG0081501	RHOSFAWR	SH 38900-39000	U	A
CG0014401	RHOSLAN	SH 48200-40700	ប	λ
CG0110601	RHYD	SH 63700-41700	Ü	A
CG0024101	RHYD DDU	SH 57000-52900	C	A
CG0056901 CG0155901	RHYDWYN RHYDYMAIN	SH 31200-88800 SH 80280-21790	u u	A A
CM0004201	RHYDYMWYN	SJ 20900-66500	Ü	Ä
CG0073501	RIVERSIDE	SH 36100-34400	Ü	A
CM0183401	SAIGHTON	SJ 44530-61700	ប	λ
CG0012901	SARN (COUNCIL HOUSES)	SH 24500-31700	С	A
CG0110801	SARN MEILLTEYRN	SH 23900-32200	С	A
CM0094501	SARNAU	SH 97100-39330	U	A
CM0094301	SARON	SJ 02750-60880	Ŭ	A
CG0109501	SEA VIEW COTTAGES	SH 38600-46900	Ü	A
CG0082201	SEION (1)	SH 54700-67200 SH 54600-66800	U "	λ .
CG0155201 CM0036801	SEION (2) SELATTYN	SJ 26670-34060	U U	A A
CM0110101	SESSWICK WERN	SJ 37480-47280	ซ	A
CG0109101	TAI CYNHAEAF (1)	SH 68800-19400	Ü	Ä
CG0155801	TAI CYNHAEAF (2)	SH 68900-19300	บ	A
CG0171901	TALERDDIG	SH 92960-00210	С	A
CG0071401	TALSARNAU	SH 61000-35900	U	A
CG0155301	TALWAENYDD SEPTIC TANK	SH 69500-47400	U	A
CG0082101	TALYBONT (BANGOR) (PRICE BROS)		С	A
CG0155101	TAN LAN (NEW)	SH 79080-63490	Ü	λ -
CM0021601	TILSTON	SJ 45520-51590	U	A
CM0021901	TREGEIRIOG	SJ 17930-33630	Ç U	A
CM0028801 CM0116701	TRELAWNYD TREUDDYN BRIDGE TERRACE	SJ 08720-79300 SJ 25580-57920	Ü	A A
CM0027701	TREUDYN LODGE VILLAS	SJ 26330-58220	Ū	Ä
CM0010801	TRYWERYN DAM	SH 88330-39860	Č	 A
CG0074501	TYDDYN HYWEL	SH 39100-47800	Ü	A
CM0073101	WHITCHURCH	SJ 51650-41620	ប	A
CM0094201	WHITEHURST	SJ 29050-40030	ប	A
CM0189901	WHITEHURST HALT	SJ 28600-40200	บ	A
CM0154101	WILLOW BUCKLEY (PENTRE)	SJ 27500-65000	บ	A
CG0089301	YSBYTY IFAN	SH 84400-49000	c	A
**********	***************************************		**********	

APPENDIX 5	Northern Area Cate	gory A Tidal STWs	

Consent	Works	Works Grid	Category
Ref.	name	Ref	
CG0113901	ABER	SH 65000-73200	A
CG0144801	ABERSOCH	SH 31300-26800	A
CG0082501	DOLGELLAU	SH 71200-18300	A
CG0111901	LLANFACHRAETH	SH 31400-82100	A
CG0077001	LLANFAIRFECHAN	SH 66900-74100	A
CM0026301	MOSTYN	SJ 17050-80120	A
CM0069001	NESTON	SJ 28690-76770	Α
CG0084501	PENRHYNDEUDRAETH	SH 61800-38500	A
CG0145001	RHIW	SH 22440-26150	A
CM0082501	RHUDDL AN	SJ 01600-78550	A
CG0075501	TALYBONT-DOLGARROG	SH 77200-68700	A
CG0084201	TREFRIW	SH 78400-62900	Α
CG0139201	TREVOR - GWYDIR MAWR TERRA	ACE SH 37680-47270	A
CG0145201	TUDWEILIOG	SH 23440-38080	A
CG0015401	TYNYGROES	SH 78520-71210	A
CG0111801	YNYS	SH 59800-35500	A

APPENDIX 5	Northern Area	Category D Inland STWs		
**********	#502026ER0+#EEE56EE5####			*========
Consent	Works	Works Grid	Class/	Category
Ref.	name	Ref	Unclass	
CM0050401	CHIRK RHOSYWAUN	SJ 29580-40820	С	D
CM0044601	DOBSHILL	SJ 30600-64250	U	D
		077 57400 05600	**	D
CG0107801	RHOSLEFAIN	SH 57400-05600	U	D

APPENDIX 5	Northern Area	Category D Tidal STWs	
Consent	Works	Works Grid	Category
Ref.	name	Ref	
CG0023301	CLYNNOG FAWR	SH 41200-50000	D
*********		=======================================	

CONSENT REFERENCE	WORKS NAME	CLASS/ UNCLASS	DIRECTIVE	LTRQO	USES CONSTRAINED	COMMENTS
AL1003501	WEOBLEY	С		2	0	CONSENT REVIEW 1/4/94
AG0004501	CILFYNYDD	С		2	0	OUTFALL NEEDS DIFFUSER TO ELIMINATE SEWAGE FUNGUS
AS1004101	RUARDEAN (WOODSIDE)	ซ		(1B)	0	
AW1002401	HOWEY	C		18	0	WELSH WATER CONSIDERING IMPROVEMENT OPTIONS. RELOCATION OF OUTFALL EXPECTED.
AW1004701	NORTON (OLD)	С		18	0	DILUTION MAY BE LOWER THAN CLAIMED. COMPLAINTS AND PERCEIVED SSO DIFFICULTIES.
AD0000701	CRAY	Ü		1 A	0	EFFLUENT COMPLYING AT PRESENT.
AN0033701	CYNON	C		2	1 Migratory Fish	NH4 CONSENT RELAXED SINCE ENVIRONMENTALLY PROTECTIVE CONSENT ISSUED
AH1002801	ORCOP (COPWELL ESTATE)	U		(1B)	0	
AH1000301	BURGHILL	С		1B	0	WW INTENDING TO MODIFY
AC0091901	LLANARTH	C		(1B)	0	
AW1000701	BUILTH WELLS	С		1A	0	BMWP Increase
AL1000602	BROMYARD (NEW)	С		1B	0	
AH1001201	HEREFORD (ROTHERWAS)	С		1B	0	UNDER INVESTIGATION. REAU
AN0179401	LLWYNON, (OLD WTW AND LLWY	r c		1A	0	
AB0044801	USK	С		1 A	0	
AD0002501	LITTLE MILL	C		1B	0	MZ PROBLEM ONLY. NOT REQUIRE CAPITAL WORKS
AW1004401	NEWBRIDGE-ON-WYE	C		1 A	0	
AC0140701	LLANDDEW	υ		(1B)	0	
AW1002301	HAY-ON-WYE	C		1 A	0	BMWP INCREASE
AW1002701	LLANDEGLEY	Č		18	0	REVIEW OF CONSENT REQ.
AB0046101	LLANELLEN	С		1A	0	NOT REQUIRE CAPITAL WORKS
AL1001501	KINGTON	Ċ		1A	D	REVIEW CONSENT REQUIRED. SSO ENTERS SAME POINT
AC0085601	BRYNMAWR (BLACKROCK)	Ċ		2	0	SEWAGE STREAMING PROBABLY CAUSE OF SF. MICROSTRAINER COULD BE REINSTATED IF REQUIRED
AW1003801	LLANWRTHWL	Ċ		1B	0	NO CAPITAL WORKS REQ.
AW1001101	CROSS GATES	Ċ		1A	0	WORKS IMPROVED. NO CAPITAL WORKS REQ. REASSESS
AG0017801	DROPE (WESTBURY HOMES)	Ċ		2	0	
AH1002401	MORDIFORD (PENTALOE CLOSE	_		1B	0	NO CAPITAL WORKS REQ.
AG0010801	DROPE	111		(2)	0	NO CALLED WORLD ROSE.
AB0046601	LLANGYBI	c		1A	0	
AH1002901	PANDY	c		1A	0	NO CAPITAL WORKS REQ.
AC0140201	RAGLAN	Ū		(1B)	0	EP CONSENT 31/12/92. OPERATING TO IT SINCE JAN/FEB 1993. REASSESS
AW1005201	RHAYADER	Ċ		1A	0	NO CAPITAL WORKS REQ.
AW1000901	CLYRO	Č		1B	0	BMNP INCREASE
AN0214601	TRELLECH	n		(2A)	0	J.M. Modelli
AW1005101	PRESTEIGNE	C		1A	0	
AW1005101	TALGARTH	Č		1B	0	
		<u> </u>			0	
AD0001701	TALYBONT	, ,		1A	0	
AH1003701	TARRINGTON	¢		1B	•	NOT DESCRIPT GLOVEL HOLES
AD0000901	TRECASTLE	Ŭ		(1B)	0	NOT REQUIRE CAPITAL WORKS
AL1003401	ULLINGSWICK (DINMARSH)	Ŭ		2	0	1
AG0007801 AW1000601	PONTSTICILL	C		1A	0	
	BUILTH ROAD	U		1A	n	

