Water Resources Act 1991
as amended by the Environment Act 1995
Consent to Discharge
Certificate of Holder

ENVIRONMENT AGENCY

Part A

To: DWR CYMRU CYFYNGEDIG
CONSENTS REGULATION OFFICER
PLAS-Y-FFYNNON
CAMBRIAN WAY
BRECON LD3 7HP

The **Environment Agency** ("the Agency") hereby confirm that the above named person is a/the registered holder of consent BE0000206

Nature of Discharge(s); SEWAGE EFF/TREATED EFF/CONTINUOUS
at
PONTYATES STW

Note: This certificate should be kept with the consent document for future reference. If you transfer responsibility for the discharge to somebody else you must pass the consent to them and tell the Agency within 21 days. **Responsibility for the consent cannot be disclaimed by the holder but the registration of holder may be transferred to a successor.** To do this please complete the form below, then tear it off and return it to the address shown. If you fail to transfer the consent, even though you are no longer on the site, you may still be liable for prosecution for pollution. If you transfer the consent but do not tell us, you will be committing an offence. In case of any queries please contact your local Environment Agency office.

Part B **Please complete in block capitals or type.**

To:

Water Resources Act 1991: Notice of transfer of consent to discharge

Consent: **Name:**
Address:

I/We* hereby serve notice on the Agency that I/we* am/are* no longer a/the* Holder of the above consent which will be/was* transferred to: * delete as appropriate

Name(s) of new holder(s):
Address:

Post Code:

Date of Transfer to new Holder(s); .....

Signed:..... **Dated:**.....

Name (block capitals): ..... **Position:** .....
(to be completed when signing on behalf of corporate bodies)

BE00002206
45

Welsh Off Ref		Form SS.RW2	WWA HQ Ref	RW/0080/1/1

LOCAL GOVERNMENT ACT 1972 WATER ACT 1973
RIVERS (PREVENTION OF POLLUTION) ACTS 1951-1961
WATER AUTHORITIES (CONTROL OF DISCHARGES) ORDER 1978

NOTIFICATION OF VARIATION OF CONSENT
for a discharge of treated sewage effluent

To : WELSH WATER AUTHORITY

This Notice is issued under the above-mentioned Acts and Order and all other enabling powers as a NOTICE DEEMED TO HAVE BEEN GIVEN BY THE SECRETARY OF STATE FOR WALES, in respect of the existing discharge of treated sewage effluent from the Authority's :

PONTYATES SEWAGE TREATMENT WORKS

via an existing outlet and subject hitherto to a previous consent as specified below.

THE EXISTING OUTLET is to : the Gwendraeth Fawr

at National Grid Reference : SN 4720 0861

and has been shown marked : Discharge Point

on the attached Plan, No. : RW/0080/1/1

THE PREVIOUS CONSENT was : the Consent Reference No. -

granted on : 19th May 1971

by : South West Wales River Authority

to : Llanelli Rural District Council

The Authority submitted this Notification of Variation on : 11th September 1981 to the Secretary of State for Wales in the form of a draft and the Secretary of State has NOT, within the relevant period, given notice of his intention to determine this matter. This discharge is therefore (in substitution for all the conditions hitherto in force) subject only to the following conditions as from : 11th December 1981.

CONDITIONS

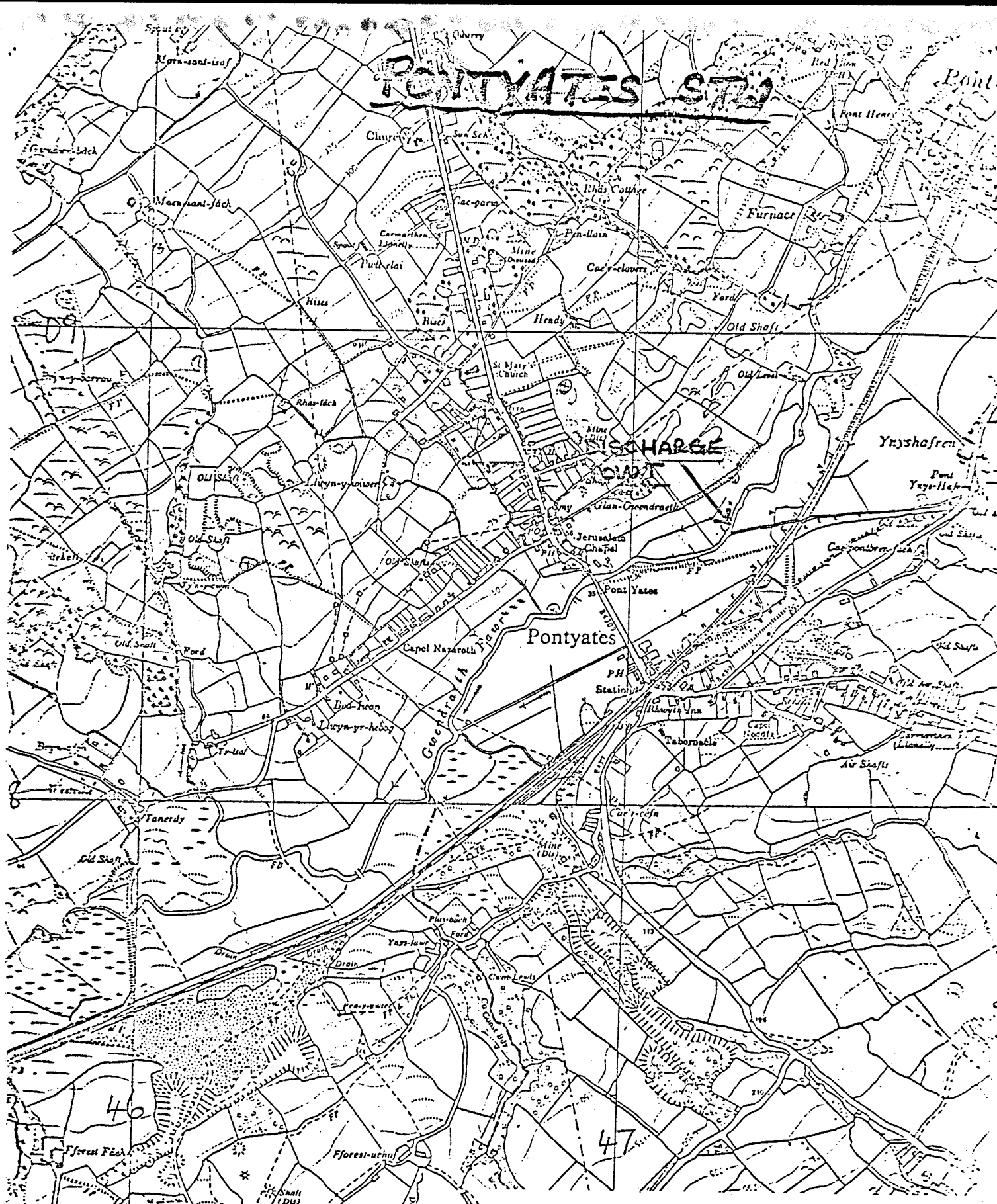
1. The discharge shall consist only of treated sewage effluent from the above works.
2. The quality and quantity of effluent shall not exceed the following maximum values:

Determinand	Value	Unit
Biochemical Oxygen Demand (+ATU) over 5 days at 20°C	20	milligrams per litre
Suspended Solids dried at 105°C	30	milligrams per litre
Rate of discharge	79	litres per second
Volume during any period of 24 consecutive hours	6828	cubic metres
Volume discharged under 'dry weather conditions' during any period of 24 consecutive hours	1138	cubic metres

3. Adequate facilities shall be provided for the taking of samples of the effluent at: outlet to Gwendraeth Fawr

The terms of this Notice will not, without the consent in writing of the person to whom this Notice is given, (or his successor), be altered before the expiration of the period ending with the Eleventh day of December 19 83 .

This Notification is issued by the Directorate of Scientific Services, Headquarters, Welsh Water Authority, Cambrian Way, Brecon, Powys.



