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 BN0267201

Nature of Discharge(s); SEWAGE EFF/TREATED EFF/CONTINUOUS
at BRYNGWYN WTW 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)

IWE/5/96

NRA

Awdurdod Afonydd Cenedlaethol
Rhanbarth Cymru

National Rivers Authority
Welsh Region

Consent No.	BN0267201

WATER RESOURCES ACT 1991

Under Section 88 and Schedule 10 of the Water Resources Act 1991 and all other enabling powers the National Rivers Authority hereby serves this Notice

R E V I E W O F C O N S E N T

To : Dŵr Cymru Cyfyngedig

Of : Plas y Ffynnon, Cambrian Way, Brecon, Powys. LD3 7HP

In respect of the previous Consent No. BN0267201 issued on : December 17, 1982

For : A discharge of sewage effluent

To : Afon y Cwm

From : Bryngwyn Water Treatment Works STW, Gwynfe Road, Llandeilo, Dyfed.

This Consent shall not be taken as providing a statutory defence against a charge of pollution in respect of any poisonous, noxious or polluting constituents not specified herein.

THE FOLLOWING REPLACE ALL PREVIOUS CONDITIONS

1. The discharge shall consist solely of biologically treated sewage effluent.

2. The discharge shall be made from a common outlet at National Grid Reference SN 6736 2200 into the Afon y Cwm.

3. Flow measurement structures shall be provided and maintained to enable the daily volume and instantaneous flow rate of the discharge to be measured or determined as required.

4. The volume of effluent discharged shall not exceed 5 cubic metres in any period of 24 consecutive hours. The rate of discharge shall not exceed 2 litres per second.

continued .....

Aelod Rhanbarthol o'r Bwrdd
Yr Athro Ron Edwards
Rheolwr Rhanbarth Cyffredinol
Dr John Stoner
Glan Teifi
Barley Mow
Llanbedr Pont Steffan
Dyfed SA48 7BY
Ffôn: Llanbedr Pont Steffan (0570) 422455
Ffacs: (0570) 423607

Regional Board Member
Professor Ron Edwards
Regional General Manager
Dr John Stoner
Glan Teifi
Barley Mow
Lampeter
Dyfed SA48 7BY
Tel: Lampeter (0570) 422455
Fax: (0570) 423607

5. The volume of effluent discharged under dry weather flow conditions shall not exceed 2.8 cubic metres per day.

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

6. A sample point at National Grid Reference SN 6736 2200 shall be constructed, maintained and appropriately labelled so that a representative sample of the sewage effluent discharged may be obtained. The discharger 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 sewage effluent taken at the said sampling point is a sample of what was discharging into controlled waters.

7. As far as is reasonably practicable, the works shall be operated so as to prevent:

   (a) Any matter being present in the effluent to such an extent as to cause the receiving waters, or any waters of which the receiving waters are a tributary, to be poisonous or injurious to fish in those waters, or to the spawning grounds, spawn or food of fish in those waters, or otherwise cause damage to the ecology of those waters; and

   (b) The treated effluent from having any other adverse environmental impact.

8. As far as is reasonably practicable, the works shall be operated so as to prevent the discharge from containing any significant trace of visible oil or grease.

9. The works shall be operated and maintained in accordance with good operational practice such that:

   a) It remains fully operational except at times of unavoidable mechanical or electrical breakdown which shall be attended to, and the NRA informed of the failure, as soon as practicable after the failure;

continued .....

b) Following a failure all equipment shall be returned to normal operation as soon as practicable;

c) Tanks shall be desludged at sufficient frequency and in such a manner to prevent excessive carryover of suspended solids.

10. a) The discharger shall establish and operate a documented maintenance programme and record all non-routine actions undertaken. Copies of the programme shall be made available for inspection by the Authority's officers at all reasonable times.

b) The discharger shall supply the Authority with an annual written report on the operation of the maintenance programme and all non-routine actions. The contents and the format of the report to be agreed in writing with the Authority.

11. a)1. No inspection of the sewage treatment works, made at a time when Sections 87 (2) or 89 (1) of the Water Resources Act 1991 apply, and the operation of the sewage treatment works is consequently adversely affected, shall be taken into account in deciding whether or not the conditions contained in paragraph 7 of this consent have been complied with.

a)2. On each occasion that the sewage treatment works is not under normal operating conditions for the reasons in 11.a)1. the discharger shall use its best endeavours to mitigate any adverse effects and shall notify the Authority by telephone as soon as practicable and confirm in writing within 14 days of the occurrence of such conditions. That notification shall include a full description of the abnormal operating conditions and their impact on the operation of the works.

b)1. No inspection of the sewage treatment works, made at a time when unusual weather conditions are adversely affecting the operation of the sewage treatment works; shall be taken into account when deciding whether or not the conditions contained in paragraph 7 of this consent have been complied with.

continued .....

Consent No.	BN0267201

WATER RESOURCES ACT 1991
Continuation Sheet

b)2. 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 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 or stand-by generation facilities.

b)3. On any occasion where unusual weather conditions adversely affect the operation of the sewage treatment works, the discharger shall use its best endeavours to mitigate that adverse effect. The discharger shall notify the NRA by telephone as soon as unusual weather conditions are know to have adversely operations and shall confirm the circumstances in writing as soon as possible therafter (and in any event within 14 days of the occurence of such conditions). Th e notification shall include a full description of the unusual weather conditions and their impact on the operation of the works.

This Notice is given on: 15th February 1995 on behalf of the Authority
by: Area Environmental Quality Manager

During the period ending with the 14th February 1997 the terms of this Notice will not be altered without the written agreement of the person making the discharge.

BN02672 01

Welsh Off Ref		Form SE.GM	WA HQ Ref	RW/0776/1/U1

C2672

WATER ACT 1973
RIVERS (PREVENTION OF POLLUTION) ACTS 1951 - 1961
WATER AUTHORITIES (CONTROL OF OUTLETS AND DISCHARGES) REGULATIONS 1975

NOTIFICATION OF CONSENT

for a discharge and/or outlet

To: WELSH WATER AUTHORITY

This Notification is issued under the above-mentioned Acts and Regulations and all othe enabling powers as a CONSENT DEEMED TO HAVE BEEN GRANTED BY THE SECRETARY OF STATE FOR WALE

and is in respect of : an Outlet and a Discharge of Sewage Effluent

from the Authority's : BRYNGWYN SEWAGE TREATMENT WORKS

The Authority submitted this Notification of Consent on : 17th September 1982 to the Secretary of State for Wales, in the form of a draft, and he has NOT, within thre months, required the Authority to apply to him for a consent. This Consent has therefor taken effect as a consent which is deemed to have been granted by the Secretary of Stat for Wales, subject only to the following conditions, on : 17th December 1982

CONDITIONS

As to the OUTLET :

1. The form and location of the outlet shall be in accordance with the following, namely

   an outlet in the form of : the existing outlet

   and discharging into the : un-named tributary of Afon-y-Cwm

   at National Grid Reference : SN 6745 2206

   and which is shown marked : Discharge Point

   on the attached Plan No. : RW/0776/1/U1

2. The outlet shall be used only for making the discharge specified in Condition 3 belo

As to the DISCHARGE :

