

R



ASiantaeth Yr
AMGYLCHEDD CYMRU
ENVIRONMENT
AGENCY WALES

Eich cyf/Your ref.

Ein cyf/Our ref. ACSC/CUST/SE/MC/AW1002101

Dyddiad/Date: 01 May 2003

Environment Quality Scientist
Dŵr Cymru
Pentywn Road
Nelson
Treharris
Mid Glamorgan
CF46 6LY

FILE COPY

Dear Dr Lewis Keil

RE: WATER RESOURCES ACT 1991, SCHEDULE 10 (AS AMENDED BY THE ENVIRONMENT ACT 1995) APPLICATION FOR VARIATION OF CONSENT TO DISCHARGE NO. AW1002101

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 to discharge sewage effluent from Glasbury Sewage Treatment Works at Glasbury, Near Hay-on-Wye.

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. 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 Secretary of State for the Environment at The Planning Inspectorate, Room 10/13, Tollgate House, Houlton Street, Bristol BS1 9DJ.

Asiantaeth yr Amgylchedd Cymru
Plas Yr Afon, Parc Busnes Llancirwg, Llancirwg, Caerdydd, CF3 0EY
Ffon: 029 20770088 Ffacs: 029 20798555
www.environment-agency.gov.uk

Environment Agency Wales
Rivers House, St Mellons Business Park, St Mellons, Cardiff, CF3 0EY
Tel: 029 20770088 Fax: 029 20798555
www.environment-agency.gov.uk



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 **Dane Broomfield**, Team Leader Environment Protection, Environment Agency Wales.

Yours sincerely



David Charrett
Customer Contact Team Leader

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CONSENT NO.	AW1002101
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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 (UWWTR) 1994.

With respect to Consent No. AW1002101 issued on the 18th November 1988.

FROM: Glasbury Sewage Treatment Works.

AT: Glasbury, Near Hay-on-Wye

TO: The River Wye.

HEREAFTER SUBJECT TO the conditions set out in the following schedule:

Secondary Treated Sewage Effluent:	Schedule No. AW100210101
UWWT Regulations 1994:	Schedule No. AW1002101/U

Subject to the provisions of Paragraphs 7 and 8 of Schedule 10 of the Water Resources Act 1991, no notice shall be served by the Agency, which alters the effect of 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 consent is issued and takes effect on the 30th day of April 2003

Signed 
Team Leader - Wye Environment Management



CONSENT NO.	AW1002101
SCHEDULE NO.	AW100210101
DATE ISSUED	



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CONDITIONS OF CONSENT TO DISCHARGE

Secondary Treated Sewage Effluent ("the Discharge")

FROM: Glasbury Sewage Treatment Works.

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 200mm diameter pipe;
 - (b) discharging to the River Wye;
 - (c) at National Grid Reference SO 18003 39916;
 - (d) shown marked 'Consent Point' on Plan AW1002101 attached as Annex 1.

SAMPLE POINT

3. An appropriately labelled sample point shall be provided and maintained at National Grid Reference SO 17911 39553, as shown marked 'Sample Point' on Plan AW1002101, so that a representative 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 950 cubic metres per day.
5. The rate of discharge shall not exceed 11 litres per second.
6. The Dry Weather Flow of the Discharge shall not exceed 475 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.



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7. A continuous flow recorder, to a specification provided by the Agency, with on-site visual display from which readings can be readily obtained, shall be provided and operated to record the daily volume and instantaneous flow of the discharge.
8. As soon as practicable after completion of the flow recorder installation the Consent Holder shall employ an independent expert to certify that the installation complies with the Agency's specification. The Consent Holder shall satisfy himself as to the professional competence of the expert. A copy of the certifier's report shall be provided to the Agency when it is available.
9. Records of the flow readings shall be maintained by the Consent Holder and shall be provided to the Agency when requested, in a format specified by the Agency.
10. The Consent Holder shall produce and maintain a quality control manual, to the satisfaction of the Agency, specifying procedures for the calibration, operation and maintenance of the flow recorder. The flow recorder shall be calibrated, operated and maintained by the Consent Holder in accordance with the provisions of the manual. The Consent Holder shall keep a record of these procedures available for inspection by the Agency and provide a copy to the Agency on request.
11. The Consent Holder shall record all failures of the continuous flow recorder and any other breaks in the flow record. The reasons for these failures and breaks shall be recorded and all steps taken to prevent a re-occurrence. The Consent Holder shall ensure that as far as possible the recorder remains fully operational at all times. Any failures shall be remedied as soon as possible.
12. Flows of the discharge shall be measured at an inlet flume, or such other point as agreed by the Agency.

COMPOSITION

13. (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) 25 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 2 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.



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14. The Discharge shall not contain more than:
- (a) 80 milligrammes per litre of biochemical oxygen demand (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);
 - (b) 54 milligrammes per litre of ammoniacal nitrogen (expressed as N).

WORKS OPERATION

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

This condition does not require -

- (a) any higher standard to be achieved in relation to any characteristic of the Discharge which is specifically regulated by conditions 13 to 14 than is required by those conditions;
- (b) any alteration of the works or a change in the type of treatment used.

MAINTENANCE

16. 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 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.



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UNUSUAL WEATHER CONDITIONS

17. (a) No sample of the Discharge, taken at a time when unusual weather conditions are adversely affecting the operation of the sewage treatment works, shall be taken into account in deciding whether or not the conditions contained in paragraphs 13, 14 and 15 of this consent have been complied with.
- (b) For the purpose of this condition "unusual weather conditions" shall include:
- (i) low ambient temperatures as evidenced by effluent temperatures of 5°C or less, or by the freezing of mechanical equipment in the works;
 - (ii) significant snow deposits;
 - (iii) tidal or fluvial flooding;
 - (iv) weather conditions causing unforeseen loss of power supply to the sewage treatment which could not be ameliorated by the reasonable provision and operation of standby generation facilities.
- (c) On any occasion where unusual weather conditions adversely affect the operation of the sewage treatment works, the consent holder shall use its best endeavours to mitigate that adverse effect.
- (d) For a sample of the Discharge to be considered for the purposes of (a) above, the consent holder shall notify the Agency by telefax or telephone as soon as unusual weather conditions are known to have adversely affected operations and shall confirm the circumstances in writing as soon as possible thereafter (and in any event within 14 days of the occurrence of such conditions). That notification shall include a full description of the unusual weather conditions and their impact on the operation of the works.

RECORDING AND REPORTING

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



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SUBSTANTIAL CHANGE

19. A Discharge shall not be made from the works if it would cause a significant increase in the polluting effects of the Discharge on controlled waters as a result of a new or altered discharge of trade effluent into the works.
20. 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.
21. A discharge of trade effluent into the works is altered if -
- (a) it is made by the sewerage undertaker and its composition or quantity changes significantly on or after the date of effect of this consent; or
 - (b) it is made by a third party and the alteration of the discharge is authorised on or after that date.
22. An increase in the polluting effects of the Discharge on controlled waters is not significant for the purposes of this condition if it relates to any characteristic of the Discharge which is specifically regulated by conditions 13 to 14 of this consent but it may be significant if it is caused by a change in some other characteristic of the Discharge.
23. 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 or Part IV of the Water Industry Act 1991 or which is only accepted as a result of a contract with the sewerage undertaker.



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UNAUTHORISED DISCHARGES

24. 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.



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SCHEDULE NO.	AW1002101/U
DATE ISSUED	



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CONDITIONS OF CONSENT TO DISCHARGE

Appropriately Treated Sewage Effluent ("the Discharge")

FROM: Glasbury Sewage Treatment Works.

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 condition U1, 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 2000 discharging to freshwater, in a Sensitive Area as identified under Part I(a) of Schedule 1.
- (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 satisfy the requirements of Regulation 5(8)(a).



ANNEX 2

TABLE



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Agency Wales

Column 1

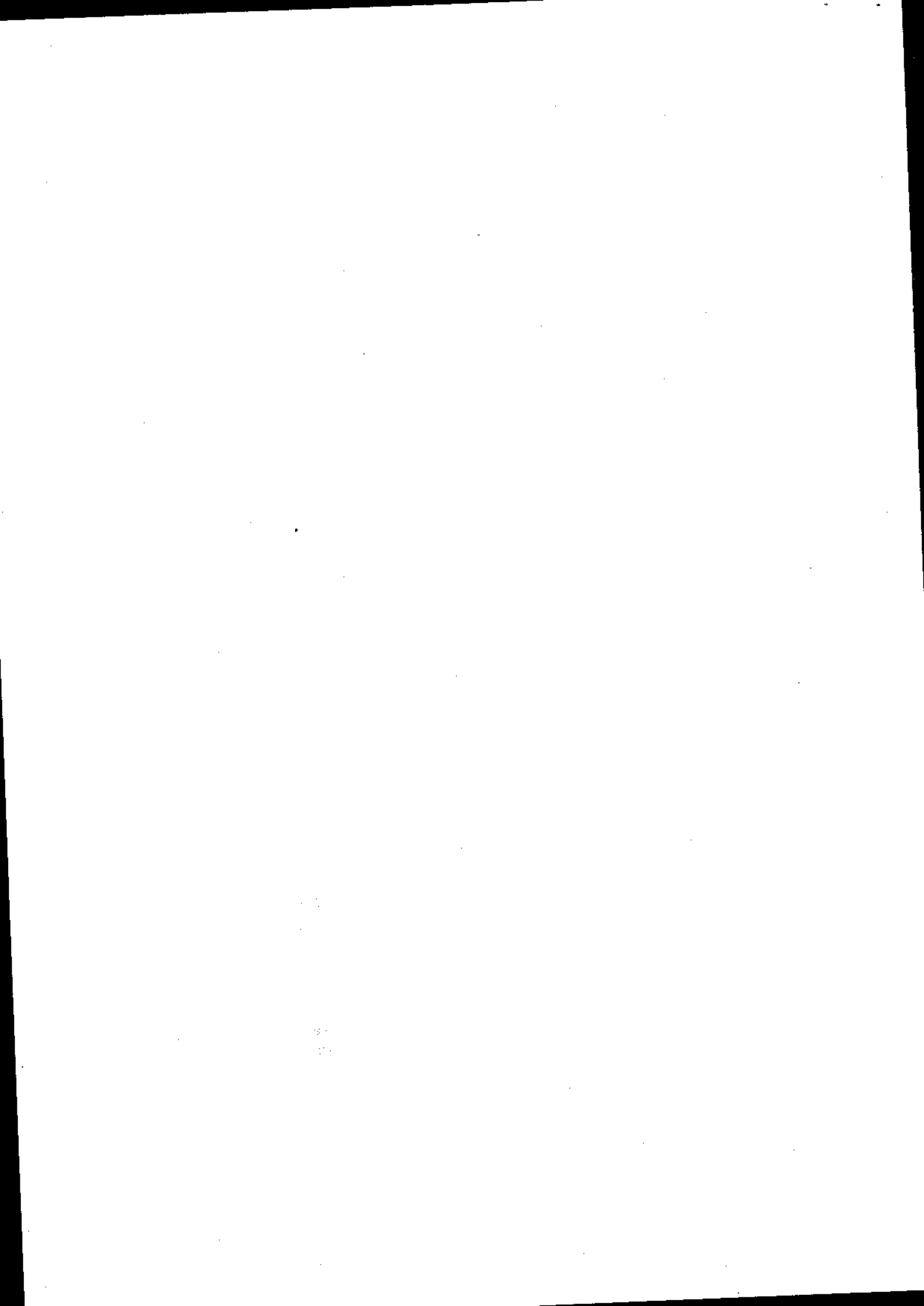
Column 2

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

PLAN NUMBER:

AM/002/01

AUTHORIZED

SIGNATURE

[Handwritten Signature]

CONSENT POINT

D	90m EXTENSION OF OUTFALL	PE	MXU	SAC	21.08.02
C	COORDINATE NUMBERS ENLARGED	RAF	P/W	SMS	02.07.02
B	ISSUED FOR CONSTRUCTION	RAF	P/W	SMS	18.06.02
A	FIRST ISSUE	RAF	P/W	SMS	11.06.02
	ISSUE REASON FOR ISSUE	ORANI	CHECKED	APPROVED	DATE

DOCUMENT WORKING STATUS

FOR ENQUIRY FOR REVIEW FOR CONSTRUCTION

FOR INFORMATION FOR ACCEPTANCE AS BUILT

PATERSON CANDY

A Sheel and Switch Company
 PATERSON CANDY LIMITED
 c/o DWR CYMRU WELSH WATER, PENYFFWR ROAD, NELSON, TRENTHAM, CF48 8LY
 Telephone: 01443 432818 Fax: 01443 482205

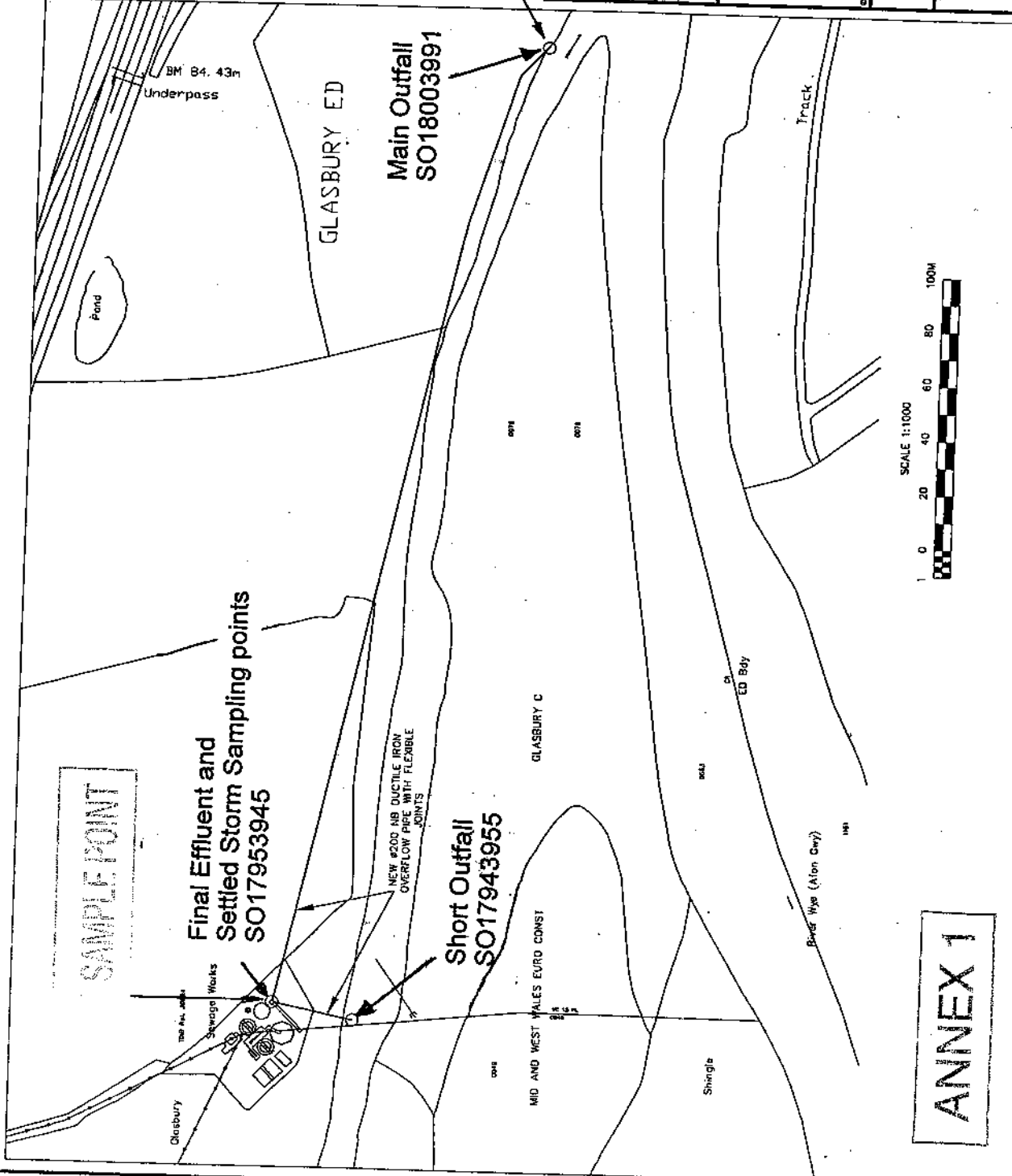
© PATERSON CANDY LIMITED. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF PATERSON CANDY LIMITED AND IS TO BE USED ONLY FOR THE PROJECT SPECIFIED HEREIN.

