

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 BJ0078801

Nature of Discharge(s): SEWAGE EFF/TREATED EFF/CONTINUOUS
at GOLDEN GROVE 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:

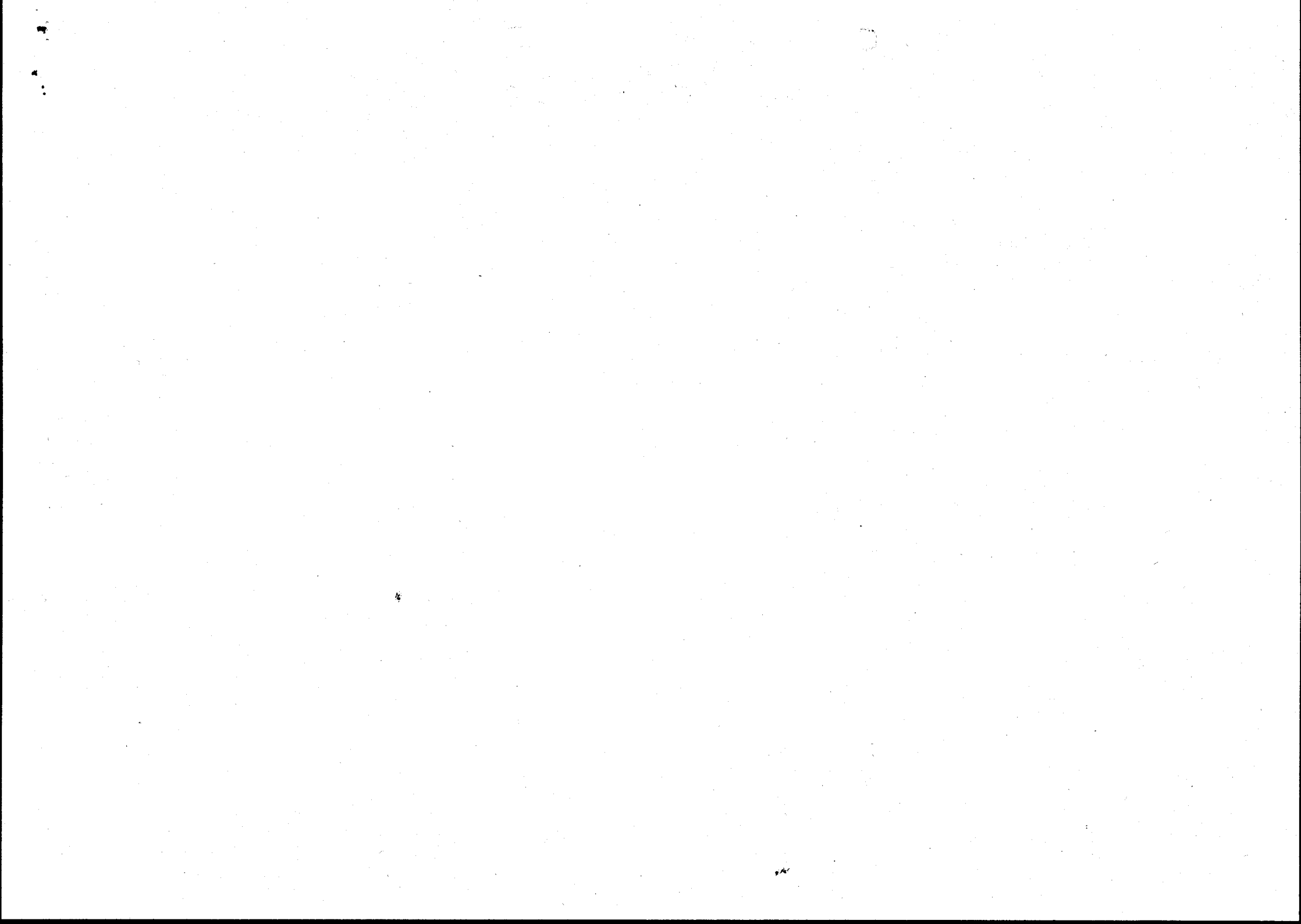
Name (block capitals):

Position:

WRS/506

(to be completed when signing)







ASANTAEITH YR
AMGYLCHEDD CYMRU
ENVIRONMENT
AGENCY WALES

Your ref.: various
Our ref.: N/WQConsents/DSAnnex

Date: 14th March 2000

Mr A. Andrews
Dŵr Cymru cyf.
Plas Y Fynnon
Cambrian Way
Brecon
LD3 7HP

Dear Sir

DISCHARGE CONSENTS - NOTIFICATION OF CHANGE TO DANGEROUS SUBSTANCES ANNEX

According to our records, you have a Consent to discharge trade or sewage effluent. The Discharge Consent contains the following condition or one that is similar: -

"The discharger shall notify the Agency in writing if any known introduction or material change in respect of discharges from trade premises...occurs that may increase or introduce into the effluent any "dangerous substance" included on List I, List II, or Red List (set out in Annex ...to this notice as updated from time to time and notified to the discharger in writing)..."

Owing to Regulations issued by DETR, the Environment Agency has reviewed the listing of substances in the Annex to this condition.

The Surface Waters (Dangerous Substances) (Classification) Regulations (SI No 2560 (1997) and SI No 389 (1998)) have made some substances, which had previously been identified in Government circular 7/89, statutory and have added 20 new substances to this list. The Annex listing has also been revised to reflect the additional substances in the Regulations and to include other substances that have become a cause for concern since 1989 when the listing was first issued.

This letter and the attached revised listing serves as the required Notification, referred to in the Consent condition. The change takes immediate effect. Please replace the old list with the new one. Please contact your local Environment Agency office and write or speak to Alun Davies if you have any queries about this letter.

Thank you for your help in this important matter.

Yours faithfully

B. Williams

PP
KEVIN THOMAS
WATER QUALITY MANAGER WALES

Asiantaeth yr Amgylchedd Cymru
Plas-yr-Afon, Parc Busnes Llancetrwg, Llancetrwg, Caerdydd, CF3 0EY
Ffôn: 029 20770088 Ffacs: 029 20798555

Environment Agency Wales
Rivers House, St Mellons Business Park, St Mellons, Cardiff, CF3 0EY
Tel: 029 20770088 Fax: 029 20798555



CONSENT NO.	BJ0078801
SCHEDULE NO.	BJ007880101

ANNEX

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

Our Ref: 2/EQ/BJ0078801/SJN/JAR
Your Ref:

Date: As postmark

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 Golden Grove Sewage Treatment Works.

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,

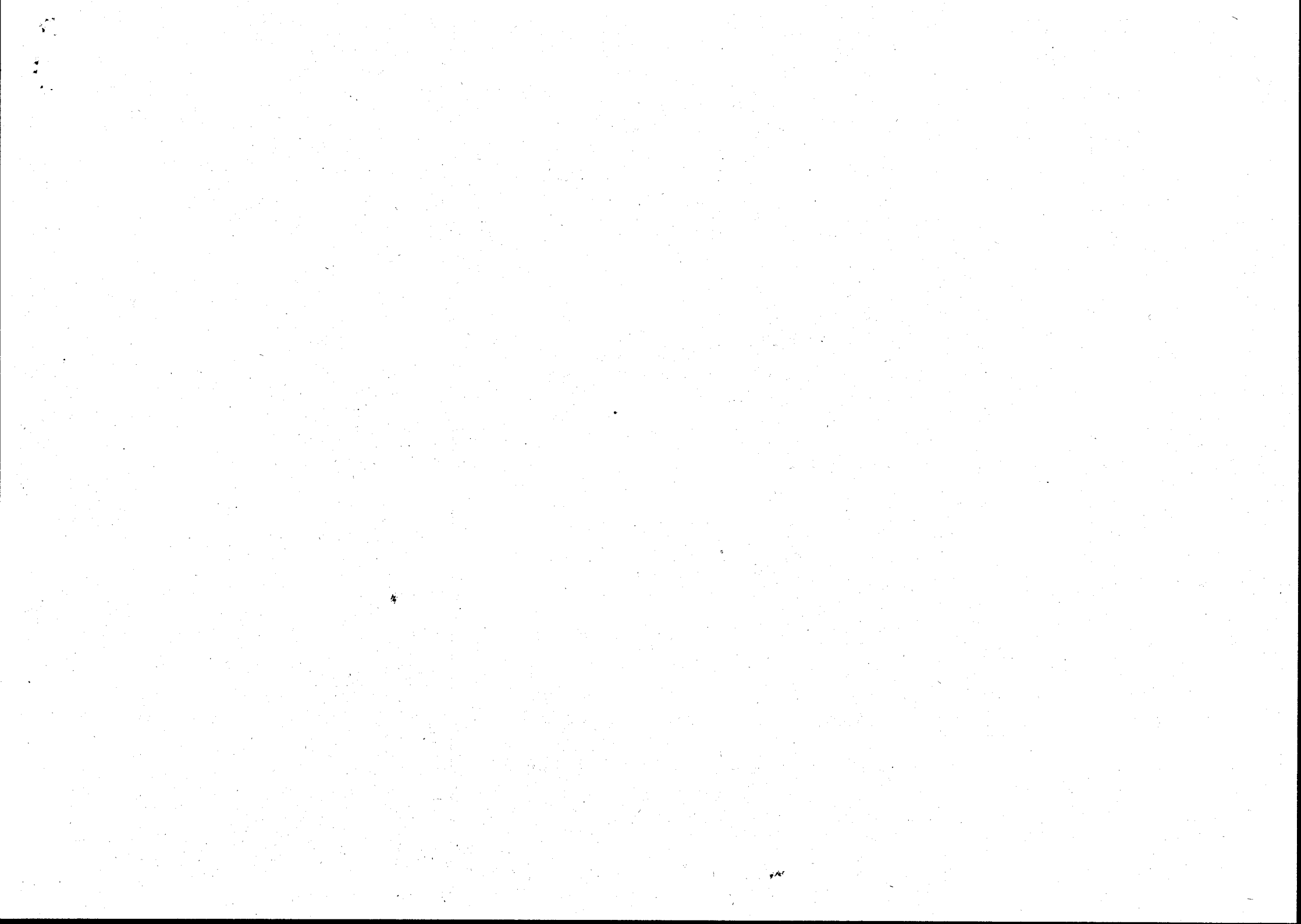
S. J. Brown
S J BROWN
Area Environmental Quality Manager

Enc

Please ask Steve Nelson, Lampeter Office: 01580 42245



PO Counter Reference
DY 3154 5131 9GB





*Audurdod Afonydd Cenedlaethol
Rhanbarth Cymru*

*National Rivers Authority
Welsh Region*

Consent No.	BJ0078801
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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

Page 1 of 7

To : Dwr Cymru Cyfyngedig

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

In respect of the previous Consent No. BJ0078801 issued on: 19 Nov 1981

For : The discharge of Sewage Effluent

To : An Unnamed Tributary of the River Tywi

From : Golden Grove Sewage Treatment Works

THE FOLLOWING REPLACE ALL PREVIOUS CONDITIONS

1.(i) The discharge shall not contain any poisonous, noxious or
polluting matter or solid waste matter.

(ii) Provided that the discharge hereby consented is made in
accordance with the following conditions of this consent, such
discharge shall not be taken to be in breach of condition (i)
above by reason of containing substances or having properties
identified in and controlled by those conditions.