APPENDIX 6 South Eastern Area

Category B Inland STWs Prioritised

CONSENT REFERENCE	WORKS NAME	CLASS/ UNCLASS	DIRECTIVE	LTRQO	USES CONSTRAINED	COMMENTS
AB0034101	ABERBAIDEN	С		1A	0	
AN0035901	CRADOC	C		1A	0	
AN0115601	PENYBONT	C		1 A	0	
AL1003101	STOKE LACY (WESTBURY)	U		(1B)	0	TO R. LODON. REASSESS
AL1001701	LUSTON & YARPOLE	U		(1B)	0	BED SILTY?
AN0106401	LLANSOY	С		1A	0	
AW1003501	LLANGUNLLO	C		1A	0	REVIEW CONSENT REQUIRED. NO CAPITAL WORKS REQ.
AW1001701	VELINDRE	Ü		(1B)	0	MIXING ZONE PROBLEM ONLY. NOT REQUIRE CAPITAL WORKS
AG0009201	LLANCARFAN	C		2	0	Problem with sewerage system. Flooding of land with storm sewage.
AH1002201	MORETON-ON-LUGG	С		1B	0	
AS1003701	ROSS (NEW) LOWER CLEEVE	С		1B	0	
AL1001401	KINGSLAND	C		1B	0	NO CAPITAL WORKS REQ.
AH1001101	HEREFORD (EIGN)	C		1B	0	UNDER INVESTIGATION. REAU
AS1001001	GLEWSTON (WILSON)	ប		(1B)	0	
AH1001901	KINGSTONE & MADLEY	С		2	2 Fisheries	DILUTION 1:1. REAU ASSESSING IMPACT. WILL PROVIDE LT CONSENT FIGURES. WILL REVIEW
AH1002001	LITTLE DEWCHURCH	С		(1B)	1 FISHERIES	Recent Plant upgrade. Chemical and visual impact on receiving stream. DRY, NO BIOLOGY
AL1001901	MOCCAS	ប		(1B)	0	WW TO IMPROVE TREATMENT. TRIB. REQUIRES PROTECTION. PROB. OPERATIONAL IMPROVEMENTS WOUL
AL1001201	EDWYN RALPH	U		(IB)	0	NO BIOLOGY, RIVER DRY
AL1000501	BREDENBURY (GRENDON FIRS)	U		(1B)	0	
AH1000401	CLEHONGER	Ç		18	0	SHOULD BE LOOKED AT WITH KINGSTONE & MADLEY STW. CONSENT TO BE REVIEWED. PC/
AS1001201	GREAT GRAIG - CROSS ASH	Ü		(1A)	0	DRIES UP IN SUMMER. LOW FLOW
AL1000201	LEOMINSTER (BARONS CROSS)	Ç		1B	0	Should be connected to Leominster (Worcester Road)
AL1002701	SHOBDON	C		1B	0	Can't BIOL. survey - no upstream sample point as culvert receives other discharges.
AL1001601	LEOMINSTER (WORCESTER RD)	-		1B	0	Bad works- high impact. Probs. with Biol sampling - discharges to Town Ditch. Reassess?
AS1002101	LLANDDEWI RHYDDERCH	Ŭ		(1B)	0	Reassess
AH1002301	MORDIFORD	Ü		(1B)	0	TO R. LUGG DISCHARGE LOCATION NOT KNOWN BY PC. NO BIOLOGY - SITES DRY
AN0180901	CAERWENT	U		N/A	0	