CLIENT: DWR CYMRU WELSH WATER - GLASBURY S.T.W.

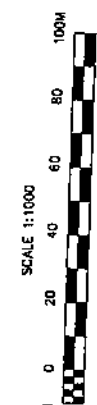
TITLE: SITE PLAN

SCALE 1:1000	MASTER SIZE	DRAWING NUMBER	ISSUE
	A2	1240-00-3100	D

REGISTRATION No.



ANNEX 1





FINAL EFFLUENT
LONG OUTFALL



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AGENCY

WATER RESOURCES ACT 1991 (schedule 10)

(as amended by the Environment Act 1995)

Application for ~~new consent~~/variation to an existing consent* to discharge
(* delete as appropriate)

APPLICATION FOR THE MAIN WORKS EFFLUENT CONSENT

Regional/Area Address: The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT	<i>Official Use Only</i> Dist/Area Ref: 1303 Application No. AW1002101 Date Received: 13/02/03 Fee Received:
--	--

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.

Glasbury Sewage treatment works
Behind Hampton Cottage
Glasbury
Powys

Post Code:

HR3 5NL

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 950 m³/day
 Briefly state how this figure was calculated (see note ii).

Calculated from two pumps operating simultaneously, this represents the highest dry weather flow condition. The FFT based on population is 640 m³/d, thus the plant is designed to treat greater than FFT. The basis for the population count and subsequent flow and load design figures are included in the attached calculation 1240-00-1001 Revision B.

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
- 3. Culvert
- 6. Soakaway
- 9. Other (*please specify below*)

200 mm internal diameter. Two discharge pipes will be used. **This application is for the main outfall.** The second, short outfall will be used when the river has surcharged the main outfall by more than 950 mm. Under these conditions the river will be in spate and the short outfall will discharge to a flooded channel.

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

Main Outfall											
S	O	1	8	0	0	0	3	9	9	0	9
Short Outfall											
S	O	1	7	9	4	3	3	9	5	5	1

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	O	1	7	9	1	1	3	9	5	5	4
---	---	---	---	---	---	---	---	---	---	---	---

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

The flow to full treatment will be measured in an flume type flow meter.

- 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

The treatment stream will comprise: Screening of all flows followed by, storm separation, primary settlement, secondary treatment in trickling filters, final settlement, and discharge to outfall. The storm water will be retained in a storm tank with sufficient capacity to hold 2 hrs of flow at FFT, before discharge to the same outfall as the final effluent from the humus tanks. Under conditions of high river flow, the storm water will be discharged via a second outfall. This discharges to the river closer to the works.

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

N

- 2.6 a) On what date do you anticipate the discharge will commence?

31/03/03

- 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.

Continuous

- 2.7 a) Are there any existing consents for discharges from the premises (see note vi)?

Y

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

AW1002101 Final effluent long outfall

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

N

3 SITE DETAILS

- 3.1 Please give the name of the relevant Planning Authority.

Powys County Council

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

- | | | | |
|---|--------------------------|----------------------------|-------------------------------------|
| 1. Single Dwelling | <input type="checkbox"/> | 6. Fish Farm | <input type="checkbox"/> |
| 2. Multiple Dwellings | <input type="checkbox"/> | 7. Mineral Workings | <input type="checkbox"/> |
| 3. Industrial Premises | <input type="checkbox"/> | 8. Water Services plc STW | <input checked="" type="checkbox"/> |
| 4. Vehicle Parking Area | <input type="checkbox"/> | 9. Water Supply | <input type="checkbox"/> |
| 5. Commercial Premises (please specify) | <input type="checkbox"/> | 10. Other (please specify) | <input type="checkbox"/> |

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

- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Well | <input type="checkbox"/> | 5. River (please give name below) | <input type="checkbox"/> |
| 2. Borehole | <input type="checkbox"/> | 6. Estuary (please give name below) | <input type="checkbox"/> |
| 3. Precipitation (eg rain or snow) | <input type="checkbox"/> | 7. Coastal Water (please give name below) | <input type="checkbox"/> |
| 4. Mains (please state water supply company) | <input type="checkbox"/> | <input type="text"/> | |

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) | <input type="checkbox"/> | 5. Into Land | <input type="checkbox"/> |
| 2. River or Stream (non-tidal) | <input checked="" type="checkbox"/> | 6. Onto Land | <input type="checkbox"/> |
| 3. Canal | <input type="checkbox"/> | 7. Directly into Groundwater | <input type="checkbox"/> |
| 4. Lake, Lock or Pond | <input type="checkbox"/> | 8. Coastal Water (see note vii) | <input type="checkbox"/> |

State name of receiving water if known:

River Wye

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

- (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)? N/A 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.

Lewis Keil
Dwr Cymru Welsh Water
Pentwyn Road
Nelson
Treharris
Caerphilly
Post Code: CF46 6YA

Daytime Telephone Number: 01792511828

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>Lewis Keil</i>	PRINT NAME:	LEWIS KEIL
ON BEHALF OF:	DWR CYMRU CYF	DATED:	6/02/03

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



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.

Glasbury Waste Water Treatment Works

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

1 N° 6 mm Screen, auto racked, with screenings washing and handling.
1 N° Primary settlement tank
1 N° Trickling filter with plastic media
1 N° Humus tank.
1 N° Storm tank.
1 N° Sludge holding 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.

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

b) Will automatic sampling equipment be provided?
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.

890

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

Some variation will occur due to summer day visitors, this is unlikely to have a great effect on the works population.

- 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) Y/N
If yes, please give details.

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

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

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

- a) *For significant sewage treatment plants full details of the plant design, dry weather flow and Biochemical Oxygen Demand load, along with information on all discharges from the works must be included in order for the application to be processed. Flow monitoring will normally be required for such discharges and details of siting and type of flow recorders should be provided.*
- b) *The Agency require a single body or company to be responsible for the discharge and any bills raised under the Charges for Discharges Scheme. Where multiple dwellings under different ownership are connected to the same system a management company should be set up.*



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.

2. Is this application being made to reinstate a lapsed Consent?
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):

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

5. Is there any trade effluent component in the proposed discharge?
If yes, please confirm here that you have completed and enclosed Annexe 3:

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

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

For proposed discharges of sewer in storm or emergency conditions: N/A

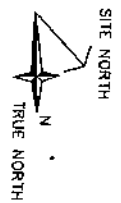
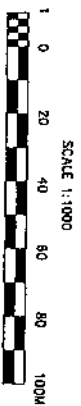
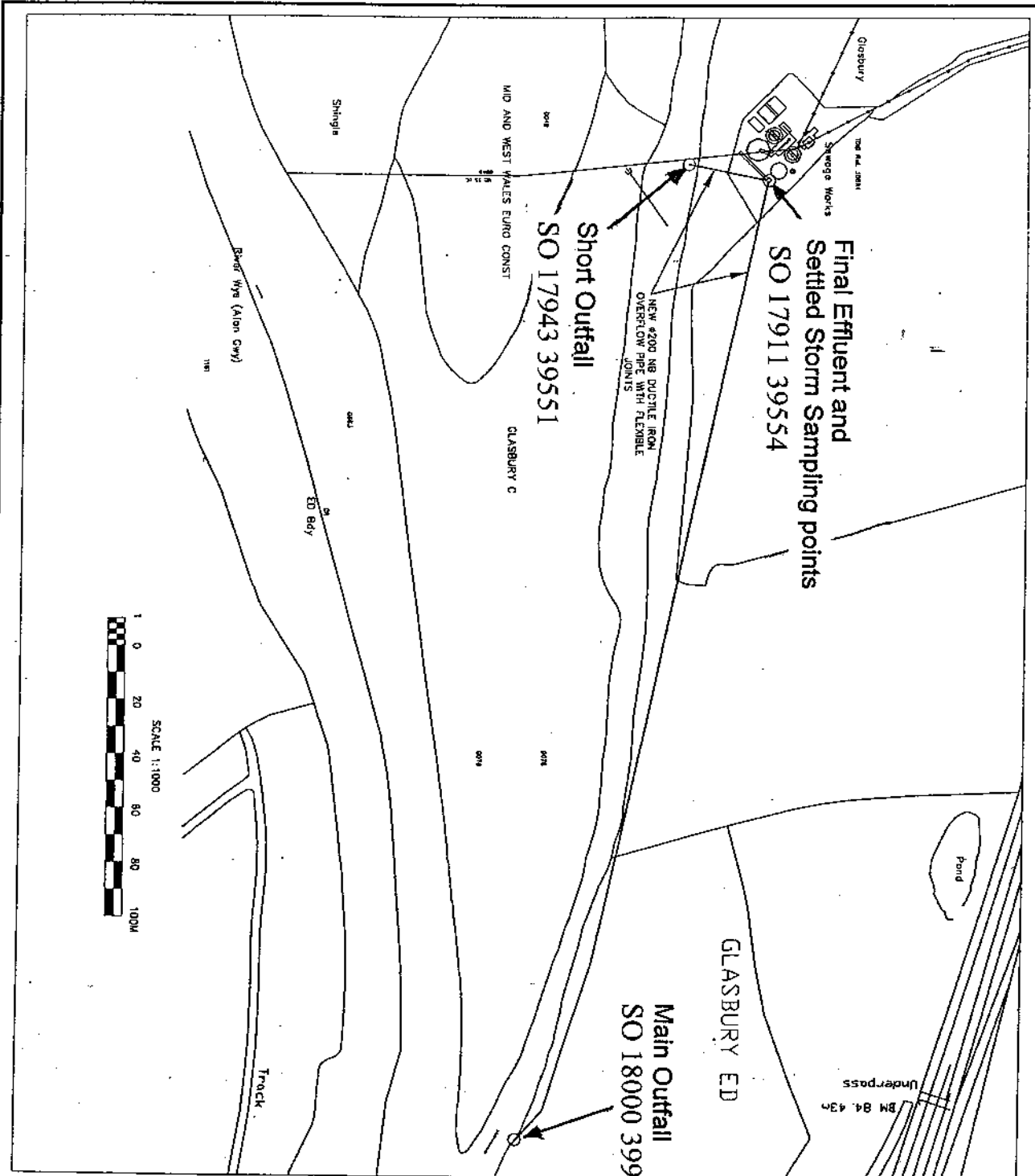
7. Please confirm here that you have completed and enclosed both Annexes 1 and 2: Tick

8. Please state:

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

IMPORTANT NOTES FOR ALL CONSENT APPLICATIONS:

1. **Whoever signs the declaration on the main application form takes responsibility for the discharge, and will become the registered consent holder, if consent is given. In the case of a 'body corporate' (eg a public limited company ('plc'), limited, company, local authority), the 'body corporate' will be the registered consent holder, and the person with the delegated authority to sign on behalf of the 'body corporate' should give their job title.**
2. **Agents making an application on behalf of a client, must attach their clients written authority.**
3. **If the name and/or address of the applicant changes after submission of this application to the Environment Agency, the applicant must inform the Agency in writing.**



ISSUE	REASON FOR ISSUE	DATE	DRAWN	CHECKED	APPROVED	DATE
D	90m EXTENSION OF OUTFALL	21.08.02	RE	YKU	SAC	21.08.02
C	COORDINATE NUMBERS ENLARGED	02.07.02	RAF	RAW	SMS	02.07.02
B	ISSUED FOR CONSTRUCTION	18.06.02	RAF	RAW	SMS	18.06.02
A	FIRST ISSUE	11.06.02	RAF	RAW	SMS	11.06.02

DOCUMENT WORKING STATUS

FOR ENQUIRY FOR REVIEW FOR CONSTRUCTION
 FOR INFORMATION FOR ACCEPTANCE AS BUILT



PATERSON CANDY

A Subsidiary of Veolia Company
 PATERSON CANDY LIMITED
 c/o DWR CYMRU WELSH WATER, PENRYN RD, NICKSON, TRENKHAM, CF84 6LY
 Telephone: 01443 482818 Fax: 01443 482805
 e-mail: paterson.candy@veolia.com
 Registered Office: 100, Victoria Road, Cardiff, CF10 1TD, Wales, UK. Registered in Wales. No. 2782877

CLIENT: DWR CYMRU WELSH WATER - GLASBURY S.T.W.

TITLE: SHE PLAN

SCALE	MASTER SHEET	DRAWING NUMBER	ISSUE
1:1000	A2	1240-00-3100	D

AUTOCAD REF:





DŴR CYMRU
WELSH WATER

Gwaith Trin Dŵr Gwastraff Tregŵr
Heol Victoria
Tre Gŵyr
Abertawe SA4 3AB

Ffacs: +44 (0)1792 872 604
Safle gwe: www.dwrcymru.com

Gowerton Waste Water Treatment Works
Victoria Road
Gowerton
Swansea SA4 3AB

Fax: +44 (0)1792 872 604
Web site: www.dwrcymru.com

C J Hall
Environment Agency Wales
Cambrian House
29 Newport Rd
Cardiff
CF24 0TP

10th February 2003

Tel 01792 511828

Dear Chris,

Glasbury STW

Please find enclosed revised consent applications for Glasbury STW which split the final effluent and settled storm into long and short outfall discharges.

In the light of our recent correspondence over these applications, I agree to an extension to the determination period until the 30th April and also to your amending the consents within the normal 4 year hands off period.

Yours sincerely,

Dr Lewis Keil
Wastewater Scientist





DŴR CYMRU
WELSH WATER

Gwaith Trin Dŵr Gwastraff Tregŵr
Heol Victoria
Tre Gŵyr
Abertawe SA4 3AB

Gowerton Waste Water Treatment Works
Victoria Road
Gowerton
Swansea SA4 3AB

Ffacs: +44 (0)1792 872 604
Safle gwe: www.dwrcymru.com

Fax: +44 (0)1792 872 604
Web site: www.dwrcymru.com

Dave Charrett
Customer Contact Dept
Environment Agency Wales
Abacus House,
St Mellons
Cardiff
CF3 0LT

30th September 2002

Tel 01792 511828

Dear Dave,

Glasbury STW

Please find enclosed applications for variation of the existing final effluent consent (AW1002101) and a new settled storm consent for Glasbury STW.

I enclose a cheque for £1376

Yours sincerely,

Dr Lewis Keil
Scientist - Wastewater





ASiantaeth YR
AMGYLCHEDD
ENVIRONMENT
AGENCY

WATER RESOURCES ACT 1991 (schedule 10)

(as amended by the Environment Act 1995)

Application for ~~new consent~~/variation to an existing consent* to discharge
(* delete as appropriate)

APPLICATION FOR THE MAIN WORKS EFFLUENT CONSENT

<p>Regional/Area Address:</p> <p>The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT</p>	<p><i>Official Use Only</i> Dist/Area Ref: 1303</p> <p>Application No. AW1002101</p> <p>Date Received:</p> <p>Fee Received:</p>
--	--



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.

<p>Glasbury Sewage treatment works Behind Hampton Cottage Glasbury Powys</p>
--

Post Code:

HR3 5NL

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 778 m³/day
Briefly state how this figure was calculated (see note ii).

Calculated from two pumps operating simultaneously, this represents the highest dry weather flow condition. The FFT based on population is 640 m³/d, thus the plant is designed to treat greater than FFT. The basis for the population count and subsequent flow and load design figures are included in the attached calculation 1240-00-1001 Revision B.

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

1. Pipe

2. Channel

3. Culvert

4. Borehole

5. Well

6. Soakaway

7. Sub-Irrigation System

8. Combination of 6 & 7

9. Other (*please specify below*)

200 mm internal diameter. Two discharge pipes will be used, the second, short outfall will be used when the river has surcharged the main outfall by more than 950 mm. Under these conditions the river will be in spate and the short outfall will discharge to a flooded channel.

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

Main Outfall									
S	O	1	8	0	0	3	9	9	1
Short Outfall									
S	O	1	7	9	4	3	9	5	5

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	O	1	7	9	5	3	9	4	5
---	---	---	---	---	---	---	---	---	---

(*please indicate on accompanying plans*)

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

The flow to full treatment will be measured in an flume type flow meter.

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

The treatment stream will comprise: Screening of all flows followed by, storm separation, primary settlement, secondary treatment in trickling filters, final settlement, and discharge to outfall. The storm water will be retained in a storm tank with sufficient capacity to hold 2 hrs of flow at FFT, before discharge to the same outfall as the final effluent from the humus tanks. Under conditions of high river flow, the storm water will be discharged via a second outfall. This discharges to the river closer to the works.

