

CONSENT NO. BP0064001

creu lle gwell
creating a better place



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

WATER RESOURCES ACT 1991

SECTION 88 – SCHEDULE 10

(AS AMENDED BY THE ENVIRONMENT ACT 1995)

RECEIVED

08 FEB 2006

NOTICE OF MODIFICATION OF CONSENT TO DISCHARGE

TO: **Environment Quality Scientist**
Dŵr Cymru Cyfyngedig
Pentwyn Road
Nelson
Treharris
CF46 6LY

Following a review of the conditions of its consent, the **ENVIRONMENT AGENCY** ("The Agency") in pursuance of its powers under the Water Resources Act 1991 **HEREBY MODIFIES ITS CONSENT** to the making of a discharge **OF SEWAGE EFFLUENT**, as follows:

Tertiary Treated Sewage Effluent incorporating the requirements of the Urban Waste Water Treatment Regulations 1994 (UWWTR)

with respect to Variation of Consent No. **BP0064001** issued on the 31st day of August 2005

FROM: DALE WASTEWATER TREATMENT WORKS

AT: DALE, NEAR MILFORD HAVEN, PEMBROKESHIRE

TO: ESTUARIAL WATERS IN MILFORD HAVEN WATERWAY

HEREAFTER SUBJECT TO the conditions set out in the following schedule(s):

Tertiary Treated Sewage Effluent
UWWT Regulations 1994

Schedule No. BP0064001 01
Schedule No. BP0064001 01 / U

Subject to the provisions of Paragraphs 7 and 8 of Schedule 10 of the Water Resources Act 1991, no notice shall be served by the Agency, which alters the effect of modifications made by this notice, without the agreement in writing of the Consent Holder, during a period of 4 years from the date this notice is served.

Dated this 31st day of January 2006.

Signed

Team Leader – Regulatory Water Quality

Asiantaeth yr Amgylchedd Cymru

"Maes Newydd", Llandarsi, Nedd Port Talbot. SA10 6JQ Ffon 08708 506506 Ffacs 01792 325511

Environment Agency Wales

"Maes Newydd", Llandarcy, Neath Port Talbot. SA10 6JQ Tel 08708 506506 Fax 01792 325511

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01
DATE ISSUED	31 st January, 2006



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

CONDITIONS OF CONSENT TO DISCHARGE

Tertiary Treated Sewage Effluent ("the Discharge")

FROM: DALE WASTEWATER TREATMENT WORKS, DALE, NEAR MILFORD HAVEN, PEMBROKESHIRE

NATURE

1. From the date specified in condition 2, the Discharge shall consist solely of tertiary treated sewage effluent which has been disinfected at all times by passage through membrane filters. For the purpose of this consent, "disinfection" is defined as the use of a process designed specifically to reduce the number of viable, potentially infectious micro-organisms in the effluent.

START DATE

2. Until discharge is permitted under the terms of this consent, its nature shall be as described, and the quality of the effluent from the works shall be controlled under the terms of the modification of consent issued on the 16th day of January 2003. There shall be no discharge under the terms of this consent until the 31st day of March 2006 or the end of commissioning of the MBR plant, whichever is the sooner. The Consent Holder shall give the Agency at least 28 days written notice before making the discharge.

LOCATION

3. The Discharge shall be made in the manner and at the place specified as:
 - (a) discharging via a 250 millimetre diameter pipe;
 - (b) discharging to the Milford Haven Waterway;
 - (c) at National Grid Reference SM 81470 05560;
 - (d) shown marked 'Consent Point' on Plan BP0064001 attached as Annex 3.

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

SAMPLE POINT

4. An appropriately labelled sample point shall be provided and maintained at National Grid Reference Reference SM 81092 05713, as shown marked 'Sampling Point' on Plan BP0064001, or some other point as agreed in writing with the Agency, so that a representative spot sample of the Discharge may be obtained. The consent holder shall ensure that all constituents of the Discharge pass through the said sampling point at all times and in any legal proceedings it shall, for the purposes of Section 10 of the Rivers (Prevention of Pollution) Act 1961, be presumed, until the contrary is shown that any sample of the Discharge taken at the said sampling point is a sample of what was being discharged into controlled waters.