Consent	Works	4	Torks Grid	Class/	Category
Ref.	name		Ref	Unclass	
		i	T.1	· · · · · · · · · · · · · · · · · · ·	
AN0178601	ABBEYCWMHIR	so	05500-71100	υ	A
AH1000101	ABBEYDORE	so	38300-30600	U	A
AA0026701	ABER	SO	10600-21400	U	A
BG0034501	ABERCYCH	SN	24300-41200	U	A
AW1000101	ABEREDW	so	07600-47400	С	A
AW1000301	ABERLLYNFI (THREE COCKS)		17400-37800	บ	A
AL1000101	ACTON GREEN		69650-50550	Ŭ	A
AL2002301	ALMELEY (BELLS ORCHARD)		33340-51610	Ü	Ä
AN0121301 AW1000501	ASTON INGHAM (NESTORIL)		67300-22400 92300-51100	ប	A
AL1000301	BEULAH BISHOPS FROME		66530-48500	C C	A
AL1000301	BODENHAM		53900-51520	ט	A A
AG0011901	BONVILSTON (EAST)		07070-73850	Ü	Ä
AG0011801	BONVILSTON (WEST)		06200-73400	Ü	A
AB0041501	BRECON	SO	05700-27600	С	A
AN0023401	BREDWARDINE	\$0	33150-44600	Ū	A
AS1000401	BROADSTONE (CATBROOK)	so	50300-02800	ช	A
AN0120801	BROCKHAMPTON (CAPLAR)	SO	58880-31590	บ	A
AN0120901	BROCKHAMPTON (LADYRIDGE)		59060-31760	ซ	λ
AN0150501	BROCKWEIR		54200-01200	ប	λ
AA0017501	BRYN		33100-10000	c	λ
AB0049501	BWLCH (SOUTH)		15400-20800	c	A
AL1000901	CANON PYON CEPNGORWYDD		46330-49180	c	λ
AN0180001 AW1001001	CILMERY		90400-45700	υ C	A N
AN0179801	CLIFFORD		00940-51820 28700-44600	C U	A A
AN0010101	COSLECH		04400-81100	C	A
AG0009101	COWBRIDGE		99700-73600	č	Ä
AN0032201	CREIGIAU		09100-80700	Ü	Α
AC0094701	CRICKHOWELL	so	22500-17500	C	A
AN0178801	CROSS OAK	so	10700-23800	U	A
AF3015702	CWMTAFF HOUSES	so	00300-15000	С	A
AH1000501	CWMYOY	so	31190-21670	c	A
AA0001901	DEVAUDEN	ST	47950-98960	Ü	A
AL1001001	DILWYN		42350-54870	U	A
A\$1000701	DINGESTOW		45910-10090	С	A
AH1000601	DORMINGTON		57910-40090	U	A
AH1000701	DORSTONE (OAKLAND PLACE)		31700-41700	Ç	À
AG0008301	DUFFRYN ISAP		02850-84950	C	A
AN0218201 AH1000801	EARDISLEY EATON BISHOP		31090-48640 44510-38920	c c	A
AN0179501	ELAN (GLAN-YR-AFON)		93500-65300	c	A A
AN0024401	ELAN VALLEY (HOTEL)	-	93600-65700	c	A
AW1001401	ELAN VILLAGE		93500-65400	ć	A
AW1001501	ERWOOD		09900-43300	ċ	A
AN0179601	EVENJOBB		26300-62200	U	A
AN0179701	FFORDLAS	so	20300-38900	U	A
AH1000901	FOWNHOPE	SO	57770-34050	C	A
AW1002001	GARTH	SN	95130-49230	С	A
AS1001301	GARWAY (FAIRVIEW)	SO	45500-22600	ប	A
AN0179201	GARWAY (NO.3 FAIRVIEW)	SO	45000-22000	Ū	A
AW1002101	GLASBURY		17900-39500	С	A
AN0149901	GLEWSTONE (MALMO PLACE)		56000-22100	U	Α
AN0149801	GLEWSTONE VILLAS		56100-22000	U	A
AS1001101	GOODRICH		56800-18580	Ç	A
AC0116401	GOYTRE (PENPERLLENI)		33000-05800	C	A
AA0027601 AD0018101	GREAT OAK GROESFFORDD		38700-09900 07500-27900	U U	A A
AH1001001	GROSMONT		40890-24270	C	A
AW1002201	GWENDDWR		06700-43330	บั	A
AN0146001	HAREWOOD END (NO.6)		52000-26000	บ	A
AN0146101	HAREWOOD END (WOODFIELDS)		52800-26900	ΰ	A
AN0146201	HENTLAND (PENCOED RISE)		52100-26100	U	A
AF4021601	HIGHLIGHT PARK (WEYCOCK CROSS)	ST	10450-76450	С	A
AH1001402	HOLME LACY		55750-36600	C	A
AN0178701	HOW CAPLE (CROSSWAYS)		61850-31140	υ	A
AN0146501	HOWLE HILL		60500-20200	U	A
AW1002501	HUNDRED HOUSE		11420-54490	บ	A
AL1001301	IVINGTON		47370-56730	U	A
AH1001701	KENDERCHURCH (WORMBRIDGE)		42600-30300	c :	A
	KENTCHURCH (CRABS CASTLE)		43700-27300	ប	A
AN0146301	VENERALITATE (DEDUCES				
AN0146301 AH1001501	KENTCHURCH (PARKSIDE)		41900-25500	C	A
AN0146301 AH1001501 AH1001801	KILPECK	so	44200-30760	c	A
AN0146301 AH1001501 AH1001801 AN0038101	KILPECK KINGS CAPLE	S0 S0	44200-30760 56300-28600	c c	A A
AN0146301 AH1001501 AH1001801	KILPECK	s0 s0 s0	44200-30760	c	A

Consent Ref.	Works name	Works Grid Ref	Class/ Unclass	Category
NGE .	uque	Ret	Officiass	
AA0003101 AW1002601	LLANBEDR	SO 23800-20300	U 	A
AN0146401	LLANBISTER (NEW) LLANCLOUDY (HILL VIEW)	SO 10800-73550 SO 49740-21120	U U	A A
AW1002801	LLANDDEWI YSTRADENNI	SO 10700-58300	Ċ.	Ä
AB0072701	LLANDEGFEDD (PICNIC SITE)	ST 32870-98400	Ū	A
AW1002901	LLANDRINDOD WELLS	SO 05000-60500	c	A
AD0001501	LLANFAIR	SO 34900-06800	c	A
AW1003001	LLANFAREDD	SO 06800-50800	C 	A
AA0015101 AW1003201	LLANFIHANGEL-NANT-BRAN LLANFILO	SN 94300-34300 SO 11740-33880	U C	A A
AB0038201	LLANFOIST (ABERGAVENNY)	SO 29900-13300	c	Ä
AD0002101	LLANFRYNACH	SQ 07800-25800	c	A
AW1003301	LLANGAMMARCH WELLS	SN 93620-47290	C	A
AN0145801	LLANGARRON (GARREN VIEW)	SO 53600-21000	Ü	A
AS1002501 AN0145901	LLANGARRON (HERBERTS HILL) LLANGARRON (NO.3 GARRON VIEW)	SO 52780-21530 SO 53000-21000	U U	A A
AW1003601	LLANGURIG	SN 90900-79600	C	A
AW1003701	LLANIGON	SO 20420-40500	č	A
AD0004201	LLANISHEN	SO 47500-03200	ប	A
AB0043401	LLANOVER	SO 31400-08700	C	A
AB0056601	LLANSPYDDID	SO 01100-28300	c	A
AS1002301 AS1002601	LLANTILIO CROSSENNY LLANVAPLEY	SO 39780-14570 SO 36500-13900	บ บ	A A
AS1002701	LLANVETHERINE	SO 36900-17600	c	A
AS1002801	LLANWARNE (MONKTON PLACE)	SO 49770-26880	บั	A
AD0010501	LLANWENARTH	\$0 26900-15700	υ	A
AW1003901	LLANWRTYD WELLS	SN 90000-46200	C	A
AW1004001	LLANYRE	SO 05250-62340	C	A
AW1004101	LLOWES	SO 19400-41600	c	A
AW1004201 AW1004301	LLYSWEN (VILLAGE) LLYSWEN (WYELANDS)	SO 13530-38120 SO 12900-38400	c	A A
AH1002101	LONGTOWN	SO 32370-28470	c	A
AS1002901	LYDBROOK	SO 58470-16960	С	A
AL1001801	LYONSHALL	SO 34170-55730	¢	A
AA0012101	MANMOEL	SO 18000-03100	U	A
AS1003201	MONMOUTH (WYESHAM)	\$0 51500-11900	C	Ä
AL1002001 AN0150201	MUCH COWARNE (MILL LANE) MUCH COWARNE (MOOR END)	SO 62100-46900 SO 64200-46600	บ บ	A A
AN0150101	MUCH COWARNE (NO.3 MOOR END)	SO 64000-46000	ŭ	A
AH1002701	MUCH DEWCHURCH (A)	SO 48500-31200	С	A
IMC	NANTDDU (W.W.A HOUSE)	SO 00200-15200	ט	A
IWD	NEUADD (CANDY FILTER HOUSE) WT		U	A
IWE IWF	NEUADD COTTAGE NEUADD FARM	SO 03200-18000	บ บ	A
AW1004501	NEW RADNOR	SO 06000-14500 SO 21630-60740	บ	A A
AS1003301	NEWLAND	SO 55100-09010	č	 А
AL1002301	OCLE PYCHARD	SO 58920-46410	C	А
AN0133901	OLD RADNOR	SO 24800-58900	Ū	A
AW1004901	PAINSCASTLE	SO 17100-46300	C	A
AW1005001 AN0098001	PANTYDWR PANTYGASSEG	SN 98400-74600 ST 25100-99900	U U	A A
AL1002401	PEMBRIDGE	SO 39300-58580	Ċ	Ä
AD0010801	PENCELLI	SO 09400-25500	Ċ	A
AL1002501	PENCOMBE	SO 60280-52700	ប	A
AG0011001	PENDOYLAN	ST 06200-76700	ប	A
AS1003401	PENRHOS PENTWYN RESERVOIR COTTAGE	SO 41600-11600 SO 05600-14600	U U	A
IWG AH1003001	PETERCHURCH	SO 34800-37950	C	A A
AG0011401	PETERSTON-SUPER-ELY	ST 08600-76300	c	 A
AH1003101	PIPE & LYDE	SO 50151-44330	ប	A
AH1003301	PONTRILAS	SO 39460-27770	С	A
AG0011101	PONTSARN	50 04500-09700	c	A
AN0121001	PONTSHILL (WOODVIEW) PONTSTICILL (FILTER HOUSE)	SO 64500-20500 SO 06100-11700	ti C	A A
AN0179301 AN0179901	PONTSTICILL (RESERVOIR WORKS)		c	Ä
AH1003201	PRESTON WYNNE	SO 56060-46020	c	A
AL1002601	PRESTON-ON-WYE	SQ 38400-42300	С	A
AS1004201	REDBROOK	SO 53800-09800	С	A
AE2021601	RHYDLAFAR	ST 11000-79770	Ü	A
AE2031301 AS1003601	RHYMNEY BRIDGE FILTER HOUSE ROCKFIELD	SO 10300-10000 SO 48550-14760	c c	A A
A\$1003601 A\$1003901	RUARDEAN	SO 61800-17900	ט	A
AN0121501	RUARDEAN (THE PLUDDS)	\$0 61670-16090	Ü	A
AA0002301	SCETHROG & PENNORTH	SO 10800-25000	c	A
AC0140301	SENNYBRIDGE (ARMY CAMP)	SN 92400-29400	¢	Α
AN0150401	SHIRENEWTON	ST 47500-94200	U	A
AL1002801 AS1004401	SPARRINGTON ST.ARVANS	SO 57100-54100 ST 51760-96190	ប	A A
.2.2004401	OT LIBITION	27 2T100-30130	U	7