3. The discharge shall consist only of treated sewage effluent from the above works.

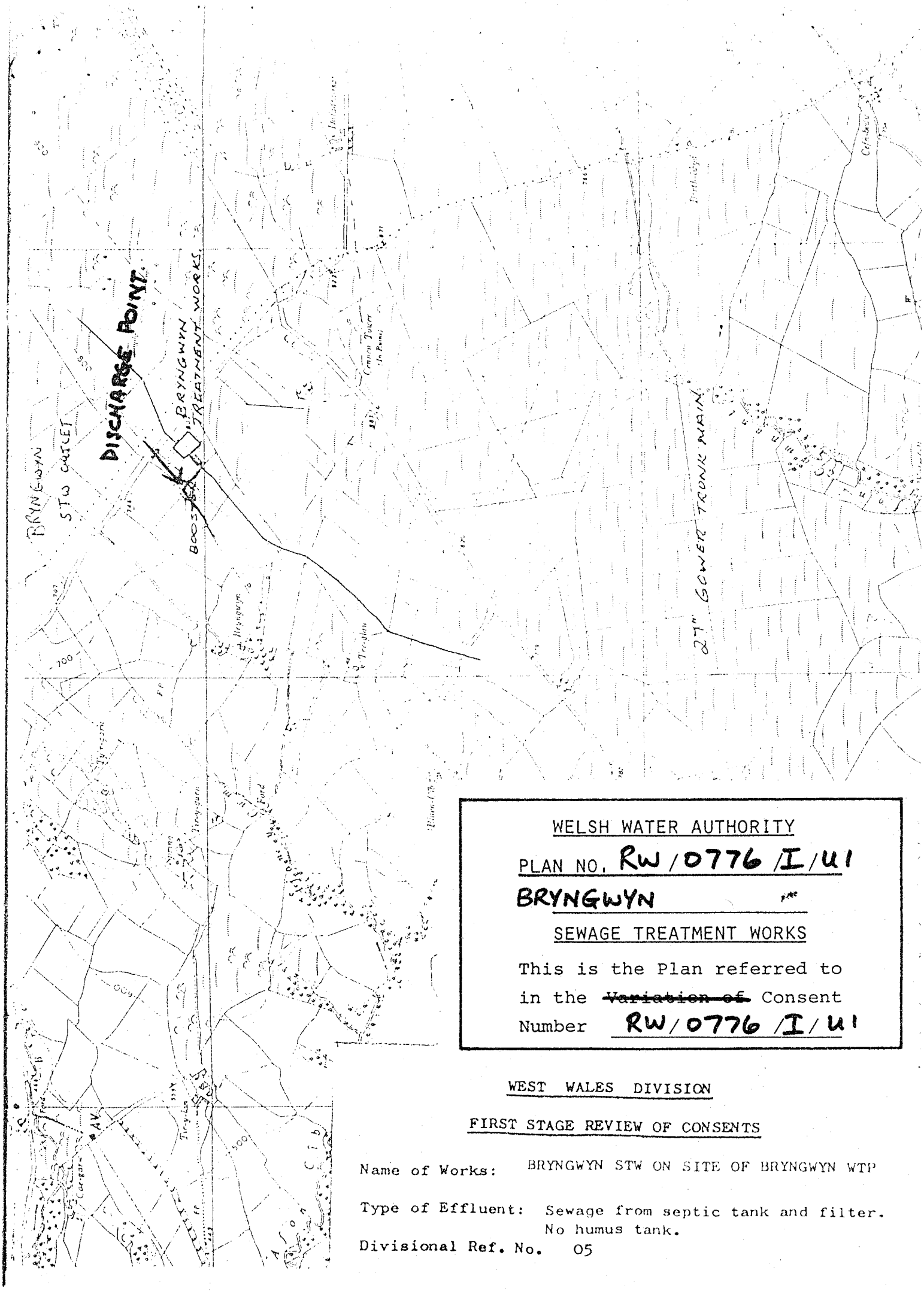
4. The quality and quantity of effluent shall not exceed the following maximum values:

Determinand	Value	Unit
Biochemical Oxygen Demand (+ATU) over 5 days at 20°C	140	milligrams per litre
Suspended Solids dried at 105°C	140	milligrams per litre
Rate of discharge	-	litres per second
Volume during any period of 24 consecutive hours	-	cubic metres
Volume discharged under 'dry weather conditions' during any period of 24 consecutive hours	3.0	cubic metres

5. Adequate facilities shall be provided for the taking of samples of the effluent at outlet to un-named tributary of Afon-y-Cwm

The terms of this Consent will not, without the consent in writing of the person to whom this Consent is given, (or his successor), be altered before the expiration of the period ending with the Seventeenth day of December 1984.

This Notification is issued by the Directorate of Scientific Services at Headquarters



WELSH WATER AUTHORITY

PLAN NO. RW/0776/I/U1

BRYNGWYN

SEWAGE TREATMENT WORKS

This is the Plan referred to in the ~~Variation of~~ Consent Number RW/0776/I/U1

WEST WALES DIVISION

FIRST STAGE REVIEW OF CONSENTS

Name of Works: BRYNGWYN STW ON SITE OF BRYNGWYN WTP

Type of Effluent: Sewage from septic tank and filter. No humus tank.

Divisional Ref. No. 05

Our Ref: 2/EQ/BN0267201/PN/JAR
Your Ref:

Date: As postmark

AAC
NRA

Dwr Cymru cyf
Plas Y Ffynnon
Cambrian Way
Brecon
Powys
LD3 7HP

Dear Sirs

RE: WATER RESOURCES ACT 1991 SECTION 88 SCHEDULE 10
REVIEW OF CONSENT TO DISCHARGE

Further to your application for the review of consent of the Authority to discharge under the provisions of Section 88 of the Water Resources Act 1991, I enclose the Authority's formal notice of the modifications made to the conditions of the consent to discharge sewage effluent from Bryngwyn Water Treatment Works STW.

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.

Where there is a change of ownership of the discharge, the Authority should be informed in writing in order that an apportioned charge may be raised.

If you are not satisfied with the new conditions of the consent you may appeal against the decision to the Secretary of State for Wales at the Welsh Office, Cathays Park, Cardiff CF1 3NQ.

Yours faithfully,

Customer Reference DR 9170 8344 5GB

H. J. Hughes
S J BROWN
Area Environmental Quality Manager

Enc

Please ask for: Peter Nightingale, Lampeter Office - 0570 422455

Dr JOHN STONER Rheolwr Cyffredinol Rhanbarthol / Regional General Manager
Awdurdod Afonydd Cenedlaethol, Rhanbarth Cymru / National Rivers Authority, Welsh Region
Llys Afon, Hawthorn Rise, Hwlffordd, Dyfed SA61 2BQ. Ffôn: (0437) 760081, Ffacs: (0437) 760881
Llys Afon, Hawthorn Rise, Haverfordwest, Dyfed, SA61 2BQ. Tel: (0437) 760081, Fax: (0437) 760881

Date Stamp

Officer's Signature

DR 9170 8344 5 GB

Sent To Dwr Cymru

Address Plas y Ffynnon
Cambrian Way,
Brecon,
Powys

Postcode LD3 7HP.

Royal Mail

Recorded
for a signature on delivery

STW at Bryngwyn WTW

FORM R2

NATIONAL RIVERS AUTHORITY
WATER RESOURCES ACT 1991

NRA

Application for consent to discharge
Schedule 10

The Consents Officer,
National Rivers Authority,
Welsh Region,
Plas-yr-Afon/Rivers House,
St Mellons Business Park,
Cardiff,
CF3 0LT

Official Use Only	
Dist/Area Ref.	South West
Application No.	BN0267201
Date Received:	18-2-94

PLEASE REFER TO THE ATTACHED NOTES WHEN COMPLETING THE APPLICATION

I/We hereby apply for consent under the provisions of the Water Resources Act 1991 to make a discharge of effluent as described in this application and on the attached plan(s). I/We will bear the costs of any advertisement (see note 1).

I/We enclose a cheque for £ to cover the cost of this application (see note 2).

Signed ..... *Date* .....

Authorised on behalf of .....