VOLUME

5. The volume of the Discharge shall not exceed 390 cubic metres per day.
6. The Dry Weather Flow of the Discharge shall not exceed 180 cubic metres per day.

For the purpose of this condition Dry Weather Flow shall mean the average daily flow to the treatment works during seven consecutive days without rain (excluding a period which includes public holidays) following seven days during which the rainfall did not exceed 0.25 millimetres on any one day.

7. The rate of discharge shall not exceed 4.5 litres per second.

FLOW MEASUREMENT

8. A continuous flow monitoring and recording system, to a specification provided by the Agency, with on-site visual display from which readings can be readily obtained by the Agency, shall be provided and operated to record the daily volume and instantaneous flow of the discharge.
9. As soon as practicable after completion of the flow system installation the Consent Holder shall employ an independent expert to certify that the installation complies with the Agency's specification. The Consent Holder shall satisfy himself as to the professional competence of the expert. A copy of the certifier's report shall be provided to the Agency when it is available.
10. Records of the flow readings shall be maintained by the Consent Holder and shall be provided to the Agency when requested, in a format specified by the Agency.

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

11. The Consent Holder shall produce and maintain a quality control manual, approved by the independent expert and to the satisfaction of the Agency, specifying procedures for the calibration, operation and maintenance of the flow monitoring system. The flow system shall be calibrated, operated and maintained by the Consent Holder in accordance with the provisions of the manual. The Consent Holder shall keep a record of these procedures available for inspection by the Agency and provide a copy to the Agency on request.
12. The Consent Holder shall record all failures of the continuous flow system and any other breaks in the flow record. The reasons for these failures and breaks shall be recorded and all steps taken to prevent a re-occurrence. The Consent Holder shall ensure that as far as possible the recorder remains fully operational at all times. Any failures shall be remedied as soon as possible.
13. Flows passing forward to full treatment shall be measured at National Grid Reference SM 81092 05713, or such other point(s) as agreed by the Agency.

COMPOSITION

14. (a) Subject to paragraph (b) below, the Discharge shall not contain more than:
 - (i) 40 milligrammes per litre of biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);
 - (ii) 60 milligrammes per litre of suspended solids (measured after drying at 105°C).
- (b) The limit for any of the relevant parameters set out in paragraph (a) above may be exceeded where, in any series of samples of the Discharge taken at regular but randomised intervals in any period of twelve consecutive months as listed in Column 1 of the table at Annex 1 to this consent, no more than the relevant number of samples, as listed in Column 2 of the said table, exceed the applicable limit for that relevant parameter.

WORKS OPERATION

15. The works shall be operated and the effluent shall be treated in a manner which, so far as reasonable practicable, minimises the polluting effects of the discharge made from the works on controlled waters.

This condition does not require -

- (a) any higher standard to be achieved in relation to any characteristic of the discharge which is specifically regulated by condition 14, than is required by that condition;
- (b) any alteration of the works or a change in the type of treatment used.

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



MAINTENANCE

16. (a) A maintenance programme, including the method and frequency of cleaning and replacement of membrane filters, on-line turbidity meters, and flow meters, shall be undertaken by the Consent Holder. Details of the maintenance programme shall be provided to the Agency for agreement.
- (b) The Consent Holder shall keep records of the maintenance undertaken (both programmed and un-programmed). Copies of these records shall be maintained by the Consent Holder and kept conveniently available for inspection by the Agency's officers at all reasonable times.

UNUSUAL WEATHER CONDITIONS

17. (a) No sample of the discharge, taken at a time when unusual weather conditions are adversely affecting the operation of the sewage treatment works, shall be taken into account in deciding whether or not the conditions 14 and 15 of this consent have been complied with.
- (b) For the purpose of this condition "unusual weather conditions" shall include:
- (i) low ambient temperatures as evidenced by effluent temperatures of 5°C or less, or by the freezing of mechanical equipment in the works;
 - (ii) significant snow deposits;
 - (iii) tidal or fluvial flooding;
 - (iv) weather conditions causing unforeseen loss of power supply to the sewage treatment which could not be ameliorated by the reasonable provision and operation of standby generation facilities.
- (c) On any occasion where unusual weather conditions adversely affect the operation of the sewage treatment works, the Consent Holder shall use its best endeavours to mitigate that adverse effect.
- (d) For a sample of the discharge to be considered for the purposes of (a) above, the Consent Holder shall notify the Agency by telefax or telephone as soon as unusual weather conditions are known to have adversely affected operations and shall confirm the circumstances in writing as soon as possible thereafter (and in any event within 14 days of the occurrence of such conditions). That notification shall include a full description of the unusual weather conditions and their impact on the operation of the works.