Aelod Rhanbarthol o'r Bwrdd
Yr Athro Ron Edwards

Rheolwr Rhanbarth Cyflwrinol
Dr John Stoner

Glon Teifi

Barley Mow

Llanbedr Pont Steffon

Dyfed SA48 7BY

Ffôn: Llanbedr Pont Steffon (0570) 422455

Ffacs: (0570) 423607

Regional Board Member
Professor Ron Edwards

Regional General Manager
Dr John Stoner

Glon Teifi

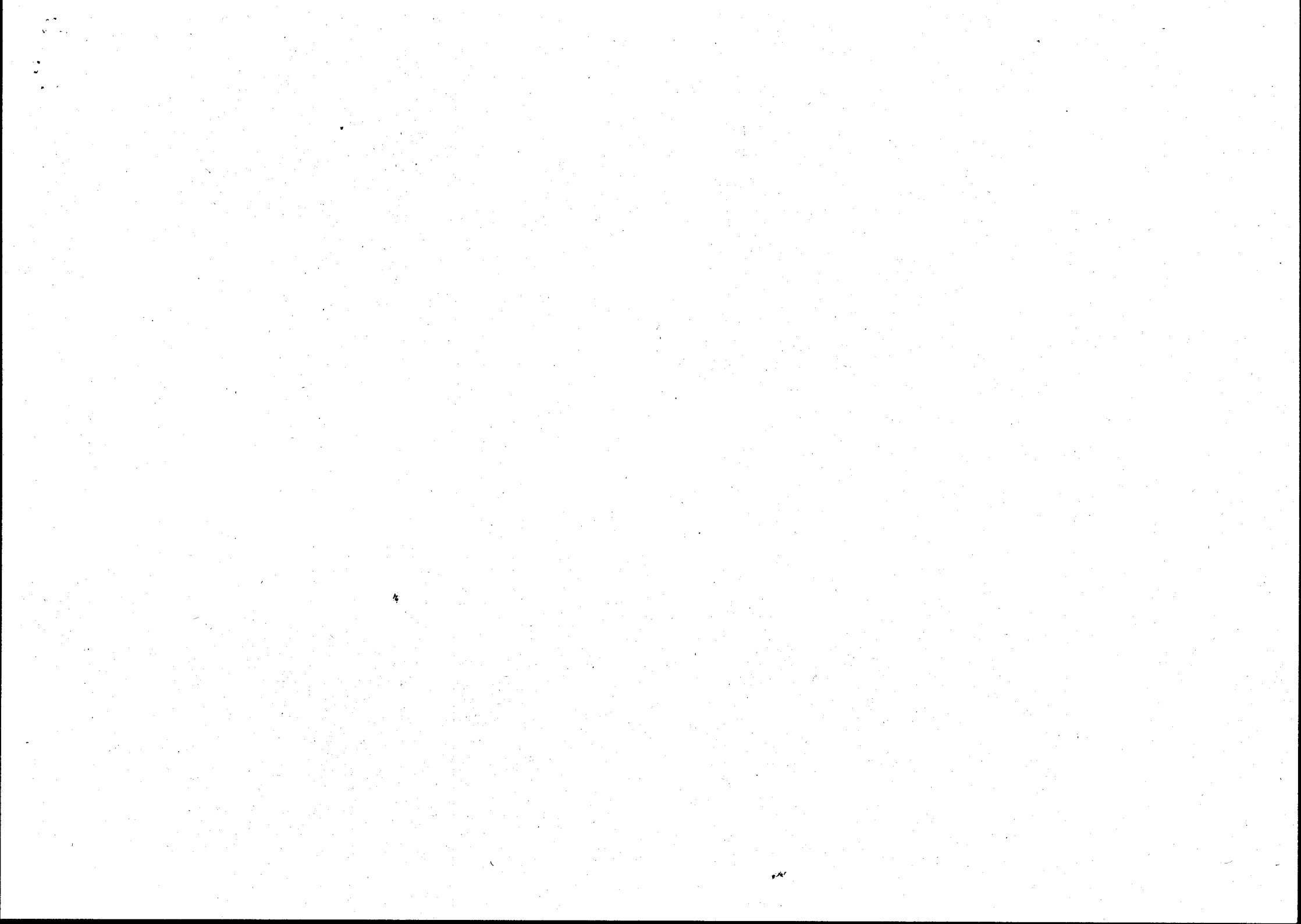
Barley Mow

Lampeter

Dyfed SA48 7BY

Tel: Lampeter (0570) 422455

Fax: (0570) 423607

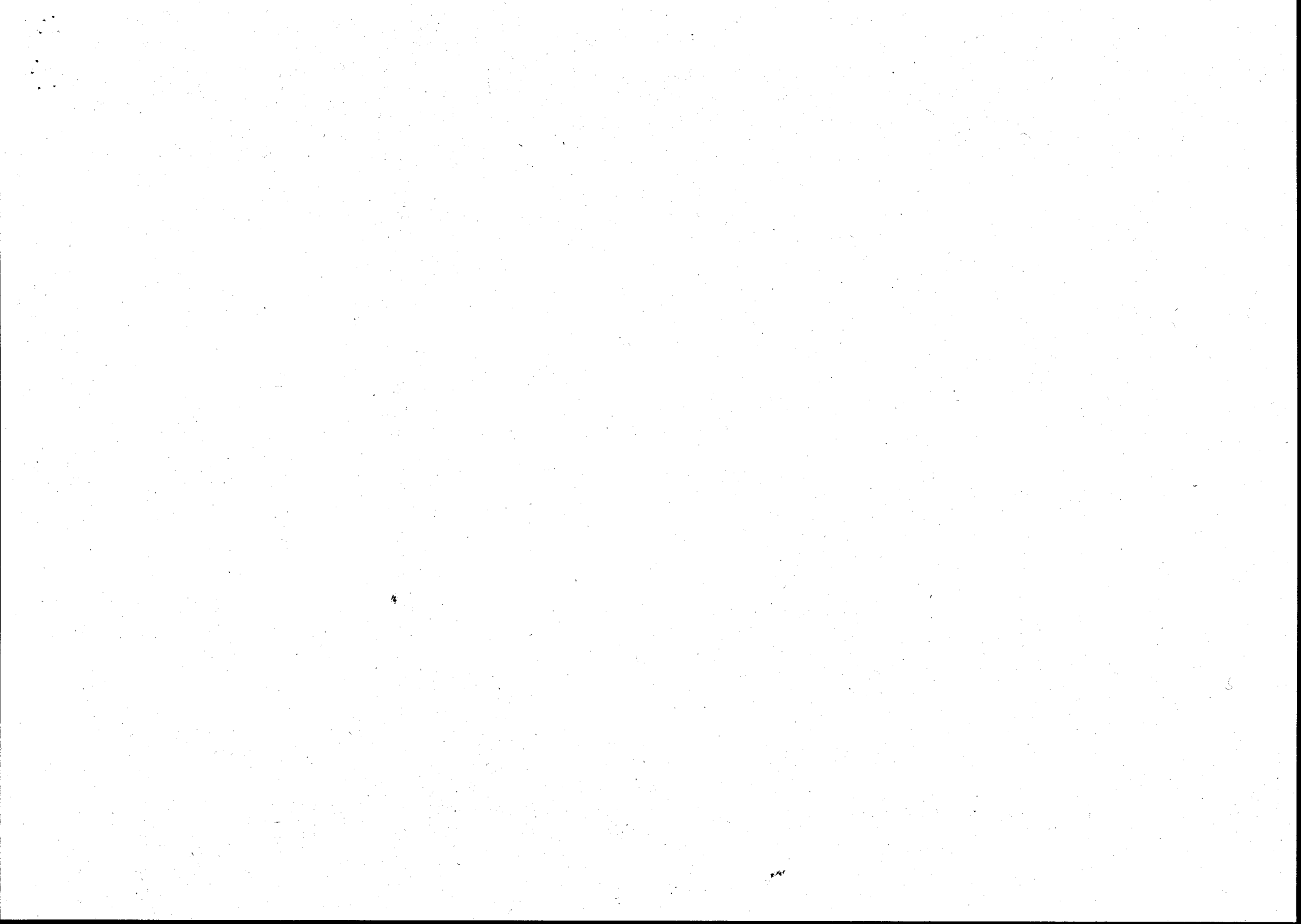


WATER RESOURCES ACT 1991
Continuation Sheet

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2. The discharge shall consist solely of biologically treated sewage effluent.
3. The discharge shall be made from an outlet at National Grid Reference SN 5927 2038 into an Unnamed Tributary of the River Tywi. (labelled discharge point X on plan BJ0078801/2)
4. 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.
5. A sample point at National grid Reference SN 59080 20190 shall be constructed, maintained and appropriately labelled so that a representative sample of the sewage effluent discharge may be obtained. The discharger shall ensure that all constituents of the discharge pass through the said sample 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 sample point is a sample of what was discharging into controlled waters.
(labelled sample chamber G on plan BJ 0078801/1)
6. The volume of effluent discharged under dry weather flow conditions shall not exceed 17 cubic metres per day.

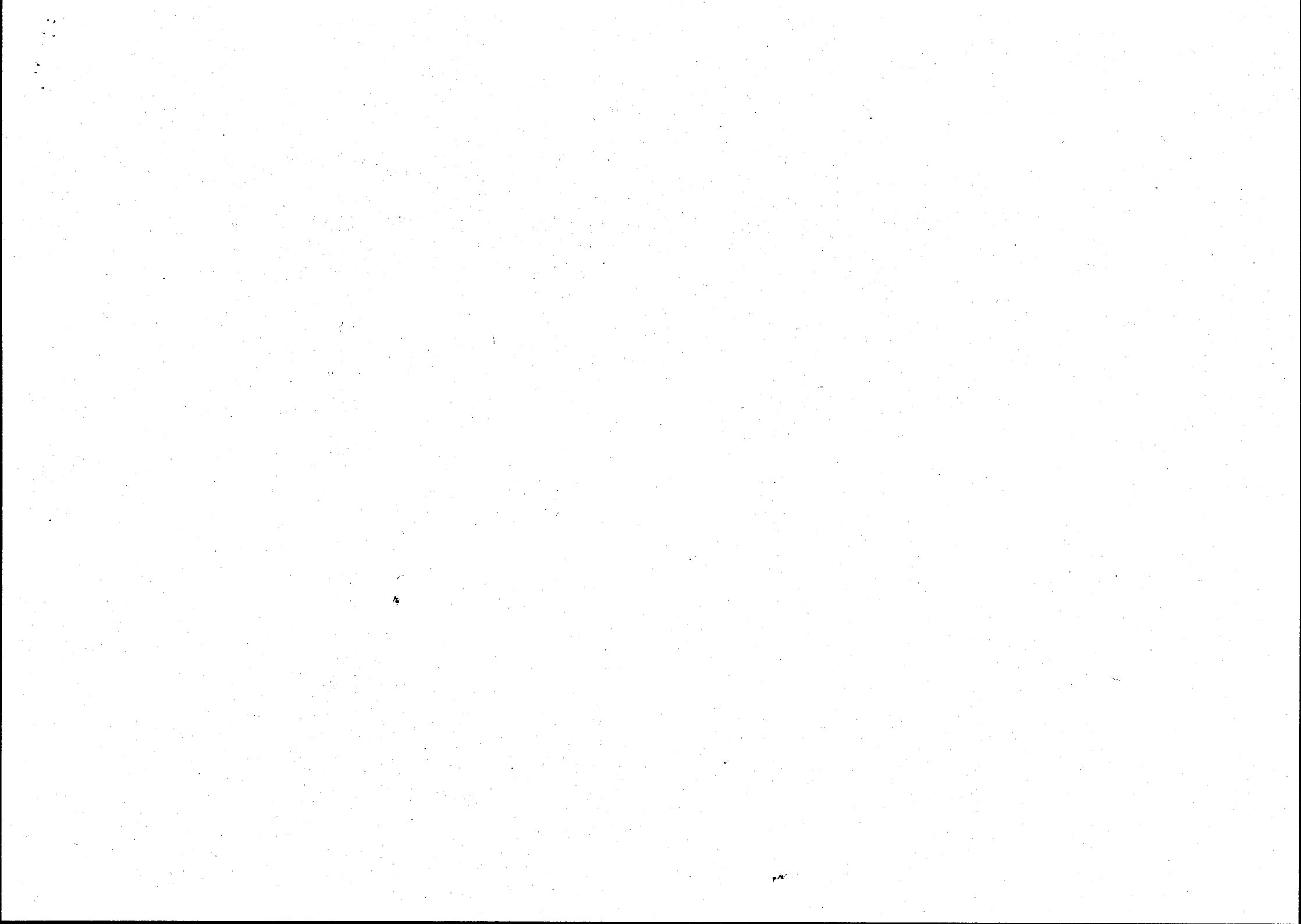
For the purposes of this consent dry weather flow shall mean the average daily flow to the treatment works during five consecutive days without rain (excluding a period which includes public holidays) following seven days which the rainfall did not exceed 0.25 millimetres on any one day.
7. The volume of effluent discharged shall not exceed 45 cubic metres in any period of 24 consecutive hours. The rate of discharge shall not exceed 0.5 litres per second.
8. (a) Subject to paragraph 8(b) below, no sample of the discharge contain more than:
 - (i) 80 milligrams per litre of biological oxygen demand (measured after 5 days at 20°C, with nitrification suppressed by the addition of allyl-thiourea)
 - (ii) 70 milligrams per litre of suspended solids (measured after drying at 105°C)



WATER RESOURCES ACT 1991
Continuation Sheet

Page 3 of 7

- 8.(b) The limit for any of the relevant parameters set out in paragraph 8(a) above may be exceeded where, in a series of samples of the discharge taken at regular randomised intervals in any period of twelve consecutive months, as listed in Column 1 of the table at Annex 1 of this consent, no more than the relevant samples, as listed in Column 2 of the said table, exceed the applicable limit for the relevant parameter.
9. As far as reasonably practicable, the works shall be operated so as to prevent:
- (i) any matter being present in the effluent, other than matter specifically covered by numerical conditions in this consent, 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
- (ii) the treated effluent from having any other adverse environmental impact.
- 10.(a) No samples of sewage effluent taken 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 paragraphs 8(a) and 8(b) of this consent has been complied with.
- (b) On each occasion that the sewage treatment works is not under normal operating conditions for the reasons in paragraph 10(a), the discharger shall use its best endeavours to mitigate any adverse effect 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.
- 11.(a) No samples of sewage effluent 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 contained in paragraphs 8(a) and 8(b) of this consent have been complied with.



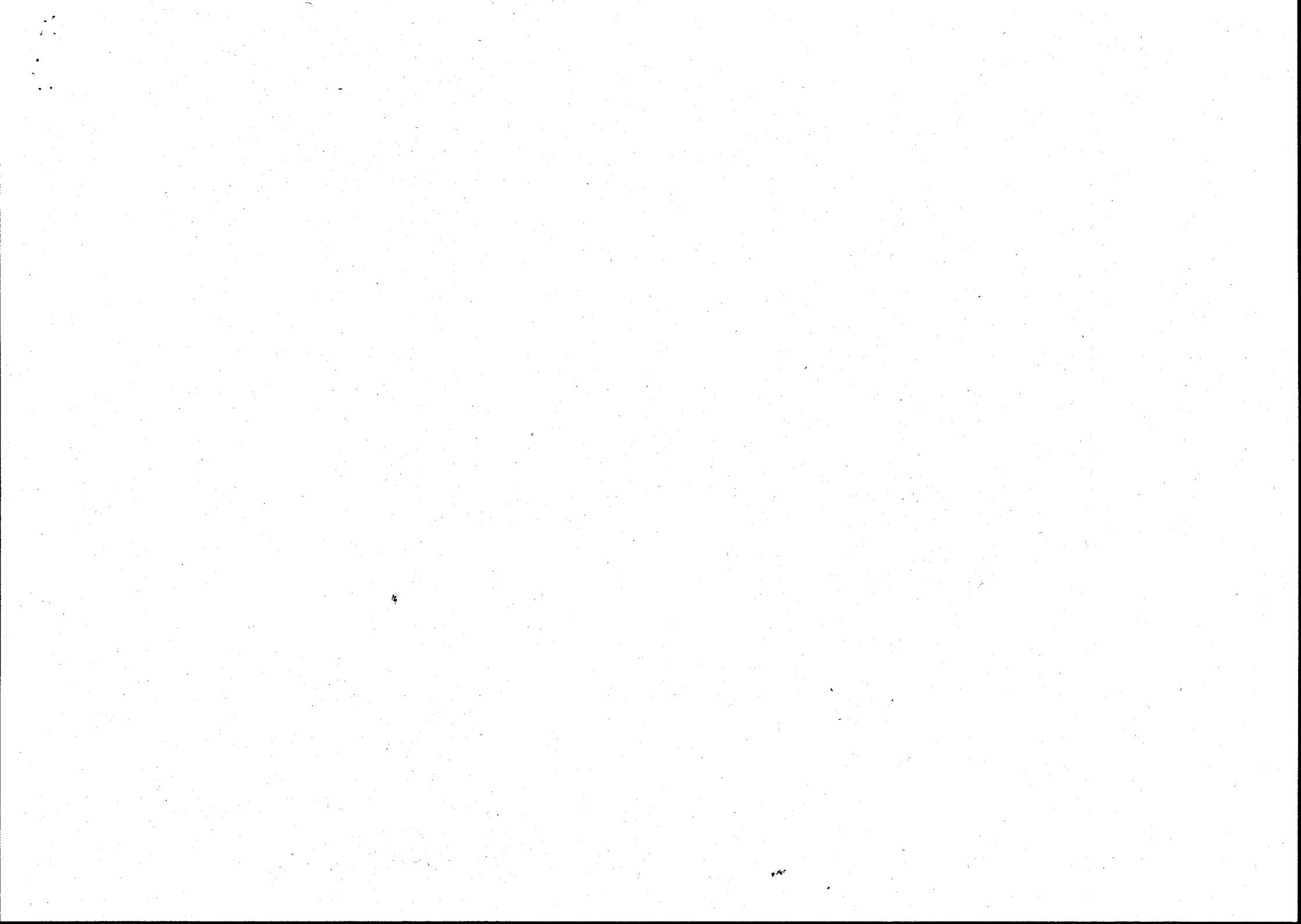
WATER RESOURCES ACT 1991
Continuation Sheet

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11.(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 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 works 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 discharger shall use its best endeavours to mitigate that adverse affect. The discharger shall notify the NRA by 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.