Have you made, or do you intend to make, an application to the Secretary of State for exemption from publicity? (See note 3.) *YES/NO**

Has this application been made in response to the service of a relevant prohibition? *YES/NO**

If yes please give reference number:

1a Full name and postal address of applicant. (See note 4.) *Post Code:* *Daytime telephone number:*	DWR CYMRU - WELSH WATER PLAS Y FFYNNON CAMBRIAN WAY BRECON LD3 7HP S.H. LEWIS 0874 623181
1b Agent (if any) *Full name and postal address* *Contact name and daytime telephone number*	*Note: if this box is completed, all correspondence will be sent to this address.*

NOTE: The application should be accompanied by 3 copies of an adequate plan and details of any environmental impact assessment. Failure to do so may result in a delay in processing the application. (See note 5.)

**Delete as necessary*

2a) *Address or other sufficient description of land or premises to which this application relates.*	STW at BRYNGWYN WTW GWYNFE RD. LLANDEILO
2b) *National Grid Reference of point of discharge.*	SN 6736 2200
2c) *District Council area.*	DINEFWR
3 *State the nature of the discharge. Tick one or more boxes as appropriate. (See note 6.)*	*Sewage effluent* ☑ *Storm/emergency sewage effluent* ☐ *Trade effluent* ☐ *Any other matter (inc. surface water).* ☐
4 *For sewage and trade effluent, and storm/emergency discharges, state:–* a) *Maximum quantity it is proposed to discharge in one day. (See note 7.)* b) *Highest rate at which it is proposed to operate the discharge.* c) *Periods during which the discharge will take place.*	SEWAGE (3 x DWF) 8.5 m^3/day l/sec CONTINUOUS
5 *For rainfall dependent discharges, state the area to be drained. (Roof areas and other impervious areas should be separately identified.)*	m^2

6 *Receiving medium*

Tick the category to which the proposed discharge(s) are to be made.

TIDAL RIVER OR STREAM	☐	*ONTO LAND*	☐
NON-TIDAL RIVER OR STREAM	☑	*DIRECTLY INTO GROUNDWATER*	☐
CANAL	☐	*INTO LAND AND WATERCOURSE*	☐
LAKE, LOCH OR POND	☐	*COASTAL WATER (see Note 8.)*	☐
INTO LAND (not discharging to a river or stream)	☐		

State name of watercourse, if known:–

7 *The Authority will normally require adequate provision for the taking of samples of the discharge. Please indicate the means proposed. (See note 9.)*

At the outlet	☐	*At a manhole or sampling chamber*	☑	*See plan*	☐	*Other*	☐

If other, please give further details:–

8. *Indicate proposed means of discharge:–*

1. Pipe	☑	*2. Channel*	☐	*3. Borehole*	☐
4. Soakaway	☐	*5. Well*	☐	*6. Sub-irrigation system*	☐
7. Culvert	☐	*8. Soakaway & sub-irrigation system*	☐	*9. Other*	☐

If 9 please give further details:–

9 *Give details as appropriate*	
a) *For pipes, channels, wells and boreholes, state diameter in millimetres or dimension(s) in metres.*	a) 150 mm diam
b) *For sub-irrigation systems, soakaway pits, wells and boreholes, state depth in metres and geological stratum, if known.*	b)
c) *For boreholes, state details of lining:*	c)
Type of lining	: metres
Depth of lining	: metres
Depth of perforated lining	: metres
Depth of unperforated lining	: metres
10 *Is there a foul sewer available to which the discharge could be made?*	*YES/NO**
If yes give reason for not connecting.	:
Distance from nearest foul sewer.	:
11 *Give brief details of:*	
a) *Source of water supply (eg mains, well, borehole, etc.)*	a)
b) *General purpose for which water is used (eg domestic, cooling, etc.)*	b)

**Delete as necessary*

12 *Is consent required for a limited period?* *If yes give relevant dates*	~~YES~~/NO* :
13 *On what date do you anticipate the discharge will begin to be made?*	SEPTEMBER 94
14 *Does this proposal replace an existing discharge?* *If yes give details*	YES/~~NO~~* Effluent from existing septic tank & percolating filter.
15 *Are there any existing consents for discharge from the premises? (see note 10.)* *If yes, give details, numbers, if known.*	YES/~~NO~~* : BN0267201 STW BC00145 01 WTW Backwash

16 *Please give details of the premises – tick as appropriate:–*

1. *Single dwelling*	☐	2. *Multiple dwellings*	☑
3. *Licenced premises*	☐	4. *Vehicle parking area*	☐
5. *Industrial premises*	☐	6. *Fish farm*	☐
7. *Mineral workings*	☐	8. *WSPLC STW*	☐
9. *Water supply*	☑	10. *Other*	☐

If other, please give further details.

17 *IN THE CASE OF SUB-IRRIGATION SYSTEMS AND SOAKAWAYS*

a) *Is any part of the system within 10 metres of the site boundary?*	YES/NO*
b) *Is any part of the system within 10 metres of a watersourse?*	YES/NO*
c) *Is the land in which the disposal system is to be constructed under-drained with land drains discharging to a watercourse or to be so under-drained?*	YES/NO*
d) *If the answer to either (b) or (c) is "YES" please state the name of the watercourse or sufficient information to identify it.*	:
e) *Attach details of the percolation test carried out.*	Attached

18 *FOR SEWAGE TREATMENT PLANTS*

a) *State the population served/population equivalent/estimated population**	*All year 15 *~~Summer~~ *~~Winter~~
b) *Give details of the treatment plant to be used (see note 11.)*	Package plant

*Delete as necessary

FOR TRADE EFFLUENT AND SEWAGE DISCHARGES CONTAINING TRADE EFFLUENT

19 a) Describe the trade effluent and the process(es) from which it arises. (See note 12.)

b) Maximum temperature of the effluent as discharged ..... °C

c) Does the effluent contain any of the following? *YES/NO

If yes, underline those present and give full details (including maximum, minimum and mean values) separately.

1. *Aldrin, dieldrin, endrin and isodrin*
2. *Arsenic*
3. *Atrazine*
4. *Azinphos-ethyl*
5. *Azinphos-methyl*
6. *Boron*
7. *Cadmium and its compound*
8. *Carbon tetrachloride*
9. *Chloroform*
10. *Chromium*
11. *Copper*
12. *Cyanide*
13. *Cyfluthrin*
14. *DDT*
15. *1, 2-Dichloroethane*
16. *Dichlorvos*
17. *Dioxins*
18. *Endosulfan*
19. *Fenitrothion*
20. *Fenthion*
21. *Flucofuron*
22. *Hexachlorobenzene (HCB)*
23. *Hexachlorobutadiene (HCBD)*
24. *Hexachlorocyclohexane (lindane and related compounds)*
25. *Iron*
26. *Lead*
27. *Malathion*
28. *Mercury and its compounds*
29. *Nickel*
30. *Parathion*
31. *Parathion-methyl*
32. *PCSD's*
33. *Pentachlorophenol (PCP)*
34. *Perchloroethylene*
35. *Permethrin*
36. *pH if outside the range 5.5 to 9.0*
37. *Polychlorinated biphenyls*
38. *Simazine*
39. *Sulcofuron*
40. *Tetrachloroethylene*
41. *Tributyltin compounds*
42. *Trichlorobenzene*
43. *Trichloroethane*
44. *Trichloroethylene*
45. *Trifluralin*
46. *Triphenyltin compounds*
47. *Vanadium*
48. *Zinc*

d) Give full details of any other significant chemical components contained in the effluent:–

**Delete as necessary*

20 *FOR STORM AND EMERGENCY DISCHARGES AND SURFACE WATER SEWERS*

State the type of discharge. Tick one or more boxes as appropriate.