WELSH WATER AUTHORITY

PLAN NO. RW /0080 /I/1

PONTYATES

SEWAGE TREATMENT WORKS

This is the Plan referred to in the Variation of Consent Number RW /0080 /I/1

Scheme No. C.2F

SOUTH WEST WALES RIVER AUTHORITY Reviewed 11th Dec 1981

RIVERS (PREVENTION OF POLLUTION) ACTS, 1951-1961

Consent to discharge of effluent

The South West Wales River Authority pursuant to the provisions of the above mentioned Acts, hereby consent to the construction of an outlet and to the discharge of effluent therefrom upon the following conditions :—

---

1. NAME AND ADDRESS OF PERSON to whom consent is given: The Clerk, Llanelli Rural District Council, Castle Buildings, Llanelli.

2. PREMISES to which consent relates: Pontyates Sewage Treatment Works.

3. OUTLET

(a) Location—situated on right/~~left~~ bank of River ~~a tributary of the River~~ Gwendreath Fawr
Map reference SN. 2½" SW/40 , Grid reference 472 0061 .

(b) Construction— 12 " diameter Pipe

(c) Use—restricted to Sewage/~~Storm Sewage~~/Trade/~~Farm~~ Effluent produced at the above mentioned premises.

4. DISCHARGE

(a) Nature Sewage effluent

(b) Volume or rate of discharge 250,000 g.p.d., d.w.f. (1138 m³/d d.w.f)
Maximum rate of discharge 1,500,000 g.p.d. (6 x d.w.f.) (6828 m³/d)

(c) Temperature not to exceed 21 °C.

(d) Composition :—

(i) pH value not less than 6.0 or more than 8.5

(ii) Suspended solids not more than 30 p.p.m.

(iii) Dissolved solids not more than ~~p.p.m.~~

(iv) 5 day B.O.D. at 20°C. not more than 20 p.p.m.

(v) Oxygen absorbed from acid permanganate in ~~3 mins~~ ~~4 hrs~~ at 27°C. not more than ~~p.p.m.~~

(vi) Ammoniacal nitrogen (as N) not more than ~~p.p.m.~~

(vii) Effluent shall pass the methylene blue stability test (5 days at 20C.)

(viii) Effluent shall not contain any other polluting substance or substances in concentrations toxic to fish and other animals.

(e) Sampling point to be located at point of outlet

5. PERIOD OF CONSENT

The terms of this consent will not without the consent in writing of the person to whom this consent is given be altered before the expiration of the period ending with the 31st day of May 19 73 .

Dated this 19th day of May 19 71 .

This consent supersedes that issued on 4th April, 1967.

Clerk of the Authority.

Penyfai House,
Penyfai Lane,
LLANELLI,

Trevor West - FW: Pontyates STW

From: Adrian Williams <Adrian.Williams@meica-process.co.uk>
To: "Trevor West [trevor.west@environment-agency.wales.gov.uk] (E-mail)" <trevor.west@environment-agency.wales.gov.uk>
Date: 04/09/2003 15:05
Subject: FW: Pontyates STW
CC: "Hilary Ford (E-mail)" <hilary.ford@dwrcymru.com>

Trevor,

I understand that you are seeking more info in respect of flows at Pontyates following my query which was wrongly addressed to Vanessa.

I attach the works process calcs spreadsheet which should provide with all you require. The significant issue is that the greater portion of our higher DWF (ie 15 l/sec from 23 l/sec)is derived from the base infiltration projections presented by Hyder Consulting in support of the CSO works recently completed.

Please advise if you need any more info at this stage .

Regards

Adrian Williams
Meica Process
<<process design.xls>>

> -----Original Message-----
> From: Adrian Williams
> Sent: 15 July 2003 17:15
> To: Vanessa. Shoebridge (E-mail)
> Cc: Stuart Thomas (E-mail); Hilary Ford (E-mail)
> Subject: Pontyates STW
>
>
>
> Vanessa,
>
> Can you help with this query please ??
>
> Consented DWF -- 1138 m3/d
> Current consent limits -- BOD:SS::20:30
>
> Indicative improved works consent limits BOD:SS:NH3::10:15:5
> Projected DWF -- 1988 m3/d, inclusive of 1296 m3/d infiltration -- pop
> 3743 including UDP
>
> Can you advise asap what this might mean for the indicative limits -- do
> we scope the work required on 10:15:5 or something else ??
>
> Regards
>
> Adrian Williams
>
> Adrian Williams
> MEICA
> P-y-S
>
> 01267 229203

RHYDLEWIS WwTW
Process Calculations Sheet C899/6.1/100/01 **1 of 1**

8.08.03
Prepared by AJW
Checked by MR
Rev A

Audit

Existing consent BOD:SS: NH3 :: 40:60:25
proposed consent BOD:SS:Amm-N 10/15/5

Dry Weather Flow 60.9 m3/d, max discharge rate 3.2 l/s

PARAMETER	UNITS		
design basis horizon	date		house count @ 2.5P/house +UDP = 255
Resident Population served (P)	pop.	**255**	
Design Flows			
Peak population served	pop.	**255**	
Per capita BOD contribution Residents	kg/h.d	**0.06**	
per capita resident TSS contribution	kg/h.d	**0.07**	
per capita Amm-N contribution Residents	kg/h.d	**0.008**	
per capita domestic flow(G)	l/h.d	**180**	
total residents flow (PG)	m3/d	**46**	
Infiltration (I)	m3/d	**4.6**	10 %
industrial flow (E)	m3/d	**0.0**	
Dry weather flow (PG + Tg + Vg + I + E)	m3/d	**50**	PG+I+E **Consent DWF = 60.9 m3/d**
	l/s	**0.6**	
Average Flow	m3/d	**63**	
	l/s	**0.7**	
Full Flow to Treatment(3DWF)	m3/d	**142**	3PG+I+3E
	l/s	**1.6**	
Full Flow to Treatment(6DWF)	m3/d	**280**	
	l/s	**3.2**	
Formula A=(PG+I+E)+1.36P+2E	m3/d	**397**	
	l/s	**4.6**	**Consent max flow =3.2 l/s**
Storm tank capacity (2hrs at 3DWF)	m3	**11.9**	
storm tank capacity (68 l/h)	m3	**17.3**	
LOADS			
Total BOD Load	kg/d	**15.3**	
BOD Concentration at Average Flow	mg/l	**242**	
Total TSS load	kg/d	**17.9**	
TSS concentration at Average Flow	mg/l	**283**	
Total Amm-N Load	kg/d	**2.0**	
Amm-N concentration at Average Flow	mg/l	**32.3**	

PACKAGED BIODISC PLANT

Nominal pop equivalent capacity		**300**	
Hydraulic capacity	l/sec	**3.2**	**6 DWF**
Biological capacity	kg/d	**15**	
Ammonia capacity	kg/d	**2.4**	

ASIANTAETH YR AMGYLCHEDD
ENVIRONMENT AGENCY

WATER RESOURCES ACT 1991 (schedule 10)

(as amended by the Environment Act 1995)

Application for variation to an existing consent* to discharge

(* delete as appropriate)

Regional/Area Address:	*Official Use Only*
The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT	*Dist/Area Ref:* 1303 *Application No.* BE0000206 *Date Received:* 24/10/03 *Fee Received:* £722

Each applicant must complete the main form and may need to complete a separate annexe if appropriate. Please look through the form and read the notes carefully before you complete it. Processing of your application will be aided by full and accurate completion of all relevant sections and provisions of the necessary plans. If you have any queries regarding the form please contact the person given in the notes.

NOTE:
All information contained within this application will be made available on the public register unless there is a request to withhold any of it. Any such request should provide a full justification stating why the information needs to be withheld (see note xiii).

1 SITE ADDRESS

1.1 Address or other sufficient description of land or premises to which this application applies.

Pontyates WwTW
Pontyates
Llanelli
Carmarthenshire

E.A. £702-00 24 OCT 2003 WELSH REGION

Post Code: SA155TR

Rec: 0100.
Cuq: 003946.

2 DETAILS OF DISCHARGE(S)

2.1 State the nature of the discharge(s) (see note i and ii) - tick one or more boxes as appropriate:

Sewage Effluent – volume of 5 cubic metres per day or less ☐

Sewage Effluent – volume greater than 5 cubic metres per day **(complete annexe 1)** √

Sewage Effluent discharged under storm or emergency conditions **(complete annexe 2)** ☐

Cooling Water **(complete annexe 3)** ☐

Trade Effluent (*including site drainage*) **(complete annexe 3)** ☐

Others (*please specify*) ☐

2.2 Please state the maximum quantity it is proposed to discharge in any one day 6480 m³/day

Briefly state how this figure was calculated (see note ii).