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

N

2.6

a) On what date do you anticipate the discharge will commence?

31/03/03 *

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.

Continuous

2.7

a) Are there any existing consents for discharges from the premises (see note vi)?

Y

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

AW1002101

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

N

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Powys County Council

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

- | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|
| 1. Single Dwelling | <input type="checkbox"/> | 6. Fish Farm | <input type="checkbox"/> |
| 2. Multiple Dwellings | <input type="checkbox"/> | 7. Mineral Workings | <input type="checkbox"/> |
| 3. Industrial Premises | <input type="checkbox"/> | 8. Water Services plc STW | <input checked="" type="checkbox"/> |
| 4. Vehicle Parking Area | <input type="checkbox"/> | 9. Water Supply | <input type="checkbox"/> |
| 5. Commercial Premises (<i>please specify</i>) | <input type="checkbox"/> | 10. Other (<i>please specify</i>) | <input type="checkbox"/> |

* No later than the 31/03/03 however, plant is due to be commissioned in September 2002.

3.3 Please indicate source of the water supply - tick as appropriate: **N/A**

- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Well | <input type="checkbox"/> | 5. River (please give name below) | <input type="checkbox"/> |
| 2. Borehole | <input type="checkbox"/> | 6. Estuary (please give name below) | <input type="checkbox"/> |
| 3. Precipitation (eg rain or snow) | <input type="checkbox"/> | 7. Coastal Water (please give name below) | <input type="checkbox"/> |
| 4. Mains (please state water supply company) | <input type="checkbox"/> | <input type="text"/> | |

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) | <input type="checkbox"/> | 5. Into Land | <input type="checkbox"/> |
| 2. River or Stream (non-tidal) | <input checked="" type="checkbox"/> | 6. Onto Land | <input type="checkbox"/> |
| 3. Canal | <input type="checkbox"/> | 7. Directly into Groundwater | <input type="checkbox"/> |
| 4. Lake, Lock or Pond | <input type="checkbox"/> | 8. Coastal Water (see note vii) | <input type="checkbox"/> |

State name of receiving water if known:

River Wye

4.2 In the case of sub-irrigation systems, soakaways or boreholes: **N/A**

- (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)? **N/A** 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.

*
*
*
*
*
*

Post Code:

Daytime Telephone Number:

Company Registration Number (if appropriate):

(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>[Signature]</i>	PRINT NAME: <i>LEWIS KEIL</i>
ON BEHALF OF: <i>DWR CYMRE C/F</i>	DATED: <i>30/09/02</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



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.

Glasbury Waste Water Treatment Works

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

1 N° 6 mm Screen, auto racked, with screenings washing and handling.
1 N° Primary settlement tank
1 N° Trickling filter with plastic media
1 N° Humus tank.
1 N° Storm tank.
1 N° Sludge holding 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). | 778 m ³ /d |
| b) | Dry weather flow of discharge(s). | 320 m ³ /d |
| c) | Average daily flow. 1.5 x DWF | 480 m ³ /d |
| d) | Maximum rate of discharge(s) | 9 l/s |

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

Y/N

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

Y/N

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

Y/N

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

890

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

Some variation will occur due to summer day visitors, this is unlikely to have a great effect on the works population.

- 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) Y/N
If yes, please give details.

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

If yes, please complete appropriate section on Annex 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 2 SEWAGE EFFLUENT DISCHARGED IN STORM OR EMERGENCY CONDITIONS

Please complete this annexe if you are proposing to make a discharge of sewage in emergency or storm conditions (if the effluent is to contain a trade component Annexe 3 should also be completed).

Official Use Only
Application No.

1. Site Name.

Glasbury Sewage Treatment works

2. State the type of discharge - tick as appropriate:

Storm tanks

Combined Sewer Overflow from sewerage system

Combined Sewer Overflow from pumping station

Emergency overflow from sewerage system

Emergency overflow from pumping station

Other (please specify)

3. For effluents discharging from sewage treatment works, is the storm/emergency effluent discharged via the same outlet as the treated effluent?

Y

If no please give:

a) the National Grid Reference of the treated effluent outlet.

b) the consent or application number covering the treated effluent discharge

If yes please give the National Grid Reference of the storm/emergency sampling point (see notes)

S O 1 7 9 5 3 9 4 5

4. For effluents discharging from combined sewer overflows, is the discharge via a dedicated pipe?

N

If no please give the National Grid Reference of the overflow into the sewer.

5. Overflow settings

- | | |
|--|---------|
| a) Overflow setting to storm tanks | 9.0 l/s |
| b) Maximum flow to storm tanks Pumped flow to works | 7.0 l/s |
| c) Overflow setting to storm sewage overflow | N/A l/s |
| d) Maximum flow to storm sewage overflow | N/A l/s |

6. Storage capacity

- | | |
|--|--------------------|
| a) Volume of Storm tanks | 73 m ³ |
| b) Retention time of storm tanks at maximum flow | 2.8 hours |
| c) Storage capacity of sewer/wet well | N/A m ³ |

7. Please provide full details of the design criteria that have been used to support this application.

PCL Drawing number 1240-00-3222 with supporting calculation of storm tank volume.

8. Will facilities be provided to raise alarms (eg telemetry)?
If yes, please give details.

Y/N

9. Will facilities be provided to prevent the discharge of gross solids?
If yes, please give details (for screens give bar spacing or aperture).

Y/N

Screens 6 mm perforated plate. This screen is not powered

10. What provisions will be made to deal with:

- | | |
|---|---------------------------------|
| a) power failure (eg standby generators)? | None - Screen requires no power |
| b) mechanical breakdown (eg standby pumps)? | Standby pump provided |
| c) rising main failure? | |
| d) tanker access? | Provided |

Notes (see also the notes on the main form):

Full details of the design criteria must be provided in order for the application to be determined. If you have any queries about what information is required please contact the person given in notes attached to the main form.



ASIANTAETH YR
AMGYLCHEDD
ENVIRONMENT
AGENCY

ANNEXE 4
WELSH REGION SUPPLEMENTARY INFORMATION ANNEXE

Please complete this annex for every proposed discharge.

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

For all proposed discharges:

1. Site Name.

2. Is this application being made to reinstate a lapsed Consent?
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):

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

5. Is there any trade effluent component in the proposed discharge?
If yes, please confirm here that you have completed and enclosed Annexe 3:

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:

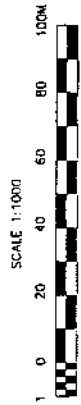
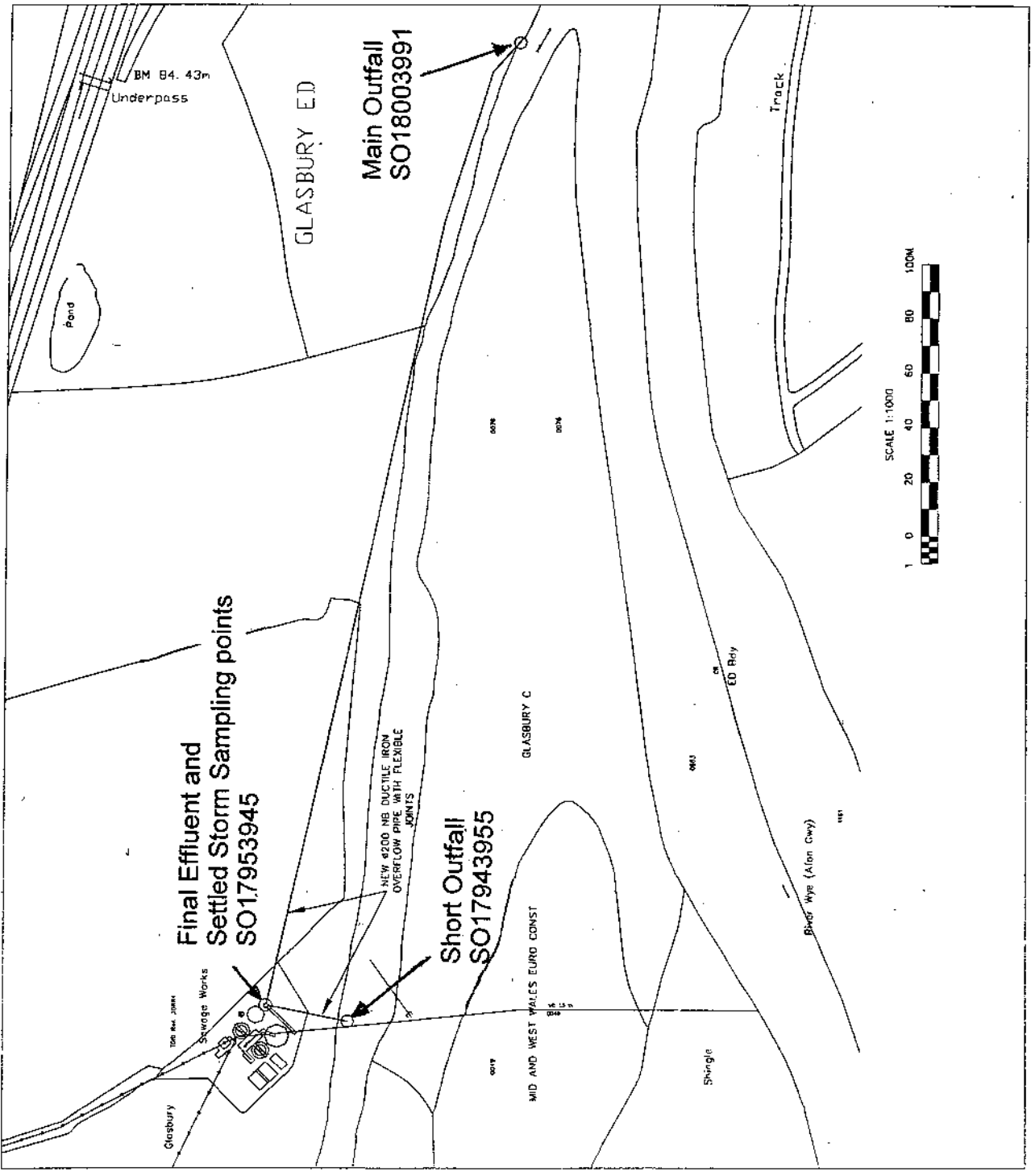
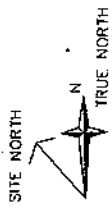
Tick

8. Please state:

Population served (head)	890
Consumption (l/head/day) default = 180	180
Infiltration (m ³ /day)	160
Industrial effluent flow (m ³ /day)	0
Dry Weather Flow (m ³ /day)	320
Soc A (l/sec)	18 l/s
Predicted spill frequency (per annum)	Not Known

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.



NO	EXTENSION OF OUTFALL	PE	MXU	SAC
D	90m	RAF	PJW	SMS
C	COORDINATE NUMBERS ENLARGED	RAF	PJW	SMS
B	ISSUED FOR CONSTRUCTION	RAF	PJW	SMS
A	FIRST ISSUE	RAF	PJW	SMS
ISSUE	REASON FOR ISSUE	DRAWN	CHECKED	APPROVED
				DATE

DOCUMENT WORKING STATUS

FOR ENQUIRY FOR REVIEW FOR CONSTRUCTION
 FOR INFORMATION FOR ACCEPTANCE AS BUILT



PATERSON CANDY

A Black and Veatch Company
 PATERSON CANDY LIMITED
 c/o DWR CYMRU WELSH WATER, PENYFFIN ROAD, NELSON, TIREHAIRIS, CF48 6LY
 Telephone: 01443 432818 Fax: 01443 492935
 PATERSON CANDY LIMITED is a member of the BLACK & VEATCH GROUP OF COMPANIES. THE GROUP IS A DIVISION OF BLACK & VEATCH HOLDINGS LIMITED, INCORPORATED IN THE UNITED STATES OF AMERICA.
 CLIENT

DWR CYMRU WELSH WATER - GLASBURY S.T.W.

TITLE
 SITE PLAN

SCALE	MASTER SIZE	DRAWING NUMBER	ISSUE
1:1000	A2	1240-00-3100	D

AUTOCAD REF.

Client: Hyder AMP 3 - Glasbury	Subject: Population equivalent in Catchment
-----------------------------------	--

Assumptions for population equivalents

House unit	=	3	per unit
Garage	=	5	per unit
Public house	=	10	per unit
School	=	0.5	per person

Summary (areas defined by attached catchment plans)

1	Area 1: Glasbury South	222.5
2	Area 2: Glasbury North	517
3	10 yr urban development plan (50 houses @ 3 pe per unit)	150

Total population equivalent of catchment 890

Note: Numbers are taken from AIS plots of catchment and visual survey

Area 1: Glasbury South

	No		p.e
Housing	64		192
Garage	0		0
Public House	1		10
School	1	36 pupils 6 staff	21
Church	1		
Total			<u><u>223</u></u>

Area 2: Glasbury North

	No		p.e
Housing	159		477
Garage	0		0
Public House	2		20
School	0		
Hall	2		
Outdoor pursuits centre	1	Day visitors	20
Total			<u><u>517</u></u>

Calculated by:	Checked by:	Job no:	Revision	B
Peter Woollard	Sharon Jones	1240-00-1001	Sheet	1 of 5

Client: DCWW - AMP 3	Subject: Loads and flows
-------------------------	-----------------------------

Population

Total works population = 890

Population based on survey included in 1240-00-1001

Flow Basis

Flow based on population

Daily flow per head = 180 l/hd.d

Flow for current population = 160 m3/d

Infiltration = 100 % per capita

Infiltration for current population = 160 m3/d

Works Flows

Total dry weather flow = 320 m3/d PE + I + E

= 3.7 l/s

Total flow at FFT = 640 m3/d 3PE + I + E

= 7.4 l/s

(ACTUAL FFT SET AT 9 L/S BECAUSE OF PUMPED FLOWS)

SocA = DWF + 1.36 P

= 320 + 1.36 x 889.5

SocA = 1530 m3/d

= 18 l/s

Calculated by:	Checked by:	Job no:	Revision B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet 2 of 5

Client:

DCWW - AMP 3

Subject:

Loads and flows

Flow from survey

Due to the pumped nature of the flow the works must be designed for two pumping stations operating at the same time. This will prevent the plant entering storm under dry weather conditions.

Normal flow will be represented by one pump in operation, flow to full treatment by two pumps. One from each station. A flow survey carried out on the pumps stations showed that each pump station pumped approximately 4 l/s. A design FFT of 9 l/s would thus ensure that, under normal flow conditions, the storm weir would not be breached. This is based on 4.5 l/s from each pumping station. REF: Titan flow survey document number 1240-00-1007 Rev A.