APPENDIX 6 South Bastern Area Category A Inland STWs

Consent	Works	Works Grid	Class/	Category
Ref.	name	Ref	Unclass	
	-			
AS1004501	ST.BRIAVELS	SO 55040-04630	С	A
AG0008501	ST.FAGANS	ST 12200-77100	C	A
AG0013201	ST.NICHOLAS	ST 08700-73200	Ü	A
AS1004601	ST.OWENS CROSS (PERRYFIELDS)	SO 53700-24560	U	A
AH1004801	ST.WEONARDS	SO 49200-24100	С	A
AL1002901	STANFORD BISHOP	SO 68750-52030	U	A
AN0150301	STAUNTON (GLOUCESTERSHIRE)	SO 55200-12700	U	A
AL5000201	STAUNTON-ON-WYE	SO 36350-44560	С	A
AH1003401	STOKE EDITH	SO 59780-40760	U	A
AL1000801	STOKE LACY (CRICKS GREEN)	SO 63370-51560	С	A
AN0149601	STOKE LACY (SWEDISH HOUSES)	SO 62400-50300	U	A
AN0150601	STRETTON GRANDISON	SO 63300-44000	· U -	A
AH1004201	SUTTON ST.NICHOLAS (C.T.BISHOP	SO 52900-45300	C	A
AN0020201	TAIR ONEN	ST 03760-74650	U	A
AN0089401	TALYBONT WTW SEPTIC TANK NO. 1	SO 10610 20760	U	λ
AN0146601	THE NARTH (FOREST VIEW)	SO 52300-06800	U	A
AW2000201	TIRABAD	SN 87870-41490	U	A
AN0106601	TRETOWER	SO 18800-21100	C	Α
IMI	TYNYWAUN	SS 93300-99300	U	A
AN0149701	ULLINGSWICK (BULLOCKS BRIDGE)	SO 58900-48070	Ü	A
AN0121101	UPTON BISHOP (BIRTLETONS)	SO 64600-27100	U	A
AS1005301	WALFORD (COUGHTON PLACE)	SO 59610-21170	С	A
AN0178901	WALFORD (NO.8 NORLAND PLACE)	SO 59000-20000	Ū	A
AH1003801	WESTON BEGGARD	SO 58700-41700	С	A
AS1005601	WESTON-UNDER-PENYARD (DAIRY CO	SO 63340-24400	U	A
AS1005801	WILTON	SO 58350-23930	C	Α
AL1003601	WOLFERLOW	SO 67220-62100	C	A
AH1003901	WOOLHOPB	SO 61500-35500	С	A
AH1004001	WOOLHOPE (THE NURDENS)	SO 62120-36080	Ċ	A
AG0007901	YNYSMAERDY (HOUSING ESTATE)	ST 03450-84300	С	A
AG0007901	INISMAERDY (HOUSING ESTATE)	ST 03450-84300	Ç	A

APPENDIX 6	South Eastern Area Category	A Tidal STWs	
~ 75 C C S 6 F F 6 F 5			
Consent	Works	Works Grid	Category
Ref.	пате	Ref .	
AB0050001	CAERLEON	ST 33000-90600	A
AN0214001	CAERLEON ROAD	ST 33720 89530	A
AA0024301	CALDICOT	ST 47800-87400	A
AB0050201	CHRISTCHURCH	ST 33980-89760	A
AF4027601	EAST ABERTHAW	ST 03300-66700	A
AS1002201	LLANDOGO	SO 52800-04200	A
AC0105301	MAGOR STW - WHITBREAD BREWERY	ST 43700-84500	A
AB0067101	NASH	ST 33700-84100	A
AB0064101	PONTHIR	ST 33400-92600	A
AS1004801	SEDBURY	ST 54000-93420	A

AS1004801 AN0024001

AS1004901

APPENDIX 6

ST.BRIDES TINTERN

Consent Ref.	Works name	Works Grid Ref	Class/ Unclass	Category
AW1000401	BWLCH (NORTH)	SO 14500-22800	Ü	D
AN0064201	CROSS INN	ST 05320 82450	Ū	D
AH1002501	MUCH BIRCH (TUMP LANE)	SO 49720-30670	c	D
IWJ	PERTHCELYN	ST 05300-97100	Ū	Ď
AG0019401	RHIWSAESON (NEW)	ST 07320 82730	c	D
AG0019301	RHIWSAESON (OLD)	ST 06880 82620	С	D
AS1005501	WALFORD (NORLAND PLACE)	SO 59300-20900	С	D
AN0079401	WENVOE	ST 12700-73100	U	D
AS1005 7 01	WESTON-UNDER-PENYARD (PENYARD	SO 63660-23040	U	D
AH1004101	WORMELOW TUMP	SO 49400-30300	C	D
AG0011301	YNYSMAERDY (INDUSTRIAL ESTATE)	ST 03780-84280	С	D