See Supporting Documentation

2.3 a) Indicate proposed means of discharge - tick as appropriate and show on plan:
(for 1, 2 & 3 please state dimensions below)

1. Pipe √
2. Channel ☐
3. Culvert ☐
4. Borehole ☐
5. Well ☐
6. Soakaway ☐
7. Sub-Irrigation System ☐
8. Combination of 6 & 7 ☐
9. Other (*please specify below*) ☐

375 mm diameter pipe

b) National Grid Reference(s) of point(s) of discharge (see note iii).

S	N	4	7	2	7	4	0	8	6	6	2

(please indicate on accompanying plans)

2.4 a) The Agency will normally require adequate provision for the taking of samples of the discharge in a safe and convenient manner at any time. Please indicate the means proposed (see note iv) - tick as appropriate and show on plan:

At the outlet ☐ At a manhole or sampling chamber √

Other *(please specify)*

b) National Grid Reference(s) of sampling point(s) (if different from 2.3 b) above).

S	N	4	7	2	0	2	0	8	6	8	2

(please indicate on accompanying plans)

c) What flow measurement facilities will be provided (see note v)?
Please give details.

Discharge flow measurement will be derived from the inlet flume and ultrasonic head. Instantaneous and 24 hr cumulative flow will be displayed adjacent to sampling point. See Drawing ref. C898/2003

2.5 a) Type of Treatment Plant(s) to be used *(please specify make and model)* - tick as appropriate:

Septic Tank [ ] Package Sewage Treatment Works [ ] Other [√]

Conventional Trickling Filter Process.

b) Will the treatment process involve the use of any chemicals (eg ferric salts, polyelectrolytes). If yes please give details. Y/~~N~~

2.6 a) On what date do you anticipate the discharge will commence? 31 /03 /04

b) If you require the consent for a limited time period please give dates; from: / /

to: / /

c) If the discharge is not continuous please detail the period/circumstances when it will occur.

2.7 a) Are there any existing consents for discharges from the premises (see note vi)? If yes, please give the reference numbers *(Any further information should be given in Section 5.3).* Y/~~N~~

BE 0000206

b) Has any person had a Prohibition Notice serviced on them in respect of this site? If yes, please give the reference number. Y/~~N~~

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Carmarthenshire CC

3.2 Please give details of the premises - tick as appropriate:

1. Single Dwelling	[ ]	6. Fish Farm	[ ]
2. Multiple Dwellings	[ ]	7. Mineral Workings	[ ]
3. Industrial Premises	[ ]	8. Water Services plc STW	[ ]
4. Vehicle Parking Area	[ ]	9. Water Supply	[ ]
5. Commercial Premises *(please specify)*	[ ]	10. Other *(please specify)*	[ ]

3.3 Please indicate source of the water supply - tick as appropriate:

1. Well ☐
2. Borehole ☐
3. Precipitation (eg rain or snow) ☐
4. Mains *(please state water supply company)* ☐
5. River *(please give name below)* ☐
6. Estuary *(please give name below)* ☐
7. Coastal Water *(please give name below* ☐

4 DETAILS OF RECEIVING ENVIRONMENT

4.1 Receiving Medium - tick the category(s) to which the proposed discharge(s) is(are) to be made:

1. Estuarial Water (tidal river or stream) ☐
2. River or Stream (non-tidal) ☑
3. Canal ☐
4. Lake, Lock or Pond ☐
5. Into Land ☐
6. Onto Land ☐
7. Directly into Groundwater ☐
8. Coastal Water (see note vii) ☐

State name of receiving water if known:

Gwendraith Fawr

4.2 In the case of sub-irrigation systems, soakaways or boreholes:

(a) Is any part of the system within 5 metres of the boundary of the premises? Y/N

(b) Is any part of the system within 10 metres of a watercourse? Y/N

(c) Is any part of the system within 50 metres of a borehole or spring? Y/N

(d) For wells and boreholes state dimension(s) in metres. m

(e) For sub-irrigation systems, soakaway pits, wells and boreholes, state maximum depth in metres. m

(f) For boreholes, state details of lining in metres:

(i) Depth of lining m

(ii) Depth of perforated lining m

(iii) Depth of unperforated lining m

(g) A percolation test must be carried out in accordance with British Standard BS6297:1983. Have the results been provided? Y/N

4.3 Is there a foul sewer available to which the discharge(s) could be made (see note viii)? Y/N

If yes, please give the reasons it is not practical to connect to it (eg distance, flow etc).

5 DETAILS OF APPLICANT AND OTHER INFORMATION

5.1 (See general notes and note ix)

(a) Full name and postal address of applicant. This should be the person who will become the consent holder should consent be issued.

*
Dwr Cymru Cyf
* Pentwyn Road
* Nelson
* Treharris
* Mid Glam
Post Code: CF46 6LY

Daytime Telephone Number: Hilary Ford 01437 769061

Company Registration Number (if appropriate): 2366777

(b) Agent (if any) - Full name and postal address.

*
*
*
*
*
*

Post Code:

Contact Name and Daytime Telephone Number:

5.2

Please give full name and address to which bills should be sent if different to that given above:

*
*
*
*
*
*

Post Code:

Daytime Telephone Number:

5.3 Are there any other factors to be taken into account? Please continue on a separate sheet if necessary.

DECLARATION

I/We:

1. apply under the Water Resources Act 1991 (as amended by the Environment Act 1995) for consent to discharge, as described in this Application. "This Application" means this page, all the other pages of this form and any attached annexes, the attached plan(s), any other sheets attached, and any other written information supplied to support the application.

2. enclose the required application fee, payable to the Environmental Agency (see note x).

3. enclose 3 copies of the plan(s) and location maps with all relevant information clearly marked (see note xi).

4. will pay required advertising costs (see note xii).

5. confirm that I/we* will notify the Environment Agency of any changes in the information in this application which might be material to the continuation of the consent.

6. confirm that the information given in this application and any questions which the Environment Agency may have about it is/will* be true to the best of my/our* knowledge, information and belief and am/are* not aware of any other facts or information which might affect the granting of a consent, or conditions which might be put on it (see note xiii).

7. confirm that I/we* will pay any annual charges due should a consent be granted YES/NO*. If no please indicate who will be completing section 5.2 above (see note xiv).

(* Delete as appropriate)

SIGNED: Hilary Ford **PRINT NAME:** HILARY FORD

ON BEHALF OF: Dŵr Cymru Cyf **DATED:** 21/10/03

CONFIDENTIALITY

I/we apply for commercial confidentiality and enclose a full written justification (see note xv).

SIGNED: ..... **DATED:** .....

PLEASE RETURN THIS FORM TO THE ADDRESS GIVEN ON THE FRONT PAGE

ASIANTAETH YR AMGYLCHEDD
ENVIRONMENT AGENCY

ANNEXE 1
SEWAGE EFFLUENT GREATER THAN 5 CUBIC METRES PER DAY

Please complete this annexe if you are proposing to discharge more than 5 cubic metres per day of sewage effluent (if the effluent is to contain a trade component Annexe 3 should also be completed).

Official Use Only
Application No.

1. Site Name.
Pontyates WwTW

2. Please detail the type and number of treatment units you are proposing to use.
Conventional Process, comprising inlet works, screen , primary settlement, trickling filters, final settlement tanks.

3. Volume, rates and overflow settings. (Please give volumes in cubic metres per day or litres per second as indicated below)

a) Maximum flow to full treatment. (see note ii) in main guidance notes for population equivalents). 6480 m³/d

b) Dry weather flow of discharge(s). (design to full plant capacity) 1989 m³/d

c) Average daily flow. 2486 m³/d

d) Maximum rate of discharge(s) 75 l/s

4. Will there be provisions for storm/emergency discharges? **If yes, please complete Annexe 2.** Y/N

5. a) Will any self monitoring take place? If yes, please give details. Y/N
Flow, Suspended Solids,

b) Will automatic sampling equipment be provided? If yes, please give details of type and location *(please indicate on plan).* Y/N

6. a) Please state the maximum population served by the treatment works.