12. The discharger shall notify the Authority in writing if any known introduction or 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 by the Authority from time to time, and notified to the discharger in writing), or any other substance considered by the discharger as having or likely to have a significant effect on the receiving waters.



Consent No.

BJ0078801

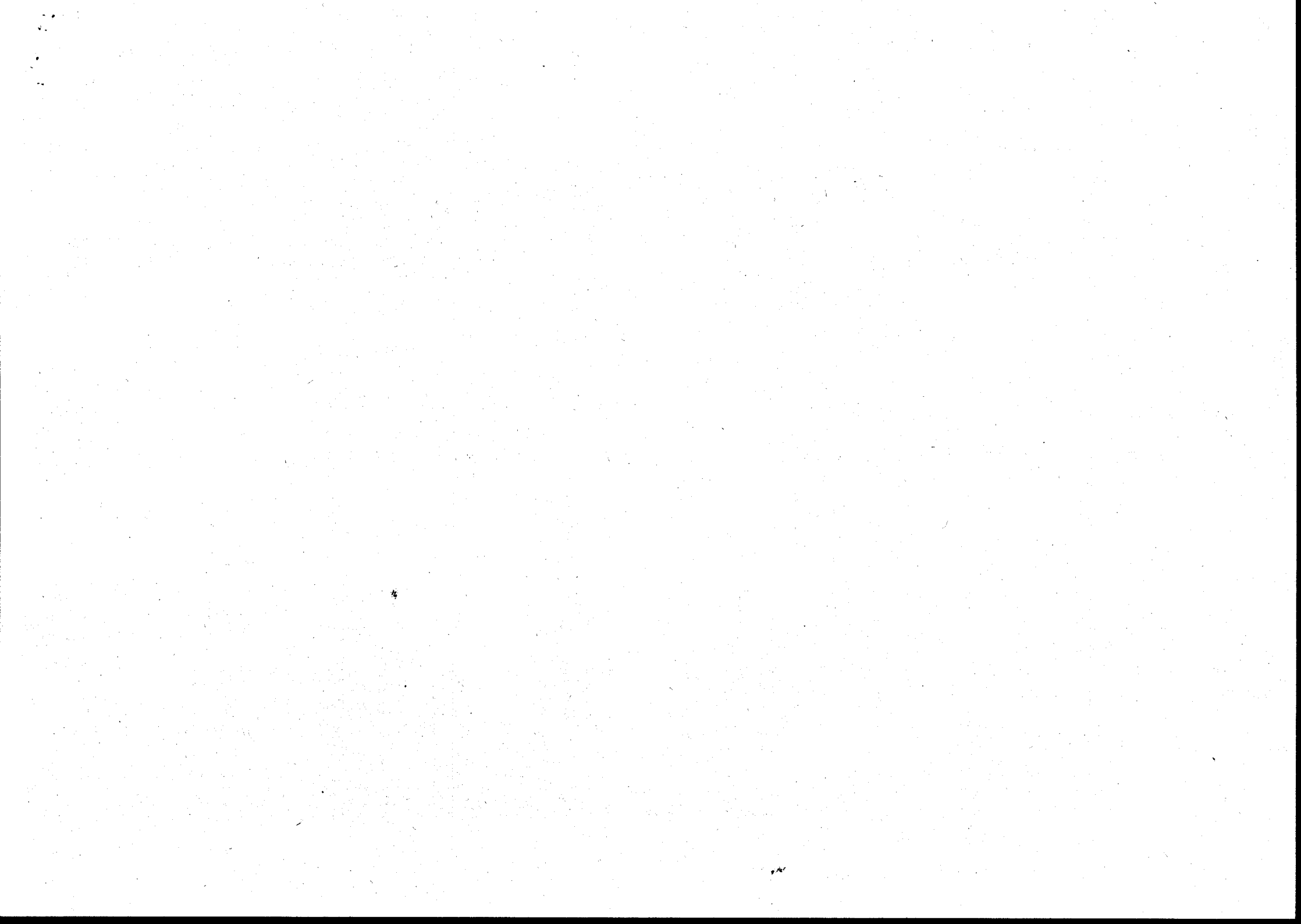
WATER RESOURCES ACT 1991
Continuation Sheet

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Subject to the provisions of paragraphs 6 and 7 of Schedule 10 of the Water Resources Act 1991, no notice shall be served by the Authority, which alters the modifications made by this notice, without the agreement in writing of the discharger, during a period of 2 years from the date this notice is served.

Dated this 5th day of September 1995

Signed  Area Environmental Quality Manager



ANNEX 1

page 6 of 7

TABLE

Column 1

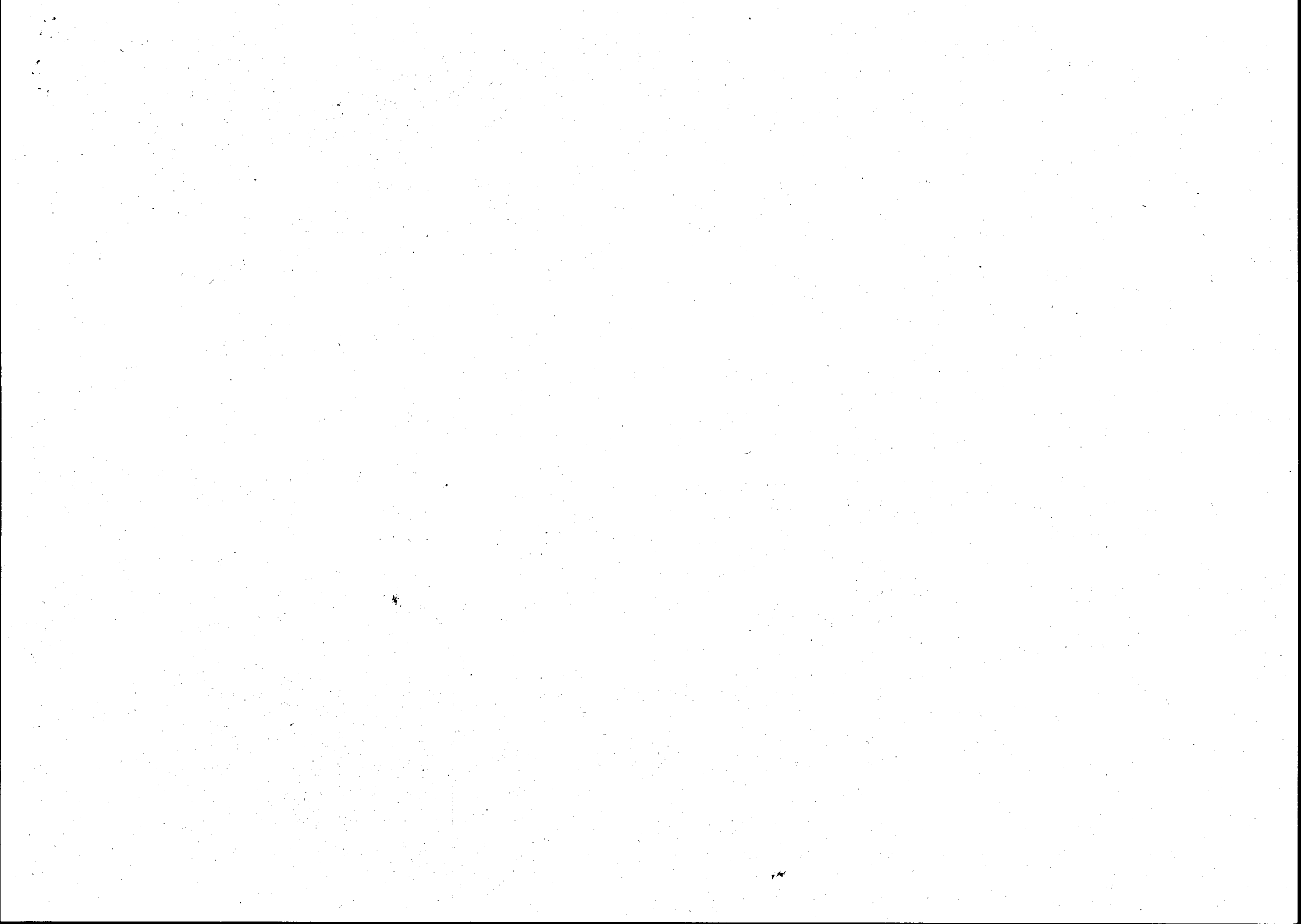
Column 2

Number of samples
taken in any period
of 12 months

Maximum number of samples
permitted to exceed limit
for given determinand

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

Cont/d

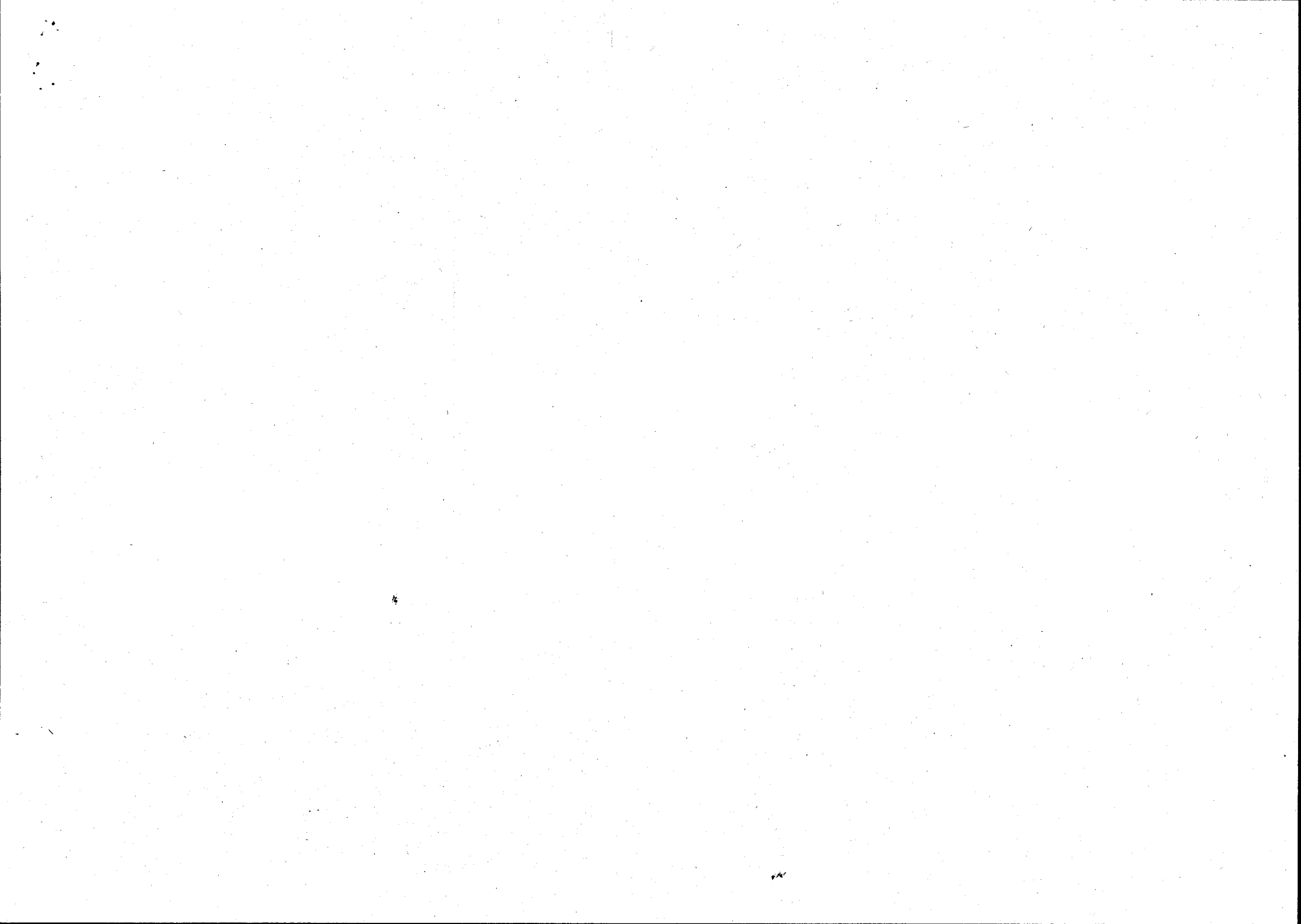


ANNEX 2

SUBSTANCE

page 7 of 7

Mercury	Vanadium
Cadmium	PCSDs
g-Hexachlorocyclohexane	Cyfluthrin
DDT	Sulcofuron
Pentachlorophenol	Flucofuron
Hexachlorobenzene	Permethrin
Hexachlorobutadiene	Cyanide
Aldrin	Azinphos-ethyl
Dieldrin	Fenthion
Endrin	Parathion
Polychlorinated Biphenyls	Parathion-methyl
Dichlorvos	Trichloroethane
1, 2 Dichloroethane	Dioxins
Trichlorobenzene	Isodrin
Atrazine	
Simazine	
Tributyltin compounds	
Triphenyltin compounds	
Trifluralin	
Fenitrothion	
Azinphos-methyl	
Malathion	
Endosulphan	
Carbon tetrachloride	
Chloroform	
Trichloroethylene	
Tetrachloroethylene	
Lead	
Chromium	
Zinc	
Copper	
Nickel	
Arsenic	
Iron	
pH	
Boron	



Welsh Off Ref

Form SS.RW2

WMA HQ Ref

RW/0532/1/1

LOCAL GOVERNMENT ACT 1972 WATER ACT 1973

Sheet 1
of 1

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 :

GOLDEN GROVE SEWAGE TREATMENT WORKS

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

THE EXISTING OUTLET is to : unnamed tributary of the Afon Tywi

at National Grid Reference : SN 5907 2032

and has been shown marked : Discharge Point

on the attached Plan, No. : RW/0532/1/1

THE PREVIOUS CONSENT was : the Consent

Reference No. - 65208

granted on : 29th February 1968

by : South West Wales River Authority

to : Llandeilo Rural District Council

The Authority submitted this Notification of Variation on : 19th August 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 : 19th November 1981