South Eastern Area Category D Inland STWs

ST 29800-81400 SO 53520-00460

CONSENT REFERENCE	WORKS NAME	CLASS/ UNCLAS		LTRQO	USES CONSTRAINED	COMMENTS
BH0054701	BOWSTREET (PENRHYNCOCH)	С	FISHERIES			PROBLEM IS WITH SEVERE INFILTRATION FRON SNO'S Also BH0054702
BC0006801	GARNSWLLT	¢	FRESHWATER FISH		2 FISHERY	
BC0016601	TREBANOS	c	FRESHWATER FISH		2 AMENITY, FISHERY	TREATMENT GIVEN DOES NOT REDUCE AMMONIA LEVELS IN EFFLUENT
3G0007701	NARBERTH EAST	Ü		(1B)	2 FISHERY	CLOSED
BP0063801	LUDCHURCH	U		(1B)	2 STOCK WATERING	BMWP NOT POSSIBLE. SEVERE SEPTICITY IN POND IN SUMMER
BN0166701	TEMPLETON	Ü		(1B)	1 FISHERY	INSUFFICIENT DILUTION TO ALLOW FURTHER DEVELOPMENT.
BP0034001	AMROTH	ប		(1B)	1 BATHING	LT CONSENT HAS BOD LIMIT, NO AMMONIA. AMMONIA STANDARD WILL NEED TO BE APPLIED
BE0039501	LLANGYNDEYRN	Ç		1B	0	
BG0043501	GORSGOCH	ti ti		(1A)	-	OTHER DATE PROPERTY DATE.
BG0011501 BG0029501	ST ISHMAELS CLYNDERWEN	נז		(1B) (1B)	0	STORM DISCHARGE PROBLEMS?
BP0044201	CAREW	"		(1B)	Ö	LOW DILUTION (<6:1). EXISTING HIGH CONSENT
BF0083301	PENYGROES/BLAENAU	Ċ		1B	0	PREDICT BIOLOGICAL SURVEY WILL SHOW NO IMPACT
BC0001501	CROSSHANDS	υ		(1B)	1 FISHERY/AMENITY	NEW FILTERS/HUMUS TANK COMMISSIONED 1992. REASSESS IMPROVEMENTS URGENTLY REQUIRED
BF0169101	YSTRADGYNLAIS	C		1B	1 PISHERI/AMENIII	STORM PROBLEMS. HYDRAULICALLY OVERLOADED, PLANNING EMBARGO ON AREAS FEEDING WORKS
BH0065101	PENPARC	บ		(18)	1 STOCK WATERING	VERY LOW DILUTION DRY IN SUMMER. <1:1
BH0064701	LETTERSON EAST	11		(1B)	0	LT PROPOSALS TO ABANDON AND PUMP TO LETTERSTON WEST?
BG0012001	LANGDON	11		(1B)	1 FISHERY	DI PROPOSALS TO ABANDON AND PUMP TO LETTERSTON WEST?
BH0072801	FFOSTRASOL	11		(1B)	1 STOCK WATERING	LOW DILUTION
BA1015401	WICK	fi .		1A	1 STOCK WATERING	RECEIVING WATERCOURSE THOUGHT TO DISCHARGE TO SWALLOW HOLES LINKED TO SCHWYLL.
BP0000101	MAESTEG	č		2	1 AMENITY	SUMMER FLOW PROBLEMS. LTRQO MAY BE 1B, OPPOSITION TO PLANNING DEVELOPMENTS. EI MASKED E
BA2001101	CRYNANT	č		1B	1 AMENITY	SAMPLE PT, LONG WAY D/S FROM STW. MUCH FOUL FLOW FREQ. DIVERTED VIA CSO. REASSESSED
BJ0078801	GOLDEN GROVE	. T		(1A)	1 STOCK WATERING	SAME II. Date will by a received the received the same states and same states and same states and same states and same states are same states
BA2001301	RESOLVEN	Č		18	1 AMENITY	DISCOLOURATION AND SEWAGE FUNGUS D/S. HUMUS TANKS TOO SMALL AND NOT WORKING WELL
BN0010301	BLAENFFOS	บ		(1A)	1 STOCK WATERING	LOW DILUTION. NON EP CONSENT
BN0013701	HENLLAN	Ċ		1A	0	DECREASE IN HIGH SCORING TAXA NOT CAUSED BY SUBSTRATE DIFFERENCE BETWEEN SITES
BN0000501	MYDROILIN	Č		1A	0	SF LOCALISED, DUE TO DISCHARGE INTO SLACK WATER AT LOW SUMMER FLOWS.
BN0202701	LLANDOVERY	č	Freshwater Fish	1A	0	RECENT IMPROVEMENTS AT WORKS SHOULD SOLVE SF PROBLEM.
BH0050901	CITACAM	บ		1A	0	REQUIRES HUMUS TANK
BG0001201	BONCATH	U		(1A)	0	NEW WORKS 1992 AND EP CONSENT. REASSESS?
BN0077601	LLANFYNYDD	U		(1A)	0	
BP0044503	LLANBOIDY	U		(1B)	0	
BG0019001	CROESGOCH	υ		(1B)	0	MAY DRY. DILN 1:1 DWF.
BP0013501	RHYDLEWIS	υ		(1A)	0	WORKS OVERDESIGNED. SF CAUSED BY DISCHARGE TO SLACK WATER UNDER LOW SUMMER FLOWS.
BP0087901	KEESTON (I)	υ		(1B)	0	CONSENT SHOULD BE EP. OXIDATION CAPACITY IMPROVED. NOT REQUIRE CAPITAL WORK
BN0269501	LLANYBRI	υ		(1B)	0	
BA1002401	HIRWAUN	С		1B	0	LACK OF DILUTION
BG0000401	MAENCLOCHOG	บ		(1B)	0	DILN. 11:1 DWF. CLOSE TO EP CONSENT
BH0055701	NEWGALE	บ		(18)	0	PLANNED OP IMPROVEMENTS 93/94, 94/95
BE0016301	FOUR ROADS	Ų		1B	0	Low Dilution of Receiving water
BG0018701	HERMON	ប		(1B)	0	PREDICTED BIOLOGICAL SURVEY WILL SHOW NO BIOLOGICAL IMPACT
BN0168801	CLARACH	С		1B	0	TO BE ABANDONED WITHIN 2 YEARS - ABEYSTWYTH B/W SCHEME