3743

b) Please give reasons for any variations in population, eg holiday resort, training area, seasonal industry etc, and detail the periods/times involved.

c) Please state type of catchment/site being served, eg residential, resort, industrial etc.

Residential

7. Will a maintenance agreement be set up to manage the sewage works? (see note b) N/A

If yes, please give details.

8. Does the effluent contain a trade component? Y/N

If yes, please complete appropriate section on Annexe 3 for authorised discharges of trade effluent to the sewerage system.

Notes (see also the notes attached to the main form):

a) For significant sewage treatment plants full details of the plant design, dry weather flow and Biochemical Oxygen Demand load, along with information on all discharges from the works must be included in order for the application to be processed. Flow monitoring will normally be required for such discharges and details of siting and type of flow recorders should be provided.

b) The Agency require a single body or company to be responsible for the discharge and any bills raised under the Charges for Discharges Scheme. Where multiple dwellings under different ownership are connected to the same system a management company should be set up.

ASIANTAETH YR AMGYLCHEDD
ENVIRONMENT AGENCY

ANNEXE 4
WELSH REGION SUPPLEMENTARY INFORMATION ANNEXE

Please complete this annexe for <u>every</u> proposed discharge.

<u>Official Use Only</u>
Application No.

<u>For all proposed discharges:</u>

1. Site Name.
   Pontyates WwTW

2. Is this application being made to reinstate a lapsed Consent? Y/N

   If so, please state the Number of the lapsed Consent:

   IMPORTANT: If you are in need of advice on either part of Question 2, please contact the Agency Regional Consents Section on 01222 770088.

3. If the proposed discharge is to be made down a pipe, channel or culvert (as given in Section 2.3 of the main application form), please state the <u>diameter</u> (including units):
   375mm

4. Please indicate the anticipated cost of the proposed scheme, including any alternatives which may have been considered:

   Scheme cost £533k.

5. Is there any trade effluent component in the proposed discharge? Y/N

   If yes, please confirm here that you have completed and enclosed Annexe 3: *Tick*

6. Will the proposed discharge be pumped or made under gravity? (please circle) ~~Pumped~~ / Gravity

If pumped, please state the maximum pump rate in l/sec: l/s

For proposed discharges of sewer in storm or emergency conditions:

7. Please confirm here that you have completed and enclosed both Annexes 1 and 2: *Tick*

8. Please state:

Population served (head)	
Consumption (l/head/day) default = 180	
Infiltration (m^3/day)	
Industrial effluent flow (m^3/day)	
Dry Weather Flow (m^3/day)	
Soc A (l/sec)	
Predicted spill frequency (per annum)	

IMPORTANT NOTES FOR ALL CONSENT APPLICATIONS:

1. **Whoever signs the declaration on the main application form takes responsibility for the discharge, and will become the registered consent holder, if consent is given. In the case of a 'body corporate' (eg a public limited company ('plc'), limited, company, local authority), the 'body corporate' will be the registered consent holder, and the person with the delegated authority to sign on behalf of the 'body corporate' should give their job title.**

2. **Agents making an application on behalf of a client, must attach their clients written authority.**

3. **If the name and/or address of the applicant changes after submission of this application to the Environment Agency, the applicant must inform the Agency in writing.**

DŴR CYMRU
WELSH WATER

Gwaith Trin Dŵr Gwastraff Pont Myrddin
Pont Myrddin
Hwlffordd
Sir Benfro SA61 1JL

Ffôn: +44 (0)1437 765 460
Ffacs: +44 (0)1437 762 552
Safle gwe: www.dwrcymru.com

Merlins Bridge WWTW
Merlins Bridge
Haverfordwest
Pembrokeshire SA61 1JL

Tel: +44 (0)1437 765 460
Fax: +44 (0)1437 762 552
Web site: www.dwrcymru.com

Mr. Gareth Davies
Environment Agency Wales
Glan Tawe
154 St. Helens Road
Swansea
SA1 4DF

21/10/03

Tel: 01437 769061

Dear Sir

Application for Discharge Consent – Pontyates WwTW

Please find enclosed, application forms, fee and three copies of supporting information in respect of variation to the existing consent to discharge BE0000206. The variation is to allow the WwTW to accommodate altered flows due to improvements to the intermittent discharges within the sewerage catchment carried out under AMP3.

Yours faithfully

Hilary Ford

Hilary Ford
Area Consents and Regulation Scientist

Documentation Supporting Application for Pontyates WwTW Discharge Consent

CONTENTS

1. Introduction.

Pontyates WwTW treats wastewater from the domestic dwellings in the villages of Pontyayes, Meinciau, and Ponthenri. The works is listed for investment within the Environment Agency Wales (EAW) spread sheet for AMP3, the driver being FF5 (Freshwater Fish Directive).

The indicative consent limits are as follows

Biological Oxygen Demand (BOD) :	10 mg/l
Suspended Solids (SS) :	15 mg/l
Ammoniacal Nitrogen :	5 mg/l

Treated effluent is discharged to the Gwendraith Fawr .

The local catchment has been the subject of CSO improvements recently undertaken by Morrison Construction Ltd., for Dwr Cymru Welsh Water.

This paper presents supporting information in respect of applications for the variation of existing consent to discharge treated effluent.

2. Feasibility and Outline Design Report.

A copy of the Feasibility and Outline Design Report, document ref. C898/6.1/01/001, which provides the background to the identification of the preferred solution, is included in the Appendix.

3. Environmental Considerations.

The proposed works improvements will improve operability so that compliance with the indicative consent limits is more assured. The scheme will contribute to the overall improvement in river water quality on the Gwendraith Fawr which is being achieved as a result of works carried out at other locations within the catchment.

APPENDIX.

Feasibility and Outline Design Report. Doc. C898/6.1/01/001

Pontyates WwTW Process Calculations Sheet C898/100/01

Location Plan for Pontyates WwTW – Drg C898/2002

Process Flow Diagram (PFD) for Pontyates WwTW – Drg 898/1001

Pontyates WwTW Site Layout showing location of Discharge, Flow Measurement & Sampling Point -- Drg C898/2003.

Meica Processes
Parc Y Splott WwTW
Llansteffan Road
Johnstown
Carmarthen SA31 3QU
Tel 01267 221131
Fax 01267 221167

Welsh Water ALLIANCE
CYNGHRAIR Dŵr Cymru

Document Cover Sheet

Project Title	Pontyates WwTW
Project Number	C898
Client	DWR CYMRU/WELSH WATER
Document Reference Number	C898/6.1/01/001

Pontyates WwTW

Feasibility & Outline Design Report

Rev.	Date	Description/Purpose	Prepared	Checked[1]			Approved for Issue[2]		
				Mech	Proc	Elect	LE	EM	PM
0		Issue for approval	AJW	SR	MR	BB	SR	AJW	SW
A	5.08.03	Rev B Drwg C898/1001	AJW					AJW	
B									
C									
D									

Contents

Notes

1. Relevant Disciplines to initial
2. LE – Lead Engineer, EM – Engineering Manager, PM – Project Manager

CONTENTS

Summary

Pontyates WwTW is scheduled for upgrade under the AMP3 programme, to meet new indicative consents of BOD:SS:NH_3::10:15:5.

Final effluent analytical results indicate that the existing biological filter plant is consistently producing a well nitrified effluent, although the final effluent quality is compromised by inadequate final settlement capacity and recycled flow control.

Similarly, the effectiveness of the primary settlement stage is reduced as a result of operational difficulties associated with shallow, rectangular tanks and sludge storage facilities.

It is recommended that the following key items are included in a scope of Works designed to consistently achieve the revised indicative limits ;

- New 11m diam. primary settlement tank
- New 11m diam. final settlement tank
- Improvement in recycle flow controls
- Provide electric drives to filters
- Essential plant maintenance
- Provision of approved flow measurement and final affluent sampling facilities.
- Essential Health and Safety upgrade.

If the project budget allows, plant performance security and operability would be improved by the following additional improvements ;

- Installation of replacement 6 x 6 mm works inlet screen
- Provision of a new, above ground level 30m3 sludge storage tank

1. INTRODUCTION

Pontyates WwTW treats wastewater from domestic dwellings in the villages of Pontyates, Meinciau and Ponthenri.