CONDITIONS

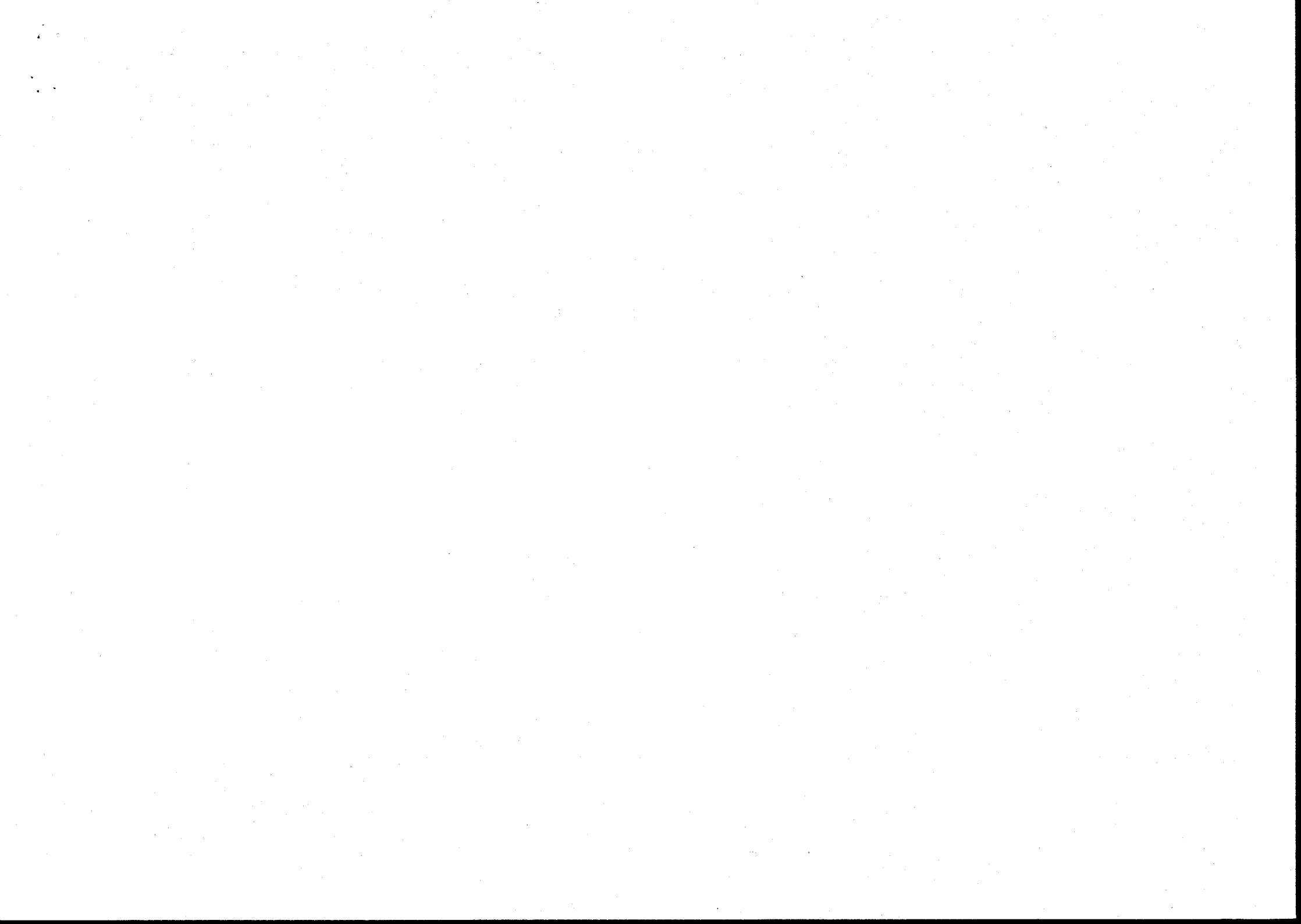
1. The discharge shall consist only of treated sewage effluent from the above works.

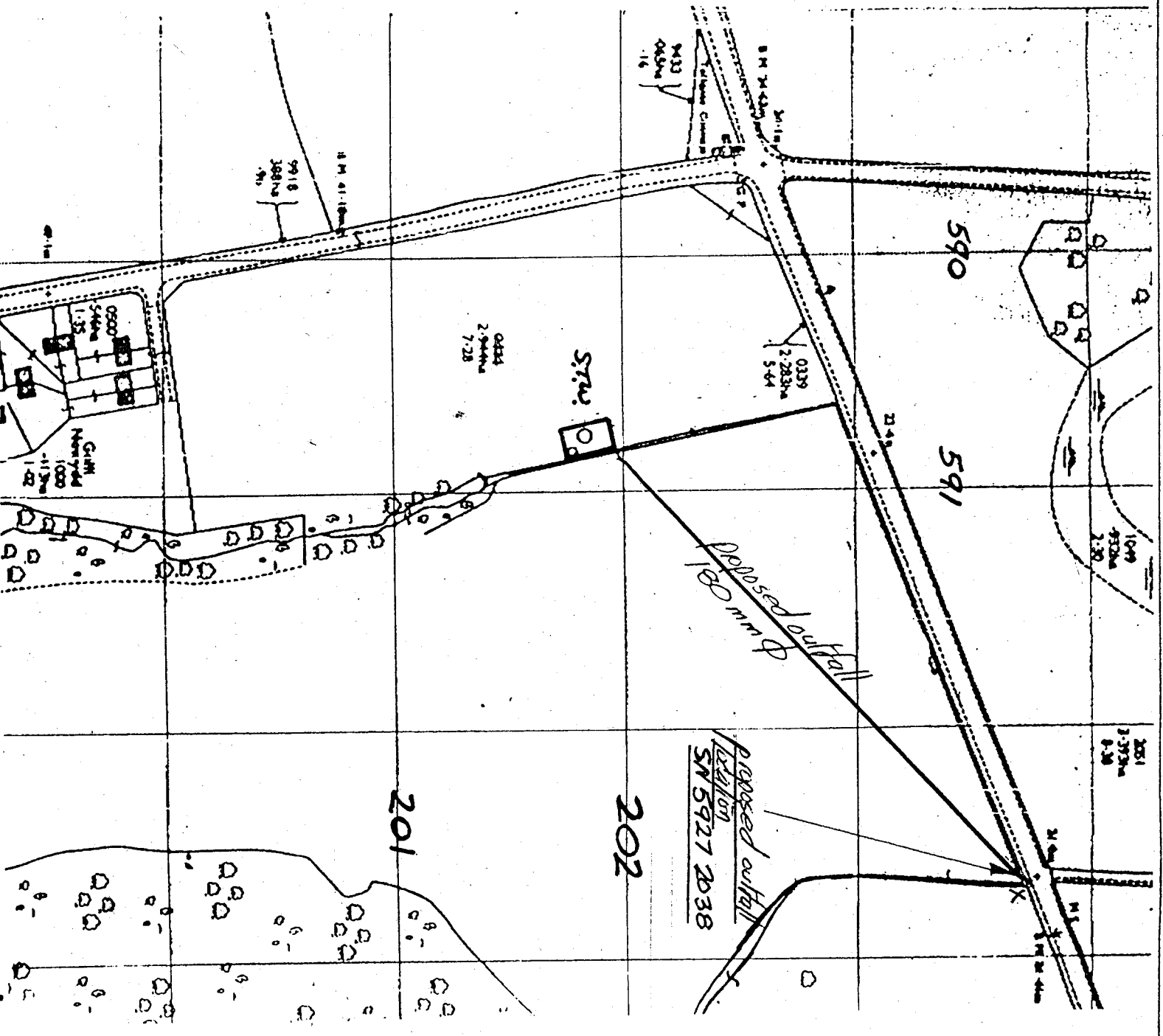
2. The quality and quantity of effluent shall not exceed the following maximum values:

<u>Determinand</u>	<u>Value</u>	<u>Unit</u>
Biochemical Oxygen Demand (+ATU) over 5 days at 20°C	80	milligrams per litre
Suspended Solids dried at 105°C	70	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 | 9.1 | cubic metres |
3. Adequate facilities shall be provided for the taking of samples of the effluent at: outlet to the unnamed tributary of the Afon Tywi.

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 Nineteenth day of November 19 83.





THE

Golden Grove STU

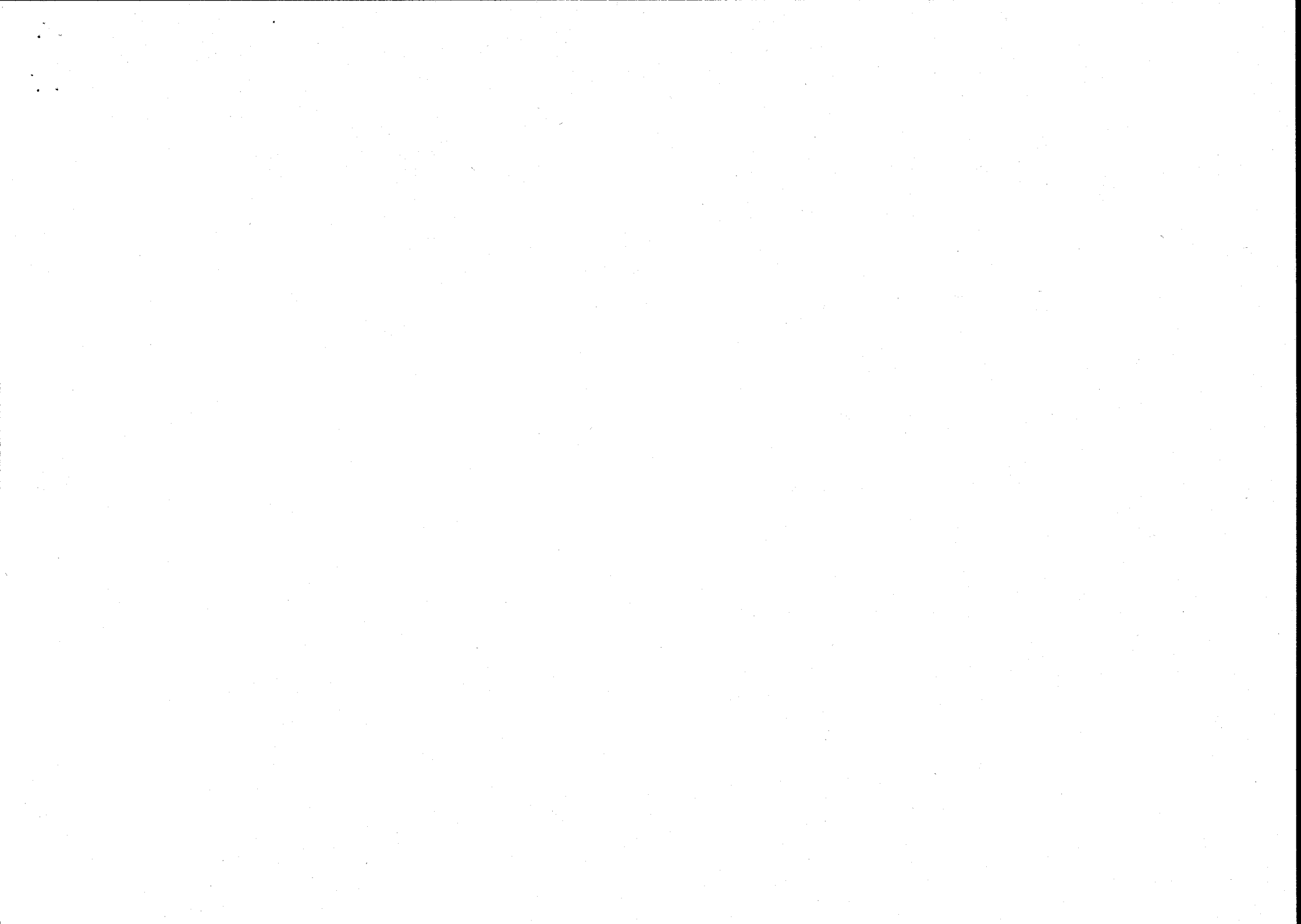
Location Plan

<u>Dwg No</u>	<u>BJ 0078801/2</u>
<u>OS Ref</u>	<u>SN5919</u>
<u>Scale</u>	<u>1:2500</u>
<u>Drawn</u>	<u>MST</u>
<u>Date</u>	<u>June 91</u>



DWR CYMRU
WELSH WATER

Rhanbarth y De Orllewin 86 Ffordd y Berrin Abertawe SA1 5JL
Ffôn: Abertawe (0792) 468000 Telffacs: (0792) 472779
South Western Division 86 The Kingsway Swansea SA1 5JL SA1 5JL
Tel: Swansea (0792) 468000 Telefax: (0792) 472779
Dwr Cymru Cyf, cwmni ddiwydiol wedi'i gofrestru yng Nghymru Rhif 2366777 Un o gwmni cwmnïau Welsh Water PLC
Syrddle Gofrestrwyd: Plas y Ffynnon Ffordd Cambria Abertawe LD3 7HP
Dwr Cymru Cyf, a limited company registered in Wales No 2366777 One of the Welsh Water PLC group of companies
Registered Office: Plas y Ffynnon Cambrian Way Brecon Powys LD3 7HP



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CONSENT NO.

BJ0078801



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. BJ0078801 issued on the 5th day of September 1995

FROM: GOLDEN GROVE WASTEWATER TREATMENT WORKS

AT: LLANDEILO, CARMARTHENSHIRE

TO: AFON TOWY

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

Secondary Treated Sewage Effluent
UWWTR Regulations 1994

Schedule No. BJ0078801 01
Schedule No. BJ0078801 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 on the 9th day of April, 2004.

Signed

MAEK 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.	BJ0078801
SCHEDULE NO.	BJ0078801 01
DATE ISSUED	9 th April, 2004



ASiantaeth Yr
AMGYLCHEDD CYMRU
ENVIRONMENT
AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Secondary Treated Sewage Effluent ("the Discharge")

FROM: GOLDEN GROVE WASTEWATER TREATMENT WORKS,
LLANDEILO, CARMARTHENSHIRE

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 80 millimetre diameter pipe;
 - (b) discharging to the Afon Towy;
 - (c) at National Grid Reference SN 58919 21384;
 - (d) shown marked 'Consent Point' on Plan BJ0078801 attached as Annex 3.

SAMPLE POINT

3. An appropriately labelled sample point shall be provided and maintained at National Grid Reference SN 59083 20294, as shown marked 'Sampling Point' on Plan BJ0078801, 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 92 cubic metres per day.
5. The Dry Weather Flow of the Discharge shall not exceed 10.8 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 1.07 litres per second.



CONSENT NO.	BJ0078801
SCHEDULE NO.	BJ0078801 01



ASiantaeth Yr
Amgylchedd Cymru
Environment
Agency Wales

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.

COMPOSITION

8. (a) Subject to paragraph (b) below, the Discharge shall not contain more than:
- (i) 40 milligrammes per litre of biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);
 - (ii) 60 milligrammes per litre of suspended solids (measured after drying at 105°C);
 - (iii) 20 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.

WORKS OPERATION

9. The works shall be operated and the effluent shall be treated in a manner which, so far as reasonable practicable, minimises the polluting effects of the discharge made from the works on controlled waters.
- This condition does not require -
- (a) any higher standard to be achieved in relation to any characteristic of the discharge which is specifically regulated by condition 8, than is required by that condition;
 - (b) any alteration of the works or a change in the type of treatment used.