Loading calculation

BOD	=	60	g/hd.d
TSS	=	72	g/hd.d
Ammonia	=	0.005	g/hd.d
BOD	=	53	kg/d
TSS	=	64	kg/d
ISS:TSS in raw sewage	=	0.2	
ISS	=	13	kg/d
BODs:BODt in raw sewage	=	0.5	
BODs	=	27	kg/d
BODp	=	27	kg/d
Ammonia	=	4.4	kg/d

Calculated by:	Checked by:	Job no:	Revision	B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet	3 of 5

Client: Hyder AMP 3 - Glasbury	Subject: Population equivalent in Catchment
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Peter Woollard	Sharon Jones	1240-00-1001	Sheet	1 of 5

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(ACTUAL FFT SET AT 9 L/S BECAUSE OF PUMPED FLOWS)

SocA = DWF + 1.36 P

= 320 + 1.36 x 889.5

SocA = **1530** m3/d

= **18** l/s

Calculated by:	Checked by:	Job no:	Revision B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet 2 of 5

Client: DCWW - AMP 3	Subject: Loads and flows
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Flow from survey

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Ammonia	=	0.005	g/hd.d
BOD	=	53	kg/d
TSS	=	64	kg/d
ISS:TSS in raw sewage	=	0.2	
ISS	=	13	kg/d
BODs:BODt in raw sewage	=	0.5	
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Calculated by:	Checked by:	Job no:	Revision B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet 3 of 5

Client: Hyder AMP 3 - Glasbury	Subject: Population equivalent in Catchment
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Total			<u><u>517</u></u>

Calculated by:	Checked by:	Job no:	Revision	B
Peter Woollard	Sharon Jones	1240-00-1001	Sheet	1 of 5

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Calculated by:	Checked by:	Job no:	Revision B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet 2 of 5

Client: DCWW - AMP 3	Subject: Loads and flows
-------------------------	-----------------------------

Flow from survey

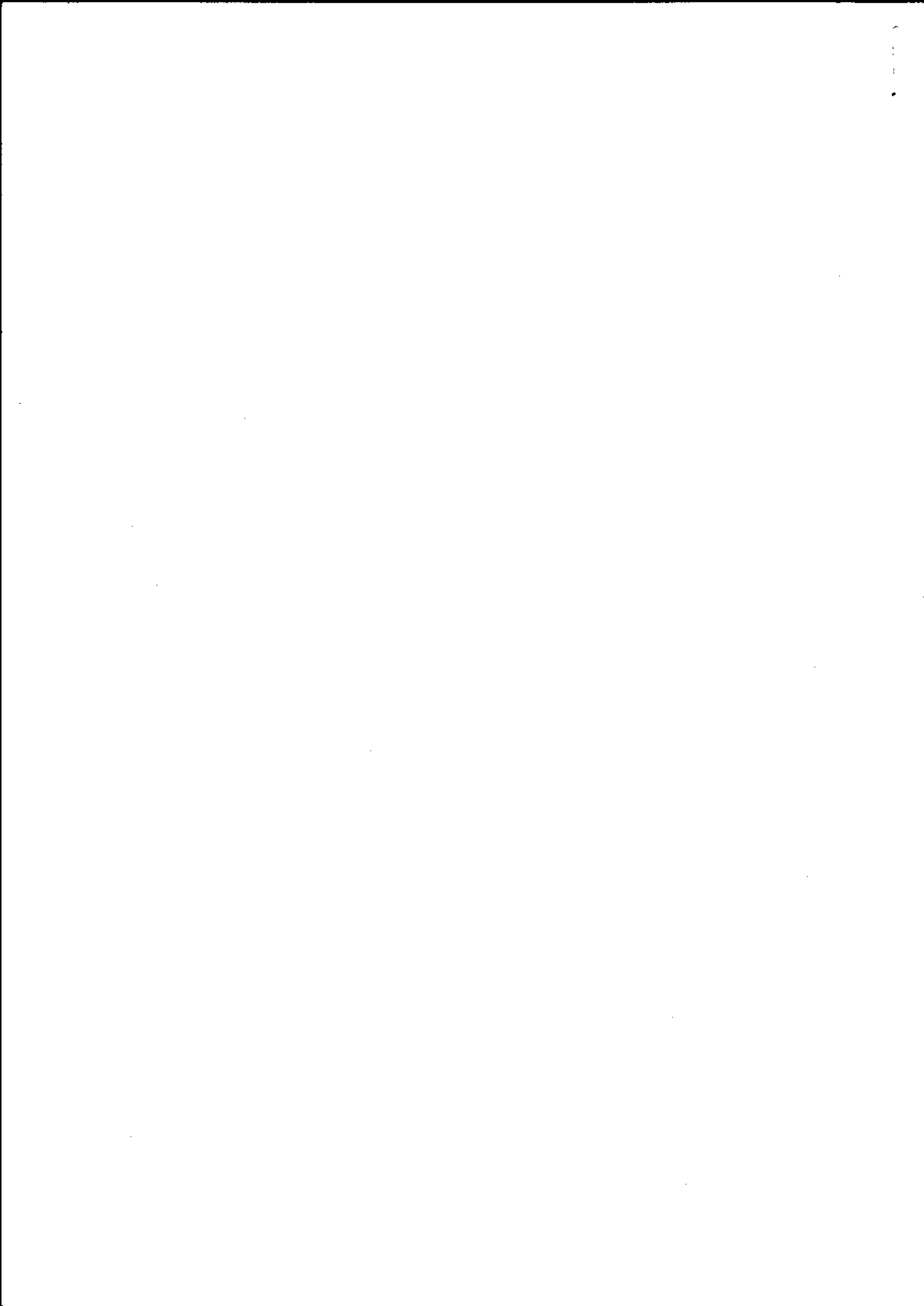
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Normal flow will be represented by one pump in operation, flow to full treatment by two pumps. One from each station. A flow survey carried out on the pumps stations showed that each pump station pumped approximately 4 l/s. A design FFT of 9 l/s would thus ensure that, under normal flow conditions, the storm weir would not be breached. This is based on 4.5 l/s from each pumping station. REF: Titan flow survey document number 1240-00-1007 Rev A.

Loading calculation

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TSS	=	72	g/hd.d
Ammonia	=	0.005	g/hd.d
BOD	=	53	kg/d
TSS	=	64	kg/d
ISS:TSS in raw sewage	=	0.2	
ISS	=	13	kg/d
BODs:BODt in raw sewage	=	0.5	
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Ammonia	=	4.4	kg/d

Calculated by:	Checked by:	Job no:	Revision	B
Peter Woollard	Sharon Jones	1240 - 00 - 1001	Sheet	3 of 5






ASiantaeth YR
AMGYLCHEDD
ENVIRONMENT
AGENCY

WATER RESOURCES ACT 1991 (schedule 10)

(as amended by the Environment Act 1995)

Application for ~~new consent~~/variation to an existing consent* to discharge
(* delete as appropriate)

APPLICATION FOR THE MAIN WORKS EFFLUENT CONSENT

<p>Regional/Area Address:</p> <p>The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT</p>	<p><i>Official Use Only</i> Dist/Area Ref: 1303</p> <p>Application No. AW1002101</p> <p>Date Received:</p> <p>Fee Received:</p> <div style="text-align: right;">  </div>
--	---

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).

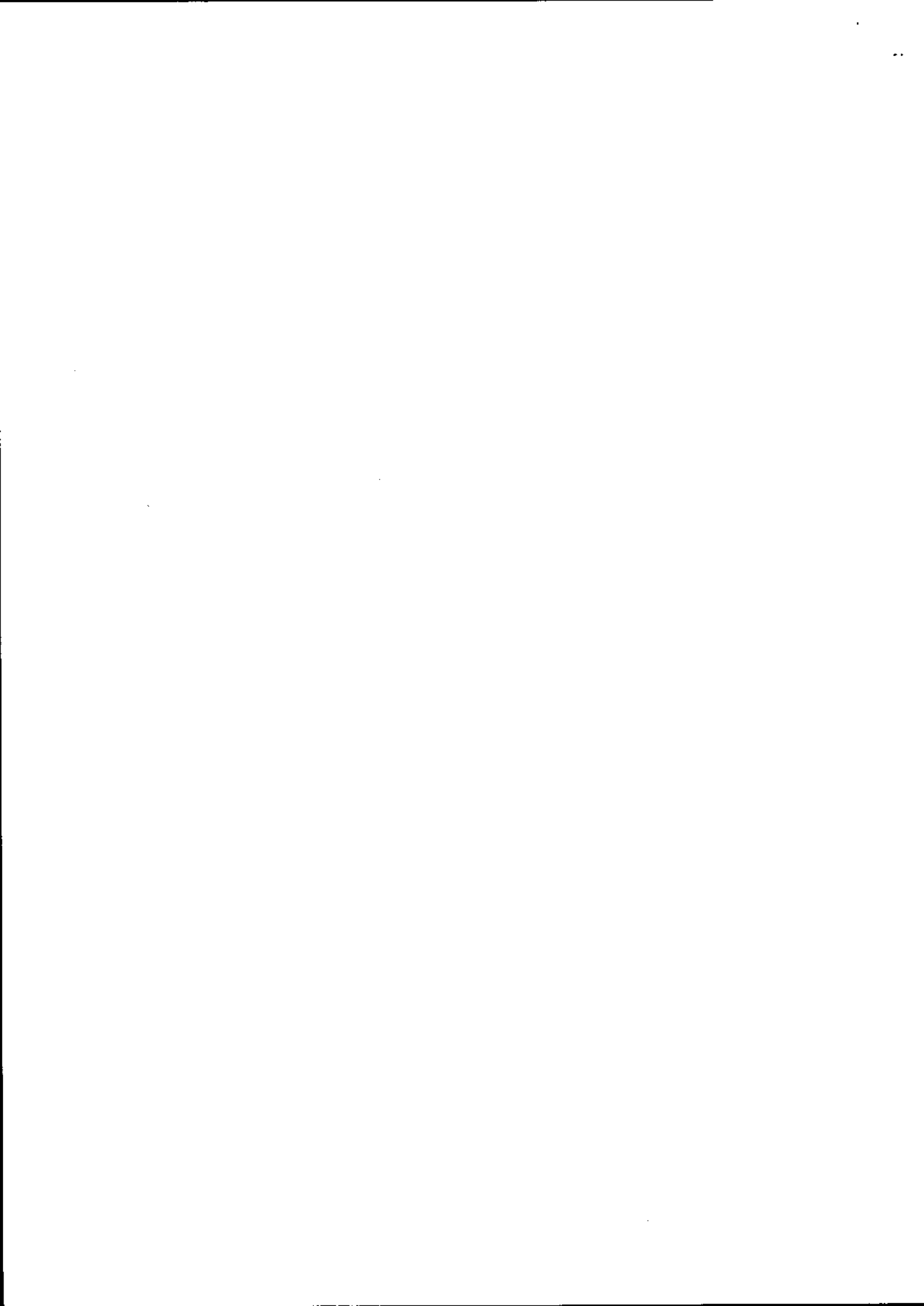
1 SITE ADDRESS

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

Glasbury Sewage treatment works
Behind Hampton Cottage
Glasbury
Powys

Post Code:

HR3 5NL



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 778 m³/day
 Briefly state how this figure was calculated (see note ii).

Calculated from two pumps operating simultaneously, this represents the highest dry weather flow condition. The FFT based on population is 640 m³/d, thus the plant is designed to treat greater than FFT. The basis for the population count and subsequent flow and load design figures are included in the attached calculation 1240-00-1001 Revision B.

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 | <input checked="" type="checkbox"/> | 4. Borehole | <input type="checkbox"/> | 7. Sub-Irrigation System | <input type="checkbox"/> |
| 2. Channel | <input type="checkbox"/> | 5. Well | <input type="checkbox"/> | 8. Combination of 6 & 7 | <input type="checkbox"/> |
| 3. Culvert | <input type="checkbox"/> | 6. Soakaway | <input type="checkbox"/> | 9. Other (<i>please specify below</i>) | <input type="checkbox"/> |

200 mm internal diameter. Two discharge pipes will be used, the second, short outfall will be used when the river has surcharged the main outfall by more than 950 mm. Under these conditions the river will be in spate and the short outfall will discharge to a flooded channel.

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

Main Outfall									
S	O	1	8	0	0	3	9	9	1
Short Outfall									
S	O	1	7	9	4	3	9	5	5

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	O	1	7	9	5	3	9	4	5
---	---	---	---	---	---	---	---	---	---

(*please indicate on accompanying plans*)



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

The flow to full treatment will be measured in an flume type flow meter.

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

The treatment stream will comprise: Screening of all flows followed by, storm separation, primary settlement, secondary treatment in trickling filters, final settlement, and discharge to outfall. The storm water will be retained in a storm tank with sufficient capacity to hold 2 hrs of flow at FFT, before discharge to the same outfall as the final effluent from the humus tanks. Under conditions of high river flow, the storm water will be discharged via a second outfall. This discharges to the river closer to the works.

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

N

2.6 a) On what date do you anticipate the discharge will commence?

31/03/03 *

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.

Continuous

2.7 a) Are there any existing consents for discharges from the premises (see note vi)?

Y

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

AW1002101

b) Has any person had a Prohibition Notice serviced on them in respect of this site?

N

If yes, please give the reference number.

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Powys County Council

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

- | | | | |
|---|--------------------------|----------------------------|-------------------------------------|
| 1. Single Dwelling | <input type="checkbox"/> | 6. Fish Farm | <input type="checkbox"/> |
| 2. Multiple Dwellings | <input type="checkbox"/> | 7. Mineral Workings | <input type="checkbox"/> |
| 3. Industrial Premises | <input type="checkbox"/> | 8. Water Services plc STW | <input checked="" type="checkbox"/> |
| 4. Vehicle Parking Area | <input type="checkbox"/> | 9. Water Supply | <input type="checkbox"/> |
| 5. Commercial Premises (please specify) | <input type="checkbox"/> | 10. Other (please specify) | <input type="checkbox"/> |

* No later than the 31/03/03 however, plant is due to be commissioned in September 2002.



3.3 Please indicate source of the water supply - tick as appropriate: **N/A**

- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Well | <input type="checkbox"/> | 5. River (please give name below) | <input type="checkbox"/> |
| 2. Borehole | <input type="checkbox"/> | 6. Estuary (please give name below) | <input type="checkbox"/> |
| 3. Precipitation (eg rain or snow) | <input type="checkbox"/> | 7. Coastal Water (please give name below) | <input type="checkbox"/> |
| 4. Mains (please state water supply company) | <input type="checkbox"/> | | |

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) | <input type="checkbox"/> | 5. Into Land | <input type="checkbox"/> |
| 2. River or Stream (non-tidal) | <input checked="" type="checkbox"/> | 6. Onto Land | <input type="checkbox"/> |
| 3. Canal | <input type="checkbox"/> | 7. Directly into Groundwater | <input type="checkbox"/> |
| 4. Lake, Lock or Pond | <input type="checkbox"/> | 8. Coastal Water (see note vii) | <input type="checkbox"/> |

State name of receiving water if known:

River Wye

4.2 In the case of sub-irrigation systems, soakaways or boreholes: **N/A**

- | | |
|---|------------------------------|
| (a) Is any part of the system within 5 metres of the boundary of the premises? | <input type="checkbox"/> Y/N |
| (b) Is any part of the system within 10 metres of a watercourse? | <input type="checkbox"/> Y/N |
| (c) Is any part of the system within 50 metres of a borehole or spring? | <input type="checkbox"/> Y/N |
| (d) For wells and boreholes state dimension(s) in metres. | <input type="text"/> m |
| (e) For sub-irrigation systems, soakaway pits, wells and boreholes, state maximum depth in metres. | <input type="text"/> m |
| (f) For boreholes, state details of lining in metres: | |
| (i) Depth of lining | <input type="text"/> m |
| (ii) Depth of perforated lining | <input type="text"/> m |
| (iii) Depth of unperforated lining | <input type="text"/> m |
| (g) A percolation test must be carried out in accordance with British Standard BS6297:1983. Have the results been provided? | <input type="checkbox"/> Y/N |

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

*
*
*
*
*
*

Post Code:

Daytime Telephone Number:

Company Registration Number (if appropriate):

(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>Lewis Kell</i>	PRINT NAME:	LEWIS KELL
ON BEHALF OF:	DWR CYMRU CŴF		DATED:
.....			30/09/02

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



Directorate of Scientific Services

WELSH WATER

SOUTH EASTERN DISTRICT
St. Nicholas House, St. Nicholas Street
Hereford HR4 0BB
Tel. Hereford (0432) 57411
Telefacsimile (0432) 55333



H.M.I.P.,
Welsh Office,
Cathays Park,
Cardiff.

F.A.O. Mr. A. A. Houlden

Your reference

Please quote reference

ATD/SP

If enquiring please ask for

Mr. Andrew Davies

Date

17th October 1988

Dear Sir,

Application for Review of Consent to Discharge
Glasbury S.T.W.

I enclose an application for the RQO-based review of consent for Glasbury S.T.W.

In expectation of a descriptive consent, sampling was reduced in 1986/87 such that compliance could not be formally assessed. In 1988, two recent samples have recorded gross failures for suspended solids, and the works is likely to be non-compliant to look up at the year-end. This would be inappropriate, given the general performance of the works and the massive dilutions available, and I therefore seek a review of consent.