Current consent limits for the works are as follows

Biological Oxygen Demand (BOD) :	20 mg/l
Suspended Solids (SS) :	30 mg/l
Ammoniacal Nitrogen :	n/a mg/l
Dry Weather Flow (DWF)	1138 m3/d
Maximum Discharge Volume	6828 m3/d
Maximum Rate of Discharge	79 l/sec

The EA spread sheet for AMP3 investment applies the core driver FF5 (Freshwater Fish Directive) to the discharge. An ammoniacal nitrogen consent limit has been added.

The indicative consent limits are as follows

Biological Oxygen Demand (BOD) :	10 mg/l
Suspended Solids (SS) :	15 mg/l
Ammoniacal Nitrogen :	5 mg/l

Treated effluent is discharged to the Gwendraith Fawr .

2. EXISTING WORKS

The Process Flow Diagram (PFD) for the existing works is included in the Appendix as Dwg. C898/1000.

Incoming flows gravitate from the Meinciau catchment, and are pumped from Pontyates and from Ponthenri catchments. All flows arriving at the works are passed forward to full treatment.

The existing works comprises the following ; inlet works including 6mm Longwood bar screen, grit removal and flume ; primary settlement tanks comprise 3 no. rectangular settlement tanks, and a single circular radial flow tank ; a central chamber distributing flows to 4 no. percolating filters; 2 no. circular radial flow final settlement tanks. Humus sludge and any other site drainage including decant water is returned to the incoming sewer and thence to the inlet works by a submersible pump set located at the lower end of the site. Co-settled primary and humus tanks sludge is pumped directly to the sludge storage tank which incorporates a picket fence thickener.

Operational problems at the site include; difficulty in effective use, flow distribution and desludging of the rectangular primary tanks, and shortfall in final settlement area and volume to produce consistent effluent quality; poor control of filter recirculation pumps.

In particular the means by which rectangular primary settlement tanks are desludged is particularly labour intensive. The tanks have to be taken off line in turn and drained of both top water and sludge through the sludge storage tank, which runs constantly full, so that "decant" overflow is passed to the site drainage pumps, from where it is pumped back to the incoming sewer ahead of the inlet works.

3. FLOWS AND LOADS

Extensive flow data was collected from the contributing catchments during 2001, as a part of the AMP3 Gwendraith Catchment Scheme which has already been completed.

Using this data, which has also been used to establish consenting criteria for the intermittent discharges within the Pontyates, Ponthenri and Meinciau catchments, the following basis of design for the works upgrade is calculated ;

	BASIS	**VALUE**
Population Equivalent (PE) (inc. growth)	Flow	3743
Dry Weather Flow (DWF)	m^3/day	1989
	l/s	23
Average Flow	m^3/day	2486
	l/sec	28.8
3DWF	m3/d	3373
	l/sec	39
SOC A	m3/d	7079
Design Flow Rate	l/sec	75
BOD Load	kg/day	225
SS Load	kg/day	225
NH_3 – N Load	kg/day	30

The above table is a summary of the calculations which are included in the Appendix as Process Calculations Sheet C898/6.1/100/01.

It is noted that the projected Dry Weather Flow (DWF) for the works is 1989 m3/d, compared with the current consent of 1138 m3/d. The increased DWF has largely resulted from increased pass forward flows (including 15 l/sec recorded dry weather infiltration allowance) from the AMP3 intermittent discharge improvement programme. Guidance has been sought from the Environment Agency in respect of the influence if any of this issue on the indicative consent limits. For the purposes of this report it is assumed that there will be no change in these limits.

4. PROCESS ISSUES

From an operational viewpoint the use of the rectangular primary settlement tanks should be abandoned, and replaced with a second circular, radial flow settlement tank, of similar dimensions to the existing. This will ensure that the full reduction in BOD load through primary settlement is effected, and will reduce the operator intervention required .

A review of the most recent 2 years final effluent sample analyses indicates that the existing biological filter capacity is adequate to achieve nitrification very consistently. Over the period 11.02.00 – 15.05.03, all samples (a total of 24) provided ammoniacal nitrogen analysis results less than 5 mg/l, which is the indicative consent limit. It is understood that the distribution arms require a significant feed flow to ensure that rotation occurs, hence the establishment of 3 no final effluent recirculation pumps.

However, through the same period, there are a number of SS/BOD failures, which can be attributed to the capacity and operation of the 2 final settlement tanks, together with poor automatic control of filter recirculation flows. Process calculations illustrate that at peak flows the final settlement tanks would be hydraulically overloaded in respect of compliance with the indicative SS limit (15 mg/l). Therefore an additional settlement tank is required.

Similarly, in order to protect the efficacy of the biological filters and the final tanks, close control over filter recycle flow rates is required. There are presently 3 no. final effluent recycle pumps, understood to be controlled by a flow (depth) sensor situated before the flume in the inlet works channel.

Sludge storage facilities are inadequate at present because effective decanting is not possible ; the storage is continuously full.

The works inlet screen is presently a 6mm mechanically raked bar screen, which determines that the biological filter distribution system requires Copa Sac protection within the central distribution chamber. Notwithstanding this there is some evidence of blockage to filter nozzles.

5. RECOMMENDATIONS.

The treatment works is capable of producing nitrified final effluent as is confirmed by the analytical results. However, consistency in performance is compromised by a shortfall in final settlement tank capacity at peak flows, and operational difficulties associated with the rectangular primary settlement tanks.

It is recommended that the existing treatment plant is upgraded by undertaking the following scope of works;

5.2 Scope of Works.

It is anticipated that the scope of works required to be undertaken at Pontyates WwTW in order to comply with the indicative consent limits of BOD:SS:NH_3::10:15:5 mg/l is as follows;

- Essential maintenance to works inlet channel , degritting unit, screen, and flow measurement plant.
- The abandonment of the rectangular primary settlement tanks except for emergency use.
- The provision of a 11m diam. radial flow primary settlement tank complete with half bridge scaper and automatic desludge facilities.
- The provision of a 11m diam. radial flow final settlement tank complete with half bridge scraper and automatic desludge facilities.
- Upgrade of existing radial flow, primary settlement tank, desludge facilities.
- Upgrade of existing final effluent to filter recycle control system and review of filter distribution system.
- Top up media inventory within the biological filters.
- Provide electric drives to the 4 no. 18m diam. filters.
- Installation of approved discharge flow monitoring and sampling facilities.
- Health and Safety essential requirements.

In the event that the project budget will allow expenditure, the following items will further improve plant performance security and plant operability;

- Replacement of the works inlet screen with a 6 x 6 mm perforated plate screen.
- The provision of a new 30m3 sludge storage tank complete with decant facilities.

The Process Flow Diagram (PFD) for the proposed works is included in the Appendix as Dwg. C898/1001.

Feasibility and Outline Design Report Acceptance Sheet

We confirm that we have discussed the content of the Pontyates WwTW Feasibility and Outline Design Report and that we are in agreement with the conclusions and recommendations.

Aled Daniel, Manager United Utilities

Signed under separate cover

..... Date .....

Stuart Worts , Meica Process Ltd., Project Manager

Signed under separate cover

..... Date .....