CONSENT NO.	BJ0078801
SCHEDULE NO.	BJ0078801 01



UNUSUAL WEATHER CONDITIONS

10. (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 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 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

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.

CONSENT NO.	BJ0078801
SCHEDULE NO.	BJ0078801 01



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Agency Wales

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 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

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 condition 8 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.

CONSENT NO.	BJ0078801
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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.	BJ0078801
SCHEDULE NO.	BJ0078801 01 / U
DATE ISSUED	9 th April, 2004



ASANTAEITH YR
AMGYLCHEDD CYMRU
ENVIRONMENT
AGENCY WALES

CONDITIONS OF CONSENT TO DISCHARGE

Secondary Treated Sewage Effluent ("the Discharge")

FROM: GOLDEN GROVE WASTEWATER TREATMENT WORKS,
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.	BJ0078801
SCHEDULE NO.	BJ0078801 01



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ENVIRONMENT
AGENCY WALES

ANNEX 1

TABLE

Column 1

Column 2

Number of samples
taken in any period
of 12 months

Maximum number of samples
permitted to exceed limit
for given determinand

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



CONSENT NO.	BJ0078801
SCHEDULE NO.	BJ0078801 01



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ANNEX 2

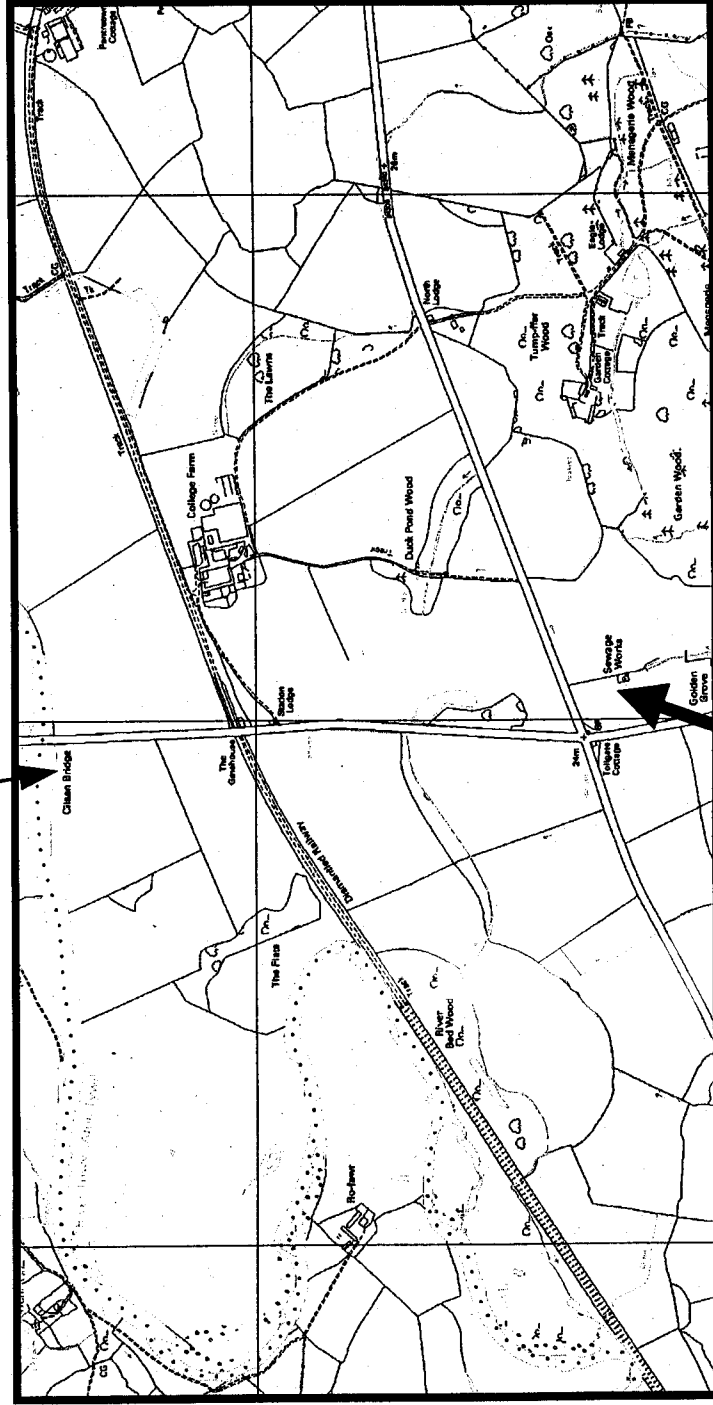
- | | |
|---|------------------------------|
| 1. Mercury and its compounds | 2. Cadmium and its compounds |
| 3. Hexachlorocyclohexane (lindane and related compounds) | 4. Carbon tetrachloride |
| 5. DDT (the isomers of 1,1,1-trichloro-2,2 bis {p-chlorophenyl} ethane) | 7. Aldrin |
| 6. Pentachlorophenol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

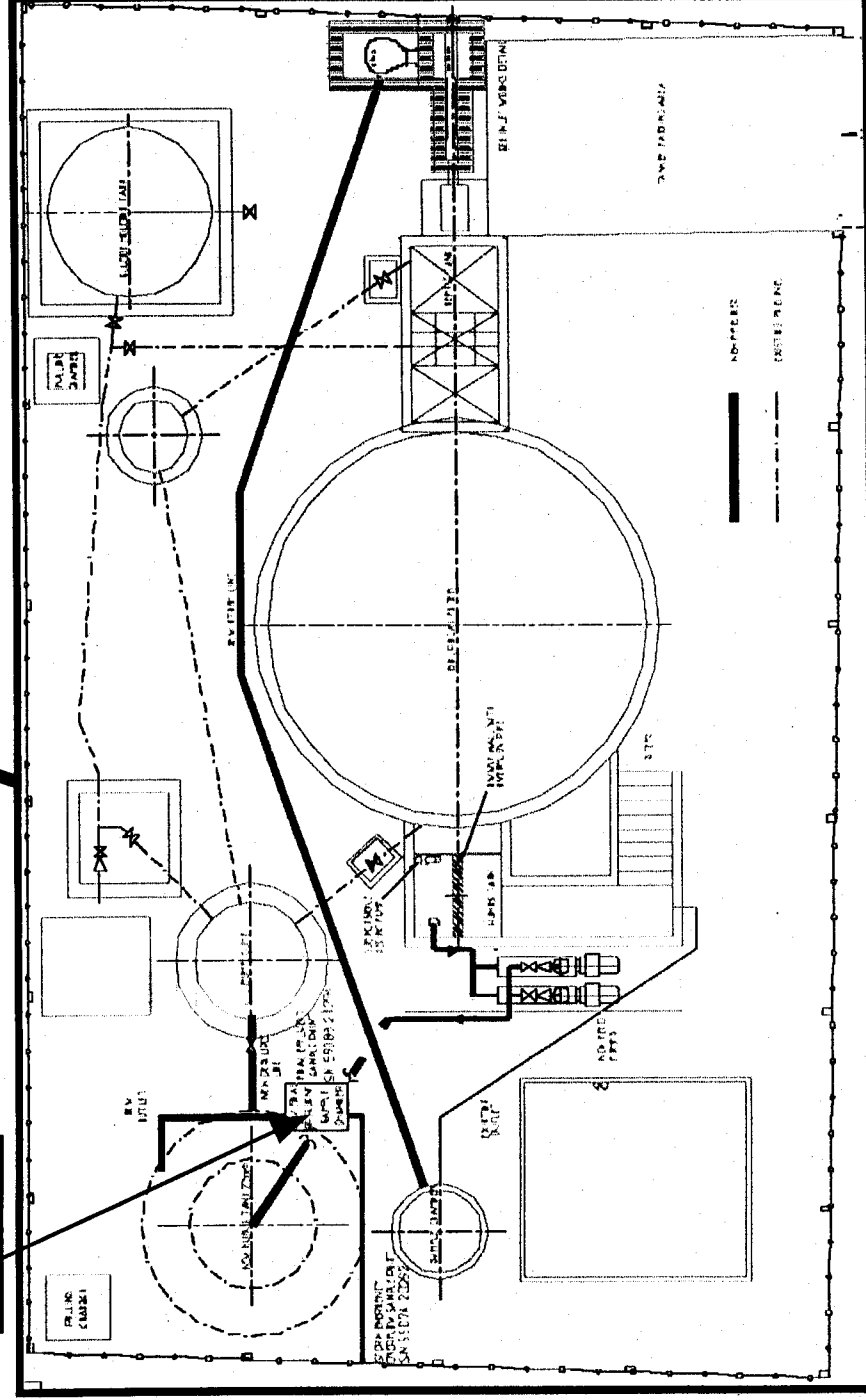
*Notification to the Agency by the Consent holder is only required in respect of changes to trade effluents likely to cause significant changes to the pH value, and/or iron or boron concentrations, of the crude sewage.

**GOLDEN GROVE WWTW FE,
LLANDEILO,
CARMARTHENSHIRE**

**Consent
Point**



**Sampling
Point**





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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 CWR
T 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
Ffôn: 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

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 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
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

Regional/Area Address:	<i>Official Use Only</i>
The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT	Dist/Area Ref: 1303 Application No. B50078801 Date Received: 4/08/03 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).

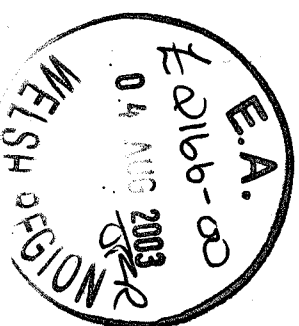
1 SITE ADDRESS

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

Golden Grove WWTW
Llandeilo
Carmarthenshire

Post Code:

N/a



CHQ: 004015.

REC: 0278

Sched 10a final

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 annex 1**) ☒
- Sewage Effluent discharged under storm or emergency conditions (**complete annex 2**) ☐
- Cooling Water (**complete annex 3**) ☐
- Trade Effluent (*including site drainage*) (**complete annex 3**) ☐
- Others (*please specify*) ☐

2.2 Please state the maximum quantity it is proposed to discharge in any one day
Briefly state how this figure was calculated (see note ii).

SocA calculated from PE

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*) ☐

80mm nominal bore

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

S	N	5	8	9	5	5	2	1	3	8	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	5	9	0	8	3	2	0	2	9	4
---	---	---	---	---	---	---	---	---	---	---	---

(*please indicate on accompanying plans*)

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

2.5 a) ☐ Chamber with V notch in accordance with EA flow measuring policy
Type of Treatment Plant(s) to be used (*please specify make and model*) - tick as appropriate:

Septic Tank ☐ Package Sewage Treatment Works ☐ Other ☒

Primary/septic tank, biological trickling filter, humus tank - see supporting documentation for more detail

☐ 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?

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).

Bj0078801

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

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.
Carmarthenshire 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:

1. Well ☐ 5. River (please give name below) ☐ n/a
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:

Towy

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).

Not applicable

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 Cymnu Cyf

* Pentwyn Road

* Nelson

* Treharis

* 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: <i>Milay Ford</i>	PRINT NAME: <i>HILARY FORD</i>
ON BEHALF OF: <i>Dŷo. Cymru Cŵ</i>	DATED: <i>30.07.2003</i>

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



ASIA NTAEITH 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.

Golden Grove WwTW

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

1 off primary/septic tank, 1 off biological filter, 1 off humus tank

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).
- b) Dry weather flow of discharge(s).
- c) Average daily flow.
- d) Maximum rate of discharge(s)

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

☐ Yes

5. a) Will any self monitoring take place?
If yes, please give details.

☐ No

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

☐ No

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

Population = 60

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

Not applicable

- 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)
If yes, please give details.

N/a

8. Does the effluent contain a trade component?

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

No

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.*



ASIANIAETH 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.

Golden Grove WWTW

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):

80 mm NB

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

Alternatives considered included pump away and packaged treatment plant.
Anticipated cost £104k

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

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)	60
Consumption (l/head/day) default = 180	180
Infiltration (m ³ /day)	6.5
Industrial effluent flow (m ³ /day)	0
Dry Weather Flow (m ³ /day)	10.8
Soc A (l/sec)	1.07
Predicted spill frequency (per annum)	N/a

IMPORTANT NOTES FOR ALL CONSENT APPLICATIONS:

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



D W R C Y M R U
W E L S H W A T E R

Gwathrin Dwr Gwastraff Pont Myrddin
Pont Myrddin
Hwlfordd
Sir Benfro SA61 1JL

Merlins Bridge WWTW
Merlins Bridge
Haverfordwest
Pembrokeshire SA61 1JL

Ffôn: +44 (0)1437 765 460
Ffacs: +44 (0)1437 762 552
Sallie gwe: www.dwr.cymru.com

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

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

30th July 2003

Tel: 01437 769061

Dear Sir

**Applications for Discharge Consent – AMP3 Schemes at Angle, Freshwater East, Golden Grove and Llanedi
Section 101A first time sewerage Llanafan**

Please find enclosed application forms, fees and supporting information for the applications relating to the above schemes.

- Angle STW final effluent and storm overflow - variation
 - Freshwater East STW final effluent only – new works
 - Golden Grove STW final effluent, storm overflow and works emergency overflow-outfall relocation
 - Llanedi STW final effluent and storm overflow – variation and new overflow
- The scheme at Freshwater East replaces the proposed new works, consented in 2002, which will not now be built. The associated storm and emergency discharges remain as consented in 2002.
- First time sewerage Llanafan STW, package plant, final effluent only – new works

These applications are submitted in accordance with our year 4 programme.

Yours faithfully

Hilary Ford
Area Consents and Regulation Scientist

Water



Water Resources, Thames Region, North East Area, Apollo Court, 2 Bishop Square Business Park, St Albans Road West, Hatfield AL10 9EX, before the end of the said period, quoting the name of the applicant.

J Haslam, on behalf of A Brand & Sons
18 February 2004.

(503)

Water Resources

Environment Agency

WATER RESOURCES ACT 1991

NOTICE OF APPLICATION FOR A LICENCE TO OBSTRUCT OR IMPEDE THE FLOW OF AN INLAND WATER BY MEANS OF IMPOUNDING WORKS

Take notice that Clive Bath, of High Delf Farm, Hillesland, Coleford, Gloucestershire, is applying to the Environment Agency for a licence to obstruct or impede the flow of stream, unnamed, at National Grid Ref SO 575 145, at High Delf Farm, Hillesland, Coleford, Gloucestershire GL16 7PW. Water will be impounded by construction of earth dam and the object of the impounding works is for conservation. (The capacity of the reservoir at overflow level will be 12,000 cubic metres).

A copy of the application and any map, plans and other documents submitted with it may be inspected, free of charge, at all reasonable hours at High Delf Farm, Hillesland, Coleford, Gloucestershire, between 26 February 2004 and 26 March 2004.