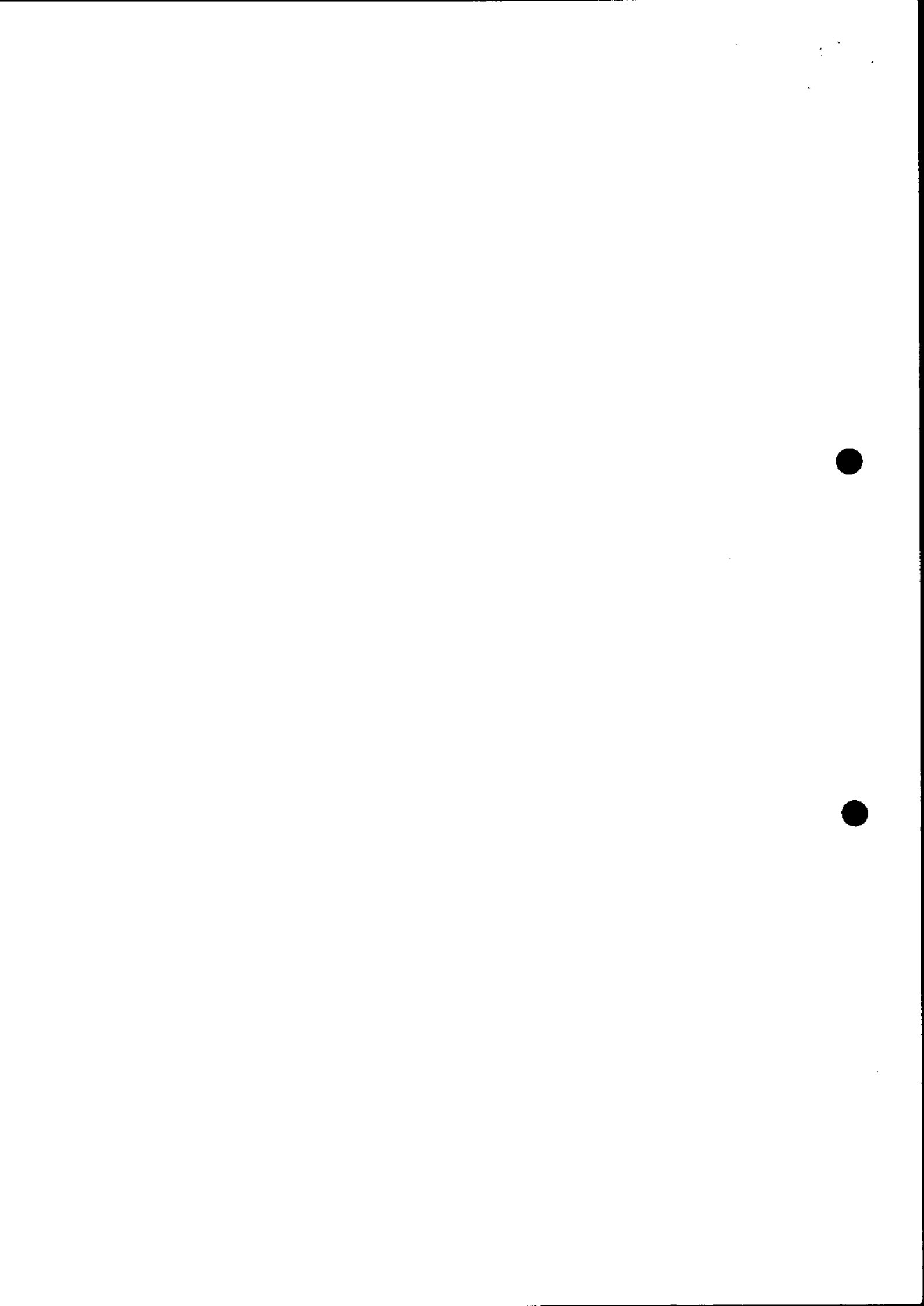
The reviewed consent will also assist in prompting the progress of a possible capital scheme to abandon an unsatisfactory works at Three Cocks (Aberllynfi) and to pump all flows to Glasbury. The reviewed consent sought is numeric rather than descriptive, for the reasons clearly stated on the COPA 4 continuation sheet.

Yours faithfully,

S. Price

P.P. A. T. Davies
WATER QUALITY OFFICER

- c.c. D. Walker)
- N. Lowe)
- A. Freeman) Letter & COPA 4 only
- A. T. Davies ✓)
- Consents clerk)
- J. Coombe - all papers



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 AW1002101

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

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

Part B Please complete in block capitals or type.

To:

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

Consent: Name:
Address:

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

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

Post Code:

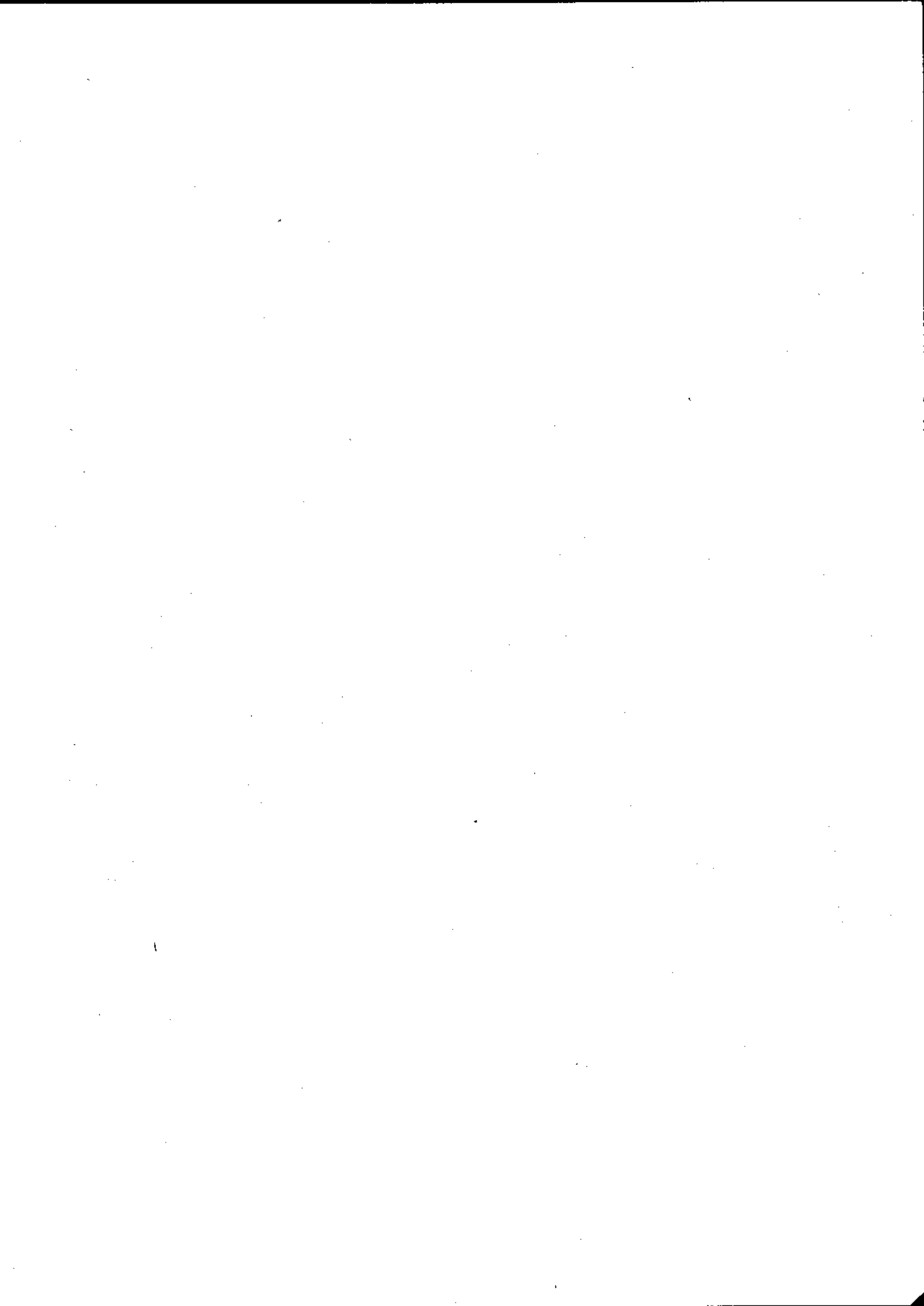
Date of Transfer to new Holder(s);

Signed: **Dated:**

Name (block capitals): **Position:**

(to be completed when signing on behalf of corporate bodies)





915

Please Return this form to:

Consents Officer.
N.R.A. Welsh Region,
FREEPOST
Rivers House,
St.Mellons Business Park,
St.Mellons,
Cardiff,
Glamorgan
CF3 7ZZ.

For office use only:

Reference No.:

AW1002101
Reply Received:

11/7/91
Action:

A 12/7/91
ML

Val. code on m. J. J. J.
15.7.91

Our records contain the following consent details :

Name and Address Of Owner:

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

Please Indicate Changes:

Consent No.: AW1002101 Operative Date : 18TH NOVEMBER 1988

Is this discharge still in operation ? YES NO

If NO, do you wish this consent to be revoked ? YES NO

If you wish this consent to be revoked, please sign here :
This discharge is not in operation. I wish this consent to be revoked.

Signed : _____ Date : _____

If you do not wish this consent to be revoked, please verify the details which follow and supply further details if known.

Address of premises
Location of discharge :

Please Indicate Changes:

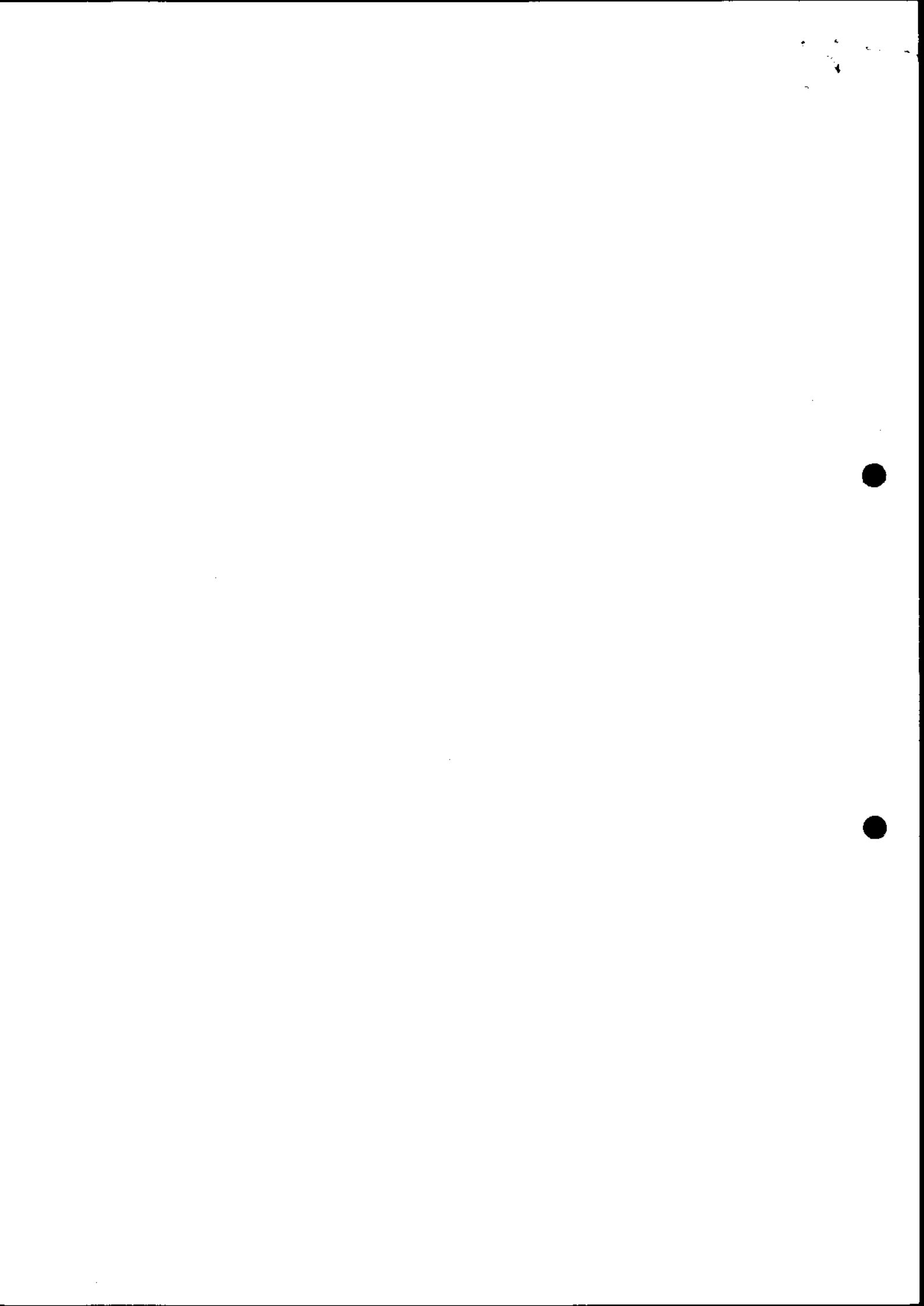
Glasbury Stw

Treated Sewage Effl.- Second/Septic Tank

Outlet National Grid Reference : SO 17980 39860 _____

Population Served : _____

Is discharge periodic or continuous? Periodic Continuous



Discharge Consent Conditions :

Condition Name	Limit Unit	Ind
DAILY VOL (DWF) M3/DAY	52 m3 ✓	
DISCHARGE RATE (L/S)	3.64 l/sec ✓	
BOD 5 ATU	150 mg/l ✓	
BOD 5	150 mg/l ✓	NOT ON CONSENT.
AMMONIA	50 mg/l ✓	
SOLIDS SUSPENDED 105 C	150 mg/l ✓	

Other Details.

PLAN NO RE/0027/I/1

Note: If the discharge has changed in composition or volume since the consent was issued, then please indicate the changes above.

If you wish future bills to be sent to a name and address other than that shown at the top of the previous page then please complete the details here.

Please give a contact name and telephone number here.

Signed : Adams pp d Lewis Date: 4.7.91

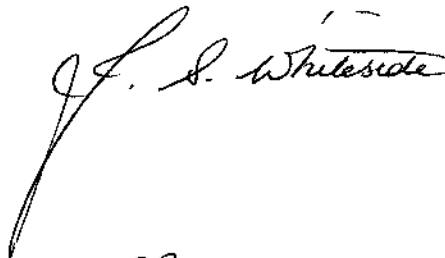
AW10021.01
(51064)


MEMORANDUM

TO: Dot Carder, (Consents Clerk), Nelson
FROM: Mr. A.T. Davies, Water Quality Officer, Hereford.
DATE: 12th December 1988
SUBJECT: Consent to discharge - Glasbury STW.

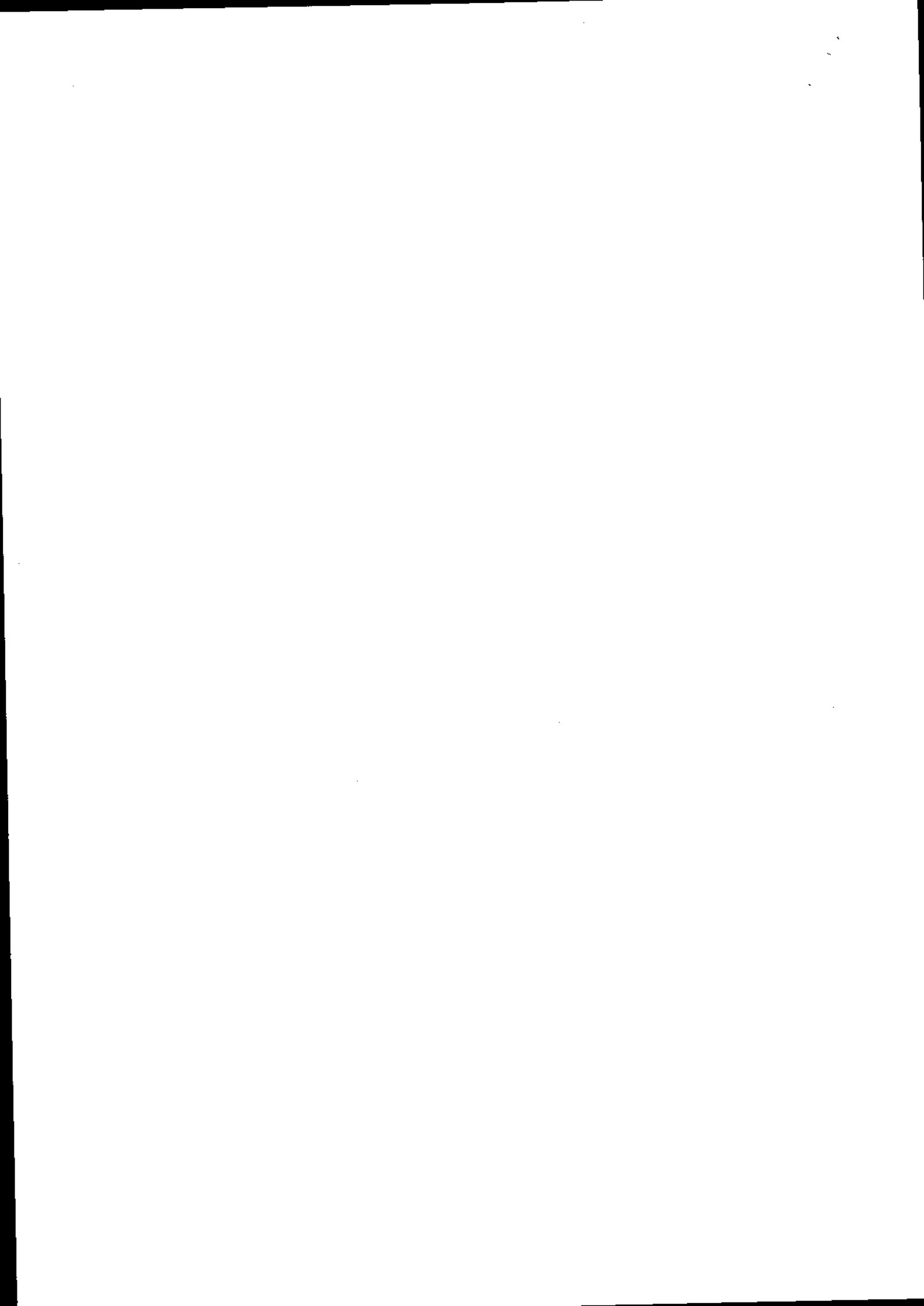
I have received from Welsh Office the enclosed consent to discharge from Glasbury STW. I now send it to you for registration, together with copies of the application and associated correspondence, for your information. Please ensure that the application is registered as well, and that the consent conditions are altered on TDIB and SWIMS.