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



RECORDING AND REPORTING

18. (a) The Consent Holder shall establish and operate a documented maintenance programme and record all non-routine actions undertaken that may have adversely affected effluent quality. Copies of the programme shall be made available for inspection by the Agency's officers at all reasonable times.
- (b) On request the Consent Holder shall supply the Agency with a written report on the maintenance and all non-routine actions that may have adversely affected effluent quality.

19. (a) Process Monitoring and Reporting

Continuous recorders, with on-site visual display from which readings may be readily obtained, shall be provided and maintained by the Consent Holder enabling:

- (i) the instantaneous effluent flow rate to be recorded at hourly, or more frequent intervals to be agreed in writing with the Agency;
- (ii) the instantaneous effluent turbidity after membrane filtration to be measured and recorded at hourly, or more frequent intervals to be agreed in writing with the Agency;
- (iii) Copies of the records shall be maintained by the Consent Holder for a minimum of 2 years, or such time as the Agency may from time to time specify, and be kept at a nominated place available for inspection by the Agency's officers at all reasonable times;
- (iv) The Consent Holder shall supply to the Agency, on a three-monthly basis, two months in arrears, records of the turbidity and flow readings, in a format agreed with the Agency.

(b) Records of Maintenance and Incidents of failure

The Consent Holder shall supply to the Agency, on a three-monthly basis, two months in arrears, records of the maintenance undertaken, including any details and an explanation of the circumstances where the agreed maintenance programme was not met.

The Consent Holder shall supply to the Agency, on a three-monthly basis, two months in arrears, a written report detailing all occurrences when at any time:

- there were any failures of any measurement system used to control the membrane filtration system;
- the external power supply to the membrane filtration system was interrupted;

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

- where effluent turbidity exceeded 30 NTU (nephelometric turbidity units);
- A discharge of sewage effluent was made which had not been subjected to treatment by membrane filtration as specified in condition 1 of this consent;
- The report shall detail the reasons why the situation occurred, and the actions taken by the Consent Holder. The report shall include an assessment of what measures can be adopted in the future to minimise such occurrences.

EFFICACY MONITORING PROGRAMME

20. The Consent Holder shall carry out the monitoring programme as detailed below during the commissioning period and thereafter, when the effluent undergoes membrane filtration. The results of the monitoring programme are to be supplied to the Agency in an agreed format every three months, two months in arrears.

I. Sample Points

- A Crude influent to sewage treatment works NGR SM 81087 05710;
- B Biologically treated sewage effluent before membrane filtration NGR SM 81088 05719;
- C Biologically treated sewage effluent after membrane filtration NGR SM 81092 05713.

II. Microbiological Determinands and Frequencies

- (a) **Faecal Coliforms** - fortnightly, at sample points A, B and C
- (b) **Total Coliforms** - fortnightly, at sample points A, B and C
- (c) **Faecal Streptococci** - fortnightly, at sample points A, B and C;
- (d) **Salmonella** - fortnightly, at sample points B and C;
- (e) **Representative enteroviruses** - fortnightly, at sample points B and C;
- (f) **F-specific bacteriophage** - fortnightly, at sample points B and C.

Following two consecutive years of full consent compliance, the Agency will review the data annually and notify in writing the Consent Holder of any resulting change in the monitoring regime.

III. Other Determinands and Frequencies

The measurement of all determinands below shall coincide with the measurement of microbial determinands.

Flow

The flow shall be measured at sample point B or C.

Suspended solids and BOD (ATU)

Suspended solids and BOD (ATU) shall be measured at sample point B or C.

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



IV. Reporting

Results of the monitoring programme shall be reported to the agency in an agreed format at three-monthly intervals, two months in arrears.