Any person who wishes to make representations about the application should do so in writing to the Environment Agency, Hadnock Road, Monmouth, Monmouthshire NP25 3NQ, before the end of the said period quoting the name of the applicant.

C Bath

11 February 2004.

(517)

Environment Agency

WATER RESOURCES ACT 1991

NOTICE OF APPLICATION FOR A LICENCE TO ABSTRACT WATER

Take notice that Overstone Park Ltd., of Overstone Park Golf Club, Billing Lane, Northampton, is applying to the Environment Agency for a licence to abstract water from Overstone Lake, at National Grid Ref SP 803 652, at Overstone Lake in Overstone, Daventry, Northamptonshire.

The proposal is to abstract water at the following rates: 16 cubic metres per hour, 119 cubic metres per day and 10,000 cubic metres per year, between 1 April and 31 October each year. The water will be used for spray irrigation on golf greens and tees.

A copy of the application and any map, plans and other documents submitted with it may be inspected, free of charge, at all reasonable hours at Overstone Park Golf Club, between 26 February 2004 and 26 March 2004.

Any person who wishes to make representations about the application should do so in writing to the Environment Agency, Waterside House, Waterside North, Lincoln LN2 5HA, before the end of the said period.

P Heilm, for and on behalf of Overstone Park Ltd.

20 February 2004.

(488)

Environment Agency

WATER RESOURCES ACT 1991

NOTICE OF APPLICATION FOR A LICENCE TO ABSTRACT WATER

Take notice that A Brand & Sons, of Bulls Lane, Hertfordshire AL9 7BB, is applying to the Environment Agency for a licence to abstract water from Underground Strata licence 28/536 National Grid Ref TL 2433 0525, at B Hatfield, Hertfordshire AL9 7BB.

The proposal is to abstract water at the following rate per hour, 65 cubic metres per day, 12,350 cubic metres per year, for irrigating nursery.

A copy of the application and any map, plans and other documents submitted with it may be inspected, free of charge, at all reasonable hours at A Brand & Sons, Bell Bar, Hatfield, Hertfordshire, between 3 March 2004 and 3 April 2004.

Any person who wishes to make representations at should do so in writing to the Environment Agency

Environment Agency

WATER RESOURCES ACT 1991

NOTICE OF APPLICATION FOR A LICENCE TO ABSTRACT WATER

Take notice that Kedassia Poultry Ltd, of Lannor House, 370-386 High Road, Wembley, Middlesex HA9 6AX, are applying to the Environment Agency for a licence to abstract water from underground strata (upper chalk), at National Grid Ref TQ 3730 8420, at 3 Smeed Road, London E3.

The proposal is to abstract water at the following rates: 19 cubic metres per hour, 190 cubic metres per day and 30,000 cubic metres per year, all year. The water will be used for chicken processing factory.

A copy of the application and any map, plans and other documents submitted with it may be inspected, free of charge, at all reasonable hours at Reception, 3 Smeed Road, London E3, between 8 March 2004 and 8 April 2004.

Any person who wishes to make representations about the application should do so in writing to the Environment Agency, Team Leader, Water Resources, Thames Region, North East Area, Apollo Court, 2 Bishop Square Business Park, St Albans Road West, Hatfield, Hertfordshire AL10 9EX, before the end of the said period, quoting the name of the applicant.

J Haslam, on behalf of Kedassia Poultry Ltd

23 February 2004.

(502)

Environment Agency Wales

WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995)

NOTICE OF APPLICATION FOR CONSENT FOR THE PURPOSE OF SECTION 88

Notice is hereby given, in accordance with Schedule 10 to the Water Resources Act 1991, that an application has been made to the Environment Agency by Dwr Cymru Welsh Water for consent to discharge 92 cubic metres per day of biologically treated sewage effluent to the Afon Towy at National Grid Ref SN 58955 21385 from Clisan Bridge, Llandilo, Carmarthenshire.

Any person who wishes to make representations about the application should do so in writing to Environment Agency Wales, Maes Newydd, Llandarcy, Neath Port Talbot SA10 6DQ, not later than 8 April 2004, quoting Ref SW/CUST/LL/B10078801.

A copy of the application may be inspected, free of charge, at all reasonable hours at Environment Agency Wales, Maes Newydd, Llandarcy, Neath, Port Talbot SA10 6DQ.

G Davies, Customer Contact and Authorisations Officer
17 February 2004.

(516)

Environment Agency Wales

WATER RESOURCES ACT 1991

NOTICE OF APPLICATION FOR A LICENCE TO ABSTRACT WATER

CLIENT *Environment Agency Wales*

DATE OF PUBLICATION *26th Feb 2004*

PUBLICATION *The London Gazette*

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s: 8.18 cubic and June this age overflow

r documents ll reasonable Ground, Off March 2004.

RANE BENGAL RESTAURANT

require

**CLEANER also
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Good working conditions • Good rates of pay
Ability to speak Bengali is preferable

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Contact Richard on

0781 2336816 (mob)

Talking Heads

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Swansea & Carmarthen

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Enthusiastic
Ambitious
Experienced Stylists
For their expanding business
Contact Leanne in confidence
01792 459826

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Education/Training/Courses**DIPLOMA IN NURSING**
adult nursing**LAST EVER INTAKE MARCH 2004**

Course commences:
11 March 2004

Course funding:

All course fees are paid for by the NHS in Wales. In addition a bursary to cover living expenses is available

Course duration:

Public Notices**Cyngor Sir Caerfyrddin
Carmarthenshire County Council**

PRIFYRDD | HIGHWAYS

Gorchymyn Sir Gaerfyrddin
Llanfynydd) (Gwaharddiad Di

HYSBYSIR trwy hyn bo
bwriadu gwneud Gorchymyn
ddyddiad yr Hysbysiad h
unrhyw gerbyd rhag telthio ar l
ddiddosbarth sy'n cr
Llanfynydd

Lle bo'n bosibl caniatu i g
mynediad i dai unig

Y ffordd arall i draffig sy'n telthio
hyd y ffordd ddiddosbarth t
Banc hyd at ei chyffordd ger

chwith ar y gyffordd a mynd heibio i fferm Pont-Arnon,
Crachdy-Isaf a Crachdy-Uchaf hyd at ei chyffordd a'r
ffordd Dosbarth III ger Fferm Pontarllyb. Troi i'r chwith i'r
ffordd Dosbarth III a theithio ymlaen heibio i Felindre,
Croesnant a Fferm Stangrach hyd at y groesffordd ger
tafam y Farmers Arms. Troi i'r chwith i'r ffordd
ddiddosbarth i ddychwelyd i bwynt i'r gogledd o'r man lle
mae'r ffordd ynghau.

I'r gwrthwyneb ar gyfer traffig sydd yn telthio tua'r de.

Bydd y Gorchymyn arfaethedig yn parhau mewn grym
hyd nes y bydd y gwaith o gryfhau neu atgyweirio'r bont
wedi ei gwblhau.

Bwriedir i'r gwaith ddechrau ar yr 8fed o Fawrth 2004.

Lle bo hynny'n briodol gall Gorchymynion Rheoli Traffig
Ffyrdd dros dro barhau mewn grym am hyd at ddeunaw
mis.

DYDDIEDIG y 25ain o Chwefror, 2004

Cyfeirnod: SMT/HTTR-484
Llinell Uniongyrchol: (01267) 224076
e-bost: smthomas@sirgare.gov.uk

Mark James, Prif Weithredwr,
Neuadd y Sir, CAERFYRDDIN.

CYNLLUNIO

Deddf Cynllunio (Adeiladau Rhedredig ac Ardaloedd
Cadwraeth) 1990 - Hysbysiad Dan Adran 73
Datblygiad o Fewn Ardai Gadwraeth

W/05961 Garej unllawr at ddefnydd domestig,
Highmead, Llansteffan, Sir Gaerfyrddin

Noder bod cais wedi ei dderbyn yn unol â'r ddeddf /
rheol uchod.

CLIENT *Environment Agency Wales*

DATE OF PUBLICATION *25th Feb 2004*

PUBLICATION *Carmarthen Journal*

be to proceed along the unclassified road in a southerly
direction past Pen Y Banc Farm to the junction at
Llwynfedwen Farm. Turn left at the junction and continue
past Pont-Arnon, Crachdy-Isaf and Crachdy- Uchaf Farms
to the junction with the Class III road near Pontarllyb Farm.
Turn left onto the Class III road and continue past
Felindre, Croesnant and Stangrach Farm to the cross
roads near the Farmers Arms Public House. Turn left
onto the unclassified road to return to a point north of the
closure.

Vice versa for southbound diverted traffic.

The proposed Order will continue in force until such time
as the strengthening or replacement works which are to
be carried out to the bridge have been completed.

It is intended that the works will commence on the 8th
day of March 2004.

Where appropriate temporary Road Traffic Regulation
Orders may continue in force for a period not exceeding
eighteen months.

DATED the 25th day of February 2004.

(ref) SMT/HTTR-484
Direct Line: 01267 224076
e-mail address: smthomas@sirgare.gov.uk

Mark James, Chief Executive,
County Hall, CARMARTHEN.

PLANNING

The Planning (Listed Buildings and Conservation
Areas) Act 1990 - Notice Under Section 73 -
Development Within Conservation Area

W/05961 Single storey domestic garage, Highmead,
Llansteffan, Carmarthen

Take notice that application(s) have been received under
the above legislation/regulations.

Public Notices**WATER RESOURCES ACT 1991: SCHEDULE 10
(AS AMENDED BY THE ENVIRONMENT ACT 1995)
NOTICE OF APPLICATION FOR CONSENT FOR
THE PURPOSE OF SECTION 88**

Notice is hereby given, in accordance with Schedule 10 to the
Water Resources Act 1991, that an application has been made to
the Environment Agency by Dwr Cymru Welsh Water for
consent to discharge 92m³/day of biologically treated sewage
effluent to the Afon Towy at National Grid Reference SN 58955
21385 from Cilsan Bridge, Llandeilo, Carmarthenshire.

Any person who wishes to make representations about the
application should do so in writing to Environment Agency
Wales, Maes Newydd, Llandarcy, Neath Port Talbot,
SA10 6JQ not later than 8th April 2004 quoting reference
SW/CUST/LL/BJ0078801.

A copy of the application may be inspected free of charge at all
reasonable hours at Environment Agency Wales, Maes Newydd,
Llandarcy, Neath Port Talbot, SA10 6JQ.

Signed: GARETH DAVIES

Customer Contact & Authorisations Officer

Date: 17th February 2004

**DEDDF ADNODDAU DŴR 1991: ATODIAD 10
(FEL Y'I DIWYGIWYD GAN DDEDDF YR
AMGYLCHEDD 1995)
HYSBYSIAD CAIS AM GANIATAD AT DDIBEN
ADRAN 88**

Hysbysir drwy hyn, yn unol ag Atodiad 10 o Deddf Adnoddau
Dŵr 1991, fod cais wedi ei gyflwyno i Asiantaeth yr
Amgylchedd Cymru gan Dŵr Cymru Welsh Water am ganiatad
i ollwng 92m³/diwrnod i Dywi yn ôl Cyfeirnod Grid
Cenedlaethol SN 58955 21385 o Bont Cilsan, Llandeilo, Sir
Gaerfyrddin.

Dylai unrhyw un sydd am wneud sylwadau ynghylch y cais
ysgrifennu at Asiantaeth yr Amgylchedd Cymru, Maes
Newydd, Llandarcy, Nedd Port Talbot, SA10 6JQ nid hwyrach
na 8fed Ebrill 2004 gan ddyfynnu cyfeirnod
SW/CUST/LL/BJ0078801.

Gellir archwilio copi o'r cais yn rhad ac am ddim ar unrhyw
adeg resymol yn Asiantaeth yr Amgylchedd Cymru, Maes
Newydd, Llandarcy, Nedd Port Talbot, SA10 6JQ.

Llofnodwyd: GARETH DAVIES

Swyddog Cyswllt Cwsmeriaid ac Awdurdodaethau

Dyddiad: 17eg Chwefror 2004

Clairvoyant**Rosemary Price**

**Famous
Psychic**

Documentation Supporting Consent Application for Golden Grove WWTW

K:\C864 Golden Grove\01 Contract Documentation\EAconsent\EAsupportingdocA.doc

CONTENTS

INTRODUCTION

1. Storm Spill Frequency Analysis
2. Feasibility Report, including:
 - Discussion of scheme drivers and probable requirements
 - Description and PFD of existing plant
 - Summary of flows and loads
 - Description and PFD of proposed plant
 - Process Calculation Sheets
3. A location map, showing the site of the W_wTTW.
4. A location map showing location and NGRs of sample and discharge points.

Introduction

The village estate at Golden Grove, comprising approx 25 dwellings discharges by gravity to an existing works.

This has been up-graded to improve the treatment quality. The outfall has been re-located to the Towy at Cilsan Bridge – providing greater dilution of the final effluent than previously.

As part of the modifications it has been necessary to incorporate an intermediate pumping station within the works, if this should fail the existing outfall location will be retained as an emergency outfall.

Flows above SocA are diverted around the plant to also discharge to the existing location via the existing outfall.

Spill frequency has been estimated using time series rainfall data.

Supporting documentation is attached.

GOLDEN GROVE – C864 – SPILL FREQUENCY

1.0 Introduction

- 1.1 Golden Grove WwTW serves the catchment from the village which gravitates to the works.
- 1.2 At the works it is proposed to treat flows equivalent to SocA spilling all greater flows to an emergency outfall situated at the present outfall location.
- 1.3 Treated effluent will be discharged under gravity to the river Towy.
- 1.4 The EA require a prediction of spill frequency for consideration of the consent limits.

2.0 Methodology

- 2.1 Under the Environment Agency guidelines for spill frequency analysis, this site was assessed using the South West Series of the Annual Time Series Rainfall data, this data was made 'catchment specific' using the guidelines published by WRc.
- 2.2 Meica Process Limited commissioned a flow monitoring survey of this site which was undertaken by Titan Environmental Surveys. The resultant report and flow information was used to verify that the model was producing accurate results.

3.0 Population and Flow Assessment

- 3.1 The population within this catchment has been assessed as 60.
- 3.2 The daily water consumption has been assumed to be 180 litres/head/day, with an occupancy rate of 2.5 persons per property for permanent residential properties.
- 3.3 Infiltration has been calculated from base flow measured and is equivalent to 0%.
- 3.4 The maximum flow for treatment in the existing plant is 1.06 l/s (equivalent to SocA) Flows in excess of this will overflow to the storm outfall.