I would be grateful if you would please return these papers to the Hereford Office for the attention of Mr. J. Coombe (AWQO) who will enter them on the appropriate local file.



 . A. T. Davies
W. Q. O.

c.c. A.W.Q.O.
W.Q.O.



MEMORANDUM

TO: Mr. R. Rowell, Hereford.
Mr. D. Russell, Abergavenny
Mr. G. Woollorton, Mr. P. Stockdale, Nelson,
Mr. D. Walker; Fao. Ms. J. Dack, Bridgend,
Mr. N. Lowe, Brecon.
FROM: Mr. A. T. Davies, Water Quality Officer, Hereford.
DATE: 12th December 1988
SUBJECT: Consent to discharge - Glasbury STW

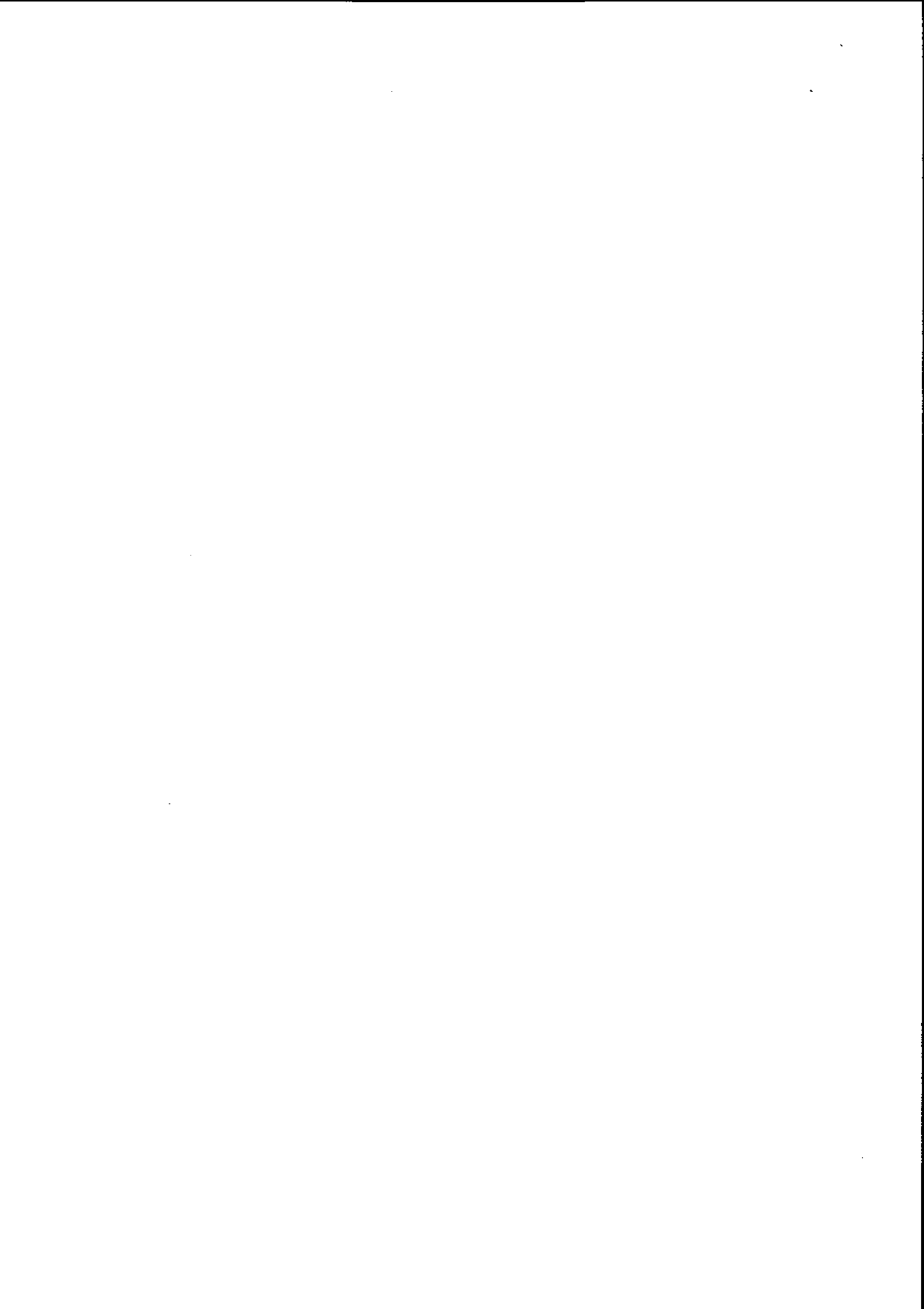
I have received from Welsh Office the enclosed consent to discharge from Glasbury STW.
I would be grateful if you could please inform the appropriate staff in your department.

J. S. Whiteside

PP A. T. Davies
W. Q. O.

c.c. W. Q. O.

Dot Carder for info.



WELSH WATER AUTHORITY				Welsh Office Form COPA4		Welsh Off Ref					
SUPPORTING INFORMATION FOR CONSENT/REVIEW - WWA Form SS.SI.1						Welsh W A Ref		AW 1002101			
DISCHARGER +Agent		WELSH WATER AUTHORITY						WWA District		SE /380	
PREMISES / SOURCE Address/Location		GLASBURY S.T.W.									
DISCHARGE TYPE		FULLY TREATED SEWAGE EFFLUENT									
DISCHARGE STATUS		New reqg Consent		Exg reqg Review		<input checked="" type="checkbox"/> Exg reqg Consent		Prevly Exempt		Temp'y until	
CONSENT / REVIEW EXISTING - issued		To: WELSH WATER AUTHORITY				By: WELSH OFFICE			Date: 24.05.81		
ADVERTISEMENT ?		Yes / No because: EXISTING DISCHARGE									
OUTLET DETAILS		New / Altered / Exg	OS Ref	SO 17983986		Diam	mm	Form			
SAMPLING POINT		TDIB SPT	51064	OS Ref	SO 17953945		Outlet / Chamber in works				
DISCHARGE IS TO		Inland Stream <input checked="" type="checkbox"/>		Landl.Pond	Onto Land	Into Land	Groundwtr	Estuary	Coastal		
RECEIVING WATER		Immediate / Main	River Wye / kms >								
Water in current programme ?		Data for :	Current Situatn		Short-term RQO		Long-term RQO		TDIB SPT Refs		
Immed. Yes / No		Assessed by :	NWC	Biol	NWC	Biol	by	NWC	Biol	by	
Main Yes / No		Immed. Up / Down	1A / 1B	124 /	/	/	19	1A / 1B	/	19	
		Main Up / Down	/	/	/	/	19	/	/	19	
USE(S) OF THE RECEIVING WATER, whether surface or groundwater		Exg / Future Use(s)	PotWS	IndWS	AgrWS	Stock	SalFish	CrsFish	WSports	VisAmen	Other
		Of Immed R.W. @ km			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Of Main R.W. @ km									
		Effect of discharge on uses, etc.	Negligible								
EFFLUENT QUALITY DATA - derived from: 12 samples taken from: 01.09.86 to : 31.08.88 (mg/l except pH)		Determinand	BOD _{ATU}	SS	Ammonia						
		Maximum	39.3	108	39						
		Minimum	1.8	7	0.4						
		Mean	14.23	37.5	6.82						
		Standard Deviation	12.67	35.4	11.68						
		Median / 50%ile	9.48	25.9	1.93						
		95%ile: N / LN / NP	48.64	111.7	28.16						
QUALITY LIMITS (mg/l except pH) S/W if seasonal 1/2 if phased		Existing	39	46							
		Proposed 95%ile	150	150	50						
		Proposed Maximum									
		Application									
CALCULATION MODE		To Quality Spec'n	3	mean 25	0.78						
		Method used	WARN BREW AND SENSITIVITY								
EFFLUENT FLOW DATA		P Popul'n No.	G Consum'n m ³ /h/d	PG Sewage m ³ /d	I Infilt'n m ³ /d	E Trade m ³ /d	PG+I+E DWF m ³ /d	Storm Sewage Of flow Weir Setting x DWF 1/sec		Maximum Rate 1/sec	Maximum Daily Vol m ³ /d
		Existing Design	280				52.4			3.64	
		Meas/Estd Current	250	0.16	40	e 12	NIL				
		Proposed Design									
		Ultimate Design									
Design Horizons: Proposed: Ultimate:		Sewerage system is % combined	Flow values for Consent Conditions		Existing	Proposed	52	52			312



REPORTING INFORMATION FOR A CONSENT / REVIEW (CONTINUED) Form SS.SI.1						Welsh Off Ref							
Relating to: GLASBURY S.T.W.						Welsh W A Ref		AW 1002101					
INFLUENT AND EFFLUENT FLOWS AND DILUTIONS Flows in m ³ /d. If estimated, give method: Flows interpolated between main river gauging stations			Flows in Immediate Receiving Water River Wye Meas / Estd at OSGR: SO 1798 3986			Flows in Main Receiving Water Meas / Estd at OSGR:							
			Minimum	5%ile	Mean	Minimum	5%ile	Mean					
Effluent Statistic	Source of Data	Effluent Volume	360,000			3,375,000							
			Dilution Ratios - expressed as x River : 1 Effluent										
D.W.F.	Meas / Estd	52	6923:1		64904:1								
Maximum	Meas / Estd												
SEWER REGIME	Width, Depth & Reaeration		W	m	D	m	R	4	W	m	D	m	R
TREATMENT PLANT UNITS - with Critical Dimensions					Primary Sett.	Area	m ²						
Unit	Detail	Existing	Proposed	Ultimate	Storm Tanks	Area	m ²						
Storm S. Of flow*	Set @ 1/s				" "	Volume	m ³						
Greens	Space mm	75			Septic Tank	Volume	m ³						
Oil Retent'n.	Hours				Biol. Filters	Media	m ³						
Slumping Rate	Max. 1/s	No			Act'd. Sludge #	Volume	m ³	94.9					
Gravity Feed	Yes / No	NO			Package Plant*	Surface	m ²						
Flow Meas't.*	Yes / No	No			Pasveer Ditch#	Volume	m ³						
Slit Removal	Yes / No	No			Final Sett't.	Area	m ²	14.5					
Sludge/Comm'n.	Yes / No				Tert'y Treat.*	Area	m ²	13.5					
Other Units and Details	* Type # Power	SATEC 20-B-25M extended aeration plant plus 27-PC-135 upward flow clarifier											
SLUDGE TREAT. AND DISPOSAL	Tankered off site to land												
HAZARDOUS WASTES Types & m ³ /d	Nil												
FURTHER DATA STATEMENT from Dist/Div. Additional conditions nearby efflts and changes C Dangerous Substances C Designated waters SSIs Continue on form SS.SI.2 (if necessary)	See attached sheet												
CAPITAL WORKS	Outline Appra.		Second Appra.		Final Appra.		Start		Finish				
District Ref	District Contact			John Coombe			HQWQS Ref						
For use by : WATER QUALITY SECTION													
For use by : WELSH OFFICE													



Directorate of Scientific Services

**WELSH
WATER**

SOUTH EASTERN DISTRICT

St. Nicholas House, St. Nicholas Street
Hereford HR4 0BB

Tel. Hereford (0432) 57411
Telefacsimile (0432) 55333

Dot



H.M.I.P.,
Welsh Office,
Cathays Park,
Cardiff.
F.A.O. Mr. A. A. Houlden

Your reference

Please quote reference

ATD/SP

If enquiring please ask for

Mr. Andrew Davies

Date

17th October 1988

Dear Sir,

Application for Review of Consent to Discharge
Glasbury S.T.W.

I enclose an application for the RQO-based review of consent for Glasbury S.T.W.

In expectation of a descriptive consent, sampling was reduced in 1986/87 such that compliance could not be formally assessed. In 1988, two recent samples have recorded gross failures for suspended solids, and the works is likely to be non-compliant to look up at the year-end. This would be inappropriate, given the general performance of the works and the massive dilutions available, and I therefore seek a review of consent.

The reviewed consent will also assist in prompting the progress of a possible capital scheme to abandon an unsatisfactory works at Three Cocks (Aberllynfi) and to pump all flows to Glasbury. The reviewed consent sought is numeric rather than descriptive, for the reasons clearly stated on the COPA 4 continuation sheet.

Yours faithfully,

S. Price

P.P. A. T. Davies
WATER QUALITY OFFICER

c.c. D. Walker)
N. Lowe)
A. Freeman) Letter & COPA 4 only
A. T. Davies)
Consents clerk)
J. Coombe - all papers

WELSH WATER AUTHORITY		Welsh Office Form COPA4		Welsh Off Ref									
SUPPORTING INFORMATION FOR CONSENT/REVIEW - WWA Form SS.S1.1				Welsh W A Ref									
DISCHARGER +Agent				WELSH WATER AUTHORITY									
PREMISES / SOURCE Address/Location				GLASBURY S.T.W.									
DISCHARGE TYPE				FULLY TREATED SEWAGE EFFLUENT									
DISCHARGE STATUS				New reqg Consent	Exg reqg Review	<input checked="" type="checkbox"/> Exg reqg Consent	Prevly Exempt	Tempy until					
CONSENT / REVIEW EXISTING - issued				To: WELSH WATER AUTHORITY		By: WELSH OFFICE		Date: 24.05.81					
ADVERTISEMENT ?				Yes / No because: EXISTING DISCHARGE									
OUTLET DETAILS				New / Altered / Exg	OS Ref	SO 17983986	Diam	mm Form					
SAMPLING POINT				TDIB SPT	51064	OS Ref	SO 17953945	Outlet / Chamber in works					
DISCHARGE IS TO				Inland Stream	<input checked="" type="checkbox"/>	Landl. Pond	Onto Land	Into Land	Groundwtr	Estuary	Coastal		
RECEIVING WATER				Immediate / Main	River Wye / kms >								
Water in current RQO Programme ?				Data for :	Current Situath	Short-term RQO		Long-term RQO		TDIB SPT Refs			
Immed. Yes / No				Assessed by :	NWC	Biol	NWC	Biol	by	NWC	Biol	by	Up / Down
Main Yes / No				Immed. Up / Down	1A/1B	124/	/	/	19	1A/1B	/	19	50018/50021
USE(S) OF THE RECEIVING WATER, whether surface or groundwater				Exg / Future Use(s)	PotWS	IndWS	AgrWS	Stock	SalFish	CrsFish	WSports	VisAmen	Other
Of Immed R.W. @ km							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Of Main R.W. @ km													
Effect of discharge on uses, etc.				Negligible									
EFFLUENT QUALITY DATA - derived from: 12 samples taken from: 01.09.86 to : 31.08.88 (mg/l except pH)				Determinand	BOD _{ATU}	SS	Ammonia						
Maximum				39.3	108	39							
Minimum				1.8	7	0.4							
Mean				14.23	37.5	6.82							
Standard Deviation				12.67	35.4	11.68							
Median / 50%ile				9.48	25.9	1.93							
95%ile: N / LN / NP				48.64	111.7	28.16							
QUALITY LIMITS (mg/l except pH) S/W if seasonal 1/2 if phased				Existing	39	46							
Proposed 95%ile				150	150	50							
Proposed Maximum													
Application													
CALCULATION MODE				To Quality Spec'n	3	mean 25	0.78						
Method used				WARN BREW AND SENSITIVITY									
EFFLUENT FLOW DATA				P Popul'n No.	G Consum'n m ³ /h/d	PG Sewage m ³ /d	I Infilt'n m ³ /d	E Trade m ³ /d	PG+I+E DWF m ³ /d	Storm Sewage Of flow Weir Setting		Maximum Rate 1/sec	Maximum Daily Vo m ³ /d
Existing Design				280					52.4			3.64	
Meas/Estd Current				250	0.16	40	e 12	NIL	52				
Proposed Design													
Ultimate Design													
Design Horizons: Proposed: Ultimate:				Sewerage system is % combined	Flow values for Consent Conditions		Existing	52					312
							Proposed	52					