21. The Consent Holder shall notify the Agency in writing if any known or planned introduction or material change in respect of discharges from trade premises to the sewerage system occurs, that may increase or introduce into the effluent any "dangerous substance" included on Lists I, II, or Red List (set out in Annex 2 to this notice as updated from time to time and notified to the Consent Holder in writing), and any other substance considered by the Consent Holder as having or likely to have a significant effect on the receiving waters.

SUBSTANTIAL CHANGE

22. A discharge shall not be made from the works if it would cause a significant increase in the polluting effects of the discharge on controlled waters as a result of a new or altered discharge of trade effluent into the works.

22.1 A discharge of trade effluent into the works is new if -

- (a) it is made by the sewerage undertaker and is of a kind not made into the works by the undertaker immediately before the date of effect of this consent; or
- (b) it is made by a third party and the discharge is authorised on or after that date.

22.2 A discharge of trade effluent into the works is altered if -

- (a) it is made by the sewerage undertaker and its composition or quantity changes significantly on or after the date of effect of this consent; or
- (b) it is made by a third party and the alteration of the discharge is authorised on or after that date.

22.3 An increase in the polluting effects of the Discharge on controlled waters is not significant for the purposes of this condition if it relates to any characteristic of the Discharge which is specifically regulated by condition 14 of this consent but it may be significant if it is caused by a change in some other characteristic of the Discharge.

22.4 For the purposes of this condition "trade effluent" means -

- (a) any discharge by the sewerage undertaker other than
 - (i) domestic sewage from premises connected directly or indirectly to the works; or

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

- (ii) surface water run-off;
- (b) any discharge by a third party which is authorised under Chapter III of Part IV of the Water Industry Act 1991 or which is only accepted as a result of a contract with the sewerage undertaker.

UNAUTHORISED DISCHARGES

23. A discharge made from the works shall not contain any poisonous, noxious or polluting matter or solid waste matter which is attributable to any unauthorised discharge into the works.
- (a) A discharge into the works is unauthorised if it is made by a third party and either there is no obligation to receive it or conditions subject to which there is an obligation to receive it are not observed.
 - (b) Nothing in this, or any other, condition of this consent prevents anyone from relying on any defence available to them under section 87 of the Water Resources Act 1991.

TELEMETRY

24. A telemetry alarm system connected to a 24-hour manned station shall be provided and maintained by the Consent Holder to provide a warning in the event that:
- (a) the external power supply to the treatment system been interrupted;
 - (b) there has been a mechanical or control system breakdown;
 - (c) the effluent turbidity exceeds 30 NTU (nephelometric turbidity units).

EMERGENCY NOTIFICATION

25. The Consent Holder shall notify the Agency in the event of a Discharge of sewage effluent which has not been subjected to the required membrane filtration process as specified in condition 1 of this consent. Such notification must be made as soon as practicable and no later than 24 hours after the event.

POWER

26. Full stand-by power generation facilities shall be provided and maintained by the Consent Holder in good working order to enable automatic resumption of power to the membrane filtration system in the event of external power supply failure.

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01 / U
DATE ISSUED	31 st January, 2006



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

CONDITIONS OF CONSENT TO DISCHARGE

Tertiary Treated Sewage Effluent ("the Discharge")

FROM: DALE WASTEWATER TREATMENT WORKS, DALE, NEAR MILFORD HAVEN, PEMBROKESHIRE

URBAN WASTE WATER TREATMENT REGULATIONS

- U0**
- (a) The Consent Holder shall comply with the Urban Waste Water Treatment (England and Wales) Regulations 1994 ('the Regulations').
 - (b) For the purpose of conditions U1 below, interpretations and references to a numbered regulation or Schedule shall have the meaning as in the Regulations, unless otherwise indicated.
- U1**
- (a) The Discharge derives from an agglomeration with a population equivalent of less than 2,000, discharging to estuarial waters.
 - (b) The Consent Holder shall inform the Agency in writing of any change, or proposed change, to the population equivalent such as would make a material change to the application of the Regulations and shall, on request, inform the Agency in writing of the actual population equivalent.
 - (c) The Discharge shall be subject to Regulation 5(7) and shall satisfy the requirements of Regulation 5(8)(a).