APPENDIX 7 South Western Area Category B Inland STWs Prioritised

CONSENT REFERENCE		CLASS/ UNCLASS	DIRECTIVE	LTRQO	USES CONSTRAINED	COMMENTS
BJ0078601	BETHLEHEM	ט		(1A)	0	NEW AUTO-DESLUDGE ON HUMUS SINCE '92
BG0017601	PUNCHESTON	U		(1A)	0	
BC0002501	REYNOLDSTON	บ		(1B)	0	NO CAPITAL WORKS REQUIRED
BG0022201	ST NICHOLAS	υ		(1A)	1 Stock Watering	DILN. SHOULD BE 90:1 AT DWF. CHECK LOCATION.
BG0037301	NANTERNIS	υ		(1A)	0	RECENT IMPROVEMENTS.REDUCTION IN HIGH SCORING TAXA NOT DUE TO A SUBSTRATE DIFFERENCE
BG0038701	CROSS INN AND NEBO	υ		(1A)	0	
BN0085301	TALLEY	υ		(1A)	0	REQUIRES STORM TANK.
BJ0078501	ASHFIELD ROW	υ		(1A)	0	RELOCATION OF O/F TO TYWI IMINENT. WILL BE ISSUED WITH DESC. CONSENT. REASSESS
BG0003501	CASTLEMORRIS	U		(1A)	0	DISCHARGE TO INACCESS. DITCH 100M U/S W. CLEDDAU. DITCH DRIES. CONSENT EP AT MAIN RIVER
BG0016901	SPITTAL	υ		(1B)	0	
BG0034601	MERRION CAMP (CASTLEMARTI	U		(1B)	0	
BP0219002	SALEM	U		(1A)	0	
BN0280301	REYNALTON	U		(1B)	1 STOCK WATERING	CONSENTED FOR DISCHARGE TO LOVESTON LAKE BUT DISCHARGES TO TRIB.
BP0134701	CAERFACHELL	U		(1B)	2 STOCK WATERING	VERY LOW DILUTIONNEW WORKS/LOCATION NEEDED
BG0002201	CAPEL BANGOR	U		(1B)	1 AMENITY	
BG0004801	DEVILS BRIDGE	U		2	1 AMENITY	
BC0017801	CARWAY	ט		(1B)	0	
BG0014501	CLARBESTON ROAD NO 1	U		(1B)	0	DILN. 2:1 DWF. AESTHETIC IMPACT AND PRESSURE FOR DEVELOPMENT
BP0219501	NEWCHAPEL	ט		(1A)	0	
BN0003601	NARBETH WEST	ט		A	0	
BN0015801	BEULAH	U		(1A)	1 STOCK WATERING	LOW DILUTION. NO BIOLOGY
BC0006101	LLANSAINT	U		(1B)	0	NO DILUTION FOR FUTURE DEV. BORDERLINE
BC0019001	TRIMSARAN	C		1B	0	NO BIOLOGY, DISCHARGE COULD NOT BE FOUND
BG0013101	TIERS CROSS	U		(1B)	1 STOCK WATERING	LOW DILUTIONDILUTION <3:1 DWF. AESTHETIC IMPACT. NO BIOLOGY
246406000	**************************************		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	****		

South Western Area

Area Category B Tidal STWs Prioritised

				action to the control of the control
CONSENT REFERENCE	WORKS NAME	ASSOCIATED DIRECTIVE	USES CONSTRAINED	COMMENTS
BF0083607 BF0177701 BC0000201 BB3006701 BC0003201 BP0077701 BC0003001 BF0147002 BH0053401 BP0052301 BP0052301 BP0052301 BP0052301 BP0052101 BC0018601 BP0052101 BC0018601 BP0151701 BH0074101	LLANELLI BURRY PORT PWLL PENYBONT (MERTHYR MA BYMEA AND HALFWAY ST SAUNDERSFOOT GOWERTON KIDWELLY PARCYSPLOTTS LLANGRANOG (SEPTIC T GOOF MARTHA GOODWICK ABERARTH LLANNANT FISHGUARD CARDIGAN	SHELLFISH BATHING SHELLFISH SHELLFISH	2 SHELLFISH GATHERING 2 SHELLFISH GATHERING 0 2 SHELLFISH GATHERING 2 BATHING 2 SHELLFISH GATHERING 0 2 WATER CONTACT, RECREATION 2 BATHING, WATER CONTACT, AMEN 2 SHELLFISH, WATER CONTACT, AM 2 SHELLFISH, WATER CONTACT, AM 1 Shelfishery 0	Remedial measures urgent but currently under way. PART OF LOUGHOR SCHEME PART OF LOUGHOR SCHEME, Will be abandoned 1996 AFFECTS SOUTHERN DOWN. POSSIBLE AMMONIA IMPACT ON ESTUARY. PART OF LOUGHOR SCHEME RELATED TO LOUGHOR SCHEME May not cause failure to meet objectives. Visual impact when sludge press in operation. 105.3 (L/S) S.S. 150 mg LOWER TIERCONSENT DETERMINED DURING DEEMED CONSENT EXERCISE SIGNIFICANT PUBLIC PRESSURE TO IMPROVE SEWERAGE ARRANGEMENTS SIGNIFICANT PUBLIC PRESSURE TO IMPROVE SEWERAGE ARRANGEMENTS DILUTION WORK NEEDS DOING SIGNIFICANT PUBLIC PRESSURE TO IMPROVE SEWERAGE ARRANGEMENTS
BP0062701 BP0054801	ST DAVIDS OVERTON		0	SEASONAL OVERLOADING, DISCHATGE OF SEWAGE DEBRIS.