Estimated based on 120 litres per household per day (Ref. WWA Sewerage)

REPORTING INFORMATION FOR A CONSENT / REVIEW (CONTINUED) Form SS.SI.1						Welsh Off Ref			
Reporting to: GLASBURY S.T.W.						Welsh W A Ref		AW 1002101	
INFLUENT AND EFFLUENT FLOWS AND DILUTIONS			Flows in Immediate Receiving Water River Wye Meas / Estd at OSGR: SO 1798 3986			Flows in Main Receiving Water Meas / Estd at OSGR:			
Flows in m ³ /d. If estimated, give method: Flows interpolated between main river gauging stations			Minimum	5%ile	Mean	Minimum	5%ile	Mean	
				360,000	3,375,000				
Effluent Statistic			Source of Data		Effluent Volume		Dilution Ratios - expressed as x River : 1 Effluent		
D.W.F.			Meas / Estd		52		6923:1		64904:1
Maximum			Meas / Estd						
CONSENT REGIME			Width, Depth & Reaeration		W	m	D	m	R
					4				
TREATMENT PLANT. UNITS - with Critical Dimensions					Primary Sett.	Area	m ²		
Unit	Detail	Existing	Proposed	Ultimate	Storm Tanks	Area	m ²		
Storm S. O'flow	Set @ 1/s				" "	Volume	m ³		
Screens	Space mm	75			Septic Tank	Volume	m ³		
Oil Retent'n.	Hours				Biol. Filters	Media	m ³		
Slumping Rate	Max. 1/s	No			Act'd. Sludge #	Volume	m ³	94.9	
Gravity Feed	Yes / No	NO			Package Plant*	Surface	m ²		
Flow Meas't.*	Yes / No	No			Pasveer Ditch#	Volume	m ³		
Solid Removal	Yes / No	No			Final Sett't.	Area	m ²	14.5	
Screen/Comm'n.	Yes / No				Tert'y Treat.*	Area	m ²	13.5	
Further Units and Details	* Type # Power	SATEC 20-B-25M extended aeration plant plus 27-PC-135 upward flow clarifier							
SLUDGE TREAT. AND DISPOSAL	Tankered off site to land								
TRADE WASTES Types & m ³ /d	Nil								
FURTHER DATA STATEMENT from Dist/Div.	See attached sheet								
Additional conditions nearby efflts and changes C Dangerous Substances C Designated Waters SSSIs Continue on Form SS.SI.2 (if necessary)									
CAPITAL WORKS	Outline Appra		Second Appra		Final Appra		Start		Finish
District Ref	District Contact			John Coombe			HQWQS Ref		
For use by : HQ WATER QUALITY SECTION									
For use by : WELSH OFFICE									

GLASBURY S.T.W.

Further Data and Statement

Sewage is received at the works mainly by pumped flows both from Radnor D. C. and Borough of Brecknock areas of Glasbury. Appreciable levels of infiltration are reported from the Radnor side and surface water intake problems exist on the Brecknock side. Allowances have been made for these in the flow data specified on the front of the COPA 4 form.

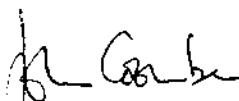
Biological impact assessment of sewage treatment works report No. SE 13/87 classifies Glasbury effluent discharge as having 'moderate impact' on the basis of sewage fungus in the mixing zone. Upstream/downstream biological scores were 78/88.

The shingle bank below Glasbury bridge, which is now effectively an island, allows some flow down the west bank of the river at most states of flow. The S.T.W. effluent outlet pipe is located at the downstream end of the Western side of this island. Sewage fungus observed by the biologists in the mixing zone of the effluent was local to the outfall. The total dilution available is substantial but obviously local visual effects occur.

Application for a descriptive consent is precluded by the following factors:-

1. Visual effects at the outfall.
2. Population currently estimated at 250. Borough of Brecknock have indicated development pressures at Glasbury village.
3. Nature of works, being entirely dependent upon a continuous power supply.
4. Glasbury STW forms part of the Velindre/Three Cocks (Aberllynfi)/Glasbury sewerage feasibility study which includes as a rationalization option the pumping of sewage from Three Cocks to Glasbury for treatment. No conclusions have yet been reached on the strategy for the area.

Taking into account point 4). above, Warn-Brew calculations including the pumped sewage flow from Three Cocks ($122 \text{ m}^3 \text{ d}^{-1}$ DWF - 1991 Estimate from feasibility study) gives results for BOD, SS, Ammonia well in excess of the currently proposed 150:150:50.



J. Coombe
Area Water Quality Officer



WELSH OFFICE

**CONTROL OF POLLUTION ACT 1974: SECTIONS 34 & 55
THE CONTROL OF POLLUTION (DISCHARGES BY AUTHORITIES) REGULATIONS 1984
CONSENT FOR A DISCHARGE**

WHEREAS

1. The WELSH WATER AUTHORITY (hereinafter referred to as 'the Water Authority') proposes to discharge biologically treated sewage effluent from the Glasbury Sewage Treatment Works to the River Wye at national grid reference SO 1798 3986 as shown on the attached plan.
2. The proposals require the consent of the Secretary of State for WALES in pursuance of sections 34 and 55 of the Control of Pollution Act 1974 as modified by the Control of Pollution (Discharges by Authorities) Regulations 1984 (hereinafter referred to as 'the Regulations').
3. In accordance with the provisions of Regulation 2 of the Regulations the Water Authority have submitted the proposals to the Secretary of State in the form of an application for consent dated 17 October 1988

THE SECRETARY OF STATE FOR WALES hereby consents to the proposed discharge subject to the conditions specified in the Schedule hereto attached.

Dated this 18 day of
1988

[Handwritten signature]

Signed *[Handwritten signature]*

On behalf of the Secretary
of State for Wales



SCHEDULE

Conditions prescribed for the discharge of biologically treated sewage effluent to the River Wye at the Glasbury Sewage Treatment Works.

"Sewage" can mean domestic sewage alone or in admixture with industrial waste water(s).

1. The nature of the effluent shall be biologically treated sewage effluent.
2. Adequate facilities shall be provided for the Secretary of State's representative so as to enable samples of the effluent to be conveniently obtained at grid reference SO 1795 3945.
3. The Welsh Water Authority shall take samples of the effluent in accordance with the relevant provisions of the Authority's sampling periodicity guidelines for the time being in force and approved for this purpose by the Secretary of State (and as may be indicated below) and shall keep records of such samples and the results of analyses thereof for inspection by the Secretary of State's authorised representative.
4. The volume of effluent under dry weather conditions shall not exceed 52 cubic metres in any period of 24 hours.
5. The maximum rate of flow discharged to the river at any time shall not exceed 3.64 litres per second. All sewage flow rates up to the maximum quoted above shall receive biological treatment.
6. The analytical methods used for determining compliance or otherwise with this consent shall be assumed to be those specified in the latest edition of "Methods for the Examination of Waters and Associated Materials" published by HMSO. Other methods of analysis may be used as alternatives to those specified in the above named publication providing that Secretary of State is

ASD
18.11.89



satisfied that they give comparable or better performance characteristics. Such other methods shall be submitted for approval to the Secretary of State together with all necessary supporting evidence.


7. The quality of the effluent discharged to the river at all flow rates up to the maximum quoted in 5 above, shall not be inferior to the following numerical quality limits (determinands) save as provided for in the Annex (by reference to the table included therein) to this Schedule.

7a. The Suspended Solids concentration (dried at 105 degrees Celsius) shall not exceed 150 milligrams per litre.

7b. The BOD (Biochemical Oxygen Demand) concentration determined in the presence of 0.5 milligrams per litre of allyl-thiourea shall not exceed 150 milligrams per litre.

7c. The ammoniacal nitrogen expressed as nitrogen shall not exceed 50 milligrams per litre.

8. Any previous consents issued by the Secretary of State in respect of effluents to which this discharge relates shall be revoked as from the date of this consent.


14.11.88



ANNEX

Where the number of samples taken in one year (that is from the 1 April to the 31 March) falls within any of the ranges given in Column 1 of the table below, the number of samples which are inferior to a specified numerical quality limit determinand set in Paragraph 7, and where relevant, Paragraph 8 of the Schedule shall not exceed the appropriate permitted number as listed in Column 2. A sample shall only be considered as having failed in relation to the particular determinand(s) for which the specified quality limit is exceeded. A sample shall be considered to be satisfactory in relation to other determinands, the concentration of which, are equal to or lower than the specified limit.

TABLE

Column 1	Column 2
Series of samples taken in any year	Maximum number of samples in which the same numerical quality limit may be exceeded.
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



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

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

To : WELSH WATER AUTHORITY

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

GLASBURY SEWAGE TREATMENT WORKS

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

THE EXISTING OUTLET is to : the River Wye

at National Grid Reference : SO 1798 3986

and has been shown marked : Discharge Point

on the attached Plan, No. : RW/0027/1/1

THE PREVIOUS CONSENT was : the Consent

Reference No.

granted on : 1st February 1972

by : Wye River Authority

to : Hay Rural District Council

The Authority submitted this Notification of Variation on : 24th February 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 : 24th May 1981

CONDITIONS

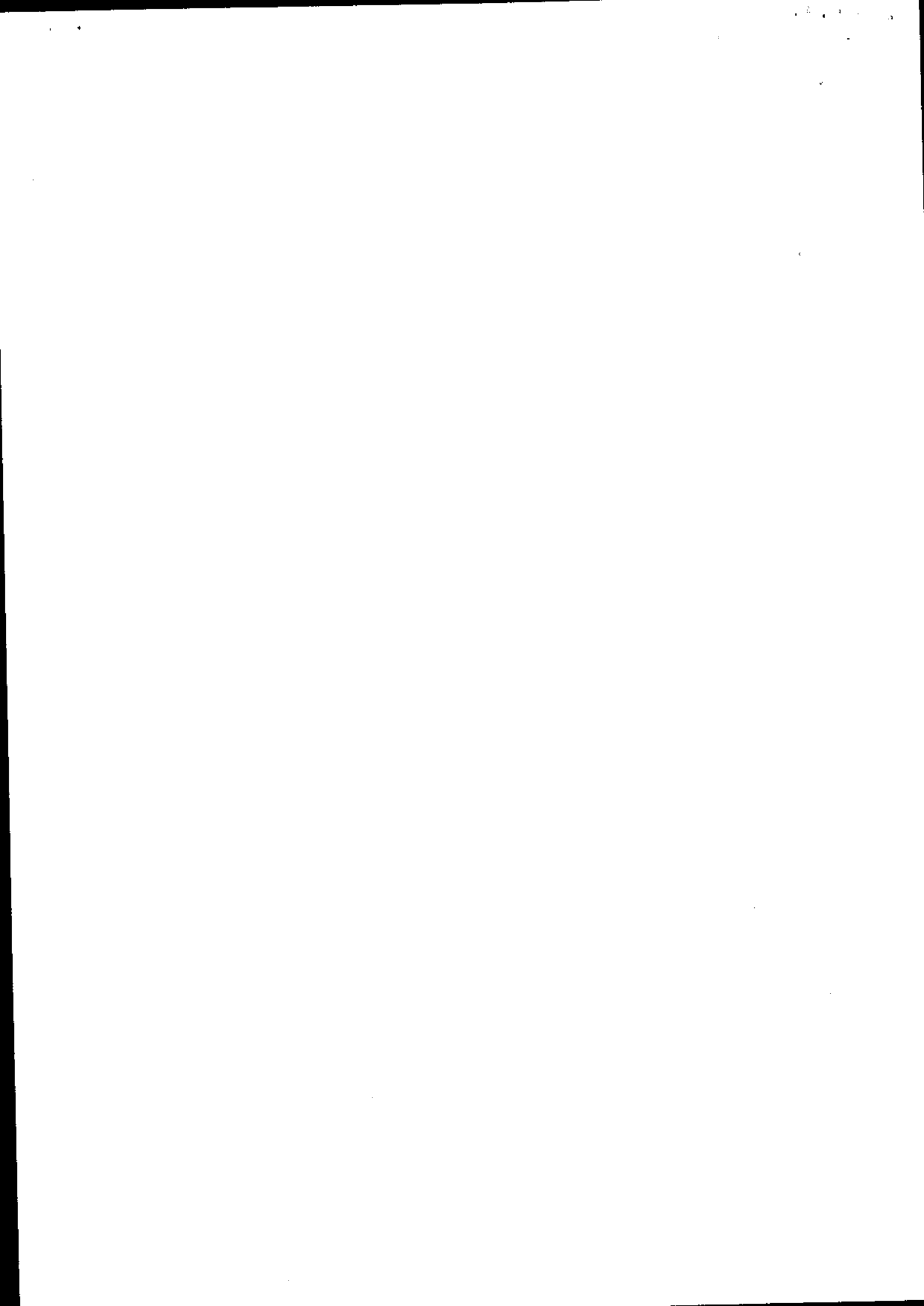
1. The discharge shall consist only of treated sewage effluent from the above works.
2. The quality and quantity of effluent shall not exceed the following maximum values:

<u>Determinand</u>	<u>Value</u>	<u>Unit</u>
Biochemical Oxygen Demand (+ATU) over 5 days at 20°C	39	milligrams per litre
Suspended Solids dried at 105°C	46	milligrams per litre
Rate of discharge	3.6	litres per second
Volume during any period of 24 consecutive hours	312	cubic metres
Volume discharged under 'dry weather conditions' during any period of 24 consecutive hours	52	cubic metres

3. Adequate facilities shall be provided for the taking of samples of the effluent at :
the outfall to the River Wye

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 Twenty-fourth day of May 1983 .