Storm tanks	☐	*Answer all except 23 & 26*
Storm overflow from sewer	☐	*Answer all except 23 & 26*
Storm overflow from pumping station	☐	*Answer all sections below*
Emergency overflow from sewer	☐	*Answer 20a, 21, 25, 27, 28*
Emergency overflow from pumping station	☐	*Answer all except 20b, 22*
Surface Water	☐	*Answer 25, 27*
Other	☐	*Answer as appropriate*

If other, please give further details:–

21 a) *State dry weather flow to pumping station/in sewer*	:	m^3/day
b) *State flow at which storm discharge will commence*	:	l/sec
22 *Expected frequency of operation*	:	per annum
23 *State volume of storm tank(s).*	:	m^3
24 *State volume of wet well*	:	m^3
25 *What provisions have been made to raise alarms? (eg telemetry)*		
26 *What facilities have been provided to prevent the discharge of gross solids? (For screens, give bar spacing or aperture.)*		
27 *What provisions have been included to deal with* a) *power failure?* b) *mechanical breakdown?* c) *rising main failure?*		
28 *What facilities have been provided for flow measurements?*		

29 *Are there any other factors to be taken into account?*

CONSENT NO.	BN0267201

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:

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

with respect to Consent No. **BN0267201** issued on the 15th day of February 1995

FROM: **BRYNGWYN WASTEWATER TREATMENT WORKS**

AT: **GWYNFE ROAD, LLANDEILO, CARMARTHENSHIRE**

TO: **AFON Y CWM**

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

Biologically Treated Sewage Effluent	**Schedule No. BN0267201 01**
UWWT Regulations 1994	**Schedule No. BN0267201 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 on the 31st day of March, 2004 and takes effect on the 31st day of March 2004.

Signed .....

Ged Davies – 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.	BN0267201
SCHEDULE NO.	BN0267201 01
DATE ISSUED	March, 2004

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Biologically Treated Sewage Effluent ("the Discharge")

FROM: **BRYNGWYN WASTEWATER TREATMENT WORKS, GWYNFE ROAD, LLANDEILO, CARMARTHENSHIRE**

NATURE

1. The Discharge shall consist solely of biologically treated sewage effluent, containing no trade effluent.

LOCATION

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

(a) discharging via a 150 millimetre diameter pipe;

(b) discharging to the Afon y Cwm;

(c) at National Grid Reference SN 67351 21995;

(d) shown marked 'Consent Point' on Plan BN0267201 attached as Annex 2.

SAMPLE POINT

3. An appropriately labelled sample point shall be provided and maintained at National Grid Reference Reference SN 67364 21996, as shown marked 'Sampling Point' on Plan BN0267201, 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 39 cubic metres per day.

5. The Dry Weather Flow of the Discharge shall not exceed 6 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 0.5 litres per second.

FLOW MEASUREMENT

7. At the request of the Agency, the Consent Holder shall install, operate and maintain a means of flow measuring to a specification and at a location required by the Agency, to enable the daily volume and/or instantaneous flow of sewage through the treatment works to be recorded. The Consent Holder shall calibrate, operate and maintain the flow monitoring and recording system to a standard agreed or specified by the Agency. The flow and maintenance records shall be provided to the Agency as and when requested.

WORKS OPERATION

8. (a) 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.

   (b) This condition does not require any alteration of the works or a change in the type of treatment used.

MAINTENANCE

9. The package plant shall be operated and maintained in accordance with good operational practice such that:

   (a) It remains fully operational except at times of unavoidable mechanical or electrical breakdown which shall be attended to, and the Agency informed of the failure, as soon as practicable after the failure;

   (b) Following a failure all equipment shall be returned to normal operation as soon as practicable;

   (c) Tanks shall be desludged at sufficient frequency and in such a manner to prevent excessive carryover of suspended solids.

UNUSUAL WEATHER CONDITIONS

10. (a) No inspection of the sewage treatment works, made 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 8 and 9 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 an inspection of the sewage treatment works 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

11. (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.

(c) The Consent Holder shall supply the Agency with an annual written summary report confirming the operation of the maintenance programme.

(d) The Consent Holder shall as soon as reasonable practicable report all non-routine actions that may have adversely affected effluent quality.

12. 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" (set out in Annex 1 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

13. 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.

13.1 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.

13.2 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.

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

13.4 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

14. 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.	**BN0267201**
SCHEDULE NO.	**BN0267201 01 / U**
DATE ISSUED	**March, 2004**

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Biologically Treated Sewage Effluent ("the Discharge")

FROM: **BRYNGWYN WASTEWATER TREATMENT WORKS, GWYNFE ROAD, LLANDEILO, CARMARTHENSHIRE**

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 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(7) and shall satisfy the requirements of Regulation 5(8)(a).

CONSENT NO.	BN0267201
SCHEDULE NO.	BN0267201 01

ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

ANNEX 1

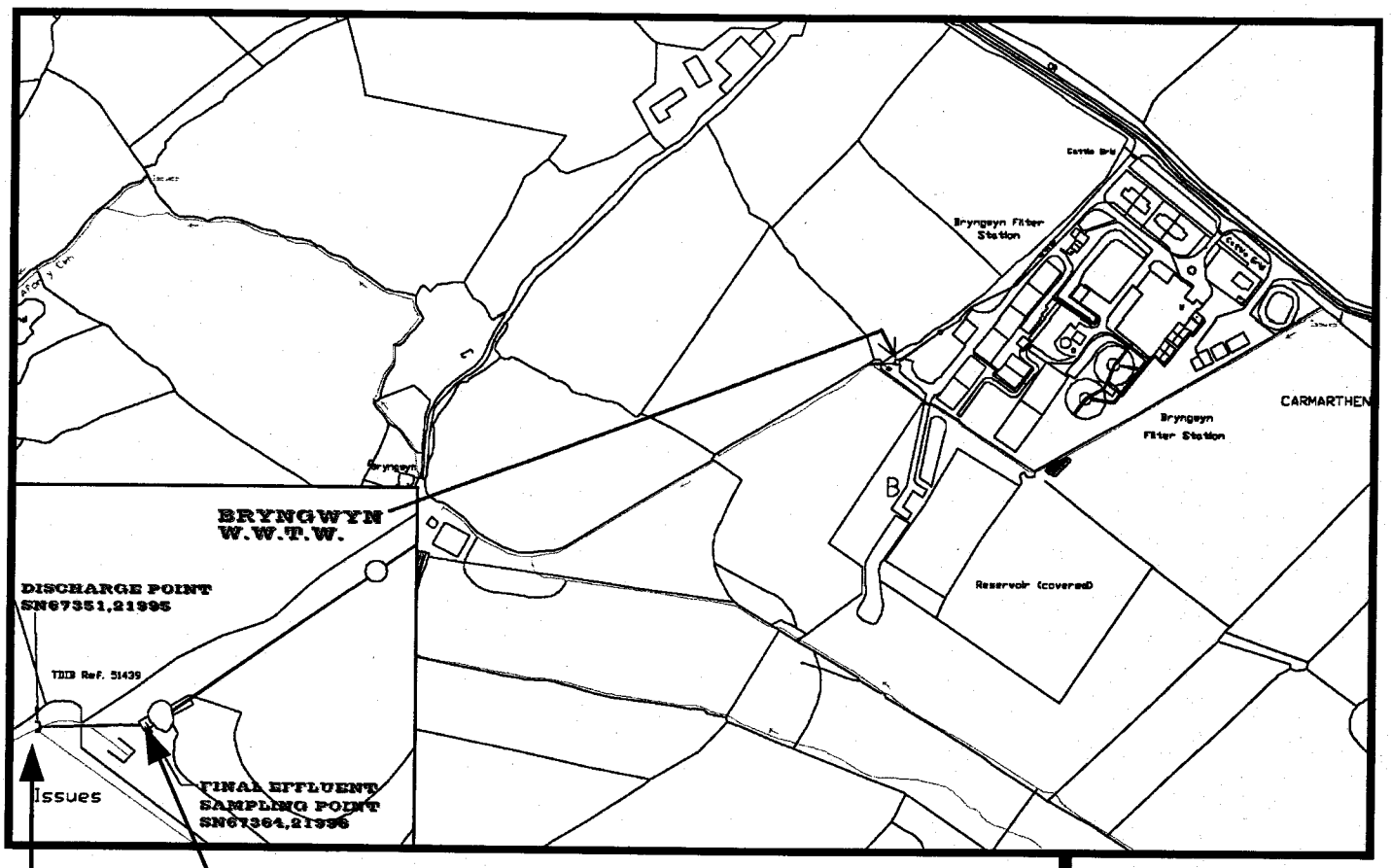
1.	Mercury and its compounds	2.	Cadmium and its compounds
3.	Hexachlorocyclohexane (lindane and related compounds)	4.	Carbon tetrachloride
5.	DDT (the isomers of 1,1,1-trichloro-2,2 bis{p-chlorophenyl} ethane)		
6.	Pentachlorophenol (PCP)	7.	Aldrin
8.	Dieldrin	9.	Endrin
10.	Isodrin	11.	Hexachlorobenzene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