APPENDIX

- **Schedule of Final Effluent Analytical Results**
- **Process Calculations Sheets C898/6.1/100/01**
- **Existing Process Flow Diagram (PFD) C898/1000**
- **Proposed Process Flow Diagram (PFD) C898/1001**

Pontyates WwTW
Schedule of Final Effluent Analytical Results

	BOD mg/l	SS mg/l	NH_3 mg/l
Current Consent Limits	**20**	**30**	**N/a**
Indicative Consent Limits	**10**	**15**	**5**
DATE			
11.12.00	5.1	8	0.5
12.12.00	5.4	4	<0.5
12.01.01	3.7	8	1.9
30.01.01	10	11	2.9
21.02.01	3.6	8	0.9
23.02.01	3.4	7	1.7
4.07.01	15.8	17	4.4
10.10.01	10.4	10	<0.5
30.10.01	5.8	12	0.7
16.01.02	8.4	16	2.28
18.02.02	7.4	12	2.1
11.03.02	11.1	18	3.2
18.04.02	10.1	16	1.8
1.05.02	14.8	50	1.4
14.06.02	3.7	7	0.81
25.09.02	8.6	14	0.9
28.10.02	7.7	12	0.8
6.12.02	3.8	9	<0.5
30.01.03	10.7	19	2.1
20.02.03	9	10	1.3
26.03.03	7.3	24	<0.5
17.04.03	8.8	15	0.6
8.05.03	8.3	11	6.5

PONTYATES WwTW 15.07.03
Process Calculations Sheet C898/6.1/100/01 1 of 2 **Prepared by** AJW
Checked by MR
Rev A
Audit

Existing consent BOD:SS 20:30
Max discharge 6828 m3/d, 79 l/s

proposed consent BOD:SS:Amm-N 10/15/5

			Contributing catchments				
PARAMETER	UNITS		Pontyates	Ponthenri	Heol Meinciau	Totals	
design basis horizon	date		2006+	2006+	2006+	2006+	
Resident Population served (P)	pop.		1175	925	1643	3743	From HCL/MCL CSO Scheme data
Design Flows							
Per capita BOD contribution Residents	kg/h.d		0.06	0.06	0.06	0.06	
per capita resident TSS contribution	kg/h.d		0.06	0.06	0.06	0.06	
per capita Amm-N contribution Residents	kg/h.d		0.008	0.008	0.008	0.008	
per capita domestic flow(G)	l/h.d		185	185	185	185.0	
total residents flow (PG)	m3/d		217	171	304	692.5	
Infiltration (I)	m3/d		432.0	0.0	864.0	1296.0	
			5.0	0.0	10.0	15.0	
industrial flow (E)	m3/d		0.0	0.0	0.0	0.0	
Dry weather flow (PG + Tg + Vg + I + E)	m3/d		649.4	171.1	1168.0	1988.5	**Consent DWF =1138m3/d**
	l/s		7.5	2.0	13.5	23.0	From HCL/MCL CSO
Average Flow	m3/d		811.7	213.9	1459.9	2485.6	Scheme data
	l/s		9.4	2.5	16.9	28.8	
Full Flow to Treatment(3DWF)	m3/d		1084.1	513.4	1775.9	3373.4	
	l/s		12.5	5.9	20.6	39.0	
Full Flow to Treatment(6DWF)	m3/d		1736.3	1026.8	2687.7	5450.7	
	l/s		20.1	11.9	31.1	63.1	**Consent max flow = 79l/s**
Formula A=(PG+I+E)+1.36P+2E	m3/d		2247.4	1429.1	3402.4	7078.9	6480
	l/s		26.0	16.5	39.4	81.9	75 Design max flow rate from
Storm tank capacity (2hrs at 3DWF)	m3	n/a	90.3	42.8	148.0	281.1	CSO settling/pumping rates
storm tank capacity (68 l/h)	m3	n/a	79.9	62.9	111.7	254.5	**Works treats all flows**
LOADS							
Total BOD Load	kg/d		70.5	55.5	98.6	224.6	
BOD Concentration at Average Flow	mg/l		87	259	68	90	
Total TSS load	kg/d		70.5	55.5	98.6	224.6	
TSS concentration at Average Flow	mg/l		87	259	68	90	
Total Amm-N Load	kg/d		9.4	7.4	13.1	29.9	
Amm-N concentration at Average Flow	mg/l		11.6	34.6	9.0	12.0	
Primary Treatment % removal							
Settled BOD load 25	kg/d					176.9	
Settled BOD Concentration	mg/l					71	
Settled TSS load 50	kg/d					117.9	
Settled TSS concentration	mg/l					35	
Settled Amm-N load 0	kg/d					31.4	
Settled Amm-N concentration	mg/l					12.6	
primary sludge mass	kg/d					106.7	
Flow split	%					100.0	
Number of tanks			1.0 existing		plus 1x11m diam	2 proposed	
Type of tank			circular			circular	
Size	m		10.35 diam.		11 diam.		
Size	m		2.135 str. Side		2.5 str. Side		
Area	m2		84.1 m2 total		95.0	179.2	m2 total
Volume based on 1.5 depth	m3		194.2 m3 total		254.1	448.3	m3 total
Upflow rate at peak flow 75l/sec	m/h		3.21 m/h			1.51	m/h
Retention time	h		0.7 h			1.7	h
Biological treatment							
secondary BOD load	kg/d					176.9	
secondary BOD concentration	mg/l						
secondary TSS load	kg/d					117.9	
secondary TSS concentration	mg/l						
secondary Amm-N load	kg/d					31.44	
secondary Amm-N concentration	mg/l						
biol. sludge mass (@0.7kg/kg BOD removed	kg/d					117.6	
Number of filters						4.0	
Diameter	m					18.0	
Depth	m					1.8	
Surface area	m2					1018	total
Volume	m3					1832	total
BOD loading	kg/m3/d					0.10	Prob Less with new PST
hydraulic loading	m3/m2/d					6.4	
Amm-N loading	kg/m3/d					0.02	
Wetting rate @ design flow 75 l/sec	m3/m2/hr					0.27	
Min wetting rate	m3/m2/hr					0.06	l/sec 16.97
Wetting rate @ DWF 23 l/sec	m3/m2/hr					0.08	

PONTYATES WwTW 15.07.03

Process Calculations Sheet C898/6.1/100/01 **2 of 2** **Prepared by** AJW

Checked by MR

consent BOD:SS 20:30 **proposed consent BOD:SS:Amm-N 10/15/5** **Rev** A

Max discharge 6828 m3/d, 79 l/s

Audit

Final Settlement	% removal					
Final BOD load	95	kg/d			8.84	
Final BOD concentration		mg/l			3.6	
Final TSS load	90	kg/d			11.79	
Final TSS concentration		mg/l			5	
Final Amm-N load	90	kg/d			3.14	
Final Amm-N concentration		mg/l			1.3	
Number of tanks			2.0	existing	plus 1x11m diam	3 proposed
Type of tank			circular			circular
Size		m	10.35	diam.	11	diam.
Size		m	2.135	str. Side	2.5	str. Side
Area		m2	168.3	m2 total	95.0	263.3 m2 total
Volume based on	1.5 depth	m3	388.5	m3 total	254.1	642.6 m3 total
Upflow rate	at peak flow 75l/sec	m/h	1.60	m/h		1.03 m/h
Retention time		h	1.4	h		2.4 h
			Note requirement for good recirc flow control			
Sludge Production						
total sludge mass		kg/d			224.3	
total sludge volume @2%ds		m3/d			11.2	

DŴR CYMRU
WELSH WATER

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Mr. T.J.West
Environment Agency Wales
Maes Newydd
Llandarcy
Neath Port Talbot
SA10 6JQ

11.12.03

Tel:01437 769061

Dear Trevor,

Re : Pontyates WwTW BE0000206 – Dry Weather Flow.

I refer to the application for variation to the final effluent discharge consent for Pontyates WwTW, which was submitted to you on 24th October 2003. I also refer to e-mail correspondence between Meica Process Ltd. and the Agency during the autumn in respect of projected dry weather flow (DWF) at the works.

In preparation of the consent application we had utilised flow data provided in support of the Gwendraith catchment CSO Scheme, undertaken by Morrison Construction Ltd. during 2002. The DWF data included infiltration estimates as follows:
Pontyates contribution – 5 l/sec
Ponthenri contribution – 2 l/sec
Heol Meinciau contribution –10 l/sec.
Using these figures, the application includes reference to a revised DWF of 23 l/sec, 1989 m3/d.

We have subsequently undertaken physical flow monitoring during October and November 2003 at the Pontyates inlet works, which confirmed that the current DWF is of the order of 6 l/sec. This equates to a daily DWF of 518 m3, compared with the present consented value of 1138 m3/d. It is apparent that, in the interests of "conservative engineering" of the CSO settings, overestimation of pass forward flows has taken place.

With this in mind, could I request that the application be amended so that the projected DWF will remain at the present level, i.e. 1138 m3.d, which will also accommodate significant growth in the future.

I trust that you will be able to accommodate this amendment to the application, and apologise for any inconvenience, which this might cause.