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



MASS BALANCE CALCULATION: MONTE CARLO METHOD

Version 2.4

Calculations done on 17/05/2001 at 13.13



Name of discharge	Glasbury STW
Name of river	Wye
Name of determinand	Ammonia

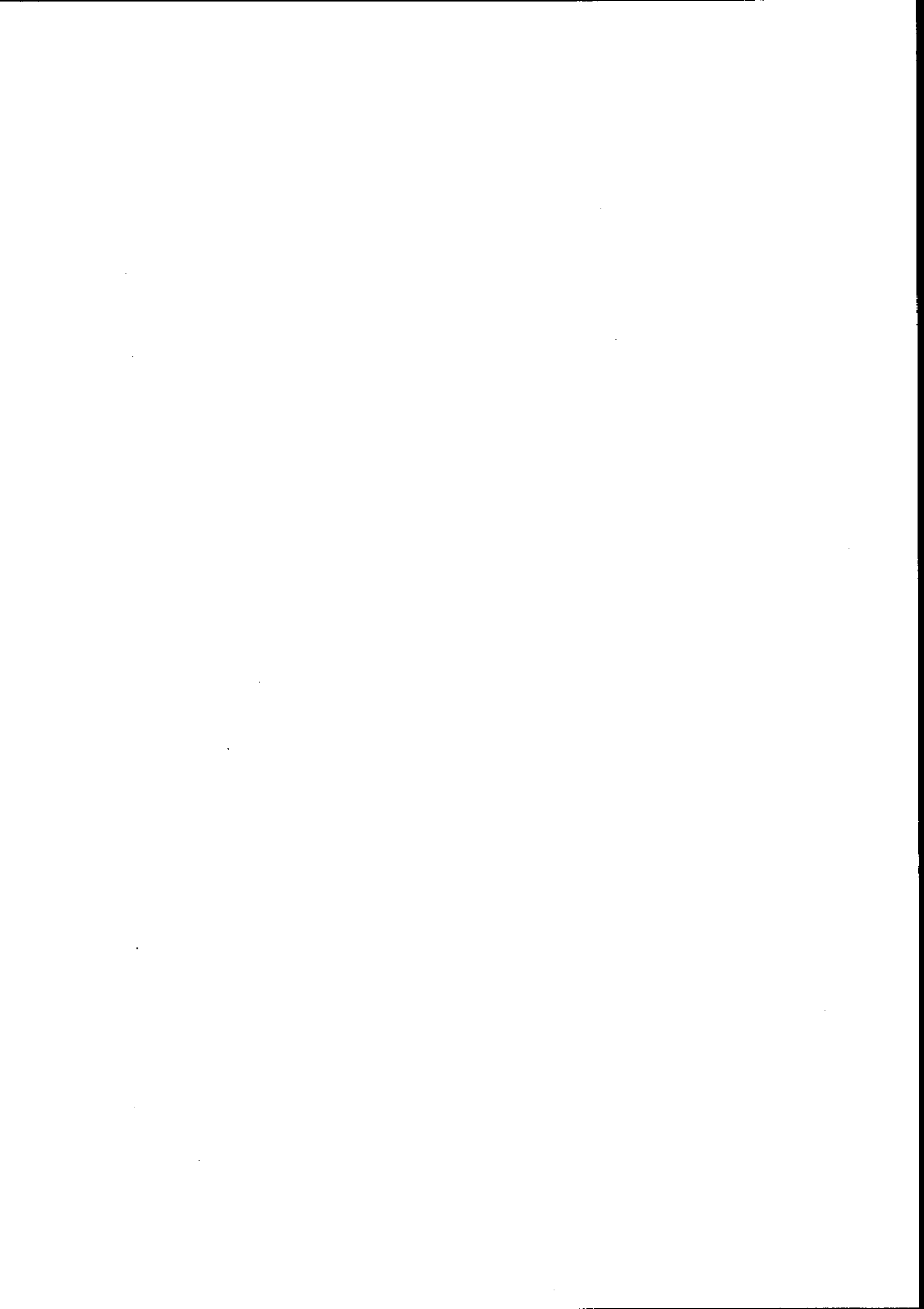
INPUT DATA	
UPSTREAM RIVER DATA	
Mean flow	40000.0
95% exceedence flow	4700.0
Mean quality	1.10
Standard deviation of quality	1.10
90-percentile	2.26
DISCHARGE DATA	
Mean flow	3.88
Standard deviation of flow	2.40
Mean quality	15.85
Standard deviation of quality	7.69
... or 95-percentile	30.37
DOWNSTREAM RIVER QUALITY TARGET	
Quality target	2.49
Percentile	90.00

RESULTS	
RIVER DOWNSTREAM OF DISCHARGE	
Mean quality	1.32
Standard deviation of quality	1.19
90-percentile quality	2.49
95-percentile quality	3.23
99-percentile quality	5.50
Quality target (90-percentile)	2.49
DISCHARGE QUALITY NEEDED	
Mean quality	1097.7
Standard deviation of quality	516.37
95-percentile quality	2082.5
99-percentile quality	2775.1
99.5-percentile quality	2999.6

No upstream quality data ∴ ensure river d/s of discharge remains in RE 1 with no more than 10% deterioration.

Results show that river is capable of accepting high levels of ammonia. ~~before~~ This is largely due to the vast dilution of the River Wye.

Agreed to remain 50mg/l standard as on existing consent.



MASS BALANCE CALCULATION: MONTE CARLO METHOD

Version 2.4

Calculations done on 18/05/2001 at 10.00



**ENVIRONMENT
AGENCY**

Name of discharge	Glasbury STW
Name of river	Wye
Name of determinand	BOD

INPUT DATA	
UPSTREAM RIVER DATA	
Mean flow	40000.0
95% exceedence flow	4700.0
Mean quality	1.10
Standard deviation of quality	0.55
90-percentile	1.80
DISCHARGE DATA	
Mean flow	3.88
Standard deviation of flow	2.40
Mean quality	15.81
Standard deviation of quality	12.06
... or 95-percentile	38.29
DOWNSTREAM RIVER QUALITY TARGET	
Quality target	1.98
Percentile	90.00

RESULTS	
RIVER DOWNSTREAM OF DISCHARGE	
Mean quality	1.24
Standard deviation of quality	0.58
90-percentile quality	1.98
95-percentile quality	2.29
99-percentile quality	3.07
Quality target (90-percentile)	1.98
DISCHARGE QUALITY NEEDED	
Mean quality	718.03
Standard deviation of quality	517.91
95-percentile quality	1718.5
99-percentile quality	2623.0
99.5-percentile quality	2941.4

No v/s quality data ∴ assume RE class 1 and 10% deterioration to remain in RE class.

Results show high BOD could be accepted due to dilution of the wye.

50/60
BOD/TSS.



WELSH OFFICE

**CONTROL OF POLLUTION ACT 1974: SECTIONS 34 & 55
THE CONTROL OF POLLUTION (DISCHARGES BY AUTHORITIES) REGULATIONS 1984
CONSENT FOR A DISCHARGE**

WHEREAS

1. The WELSH WATER AUTHORITY (hereinafter referred to as 'the Water Authority') proposes to discharge biologically treated sewage effluent from the Glasbury Sewage Treatment Works to the River Wye at national grid reference SO 1798 3986 as shown on the attached plan.
2. The proposals require the consent of the Secretary of State for WALES in pursuance of sections 34 and 55 of the Control of Pollution Act 1974 as modified by the Control of Pollution (Discharges by Authorities) Regulations 1984 (hereinafter referred to as 'the Regulations').
3. In accordance with the provisions of Regulation 2 of the Regulations the Water Authority have submitted the proposals to the Secretary of State in the form of an application for consent dated 17 October 1988

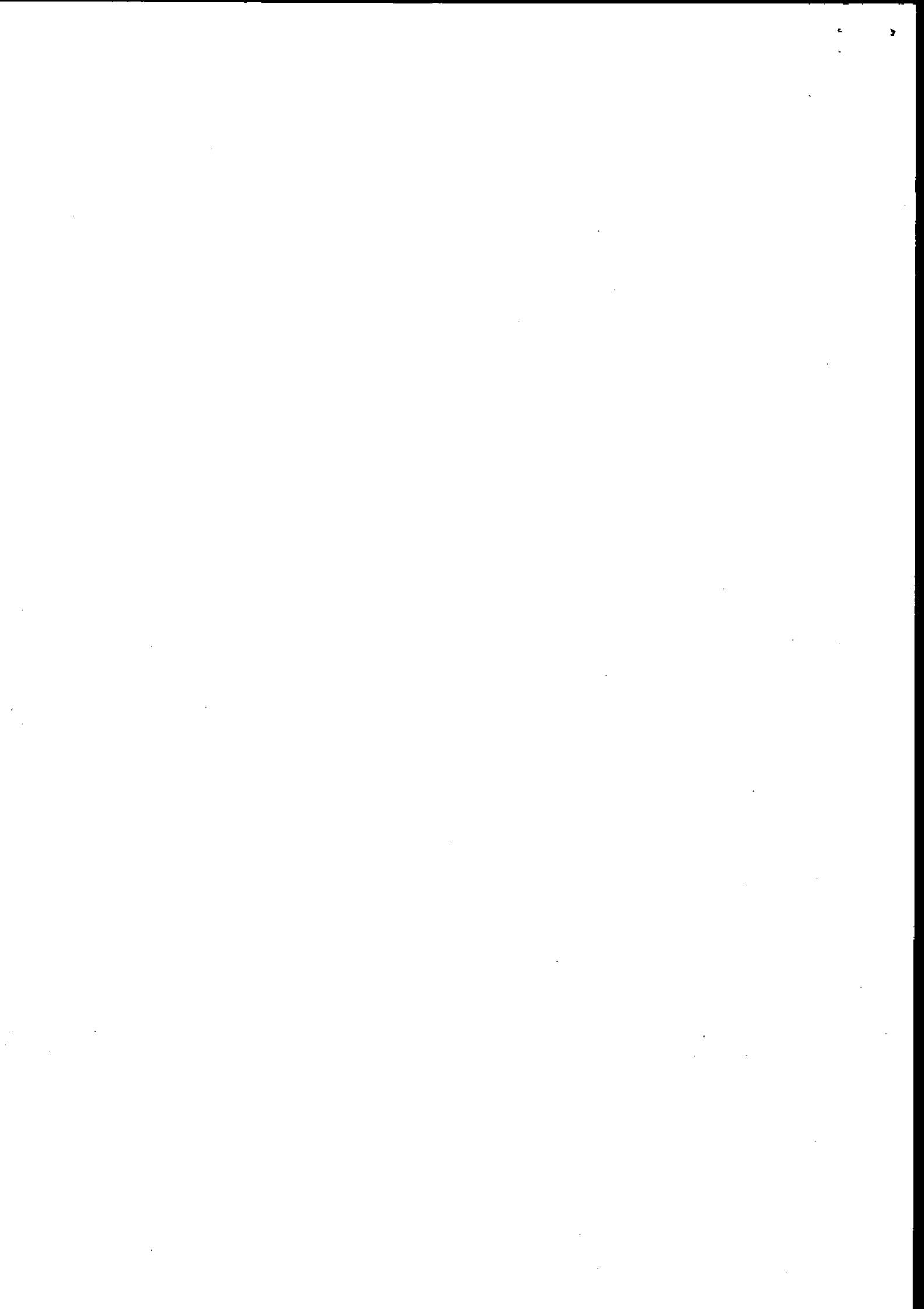
THE SECRETARY OF STATE FOR WALES hereby consents to the proposed discharge subject to the conditions specified in the Schedule hereto attached.

Dated this 18 day of
1988

David

Signed *A. P. Jones*

On behalf of the Secretary
of State for Wales



SCHEDULE

Conditions prescribed for the discharge of biologically treated sewage effluent to the River Wye at the Glasbury Sewage Treatment Works.

"Sewage" can mean domestic sewage alone or in admixture with industrial waste water(s).

1. The nature of the effluent shall be biologically treated sewage effluent.

2. Adequate facilities shall be provided for the Secretary of State's representative so as to enable samples of the effluent to be conveniently obtained at grid reference SO 1795 3945. - *Wye!*

3. The Welsh Water Authority shall take samples of the effluent in accordance with the relevant provisions of the Authority's sampling periodicity guidelines for the time being in force and approved for this purpose by the Secretary of State (and as may be indicated below) and shall keep records of such samples and the results of analyses thereof for inspection by the Secretary of State's authorised representative.

4. The volume of effluent under dry weather conditions shall not exceed 52 cubic metres in any period of 24 hours.

5. The maximum rate of flow discharged to the river at any time shall not exceed 3.64 litres per second. All sewage flow rates up to the maximum quoted above shall receive biological treatment.

315 m³/day

6. The analytical methods used for determining compliance or otherwise with this consent shall be assumed to be those specified in the latest edition of "Methods for the Examination of Waters and Associated Materials" published by HMSO. Other methods of analysis may be used as alternatives to those specified in the above named publication providing that Secretary of State is

ASD .. oo



satisfied that they give comparable or better performance characteristics. Such other methods shall be submitted for approval to the Secretary of State together with all necessary supporting evidence.


7. The quality of the effluent discharged to the river at all flow rates up to the maximum quoted in 5 above, shall not be inferior to the following numerical quality limits (determinands) save as provided for in the Annex (by reference to the table included therein) to this Schedule.

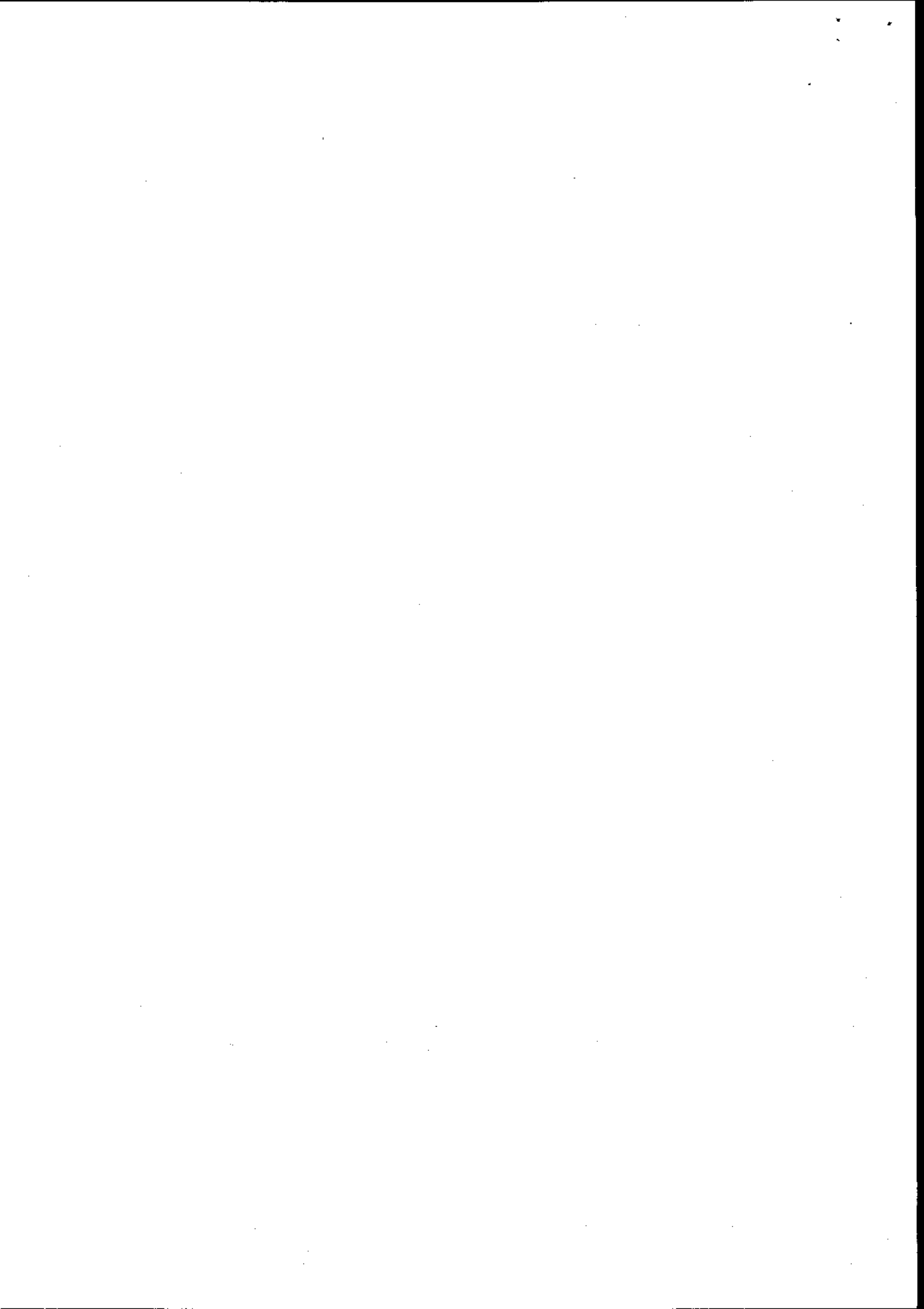
7a. The Suspended Solids concentration (dried at 105 degrees Celsius) shall not exceed 150 milligrams per litre.

7b. The BOD (Biochemical Oxygen Demand) concentration determined in the presence of 0.5 milligrams per litre of allyl-thiourea shall not exceed 150 milligrams per litre.

7c. The ammoniacal nitrogen expressed as nitrogen shall not exceed 50 milligrams per litre.

8. Any previous consents issued by the Secretary of State in respect of effluents to which this discharge relates shall be revoked as from the date of this consent.


14.11.58



ANNEX

Where the number of samples taken in one year (that is from the 1 April to the 31 March) falls within any of the ranges given in Column 1 of the table below, the number of samples which are inferior to a specified numerical quality limit determinand set in Paragraph 7, and where relevant, Paragraph 8 of the Schedule shall not exceed the appropriate permitted number as listed in Column 2. A sample shall only be considered as having failed in relation to the particular determinand(s) for which the specified quality limit is exceeded. A sample shall be considered to be satisfactory in relation to other determinands, the concentration of which, are equal to or lower than the specified limit.

TABLE

Column 1	Column 2
Series of samples taken in any year	Maximum number of samples in which the same numerical quality limit may be exceeded.
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