Consent	Works	Works Grid	Class/	Category	
Ref.	namė	Ref	Unclass		
BM0028101	ABERCRAF	SN 80800-12400	С	A	
BA2001201	ABERGARWED	SN 81600-02300	c	Ä	
BN0007002	ABERGORLECH	SN 58630-33800	č	Ä	
BN0112801	ADPAR	5N 30400-41000	c		
BN0037001	ALLTWALIS			A	
		SN 44300-31360	Ŭ	A	
BG0028801	ALLTYBLACCA	SN 52400-45700	C	A	
BG0001101	AMBLESTON	SN 00200-25500	Ü	A	
BN0269701	BANCYFELIN	SN 32500-17900	C	A	
BN0000302	BRECHFA	SN 53020-30210	С	A	
BJ0078701	BROAD OAK	SN 57720-22470	Ü	A	
BP0211901	BRONWYDD	SN 41950-24770	U	A	
BA2039701	BRYN TERRACE	SS 87800-88300	U	A	
BC0003201	BYNEA FAWR FARM	SS 54800-99000	Ų	A	
BN0042101	CAIO	SN 67480-39680	υ	A	
BG0004901	CAMROSE	SM 92500-20100	บ	Α	
BN0054901	CAPEL IWAN	SN 29300-36100	U	A	
BE0042501	CARMEL AND PANTLLYN	SN 60100-17400	Ū	A	
BN0008101	CELLAN	SN 60200-49000	Ċ	A	
BG0049001	CENARTH	SN 26900-41200	c	A	
BP0101201 BP0217801	CENARTH 2 (GLANYRAFON)	SN 26570-41660	C	A	
	CILGERRAN	SN 19400-43300	Ŭ	A	
BA2001001	CLYNE	SN 79800-00400	c	A	
BG0028101	CONWYL ELFED	SN 37670-26980	C	A	
BP0152501	COOMBE	SN 33520-14040	Ŭ	A	
BG0027001	CRIBYN	SN 51500-51200	U	A	
BJ0076101	CRUGYBAR	SN 65600-37600	U	A	
BP0044401	CRYMYCH	SN 18300-34700	U	A	
BN0072901	CWMDUAD	SN 37790-30760	С	A	
BC0010601	CWMGWILI	SN 57700-10400	Ċ	A	
BA1005701	CWMGWRACH	SN 86400-05500	Ċ	A	
BN0103601	CWMIFOR	SN 66030-25100	Ċ	A	
BC0015601	CWMTAWEL		c		
		SN 57200-11200		A	
BN0018001	CWRT HENRI	SN 55400-22800	C	A	
BN0005601	CWRTNEWYDD	SN 49400-47100	С	A	
BJ0076001	CYNGHORDY	SN 80300-39930	Ū	A	
BN0059501	DIHEWYD	SN 48200-56600	ט	A	
BH0060601	DREFACH/VELINDRE	SN35100-39900	C	A	
BG0047901	EGLWYSWRW	SN 13800-38500	บ	A	
BC0020401	FELINDRE	SN 63100-03000	U	A	
BH0073201	FELINDRE FARCHOG	SN 09800-39000	C	A	
BJ0075601	FELINGWM UCHAF	SN 50870-24420	U	A	
BH0065401	FFAIRFACH	SN 61750-21100	С	A	
BN0077501	FFARMERS	SN 64820-44540	С	A	
BA2026901	FFORESTGOCH	SN 74200-01600	Ū	A	
BG0018801	GLOGUE	SN 22000-32500	Ü	A	
BH0055601	GREENFIELD TERRACE	SN 50800-42300	Ü	A	
BP0164501	GWYNFE	SN 72420-21920	Ü		
_				A	
BP0019601	KILGETTY	SN 13100-07500	U	A	
BP0045001	LAMPETER	SN 57600-47600	U	A	
BG0023601	LAMPETER VELFREY	SN 15600-14800	U	A	
BG0022401	LAMPHEY	SN 01900-00800	c	A	
BH0071101	LETTERSTON WEST	SM 92880-29030	С	A	
BE0027201	LLANDDAROG	SN 49300-16300	С	A	
BG0023501	LLANDDEWI BREFI	SN 65700-55100	С	A	
BG0013201	LLANDDEWI VELFREY	SN 14300-16900	С	A	
BG0010201	LLANDYSSUL	SN 41800-40200	Ċ	A	
BH0070801	LLANFAIR CLYDOGAU	SN 62200-51200	Ċ	A	
BP0015201	LLANFARIAN	SN 59200-77700	č	 A	
CG0058101	LLANFECHELL	SH 37400-91400	U	Ä	
BN0020802	LLANFIHANGEL-AR-ARTH	SN 45500-40000	c	A	
			U		
BN0002901	LLANFYRNACH	SN 22000-31000		A	
BG0040001	LLANGADOG	SN 70080-28000	c	A	
BN0002701	LLANGEITHO	SN 61200-58800	C	Α	
BG0021501	LLANGYBI	SN 60600-53100	U	A	
BN0095701	LLANGYNOG	SN 33800-16010	U	A	
BN0099101	LLANILAR	SN 62300-75500	С	A	
BC0001601	LLANNON	SN 53740-07250	С	A	
BN0049101	LLANPUMPSAINT	SN 41600-29100	С	A	
BN0160301	LLANRHYSTUD	SN 53300-69400	c	A	
BH0062601	LLANSAWEL	SN 62320-36180	c	A	
BG0026201	LLANWNEN	SN 53400-46900	c	Ä	
BJ0091401		SN 51600-43100	c		
	LLANYBYDDER			A	
BG0036801	LLANYCHAER	SM 98600-35500	C	A	
BG0024901	LLECHRYD	SN 21100-43600	Ċ	A	
BG0027301	LLWYNCELYN	SN 43900-59300	ប	A	
	LLYS Y FRAN DAM	SN 03800-24300	C	A	
BJ0085001 BG0022701	MARLOES	30 03000 24300	C	^	

Consent	Works	Works Grid	Class/	Category
Ref.	name	Ref	Unclass	Category
			VIIC 1433	
BG0037101	MEIDRIM	SN 28960-20430	c	A
BP0134601	MIDDLE MILL (SEPTIC TANK)	SM 80600-25800	c	Ä
BG0010301	MOYLEGROVE	SN 11500-44900	Ü	Ä
BH0050801	MYDDFAI	SN 77550-29740	Ü	Ä
BN0002601	NANTGAREDIG	SN 50360-21580	ç	Ä
BD0031001	NANTGWINEU	SN 69900-14100	Ü	Ä
BG0014001	PANTEG	SM 92700-34900	Ü	Ä
BG0007801	PENCADER	SN 44400-36500	Ċ	Ä
BN0015601	PENNANT	SN 50900-63000	Ċ	Ä
BG0036101	PENTRECWRT	SN 38900-39100	ċ	Ä
BG0004401	PONTERWYD	SN 75200-80900	ט	Ä
BA2014001	PONTNEDDFECHAN	SN 90300-07700	C	Ä
BG0023001	PONTRHYDCEIRT STW LLWYNCELYN	SN 21100-42600	Ū	A
BN0040202	PONTRHYDFENDIGAID	SN 72800-66800	C	A
BE0000206	PONTYATES	SN 47200-08700	c	Ä
BC0021001	PONTYBEREM	SN 49400-10900	c	
BN0077401	PUMPSAINT	SN 45400-10500 SN 65840-40580	c	A A
BN00772501	RED ROSES	SN 19700-11600	ט	
BN0008801	REDCLIFFE	SN 11000-13500	Ü	A A
BH0050701	RHANDIRMWYN	SN 78130-43230	C	
BG0029101	RHOSCROWTHER	SM 90000-02200	U	A
BG0029101 BG0038101	RHOSHILL	SM 19300-02200 SN 19300-40000	Ü	A
BE0064501	RHYD-Y-PANDY	SN 66500-02200	tr	A
BP0101301	RHYDYFELIN	SN 59070-79010	C	A
BN0267001	ROSEBUSH	SN 07300-29300	Ω C	A
BG0000501	ROSEMARKET	SM 95300-07900	Ü	A
BH0058201	SCLEDDAU	SM 94600-33900	Ü	A A
BL0138601	SOLVA	SM 80700-24100	U	A
BH0056001	ST FLORENCE	SN 08700-24100 SN 08700-01000	_	-
BJ0079201	ST.TWYNNELLS	SR 94800-97800	Ü	A
BB4018701			Ü	A
BP0095901	STORMY DOWN SWEET WELLS	SS 83700-80500	Ü	A
BG0011001	TALGARREG	SS 90700-89200	U	À
BG0011001 BG0025601	TALSARN	SN 42500-51000 SN 54400-56300	U	A
BH0056201	TAVERNSPITE		c	A
	TRAPP	SN 18300-13000	U 	Ä
BJ0075101		SN 65370-18980	Ü	A
BN0071601	TREFFGARNE	SM 95800-22970	c	A
BH0057801	TREGARON	SN 67300-59200	C	A
BN0269401	TRELECH	SN 28200-30400	Ū.	A
BN0052401	TREVINE	SM 83700-32300	Ü	A
BP0164601	TWYNLLANAN	SN 75430-24260	U 	A
BH0073801	VERWIG	SN 18200-49400	U 5-	A
BN0083801	WALTON EAST	SN 02300-23000	Ü	A
BL0138501	WHITLAND	SN 20200-16400	c	A
BH0068601	WOLFSCASTLE	SM 95800-26600	Ç	A
BA1014501	YNYSARWED	SN 81400-02100	С	A