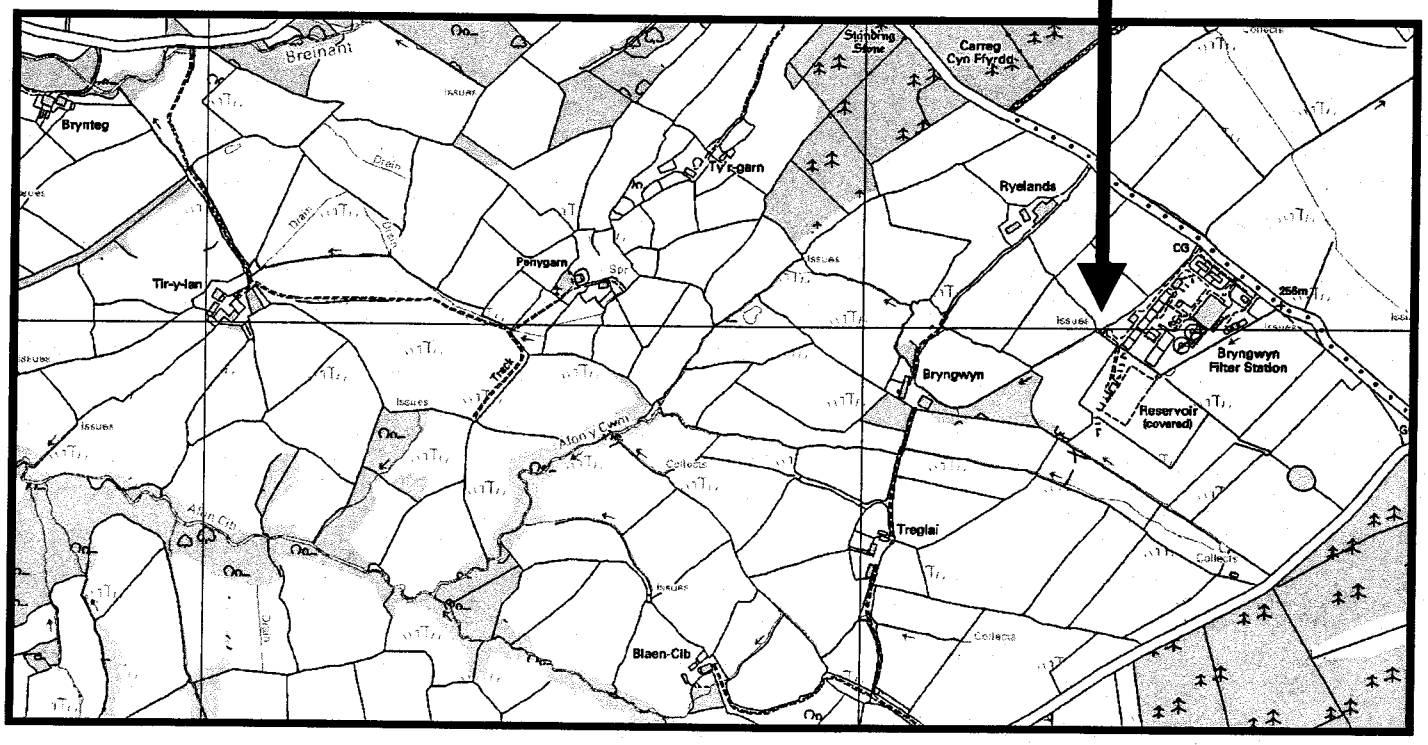
ANNEX 2	BN0267201

BRYNGWYN WwTW FE, GWYNFE ROAD, LLANDEILO, CARMARTHENSHIRE



Consent Point

Sampling Point



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ASIANTAETH YR AMGYLCHEDD CYMRU
ENVIRONMENT AGENCY WALES

Ein cyf/Our ref. 2/CS/LL/BN0267201
Eich cyf/Your ref.

Dyddiad/Date: 2 April 2004

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

Dear Ms Ford

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION TO DISCHARGE BIOLOGICALLY TREATED SEWAGE EFFLUENT BY DWR CYMRU WELSH WATER FROM BRYNGWYN WWTW.
APPLICATION NO: BN0267201

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 consent as detailed above.

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.

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

If you have any queries regarding the enforcement of this consent, please do not hesitate to contact Ged Davies, Team Leader Environment Management, Environment Agency Wales, Llys Afon, Hawthorne Rise, Haverfordwest, SA61 2BQ.

Yours sincerely

GARETH DAVIES
Customer Contact & Authorisations Officer

Enc.

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

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.* BN0267201 *Date Received:* 24/11/03 *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.

Bryngwyn WwTW, Gwynfe Road, Llandeilo.

Post Code: N/a

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

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

S	N	6	7	3	5	1	2	1	9	9	5

(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	6	7	3	6	4	2	1	9	9	6

(please indicate on accompanying plans)

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

Discharge flow measuring structure provided at NGR SN 67364 21996

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 [ ]

Rotating Biological Contactor (RBC) supplied by Kee Process Ltd

b) Will the treatment process involve the use of any chemicals (eg ferric salts, polyelectrolytes). If yes please give details. No

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)? Yes

If yes, please give the reference numbers *(Any further information should be given in Section 5.3).*

BN0267201

b) Has any person had a Prohibition Notice serviced on them in respect of this site? No

If yes, please give the reference number.

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Carmarthen County Council

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: not applicable

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

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

State name of receiving water if known:

Afon Y Cwm

4.2 In the case of sub-irrigation systems, soakaways or boreholes: not applicable

(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
*Caerphilly
*
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: Dwr Cymru Cyf ..... **DATED:** 20.11.03 .....

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.

   Bryngwyn WwTW, Gwynfe Road, Llandeilo.

2. Please detail the type and number of treatment units you are proposing to use.

   1 off packaged treatment plant using rotating biological contactor technology

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). — 39.0 m³/d

   b) Dry weather flow of discharge(s). — 6.0 m³/d

   c) Average daily flow. — 8.0 m³/d

   d) Maximum rate of discharge(s) — 0.5 l/s

4. Will there be provisions for storm/emergency discharges? — No
   If yes, please complete Annexe 2.

5. a) Will any self monitoring take place? — no
   If yes, please give details.

   b) Will automatic sampling equipment be provided? — no
   If yes, please give details of type and location *(please indicate on plan)*.

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

24 PE

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

Residential

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) **no**

If yes, please give details.

8. Does the effluent contain a trade component? **no**

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 every proposed discharge.

Official Use Only
Application No.

For all proposed discharges:

1. Site Name.

Bryngwyn WwTW, Gwynfe Road, Llandeilo.