Yours sincerely

Hilary Ford
Area Consents and Compliance Scientist

CONSENT NO.	BE0000206

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

WATER RESOURCES ACT 1991

SECTION 88 – SCHEDULE 10

(AS AMENDED BY THE ENVIRONMENT ACT 1995)

VARIATION OF CONSENT TO DISCHARGE

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

In pursuance of an application by the consent holder for variation of consent, the **ENVIRONMENT AGENCY** ("The Agency") in pursuance of its powers under the Water Resources Act 1991 **HEREBY VARIES ITS CONSENT** to the making of a discharge **OF SEWAGE EFFLUENT**, as follows:

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

with respect to Consent No. **BE0000206** issued on the 11th day of December 1981

FROM: **PONTYATES WASTEWATER TREATMENT WORKS**

AT: **PONTYATES, LLANELLI**

TO: **GWENDRAETH FAWR**

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

Secondary Treated Sewage Effluent — Schedule No. BE0000206 01
UWWT Regulations 1994 — **Schedule No. BE0000206 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 affects the effect of variations made to this consent, without the agreement in writing of the Consent Holder, during a period of 4 years from the date this variation is issued.

This variation of consent is issued and takes effect on the 31st day of March 2004.

Signed .....

MARK SABINE

~~**Peter Jordan**~~ – **Environment Management Team Leader**

Asiantaeth yr Amgylchedd Cymru
"Maes Newydd", Llandarsi, Nedd Port Talbot. SA10 6JQ Ffon 01792 325500 Ffacs 01792 325511

Environment Agency Wales
"Maes Newydd", Llandarcy, Neath Port Talbot. SA10 6JQ Tel 01792 325500 Fax 01792 325511

CONSENT NO.	BE0000206
SCHEDULE NO.	BE0000206 01
DATE ISSUED	31st March, 2004

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Secondary Treated Sewage Effluent ("the Discharge")

FROM: PONTYATES WASTEWATER TREATMENT WORKS, PONTYATES, LLANELLI

NATURE

1. The Discharge shall consist solely of secondary treated sewage effluent.

LOCATION

2. The Discharge shall be made in the manner and at the place specified as:

   (a) discharging via a 375 millimetre diameter pipe;

   (b) discharging to the Gwendraeth Fawr;

   (c) at National Grid Reference SN 47274 08662;

   (d) shown marked 'Consent Point' on Plan BE0000206 attached as Annex 3.

SAMPLE POINT

3. An appropriately labelled sample point shall be provided and maintained at National Grid Reference Reference SN 47202 08682, as shown marked 'Sampling Point' on Plan BE0000206, 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 discharging into controlled waters.

VOLUME

4. The volume of the Discharge shall not exceed 6,480 cubic metres per day.

5. The Dry Weather Flow of the Discharge shall not exceed 1,138 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.

6. The rate of discharge shall not exceed 75 litres per second.

FLOW MEASUREMENT

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. Flows passing forward to full treatment shall be measured at the inlet works measuring flume, at National Grid Reference SN 47219 08789, or such other point(s) as agreed by the Agency.

COMPOSITION

13. (a) Subject to paragraph (b) below, the Discharge shall not contain more than:

(i) 10 milligrammes per litre of biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);

(ii) 15 milligrammes per litre of suspended solids (measured after drying at 105°C);

(iii) 5 milligrammes per litre of ammoniacal nitrogen (expressed as N).

(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.

14. The Discharge shall not contain more than:

(a) 48 milligrammes per litre of biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);

(b) 72 milligrammes per litre of suspended solids (measured after drying at 105°C);

(c) 20 milligrammes per litre of ammoniacal nitrogen (expressed as N).

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 conditions 13 and 14, than is required by those conditions;

(b) any alteration of the works or a change in the type of treatment used.

UNUSUAL WEATHER CONDITIONS

16. (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 13, 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.

RECORDING AND REPORTING

17. (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.

18. 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

19. 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.

19.1 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.

19.2 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.

19.3 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 conditions 13 and 14 of this consent but it may be significant if it is caused by a change in some other characteristic of the Discharge.

19.4 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

(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

20. 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.

CONSENT NO.	**BE0000206**
SCHEDULE NO.	**BE0000206 01 / U**
DATE ISSUED	**31st March, 2004**

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Secondary Treated Sewage Effluent ("the Discharge")

FROM: PONTYATES WASTEWATER TREATMENT WORKS, PONTYATES, LLANELLI

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 between 2,000 and 10,000, discharging to freshwaters.

(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(1) and shall satisfy the requirements of Part I of Schedule 3.

U2 (a) The Consent Holder shall provide apparatus for the purpose of:

(i) measuring or recording the volume, rate of flow, nature, composition or temperature, and
(ii) collecting samples of any waste water,

as is necessary to ensure compliance with paragraph (b) below.

(b) The Consent Holder shall monitor the Discharge to verify compliance with the requirements of condition U1(c) above in accordance with control procedures as set out in Part II of Schedule 3.

(c) The consent holder shall provide to the agency any information collected in complying with paragraph (b) above in a manner agreed with the agency.

U3 Condition U2 above shall apply for the purpose of verifying compliance with the directive from the date as specified in the relevant paragraph of regulation 5 as incorporated into this consent under condition U1(c) above.

U4 (a) An appropriately labelled sample point shall be provided and maintained at National Grid Reference SN 47219 08789, as shown marked 'UWWTD Crude Sewage Sampling Point' on the attached Plan No. BE0000206, or some other point as agreed in writing with the Agency, so that a representative sample of the Influent may be obtained.

(b) An appropriately labelled sample point shall be provided and maintained at National Grid Reference SN 47202 08682, as shown marked 'UWWTD Final Effluent Sampling Point' on the attached plan no. BE0000206, or some other point as agreed in writing with the agency, so that a representative sample of the discharge may be obtained.

CONSENT NO.	BE0000206
SCHEDULE NO.	BE0000206 01

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

ANNEX 1

TABLE

Column 1 Number of samples taken in any period of 12 months	Column 2 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

CONSENT NO.	BE0000206
SCHEDULE NO.	BE0000206 01

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

ANNEX 2

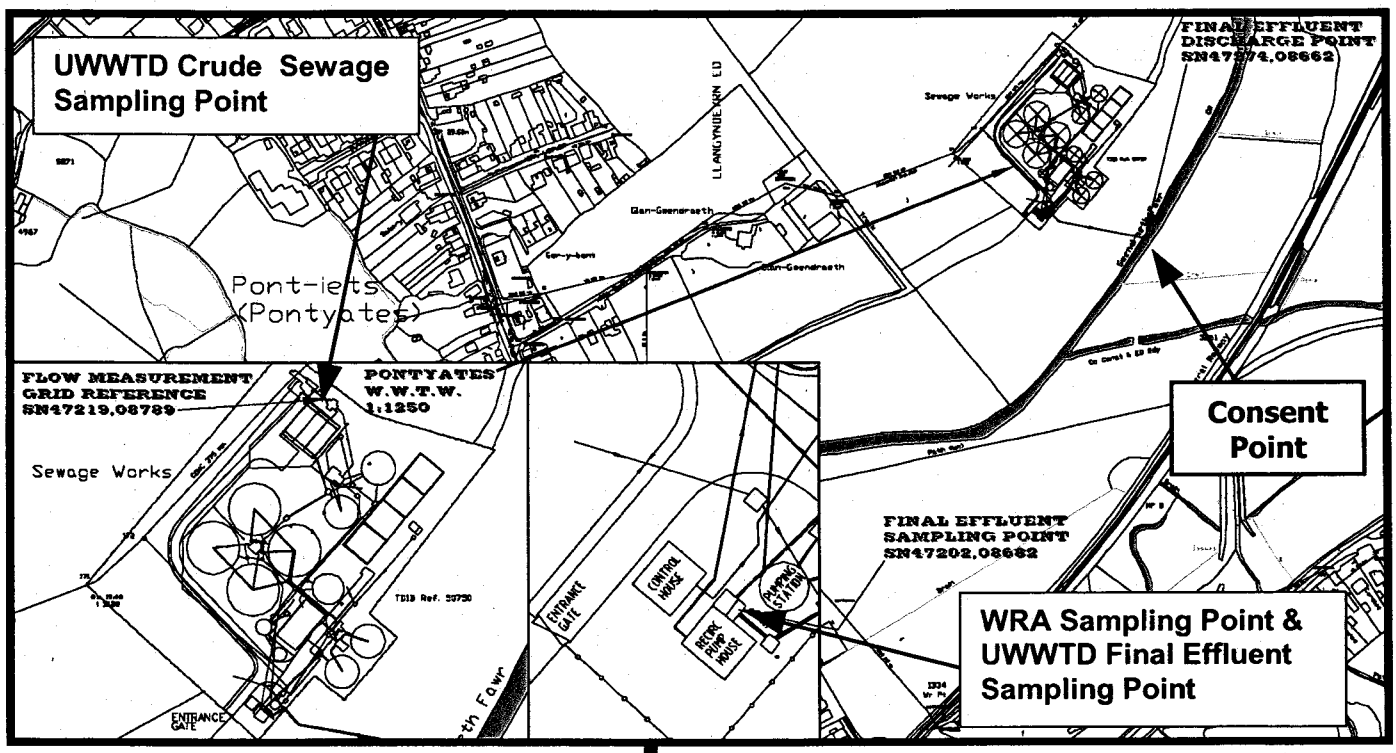
1.	Mercury and its compounds	2.	Cadmium and its compounds
3.	Hexachlorocyclohexane (lindane and related compounds)	4.	Carbon tetrachloride
5.	DDT (the isomers of 1,1,1-trichloro-2,2 bis{p-chlorophenyl} ethane)		
6.	Pentachlorophenol (PCP)	7.	Aldrin
8.	Dieldrin	9.	Endrin
10.	Isodrin	11.	Hexachlorobenzene (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		