APPENDIX 7	South Western Area	Category A Tidal STWs

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Consent	Works	Works Grid	Category
Ref.	name	Ref	

BG0019601	ANGLE	SM 87400-03300	A
BP0054601	BISHOPSTON	SS 58300-87800	A
BG0046401	COSHESTON	SN 00100-03500	A
BC0016101	CROFTY (TRADING ESTATE)	SS 52300-95600	A
BP0063201	DINAS	SN 01000-39700	A
BJ0087001	FERRYSIDE	SN 37200-11470	A
BC0003701	HENDY	SN 58300-03300	Α
BG0016701	HERBRANDSTON	SM 86900-07200	A
BN0000402	ноок	SM 98500-11000	A
BH0066901	HUNDLETON	SM 96300-01400	A
BJ0091501	JOHNSTON	SM 93800-11100	Α
BC0006501	LLANGENNECH	SN 56700-01000	A
BG0042201	LLANGWM	SM 99500-08700	A
BE0006405	LLANMADOC	SS 44600-93400	A
BP0062201	LLANON	SN 51000-67500	A
BC0015401	LLANRHIDIAN	SS 49700-92700	A
BK0111901	LLANSTEPHAN	SN 35600-11200	A
BP0062801	MANORBIER	SS 06200-97800	A
BJ0087401	MERLINS BRIDGE	SM 95500-14600	A
BN0192501	MILTON	SN 04100-03200	A
BH0069602	NEYLAND	SM 95800-05400	A
BP0054901	OXWICH	SS 49500-85200	A
BN0077102	PANTYRATHRO	SN 36830-13570	Α
BC0013401	PEMBREY	SN 41500-00000	A
BC0013901	PENCLAWDD	S\$ 54500-95900	A
BJ0084201	PENDINE	SN 23800-07900.	A
BP0063901	PENYBONT/NEWPORT	SN 06100-39500	A
BN0000701	PORTHGAIN	SM 81400-32600	A
BP0054501	RHOSSILI	SS 42800-87600	A
BP0082701	SKRINKLE	SS 08200-97500	A
BP0054701	SOUTHGATE (HAEL LANE)	SS 55700-87800	A
BG0024501	ST.CLEARS	SN 28570-15030	A
BP0217701	STACKPOLE	SR 98200-96400	A
BN0267101	UZMASTON	SM 97200-14100	A
BP0063101	WALTON WEST	SM 86300-13100	A
BH0073901	WATERSTON	SM 93500-06000	A

APPENDIX 7 South Western Area Category D Inland STWs

Consent Ref.	Works name	Works Grid Ref	Class/ Unclass	Category
		·		
BE0075601	CUCKOO MILL	SS 64200-99300	C	D
BA2022601	MARLAS	SS 81400-82300	С	D
BN0273501	PENIEL	SN 4370-2390	Ū	D
BC0011301	PENNARD (LINKSIDE) NORT	TON DRIV SS 54950-89100	U	D

APPENDIX 7	South Western Area	Category D Tidal STWs
Consent Ref.	Works name	Works Grid Category Ref
TDA	NORTHUMBERLAND	SS 50800 98800 D

APPENDIX 8

Additional STWs Not Included in the STW Strategy

South East Area

AN0231301	Much Dewchurch New STW	Post-dates strategy
AA0001501	Tredunnock STW	
AB0053401	Powys Pencelli Hillcrest	
AN0179001	Pencarn Lane STW	Is this DCWW owned?
AE2016601	Martins Terrace - Former colliery properties	Is this DCWW owned?

South West Area

BA2030301	Schwyll Septic Tank	
BP0072801	Llanedi STW	Post dates strategy
BG0009701	Mathry STW	
BN0021602	Burton Ferry STW	Is this TREATED effluent?
BN0267201	Bryngwyn STW	
BP0014601	Whitland The Grove Heol S	hon
BP0135401	New Llysyfran V.'S CTR	
BP0215901	Narberth West STW	Post dates strategy

Northern Area

CG0082001 CG0108601	Bodfordd STW	
CG0108801	Llandegai STW Gaerwen STW	
CG0134901	Aberhosan STW	w (a)
CG0139001	Bontddu STW	Is this TREATED effluent?
CG0314701	Talybont STW near Ba	ngor
CM0036401	Buckley Alltami S.L.	Robinson (Not used but monitored)
CG0035201	Pentrefelin STW	?
CG0083201	Glan Conwy Corner	?
CM0027601	Chirk Whitehurst	Septic Tank
CM0145301	Marli Glascoed STW	?
CM0005151	Chirk Bank STW	Will be PS

Priorities for Freshwater Biological Assessment

APPENDIX 9

Cat	Description		E	W	Total Pr	iority	Person-Day
В	Work done, not reass.		11	15	48	1+	72
D	Abandoned, not ass.	4	11	4	19	1+	28.5
В	Work done, reass.	9	7	13	29	1+	43.5
A	Desc. consent, never ass.		·		159(72)	2	238.5(130.
В	No work done, never ass.		1	1	4	2+	6
A	Non. desc. consent, Never ass.	55(38)	26(23)	56(39)	137(100)	2*	205.5(55.5
В	No work done, data 5 years old in 1994	3	3	3	9	3+	13.5
В	No work done, data 3 years old in 1994	9	9	7	25	4#	37.5
A	Desc. consent, data 3 years old in 1994	2 (1)	0	0	2 (1)	4#	3 (1.5)
A	Non desc. consent, data 3 years old in 1994	18(3)	11(2)	0	29(5)	4 * #	43.5 (36)
В	No work done, data <3 years old in 1994	51	38	27	116	5	174
A	Desc. consent, data <3 years old in 1994	11(7)	15(4)	1(1)	27(12)	5	40.5(22.5)
A	Non desc. consent, data < 3 years old in 1994	65(7)	60(21)	50(9)	175(37)		
T	Total Category B works		69	66			
T	Total Category A works		185	123	529		

Person-Day estimates are based on 1.5 days per works.

Person-Day estimates in parentheses assume exempt works are not included.

- * Works in these groups, which may be converted to descriptive consents will take on the priorities of equivalent groups in the above table when they become descriptive.
- Sampling to take place in 1994.
- # Sampling to take place in 1995 or before if resources available.

Category A works which may be placed at lowest priority within each group are shown in parentheses in the above table:

N E W Total
94 72 61 227

Prioritisation criteria within each group (Category A and B):

Dilution > 100:1 No recent changes to works operation No planned changes to works operation Environmentally Protective numeric consent

The more of these criteria that are true for a works, the lower priority they should have within a group.

NO SAMPLE POSSIBLE?

If it is not possible to sample a site using standard 3 minute kick, consider sampling using the sweep technique.

If this is not possible, could assign a biological score comparing sewage fungus abundance upstream and downstream.

If this is not possible, assign a biological score of 0, 1 or 2 using other knowledge eg. if it causes eutrophication in a lake or discharges to a normally dry ditch.