2. Is this application being made to reinstate a lapsed Consent? no

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 diameter (including units):

150mm NB

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

£60,000

5. Is there any trade effluent component in the proposed discharge? no

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) | 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)	24
Consumption (l/head/day) default = 180	180
Infiltration (m^3/day)	2.2
Industrial effluent flow (m^3/day)	0
Dry Weather Flow (m^3/day)	6.0
Soc A (l/sec)	0.5
Predicted spill frequency (per annum)	N/a

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
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Pembrokeshire SA61 1JL

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

RECEIVED
24 NOV 2003

Mr. Gareth Davies
Environment Agency Wales
Maes Newydd
Llandarcy
Neath Port Talbot
SA10 6JQ

20th November 2003

Tel: 01437 769061

Dear Sir

Application for Discharge Consent – Bryngwyn STW

Please find enclosed application forms, fee and three copies of supporting information in respect of quality improvements to the above works final effluent, This scheme forms part of our AMP3 investment programme.

Yours faithfully

Hilary Ford

Hilary Ford
Area Consents and Regulation Scientist

E.A.
f 722-00
27 NOV 2003
WELSH REGION

Rec: 01321.
Chq: 004166

We welcome correspondence in Welsh and English.
Rydym yn croesawu gohebiaeth yn y Gymraeg neu yn Saesneg

United Utilities yn cydweithio gyda Dŵr Cymru Welsh Water i ddarparu gwasanaethau gweithredol a chynnal a chadw ar gyfer asedau dŵr gwastraff.

Dŵr Cymru Cyf, cwmni cylyngedig wedi'i gofrestru yng Nghymru rhif 2366777 Swyddfa gofrestredig: Heol Pentwyn, Nelson, Treharris, Morgannwg Ganol CF46 6LY

United Utilities working with Dŵr Cymru Welsh Water, for the provision of operation and maintenance services for water and wastewater assets.

Dŵr Cymru Cyf, a limited company registered in Wales no. 2366777. Registered office: Pentwyn Road, Nelson, Treharris, Mid Glamorgan CF46 6LY

Documentation Supporting Consent Application for Bryngwyn WwTW

CONTENTS

INTRODUCTION

1. A Process Flow Diagram of the system, drg C876/1000.

2. Feasibility Report, doc C876/6.1/01/001.

2. A location map, showing site, drg C876/2000.

3. A location map of the treated effluent sampling and discharge point., drg C876/2001

Introduction

Bryngwyn WwTW is situated in the grounds of the water treatment plant to treat the sewage from the works and from 5 houses built on the site.

There is a separate surface water/process water drainage system.

Supporting documentation is enclosed.

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	Bryngwyn WwTW
Project Number	C876
Client	DWR CYMRU/WELSH WATER
Document Reference Number	C876/6.1/01/001

Bryngwyn WwTW

Feasibility Report

Rev.	Date	Description/Purpose	Prepared	Checked[1]			Approved for Issue[2]		
				Mech	Proc	Elect	LE	EM	PM
0	14.11.03	First issue for discussion	MR	SR	MR	BB	SR	AJW	SW
B									
C									
D									

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

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APPENDIX

- Proposed Process Flow Diagram (PFD) C877/1000

Summary

Bryngwyn WwTW is scheduled for upgrade under the AMP3 programme, to meet new indicative consents of BOD: SS = 40:60

As there are a very small number of houses connected it is recommended that a package treatment plant based on Rotating Biological Contactor (RBC) technology is installed.

1. INTRODUCTION

Bryngwyn WwTW treats wastewater from five houses and the Bryngwyn Water Treatment Works.

Current consent limits for the works are as follows

Biological Oxygen Demand (BOD) :	140 mg/l
Suspended Solids (SS) :	140 mg/l
Ammoniacal Nitrogen :	n/a mg/l
Dry Weather Flow (DWF)	2.8m3/d
Maximum Discharge Volume	5.0 m3/d
Maximum Rate of Discharge	2.0 l/sec

The EA spread sheet for AMP3 investment applies the core driver U2 to the discharge.

The indicative consent limits are as follows

Biological Oxygen Demand (BOD) :	40 mg/l
Suspended Solids (SS) :	60 mg/l
Ammoniacal Nitrogen :	n/a mg/l

Treated effluent is discharged to the Afon Y Cwm.

2. EXISTING WORKS

Incoming flows gravitate from the toilets of the treatment works and from the 5 houses to the treatment works, there is a separate system for surface water from the works.

The existing works comprises inlet septic tank, biological filter and direct discharge via a sample chamber. It is subject to excessive flows due to process water drains connected.

3. FLOWS AND LOADS

A flow and load survey has not been carried out as it is inappropriate for such low flows, there is also either infiltration, or service water connection that are making the existing plant treat volumes in excess of those expected.
The figures listed below are based on house count with standard occupancy rates.

	BASIS	VALUE
Population Equivalent (PE)	Flow	24

Dry Weather Flow (DWF)	m^3 /day	6.0
	l/s	0.1
3DWF	m3/d	15.0
	l/sec	0.2
SOC A	m3/d	39.0
	l/sec	0.5
BOD Load	kg/day	1.4
SS Load	kg/day	1.4
NH_3 – N Load	kg/day	0.2

4.0 Recommendation

As the current works is in a poor state of repair and there is no convenient location to add a solids separation stage it is recommended that the plant be replaced with a package treatment plant.

4.1 Scope of Works.

- Install packaged RBC plant
- Relay outfall pipe to outfall position
- Divert process water to clean drain
- Provide washwater supply
- Provide power to new plant
- Provide telephone line for telemetry alarm
- Installation of approved discharge flow monitoring and sampling facilities
- Make redundant works safe

The Process Flow Diagram (PFD) for the proposed works is included in the Appendix as Dwg. C876/1000.

Feasibility and Outline Design Report Acceptance Sheet

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

Aled Daniel, Manager United Utilities

..... Date .....

Stuart Worts , Meica Process Ltd., Project Manager

..... Date .....

APPENDIX

- **Proposed Process Flow Diagram (PFD) C876/1000**

BRYNGWYN			15.11.03	**CONVENTIONAL PLANT**	
consent BOD:SS 140/140		proposed consent BOD:SS:Amm-N 40/60			Doc No C876/001
DWF = 2.8 m3/d, max = 5.0 m3/d, 2 l/s					Prepared by MR
PARAMETER		UNITS			Checked by AJW
design basis horizon		date			Dated 15.11.03
Resident Population served (P)		pop.	**24**		**based on house count = 6@4**
					inc water works
Design Flows					
Tourist pop served(T)		pop.	**0**		
Day visitors(V)		pop.	**0**		
Peak population served		pop.	**24**		
Per capita BOD contribution Residents		kg/h.d	**0.06**		
Per capita BOD contribution Tourists		kg/h.d	**0.04**		
Per capita BOD contribution Visitors		kg/h.d	**0.02**		
per capita resident TSS contribution		kg/h.d	**0.06**		
per capita tourist TSS contribution		kg/h.d	**0.06**		
per capita Amm-N contribution Residents		kg/h.d	**0.008**		
per capita Amm-N contribution Tourists		kg/h.d	**0.006**		
per capita Amm-N contribution Visitors		kg/h.d	**0.003**		
per capita domestic flow(G)		l/h.d	**180**		
per capita tourist flow		l/h.d	**120**		
per capita visitors flow		l/h.d	**25**		
total residents flow (PG)		m3/d	**4**		
total tourists flow (Tg)		m3/d	**0**		
total visitors flow (Vg)		m3/d	**0.0**		
Infiltration (I)		m3/d	**2.2**	50 %	
industrial flow (E)		m3/d	**0.0**		**check as lots of flow of clean water**
Dry weather flow (PG + Tg + Vg + I + E)		m3/d	**6**	PG+I+E	**Consent DWF = 2.8m3/d**
		l/s	**0.1**		
Average Flow		m3/d	**8**		
		l/s	**0.1**		
(3DWF)		m3/d	**15**	3PG+I+3E	
		l/s	**0.2**		
(6DWF)		m3/d	**28**		
		l/s	**0.3**		
Formula A=(PG+I+E)+1.36P+2E		m3/d	**39**		
		l/s	**0.5**		
Storm tank capacity (2hrs at 3DWF)		m3	**1.3**		
storm tank capacity (68 l/h)		m3	**1.6**		**none on site**
LOADS					
Total BOD Load		kg/d	**1.4**		
BOD Concentration at Average Flow		mg/l	**178**		
Total TSS load		kg/d	**1.4**		
TSS concentration at Average Flow		mg/l	**178**		
Total Amm-N Load		kg/d	**0.2**		
Amm-N concentration at Average Flow		mg/l	**23.7**		
Primary Treatment	% removal				
Settled BOD load	25	kg/d	**1.1**		
Settled BOD Concentration		mg/l	**133**		
Settled TSS load	50	kg/d	**0.7**		
Settled TSS concentration		mg/l			
Settled Amm-N load	0	kg/d	**0.2**	**inc 15% increase in septic tank**	
Settled Amm-N concentration		mg/l	**27.3**		
primary sludge mass		kg/d	**0.7**		
Flow split		%	**100.0**		
Number of tanks			**1.0**		
Type of tank			**rectangula**	**no desludge facility**	
length		m	**2.8**		
width		m	**1.0**		
Area		m2	**2.8**		
Volume based on	1 depth	m3	**2.8**		
Upflow rate		m/h	**0.6**	**at SocA**	
Retention time		h	**1.7**		
Biological treatment					
secondary BOD load		kg/d	**1.1**		