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

ANNEX 1

TABLE

Column 1

Column 2

Number of samples
taken in any period
of 12 months

Maximum number of samples
permitted to exceed limit
for given determinand

4-7	1
8-16	2
17-28	3
29-40	4
41-53	5
54-67	6
68-81	7
82-95	8
96-110	9
111-125	10
126-140	11
141-155	12
156-171	13
172-187	14
188-203	15
204-219	16
220-235	17
236-251	18
252-268	19
269-284	20
285-300	21
301-317	22
318-334	23
335-350	24
351-365	25

creu lle gwell
creating a better place

CONSENT NUMBER	BP0064001
SCHEDULE NUMBER	BP0064001 01



Asiantaeth yr
Amgylchedd Cymru
Environment
Agency Wales

ANNEX 2

- | | |
|--|------------------------------|
| 1. Mercury and its compounds | 2. Cadmium and its compounds |
| 3. Hexachlorocyclohexane
(lindane and related compounds) | 4. Carbon tetrachloride |
| 5. DDT (the isomers of 1,1,1-trichloro-2,2 bis(p-chlorophenyl) ethane) | |
| 6. Pentachlorophenol (PCP) | 7. Aldrin |
| 8. Dieldrin | 9. Endrin |
| 10. Isodrin | 11. Hexachlorobenzene (HCB) |
| 12. Hexachlorobutadiene (HCBd) | 13. Chloroform |
| 14. Polychlorinated biphenyls | 15. Dichlorvos |
| 16. 1,2-Dichloroethane | 17. Trichlorobenzene |
| 18. Atrazine | 19. Simazine |
| 20. Tributyltin compounds | 21. Triphenyltin compounds |
| 22. Trifluralin | 23. Fenitrothion |
| 24. Azinphos-methyl | 25. Malathion |
| 26. Endosulfan | 27. Lead |
| 28. Chromium | 29. Zinc |
| 30. Copper | 31. Nickel |
| 32. Arsenic | 33. *Iron |
| 34. *pH outside range 5.5 to 9.0 | 35. *Boron |
| 36. Vanadium | 37. PCSD'S |
| 38. Cyfluthrin | 39. Sulcofuron |
| 40. Flucofuron | 41. Permethrin |
| 42. 4-Chloro-3-methyl-phenol | 43. 2-Chlorophenol |
| 44. 2,4-Dichlorophenol | 45. 2,4-D (ester) |
| 46. 2,4-D (non ester) | 47. 1,1,1-Trichloroethane |
| 48. 1,1,2-Trichloroethane | 49. Bentazone |
| 50. Benzene | 51. Biphenyl |
| 52. Chloronitrotoluenes | 53. Demeton |
| 54. Dimethoate | 55. Linuron |
| 56. MCPA | 57. Mecoprop |
| 58. Mevinphos | 59. Napthalene |
| 60. Omethoate | 61. Toluene |
| 62. Triazophos | 63. Xylene |
| 64. Cyanide | 65. Azinphos-ethyl |
| 66. Fenthion | 67. Parathion |
| 68. Parathion-methyl | 69. Trichloroethylene |
| 70. Tetrachloroethylene | 71. Dioxins |
| 72. PAHs | 73. Nonyl phenol |
| 74. Nonyl phenyl ethoxylate | 75. Di-ethylhexyl phthalate |
| 76. Bisphenol-A | 77. Diazinon |
| 78. Chlorfenvinphos | 79. Chlorotoluron |
| 80. Isoproturon | 81. Diuron |
| 82. Propetamphos | 83. Flumethrin |
| 84. Amitraz | 85. High-Cis Cypermethrin |
| 86. Cyromazine | 87. Deltamethrin |
| 88. Cypermethrin | |

This list is applicable as at 1 December 1998 and will be updated as and when changes to the relevant legislative requirements occur.

*Notification to the Agency by the Consent holder is only required in respect of changes to trade effluents likely to cause significant changes to the pH value, and/or iron or boron concentrations, of the crude sewage.



**DALE WwTW FE,
DALE, NEAR MILFORD HAVEN,
PEMBROKESHIRE**