Martyn Robinson
16.05.03

SPILL FREQUENCY ANALYSIS GOLDEN GROVE WwTW
Results of Annual Time Series Rainfall Assessment

30.04.03

Event No	Date	Total intensity (mm)	Rainfall duration (hr)	Average intensity (mm/hr)	Maximum intensity (mm/hr)	peak storm flow $Q = 2.78.C_v C_{ri} A$ (l/s)	Total storm inflow (m ³)	DWF (l/s)	Total foul flow (m ³)	Total inflow (m ³)	Peak sewer flow (l/s)	FFT (l/s) 1.06 (m ³)	Spill to Storm Tank (m ³)	Storm tank volume (m ³)	Overflow to watercourse (m ³)
1	08/10/1964	1287.4	8.15	2.63	34.2	0.9	25.1	0.1	3.7	28.8	1.0	31.1	0.0	0.0	0.0
2	20/07/1973	903.0	5.65	2.66	23.4	0.9	17.6	0.1	2.5	20.2	1.0	21.6	0.0	0.0	0.0
3	25/09/1963	876.4	5.32	2.75	28.8	0.9	17.1	0.1	2.4	19.5	1.0	20.3	0.0	0.0	0.0
4	20/01/1960	864.6	10.32	1.40	16.2	0.5	16.9	0.1	4.6	21.5	0.6	39.4	0.0	0.0	0.0
5	09/12/1961	879.6	9.32	1.57	28.2	0.5	17.2	0.1	4.2	21.4	0.6	35.6	0.0	0.0	0.0
6	20/11/1974	937.2	7.15	2.18	22.8	0.7	18.3	0.1	3.2	21.5	0.8	27.3	0.0	0.0	0.0
7	23/09/1963	969.0	8.15	1.98	34.8	0.6	18.9	0.1	3.7	22.6	0.8	31.1	0.0	0.0	0.0
8	25/07/1973	632.4	1.65	6.39	51.0	2.1	12.3	0.1	0.7	13.1	2.2	6.3	6.8	0.0	6.8
9	23/01/1960	1074.0	8.32	2.15	15.0	0.7	21.0	0.1	3.7	24.7	0.8	31.7	0.0	0.0	0.0
10	11/12/1961	1098.6	14.48	1.26	32.4	0.4	21.4	0.1	6.5	28.0	0.5	55.3	0.0	0.0	0.0
11	10/11/1974	902.4	10.48	1.44	42.6	0.5	17.6	0.1	4.7	22.3	0.6	40.0	0.0	0.0	0.0
12	05/06/1964	875.4	10.15	1.44	36.0	0.5	17.1	0.1	4.6	21.7	0.6	38.7	0.0	0.0	0.0
13	26/08/1956	783.6	13.15	0.99	39.0	0.3	15.3	0.1	5.9	21.2	0.4	50.2	0.0	0.0	0.0
14	10/09/1963	460.2	8.65	0.89	73.2	0.3	9.0	0.1	3.9	12.9	0.4	33.0	0.0	0.0	0.0
15	22/03/1970	747.0	7.32	1.70	49.8	0.6	14.6	0.1	3.3	17.9	0.7	27.9	0.0	0.0	0.0
16	11/02/1973	1232.4	14.82	1.39	36.0	0.5	24.1	0.1	6.7	30.7	0.6	56.6	0.0	0.0	0.0
17	06/06/1964	675.0	10.50	1.07	9.6	0.3	13.2	0.1	4.7	17.9	0.5	40.1	0.0	0.0	0.0
18	08/09/1963	416.8	4.32	1.60	38.4	0.5	8.1	0.1	1.9	10.0	0.6	16.5	0.0	0.0	0.0
19	07/10/1964	481.2	11.32	0.71	45.0	0.2	9.4	0.1	5.1	14.5	0.4	43.2	0.0	0.0	0.0
20	24/09/1963	423.6	4.65	1.52	23.4	0.5	8.3	0.1	2.1	10.4	0.6	17.7	0.0	0.0	0.0
21	13/12/1961	285.6	4.00	1.19	53.4	0.4	5.6	0.1	1.8	7.4	0.5	15.3	0.0	0.0	0.0
22	12/06/1964	567.6	6.32	1.46	19.2	0.5	10.8	0.1	2.8	13.6	0.6	24.1	0.0	0.0	0.0
23	01/12/1961	728.4	13.32	0.91	18.6	0.3	14.2	0.1	6.0	20.2	0.4	50.8	0.0	0.0	0.0
24	06/10/1964	640.8	5.32	2.00	15.0	0.7	12.5	0.1	2.4	14.9	0.8	20.3	0.0	0.0	0.0
25	04/05/1962	798.6	8.93	1.48	8.4	0.5	15.5	0.1	4.0	19.5	0.6	34.1	0.0	0.0	0.0
26	03/09/1963	964.2	15.15	1.06	19.8	0.3	18.8	0.1	6.8	25.6	0.5	57.8	0.0	0.0	0.0
27	30/04/1963	866.4	11.15	1.29	10.8	0.4	16.8	0.1	5.0	21.9	0.5	42.5	0.0	0.0	0.0
28	07/12/1961	771.0	16.32	0.79	10.2	0.3	15.1	0.1	7.3	22.4	0.4	62.3	0.0	0.0	0.0
29	12/12/1961	388.8	5.00	1.30	18.6	0.4	7.6	0.1	2.3	9.8	0.5	19.1	0.0	0.0	0.0
30	11/11/1974	316.8	6.48	0.81	39.0	0.3	6.1	0.1	2.9	9.1	0.4	24.7	0.0	0.0	0.0
31	23/01/1960	602.4	12.33	0.81	10.8	0.3	11.8	0.1	5.5	17.3	0.4	47.1	0.0	0.0	0.0
32	25/08/1956	319.8	3.32	1.59	23.4	0.5	6.2	0.1	1.5	7.7	0.6	12.7	0.0	0.0	0.0
33	15/07/1973	382.2	2.65	2.39	11.4	0.8	7.4	0.1	1.2	8.6	0.9	10.1	0.0	0.0	0.0
34	20/04/1963	387.4	6.00	0.80	18.0	0.3	5.6	0.1	2.7	8.3	0.4	22.9	0.0	0.0	0.0
35	01/08/1956	486.0	5.00	1.62	7.2	0.5	9.5	0.1	2.3	11.7	0.7	19.1	0.0	0.0	0.0
36	30/03/1970	315.6	5.00	1.05	11.4	0.3	6.1	0.1	2.3	8.4	0.5	19.1	0.0	0.0	0.0
37	14/07/1973	769.2	14.65	0.87	16.2	0.3	14.9	0.1	6.6	21.5	0.4	55.9	0.0	0.0	0.0
38	18/07/1973	547.2	6.15	1.48	11.4	0.5	10.7	0.1	2.8	13.4	0.6	23.5	0.0	0.0	0.0
39	03/03/1970	442.8	6.65	1.11	9.0	0.4	8.6	0.1	3.0	11.6	0.5	25.4	0.0	0.0	0.0
40	21/01/1960	382.2	6.15	1.03	9.0	0.3	7.4	0.1	2.8	10.2	0.5	23.5	0.0	0.0	0.0
41	19/03/1970	256.8	3.48	1.22	8.4	0.4	5.0	0.1	1.6	6.5	0.5	13.3	0.0	0.0	0.0

SPILL FREQUENCY ANALYSIS GOLDEN GROVE WwTW
Results of Annual Time Series Rainfall Assessment

30.04.03

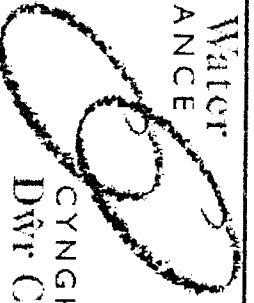
Event No	Date	Total intensity (mm)	Rainfall duration (hr)	Average intensity (mm/hr)	Maximum intensity (mm/hr)	peak storm flow $Q = 2.78.C_v C_{RI} A$ (l/s)	Total storm inflow (m ³)	DWF (l/s)	Total foul flow (m ³)	Total inflow (m ³)	Peak sewer flow (l/s)	FFT (l/s) 1.06 (m ³)	Spill to Storm Tank (m ³)	Storm tank volume (m ³)	Overflow to watercourse (m ³)
42	08/05/1962	220.2	3.15	1.16	8.4	0.4	4.3	0.1	1.4	5.7	0.5	12.0	0.0	0.0	0.0
43	10/05/1962	166.2	0.65	4.15	12.0	1.3	3.2	0.1	0.3	3.5	1.5	2.5	1.0	0.0	1.0
44	19/11/1974	803.4	11.32	1.18	10.8	0.4	15.6	0.1	5.1	20.7	0.5	43.2	0.0	0.0	0.0
45	05/10/1964	467.4	7.32	1.06	25.8	0.3	9.1	0.1	3.3	12.4	0.5	27.9	0.0	0.0	0.0
46	02/01/1960	357.6	8.82	0.70	11.4	0.2	7.2	0.1	4.0	11.2	0.4	33.7	0.0	0.0	0.0
47	05/06/1964	327.0	3.65	1.50	5.4	0.5	6.4	0.1	1.6	8.1	0.6	13.9	0.0	0.0	0.0
48	13/07/1973	328.8	6.00	0.90	17.4	0.3	6.3	0.1	2.7	9.0	0.4	22.9	0.0	0.0	0.0
49	29/08/1956	352.8	6.15	0.95	15.0	0.3	6.8	0.1	2.8	9.6	0.4	23.5	0.0	0.0	0.0
50	10/12/1961	394.2	5.50	1.19	10.8	0.4	7.7	0.1	2.5	10.2	0.5	21.0	0.0	0.0	0.0
51	01/01/1960	250.2	11.32	0.37	8.4	0.1	4.9	0.1	5.1	10.0	0.2	43.2	0.0	0.0	0.0
52	11/03/1970	211.8	3.48	1.01	10.2	0.3	4.1	0.1	1.6	5.7	0.5	13.3	0.0	0.0	0.0
53	04/12/1961	180.0	2.15	1.40	9.6	0.5	3.5	0.1	1.0	4.5	0.6	8.2	0.0	0.0	0.0
54	09/10/1964	305.4	7.48	0.68	13.2	0.2	6.0	0.1	3.4	9.3	0.3	28.5	0.0	0.0	0.0
55	02/11/1974	201.6	2.15	1.56	11.4	0.5	3.9	0.1	1.0	4.9	0.6	8.2	0.0	0.0	0.0
56	03/12/1961	288.6	11.82	0.41	9.6	0.1	5.6	0.1	5.3	11.0	0.3	45.1	0.0	0.0	0.0
57	11/11/1974	285.0	6.65	0.71	18.6	0.2	5.6	0.1	3.0	8.6	0.4	25.4	0.0	0.0	0.0
58	19/07/1973	252.0	3.32	1.27	8.4	0.4	4.9	0.1	1.5	6.4	0.5	12.7	0.0	0.0	0.0
59	10/03/1970	157.8	2.15	1.22	9.0	0.4	3.1	0.1	1.0	4.0	0.5	8.2	0.0	0.0	0.0
60	30/03/1970	171.0	1.98	1.44	11.4	0.5	3.3	0.1	0.9	4.2	0.6	7.6	0.0	0.0	0.0

Summary	
number of spills from works	2
number of spills (>50m ³) from works	0

Notes

1. Rainfall events are the Annual Time Series Rainfall for the South-West region.
2. Due to the low number of spills, only the first 60 storms have been assessed.
3. Peak storm flow has been calculated using the Wallingford Procedure, Modified Rational Method, with total impermeable area of 0.1125Ha (45 m²/house)
4. Total storm inflow = peak storm flow x storm duration
5. DWF = dry weather flow from calculations = 0.125 l/s at the WwTW location
6. Total foul flow = DWF x storm duration
7. Total inflow = total storm inflow + total foul flow
8. FFT = flow to treatment, maximum rate of 1.06 l/s x storm duration
9. When Inflow > FFT spill to to watercourse will occur

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	Golden Grove WwTW
Project Number	C 864
Client	DWR CYMRU/WELSH WATER
Document Reference Number	C864/6.1/01/001

Golden Grove WwTW Feasibility Report

Rev.	Date	Description/Purpose	Prepared	Checked ¹				Approved for Issue ²	
				Mech	Proc	Elect	EM	PM	
0	02.04.03	First issue for costing	SR/MR	SR	MR		AJW	SW	
A	30.05.03	Minor amendments	AJW	SR	AJW	BB	AJW	SW	
B	11.06.03	EA consent review	JO	SR	AJW	BB	AJW	SW	
C									
D									

Contents

Report

Acceptance Sheet

PFD – Existing drg C864/1000

PFD – Proposed drg C864/1001

Process Calculations Sheet C864/100/01

Notes

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

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- Process Calculations Sheet C864/100/01	
- Existing Process Flow Diagram (PFD) C864/1000	
- Proposed Process Flow Diagram (PFD) C864/1001	

1. INTRODUCTION.

Golden Grove WwTW treats sewage from the small catchment of Golden Grove. The (STAM) population equivalent is recorded on the database as 60.

The works has the following current discharge consent conditions:

BOD	70 mg/l
TSS	80 mg/l

The works has a river quality driver QO(b) under Amp3 and an indicative discharge consent of:

BOD	20 mg/l
TSS	30 mg/l
Ammonia	5 mg/l

The Amp3 spreadsheet also suggests that an outfall relocation might be considered. Recent correspondence from the EA (letter 04.06.03) states that if the outfall was relocated to the Towy at Cilsan Bridge the following consent would apply:

BOD	40 mg/l
TSS	60 mg/l
Ammonia	20 mg/l

This Report is the output of feasibility and outline design work carried out to identify the optimum solution for the Golden Grove works.

2. EXISTING PLANT.

The existing Process Flow Diagram (PFD) is generally as shown on the attached drawing; C864/1000.

All the flows entering the Golden Grove WWTW are via gravity sewers.

The works comprises: a macerator, primary tank, biological filter, humus tank and a sample chamber. A recirculation pump returns flow from the humus tank to the inlet of the biofilter. The primary tank and the humus tank are desludged manually to a pump sump from where the sludge is pumped to an above ground sludge tank, decant of supernatant liquors is a manual operation.

The site is provided with a single phase power supply.

The treatment works comfortably complies with the current discharge consent limits.

Site access to this site is limited, as it involves walking through a farmer's field.

3. FLOWS AND LOADS.

A flow survey has been carried out (11.02.03 to 11.03.03) to establish flows arriving at the works.

From the results it is evident that there was no infiltration during the survey period, which was essentially a dry period. It is not expected that infiltration will be excessive even in wet weather due to the compact nature of the catchment.

Correlation between rainfall and inflows suggests that there are rainwater connections, probably roof water.

Peak hourly average flow during the period was recorded as 1.8 l/s this occurred during a rainfall event of 4.4 mm/h.

The flow and load survey identified the following wastewater inflow characteristics;

	Units	Value
Population	Flow	60
Dry Weather Flow (DWF)	m ³ /day	10.8
Average Flow	m ³ /day	13.5
	l/sec	0.2
Peak Flow (SOC A)	m ³ /day	92
3 DWF	m ³ /day	32
BOD Load	kg/day	3.8
SS Load	kg/day	4
NH ₃ -N Load	kg/day	0.5

The above summary is based on the process calculations included in the Appendix to this report.