secondary BOD concentration		mg/l		
secondary TSS load		kg/d	**0.7**	
secondary TSS concentration		mg/l		
secondary Amm-N load		kg/d	**0.22**	
secondary Amm-N concentration		mg/l		
biol. sludge mass (@0.7kg/kg BOD removed)		kg/d	**0.7**	
Number of filters			**1.0**	
Diameter		m	**2.5**	
Depth		m	**1.0**	
Surface area		m2	**4.9**	
Volume		m3	**4.9**	
BOD loading		kg/m3/d	**0.22**	**OK**
hydraulic loading		m3/m2/d	**8.0**	
Amm-N loading		kg/m3/d	**0.045**	**OK for 5 mg/l Amm-N**
Final Settlement	% removal			
Final BOD load	95	kg/d	**0.05**	
Final BOD concentration		mg/l	**6.7**	
Final TSS load	**90**	kg/d	**0.07**	
Final TSS concentration		mg/l	**9**	
Final Amm-N load	**0**	kg/d	**0.22**	
Final Amm-N concentration		mg/l	**27.3**	
Number of tanks			**0.0**	
Type of tank			**rectangular**	
length		m	**0.0**	**no final tank**
width		m	**0.0**	
Area		m2	**0.0**	
Volume based on	**1.2** depth	m3	**0.0**	
Upflow rate		m/h	**#DIV/0!**	
Retention time		h	**#DIV/0!**	
Sludge Production				
total sludge mass		kg/d	**1.4**	
total sludge volume @2%ds		m3/d	**0.1**	

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.* BN0267201 *Date Received:* 24/11/03 *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.

Bryngwyn WwTW, Gwynfe Road, Llandeilo.

Post Code: N/a

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

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

S	N	6	7	3	5	1	2	1	9	9	5

(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	6	7	3	6	4	2	1	9	9	6

(please indicate on accompanying plans)

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

Discharge flow measuring structure provided at NGR SN 67364 21996

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 [ ]

Rotating Biological Contactor (RBC) supplied by Kee Process Ltd

b) Will the treatment process involve the use of any chemicals (eg ferric salts, polyelectrolytes). If yes please give details. No

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)? Yes

If yes, please give the reference numbers *(Any further information should be given in Section 5.3).*

BN0267201

b) Has any person had a Prohibition Notice serviced on them in respect of this site? No

If yes, please give the reference number.

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Carmarthen County Council

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: not applicable

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

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

State name of receiving water if known:

Afon Y Cwm

4.2 In the case of sub-irrigation systems, soakaways or boreholes: not applicable

(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
*Caerphilly
*
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: Dwr Cymru Cyf ..... **DATED:** 20.11.03 .....

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.

Bryngwyn WwTW, Gwynfe Road, Llandeilo.

2. Please detail the type and number of treatment units you are proposing to use.

1 off packaged treatment plant using rotating biological contactor technology

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).	39.0 m³/d
b)	Dry weather flow of discharge(s).	6.0 m³/d
c)	Average daily flow.	8.0 m³/d
d)	Maximum rate of discharge(s)	0.5 l/s

4. Will there be provisions for storm/emergency discharges? **No**
If yes, please complete Annexe 2.

5. a) Will any self monitoring take place? **no**
If yes, please give details.

b) Will automatic sampling equipment be provided? **no**
If yes, please give details of type and location *(please indicate on plan)*.

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

24 PE

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

Residential

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) **no**

If yes, please give details.

8. Does the effluent contain a trade component? **no**

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 every proposed discharge.

Official Use Only
Application No.

For all proposed discharges:

1. Site Name.

Bryngwyn WwTW, Gwynfe Road, Llandeilo.

2. Is this application being made to reinstate a lapsed Consent? no

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 diameter (including units):

150mm NB

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

£60,000

5. Is there any trade effluent component in the proposed discharge? no

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) | 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)	24
Consumption (l/head/day) default = 180	180
Infiltration (m^3/day)	2.2
Industrial effluent flow (m^3/day)	0
Dry Weather Flow (m^3/day)	6.0
Soc A (l/sec)	0.5
Predicted spill frequency (per annum)	N/a

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

RECEIVED
24 NOV 2003

Mr. Gareth Davies
Environment Agency Wales
Maes Newydd
Llandarcy
Neath Port Talbot
SA10 6JQ

20th November 2003

Tel: 01437 769061

Dear Sir

Application for Discharge Consent – Bryngwyn STW

Please find enclosed application forms, fee and three copies of supporting information in respect of quality improvements to the above works final effluent, This scheme forms part of our AMP3 investment programme.

Yours faithfully

Hilary Ford

Hilary Ford
Area Consents and Regulation Scientist

E.A.
£722-00
27 NOV 2003
PAID
WELSH REGION

Rec: 01321.
Chq: 004166

We welcome correspondence in Welsh and English.
Rydym yn croesawu gohebiaeth yn y Gymraeg neu yn Saesneg

United Utilities yn cydweithio gyda Dŵr Cymru Welsh Water i ddarparu gwasanaethau gweithredol a chynnal a chadw ar gyfer asedau dŵr gwastraff.

Dŵr Cymru Cyf, cwmni cyfyngedig wedi'i gofrestru yng Nghymru rhif 2366777 Swyddfa gofrestredig: Heol Pentwyn, Nelson, Treharris, Morgannwg Ganol CF46 6LY.

United Utilities working with Dŵr Cymru Welsh Water, for the provision of operation and maintenance services for water and wastewater assets.

Dŵr Cymru Cyf, a limited company registered in Wales no. 2366777. Registered office: Pentwyn Road, Nelson, Treharris, Mid Glamorgan CF46 6LY

Documentation Supporting Consent Application for Bryngwyn WwTW

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1. A Process Flow Diagram of the system, drg C876/1000.
2. Feasibility Report, doc C876/6.1/01/001.
2. A location map, showing site, drg C876/2000.
3. A location map of the treated effluent sampling and discharge point., drg C876/2001

Introduction

Bryngwyn WwTW is situated in the grounds of the water treatment plant to treat the sewage from the works and from 5 houses built on the site.

There is a separate surface water/process water drainage system.

Supporting documentation is enclosed.