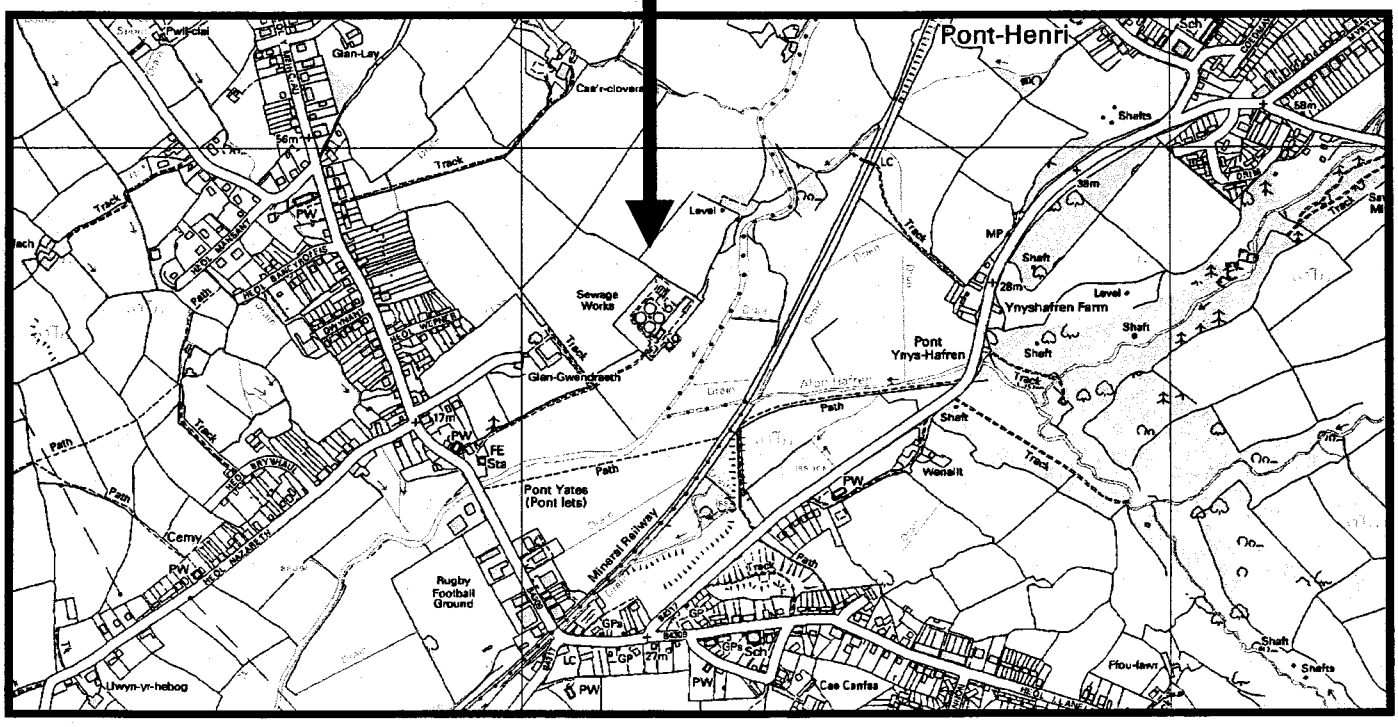
This list is applicable as at 1 December 1998 and will be updated as and when changes to the relevant legislative requirements occur.

*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.

ANNEX 3	BE0000206

PONTYATES WwTW FE, PONTYATES, LLANELLI





ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

Ein cyf/Our ref. 2/CS/LL/BJ0087001, BH0050801, BC0010601, BN0077102, BC0019001, BN0169301, BE0039501, BP0014601, BG0028101, BP0072801, BE0000206, BN0018001, BJ0078801.

Eich cyf/Your ref.

Dyddiad/Date: 21 April 2004

F.A.O Hilary Ford
Dwr Cymru Cyf
Pentwyn Road
Nelson
Treharris
CF46 6LY

Dear Ms Ford

Further to your application for variation of consent of the Agency to discharge under the provisions of Section 88 of the Water Resources Act 1991, I enclose the Agency's formal notice of the variations made to the conditions of the consents as detailed below.

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM GOLDEN GROVE WWTW.
APPLICATION NO: BJ0078801

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM CWRT HENRI WWTW.
APPLICATION NO: BN0018001

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM PONTYATES WWTW.
APPLICATION NO: BE0000206

Asiantaeth yr Amgylchedd Cymru
Maes Newydd, Llandarsi, Nedd Port Talbot, SA10 6JQ
Ffon: 01792 325500, Ffacs: 01792 325511

Environment Agency Wales
Maes Newydd, Llandarcy, Neath Port Talbot, SA10 6JQ
Tel: 01792 325500, Fax: 01792 325511

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM LLANEDI WWTW.
APPLICATION NO: BP0072801

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM CYNWYL ELFED WWTW.
APPLICATION NO: BG0028101

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM HEOL SHON WWTW.
APPLICATION NO: BP0014601

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM LLANGYNDERYN WWTW.
APPLICATION NO: BE0039501

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SETTLED STORM SEWAGE BY DWR CYMRU WELSH WATER FROM FERRYSIDE WWTW.
APPLICATION NO: BN0169301

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM TRIMSARAN WWTW.
APPLICATION NO: BC0019001

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM PANTYRATHRO WWTW.
APPLICATION NO: BN0077102

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Environment Agency Wales
Maes Newydd, Llandarcy, Neath Port Talbot, SA10 6JQ
Tel: 01792 325500, Fax: 01792 325511

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM CWMGWILI WWTW.
APPLICATION NO: BC0010601

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM MYDDFAI WWTW.
APPLICATION NO: BH0050801

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE SECONDARY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM FERRYSIDE WWTW.
APPLICATION NO: BJ0087001

Under the present Scheme of Charges for Discharges to Controlled Waters an annual charge will be made for all consents to discharge, except where the discharge is of sewage effluent of five cubic metres or less per day. This charge is based on information derived from the conditions attached to the consent to discharge, as outlined in the enclosed leaflet. A change in conditions may therefore result in a change in annual charge, you may therefore receive a revised bill in due course.

If you are not satisfied with the new conditions of the consent you may appeal against the decision to the National Assembly for Wales at Cathays Park, Cardiff CF10 3NQ.

Please take careful note that if the holder of the consent changes, you must inform the Agency IN WRITING as soon as possible of the name of the new holder. This to ensure that the rights and charges associated with the Consent are transferred to the new holder. A certificate of Holder notice will be sent to you shortly which is designed for this purpose, and should be kept safely with the Consent until required.

If you have any queries regarding the enforcement of this consent, please do not hesitate to contact Mark Sabine, Team Leader Environment Management, Environment Agency Wales, Plas Gwendraeth, Heol Parc Mawr, Cross Hands Business Park, Llanelli, SA14 6RE.

Yours sincerely

GARETH DAVIES
Customer Contact & Authorisations Officer

Enc.

Asiantaeth yr Amgylchedd Cymru
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