5.0 PROCESS OPTIONS.

Analysis of the final effluent samples indicates that the works could achieve the indicative consent but not consistently, which is illustrated in the works final effluent sample analytical results on record .

The treatment works would require a nitrifying filter to ensure compliance with the indicative ammonia consent for the current discharge location.

As there are no existing storm provisions, it is proposed that any future amendment to process design should be based upon treating SOC A, 1.0 l/s. which will necessitate the provision of a new humus tank.

Process options which have been considered include the following

5.1 Pump Away.

Consideration has been given to abandonment of the works and pumping all wastewater to Ffairach WWTW , a distance of 3200 m. A NPV assessment has been carried out on the projected capital and operating costs vs the costs associated with maintaining the operating works at Golden Grove ; the assessment confirmed that this solution is not cost effective.

5.2 Relocation of Outfall.

It has been confirmed (EA, 04.06.03) that relocation of the outfall position to a watercourse with greater dilution capability than at the present location, will allow for a relaxation in the applied discharge consent limits from those indicated.

In order to limit risk associated with this option, it is proposed to relocate the outfall from the works directly to the River Towy, where significant dilution is guaranteed , which will require the provision of a new gravity discharge sewer over a distance n.e. 1200m.

The scope of works required to effect this solution includes the following;

- The inlet macerator will be replaced with a new unit.
- A flow splitting arrangement to control FFT to SOC A.
- Copa Sack to provide screening of storm flows.
- Repair of the existing sludge pump.
- Refurbishment of the existing electrical installation.
- The provision of a new duty/standby variable speed submersible pump set to lift filter effluent into the humus tank.
- The provision of a new humus tank sized to accommodate flows up to 1 l/sec (SOC A)
- The provision of a relocated 80mm nb offsite sewer for treated effluent discharge directly to the River Towy.

Note that the existing primary tank is limited in capacity so the current practice of de-sludging humus sludge directly to the sludge storage tank should be continued.

6. DESIGN BASIS.

See attached Process Calculations Sheet C865/6.1/100/01 together with Proposed Process Flow Diagram (PFD) C864/1001.

7. RECOMMENDATIONS

In order to accommodate the requirements of the AMP 3 UWWTD driven quality scheme for Golden Grove , it is recommended that consideration be given to the identified preferred solution which is described in para. 5.2, Relocation of Outfall, which includes enhancement of existing treatment facilities.

Feasibility Report Acceptance Sheet

We confirm that we have discussed the content of the Golden Grove WWTW Feasibility Report and that we are in agreement with the conclusions and recommendations which can be progressed to outline design and costing for approval.

Aled Daniel, Manager United Utilities

..... Date

Stuart Worts, Meica Process Project Manager

..... Date

APPENDIX

Process Calculations Sheet C864/100/01

Existing Process Flow Diagram (PFD) C864/1000

Proposed Process Flow Diagram (PFD) C864/1001

Prepared by mr
Checked by ajw
Rev A

Current consent BOD:SS:Amn-N 70:80
Proposed consent 20/30/5

residential area

outfall relocation may relax consent standard?

PARAMETER	UNITS
design flow horizon	date
Residents (P)	2011
Per capita BOD contribution	pop.
per capita TSS contribution	kg/h.d
per capita Amn-N contribution	kg/h.d
per capita domestic flow(G)	kg/h.d
Domestic flow(PG)	l/h.d
	m3/d

60
0.06
0.06
0.008
180
11

FLOWS

Infiltration(I)	0	m3/d
Industrial flow (E)		m3/d
Dry weather flow (PG + I + E)		m3/d
Average Flow		m3/d

0.0
0.0
10.8
13.5

consented 17 m3/d

Full Flow to Treatment(3DWF)

Formula A=DWF+1.36P+2E

l/s
m3/d

0.2
32

consented 45 m3/d

Storm capacity FormA-FFT for 2hrs

Storm capacity @ 68 l/h

AMP2 guidelines A 2hrs at 3DWF

actual storm tank capacity

LOADS

BOD Load		kg/d
BOD Concentration at Average Flow		mg/l
Total TSS load		kg/d
TSS concentration at Average Flow		mg/l
Total Amn-N Load		kg/d
Amn-N concentration at Average Flow		mg/l

3.8
280
4
280
0.5
37.3

includes 5% liquor returns
includes 5% liquor returns
includes 5% liquor returns

Primary Treatment	% removal
Settled BOD load	20
Settled BOD Concentration	
Settled TSS load	40
Settled TSS concentration	
Settled Amn-N load	0
Settled Amn-N concentration	
primary sludge mass removed	

kg/d
mg/l
kg/d
mg/l
kg/d
mg/l
kg/d

3.0
224
2.3
168
0.5
37.3
2

low removal due to primitive primary tank

Primary tank sizing rectangular 2m x 1m
Volume required for 2hrs retention at 3DWF
actual area
upflow rate at Soc A

m3
m2
m/h

2.7
2.0
1.9

7.46 minimum volume to BSG297
to low should be 4.6 m2 minimum
too high should be <0.9 m/h

% removal

Biological treatment	
Number of filters	
Diameter	
Depth of media	
Type of media	
Volume of media	
secondary BOD load	
secondary TSS load	
secondary Amn-N load	
BOD loading	
hydraulic loading at SocA	
min hydraulic loading	
minimum recirc rate	
Amn-N loading	

m
m
m3
kg/d
kg/d
kg/d
kg/m3.d
m3/m2/d
m3/m3/d
l/s
kg/m3.d

1.0
6.0
39.6
3.0
2.3
0.50
0.076
2.33
0.75
0.34
0.013

too shallow for Amn?
rock

Final Settlement

Number of tanks	existing	proposed
Size of tank 2.6m x 0.9m	1	1.00
Surface area	m	2.50 dia
Sidewall	m ²	4.42
Volume	m	1.50
retention at Soc A	m ³	6.63
upflow at Soc A	hrs	1.72
	m/h	0.87
biological sludge mass	kgSS/kgBOD	
Sludge mass	kg/d	0.5
		3.8

DRAWING No.
C864/1001

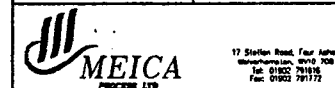
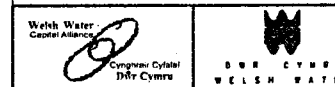
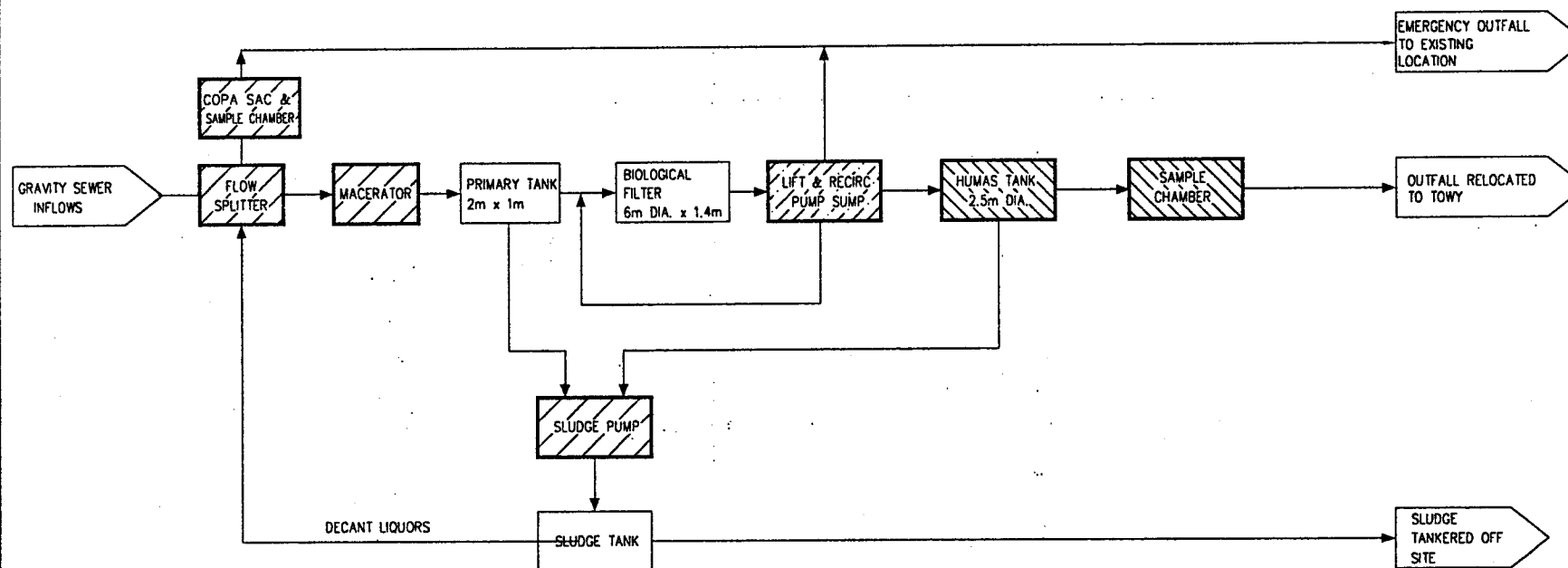
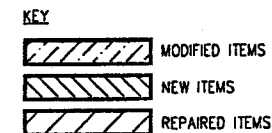
ORIGINAL SHEET SIZE A1 - DO NOT SCALE

SEE PREVIOUS ISSUES FOR PAST REVISION DETAILS			
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C	THIRD ISSUE	DESIGNED BY A.C.H.	DESIGNED BY A.C.H.
		CHECKED BY D.B.	CHECKED BY D.B.
		APPROVED BY M.R.	APPROVED BY M.R.

GENERAL NOTES

NOTES

PROPOSED - GOLDEN GROVE W.w.T.W. PROCESS FLOW DIAGRAM



17 Station Road, Four Ashes
Warrington, Warrington, Warrington, Warrington
Tel: 01925 791111
Fax: 01925 791172

CUSTOMER
DWR CYMRU WELSH WATER

PROJECT NAME
GOLDEN GROVE W.w.T.W.

FILE
PROPOSED PROCESS FLOW
DIAGRAM (PFD)

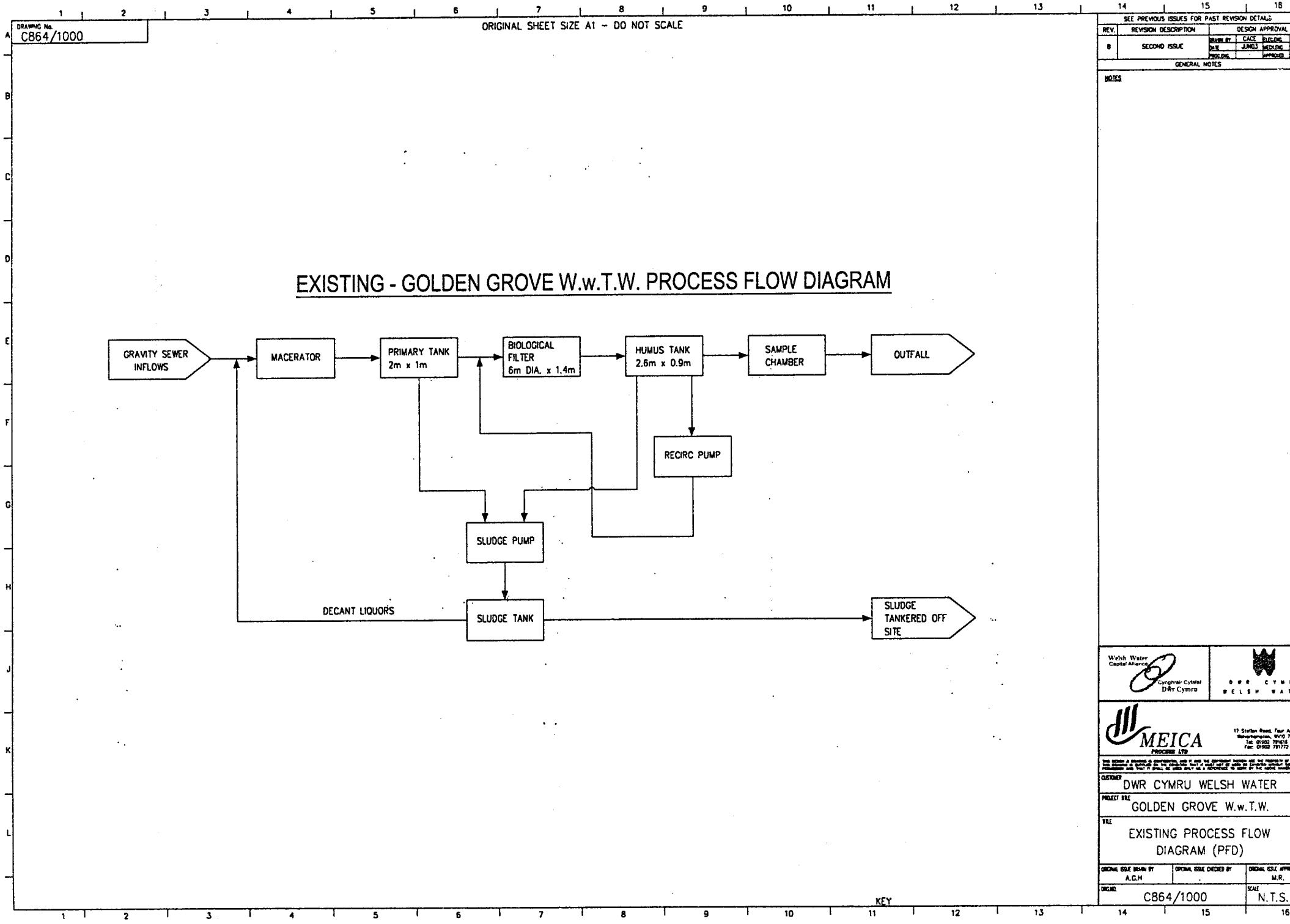
ORIGINAL ISSUE DRAWN BY
A.C.H.

ORIGINAL ISSUE CHECKED BY
M.R.

ORIGINAL ISSUE APPROVED BY
M.R.

SCALE
N.T.S.

DRAWING No.
C864/1001



CUSTOMER
DWR CYMRU WELSH WATER

PROJECT FILE
GOLDEN GROVE W.W.T.W.

FILE
EXISTING PROCESS FLOW
DIAGRAM (PFD)

ORIGINAL ISSUE DRAWN BY
A.C.H.

ORIGINAL ISSUE CHECKED BY
M.R.

ORIGINAL ISSUE APPROVED BY
C864/1000

SCALE
N.T.S.



SECTION - 'A'-'A' (1:12.5)

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