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	Bryngwyn WwTW
Project Number	C876
Client	DWR CYMRU/WELSH WATER
Document Reference Number	C876/6.1/01/001

Bryngwyn WwTW

Feasibility Report

Rev.	Date	Description/Purpose	Prepared	Checked[1]			Approved for Issue[2]		
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0	14.11.03	First issue for discussion	MR	SR	MR	BB	SR	AJW	SW
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Notes
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APPENDIX

- Proposed Process Flow Diagram (PFD) C877/1000

Summary

Bryngwyn WwTW is scheduled for upgrade under the AMP3 programme, to meet new indicative consents of BOD: SS = 40:60

As there are a very small number of houses connected it is recommended that a package treatment plant based on Rotating Biological Contactor (RBC) technology is installed.

1. INTRODUCTION

Bryngwyn WwTW treats wastewater from five houses and the Bryngwyn Water Treatment Works.

Current consent limits for the works are as follows

Biological Oxygen Demand (BOD) :	140 mg/l
Suspended Solids (SS) :	140 mg/l
Ammoniacal Nitrogen :	n/a mg/l
Dry Weather Flow (DWF)	2.8m3/d
Maximum Discharge Volume	5.0 m3/d
Maximum Rate of Discharge	2.0 l/sec

The EA spread sheet for AMP3 investment applies the core driver U2 to the discharge.

The indicative consent limits are as follows

Biological Oxygen Demand (BOD) :	40 mg/l
Suspended Solids (SS) :	60 mg/l
Ammoniacal Nitrogen :	n/a mg/l

Treated effluent is discharged to the Afon Y Cwm.

2. EXISTING WORKS

Incoming flows gravitate from the toilets of the treatment works and from the 5 houses to the treatment works, there is a separate system for surface water from the works.

The existing works comprises inlet septic tank, biological filter and direct discharge via a sample chamber. It is subject to excessive flows due to process water drains connected.

3. FLOWS AND LOADS

A flow and load survey has not been carried out as it is inappropriate for such low flows, there is also either infiltration, or service water connection that are making the existing plant treat volumes in excess of those expected.
The figures listed below are based on house count with standard occupancy rates.

	BASIS	VALUE
Population Equivalent (PE)	Flow	24

Dry Weather Flow (DWF)	m^3 /day	6.0
	l/s	0.1
3DWF	m3/d	15.0
	l/sec	0.2
SOC A	m3/d	39.0
	l/sec	0.5
BOD Load	kg/day	1.4
SS Load	kg/day	1.4
NH_3 – N Load	kg/day	0.2

4.0 Recommendation

As the current works is in a poor state of repair and there is no convenient location to add a solids separation stage it is recommended that the plant be replaced with a package treatment plant.

4.1 Scope of Works.

- Install packaged RBC plant
- Relay outfall pipe to outfall position
- Divert pr

Feasibility and Outline Design Report Acceptance Sheet

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

Aled Daniel, Manager United Utilities

..... Date .....

Stuart Worts , Meica Process Ltd., Project Manager

..... Date .....

APPENDIX

- **Proposed Process Flow Diagram (PFD) C876/1000**

BRYNGWYN			15.11.03	**CONVENTIONAL PLANT**	
consent BOD:SS 140/140		proposed consent BOD:SS:Amm-N 40/60			Doc No C876/001
DWF = 2.8 m3/d, max = 5.0 m3/d, 2 l/s					Prepared by MR
PARAMETER		UNITS			Checked by AJW
design basis horizon		date			Dated 15.11.03
Resident Population served (P)		pop.	**24**		**based on house count = 6@4 inc water works**
Design Flows					
Tourist pop served(T)		pop.	**0**		
Day visitors(V)		pop.	**0**		
Peak population served		pop.	**24**		
Per capita BOD contribution Residents		kg/h.d	**0.06**		
Per capita BOD contribution Tourists		kg/h.d	**0.04**		
Per capita BOD contribution Visitors		kg/h.d	**0.02**		
per capita resident TSS contribution		kg/h.d	**0.06**		
per capita tourist TSS contribution		kg/h.d	**0.06**		
per capita Amm-N contribution Residents		kg/h.d	**0.008**		
per capita Amm-N contribution Tourists		kg/h.d	**0.006**		
per capita Amm-N contribution Visitors		kg/h.d	**0.003**		
per capita domestic flow(G)		l/h.d	**180**		
per capita tourist flow		l/h.d	**120**		
per capita visitors flow		l/h.d	**25**		
total residents flow (PG)		m3/d	**4**		
total tourists flow (Tg)		m3/d	**0**		
total visitors flow (Vg)		m3/d	**0.0**		
Infiltration (I)		m3/d	**2.2**	50 %	
industrial flow (E)		m3/d	**0.0**		**check as lots of flow of clean water**
Dry weather flow (PG + Tg + Vg + I + E)		m3/d	**6**	PG+I+E	**Consent DWF = 2.8m3/d**
		l/s	**0.1**		
Average Flow		m3/d	**8**		
		l/s	**0.1**		
(3DWF)		m3/d	**15**	3PG+I+3E	
		l/s	**0.2**		
(6DWF)		m3/d	**28**		
		l/s	**0.3**		
Formula A=(PG+I+E)+1.36P+2E		m3/d	**39**		
		l/s	**0.5**		
Storm tank capacity (2hrs at 3DWF)		m3	**1.3**		
storm tank capacity (68 l/h)		m3	**1.6**		**none on site**
LOADS					
Total BOD Load		kg/d	**1.4**		
BOD Concentration at Average Flow		mg/l	**178**		
Total TSS load		kg/d	**1.4**		
TSS concentration at Average Flow		mg/l	**178**		
Total Amm-N Load		kg/d	**0.2**		
Amm-N concentration at Average Flow		mg/l	**23.7**		
Primary Treatment	% removal				
Settled BOD load	25	kg/d	**1.1**		
Settled BOD Concentration		mg/l	**133**		
Settled TSS load	50	kg/d	**0.7**		
Settled TSS concentration		mg/l			
Settled Amm-N load	0	kg/d	**0.2**	**inc 15% increase in septic tank**	
Settled Amm-N concentration		mg/l	**27.3**		
primary sludge mass		kg/d	**0.7**		
Flow split		%	**100.0**		
Number of tanks			**1.0**		
Type of tank			**rectangula**	**no desludge facility**	
length		m	**2.8**		
width		m	**1.0**		
Area		m2	**2.8**		
Volume based on	**1** depth	m3	**2.8**		
Upflow rate		m/h	**0.6**	**at SocA**	
Retention time		h	**1.7**		
Biological treatment					
secondary BOD load		kg/d	**1.1**		

secondary BOD concentration		mg/l		
secondary TSS load		kg/d	**0.7**	
secondary TSS concentration		mg/l		
secondary Amm-N load		kg/d	**0.22**	
secondary Amm-N concentration		mg/l		
biol. sludge mass (@0.7kg/kg BOD removed)		kg/d	**0.7**	
Number of filters			**1.0**	
Diameter		m	**2.5**	
Depth		m	**1.0**	
Surface area		m2	**4.9**	
Volume		m3	**4.9**	
BOD loading		kg/m3/d	**0.22**	**OK**
hydraulic loading		m3/m2/d	**8.0**	
Amm-N loading		kg/m3/d	**0.045**	**OK for 5 mg/l Amm-N**
Final Settlement	% removal			
Final BOD load	95	kg/d	**0.05**	
Final BOD concentration		mg/l	**6.7**	
Final TSS load	**90**	kg/d	**0.07**	
Final TSS concentration		mg/l	**9**	
Final Amm-N load	**0**	kg/d	**0.22**	
Final Amm-N concentration		mg/l	**27.3**	
Number of tanks			**0.0**	
Type of tank			**rectangular**	
length		m	**0.0**	**no final tank**
width		m	**0.0**	
Area		m2	**0.0**	
Volume based on	**1.2** depth	m3	**0.0**	
Upflow rate		m/h	**#DIV/0!**	
Retention time		h	**#DIV/0!**	
Sludge Production				
total sludge mass		kg/d	**1.4**	
total sludge volume @2%ds		m3/d	**0.1**	