



DŴR CYMRU
WELSH WATER

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

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

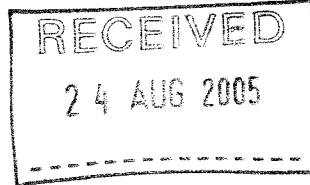
Gowerton Waste Water Treatment Works
Victoria Road
Gowerton
Swansea SA4 3AE

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

Mrs Lynne Lewis
Environment Agency Wales
'Maes Newydd'
Llandarcy
Neath and Port Talbot
SA10 6JQ

22nd August 2005

Tel 01792 511828



Dear Mrs Lewis,

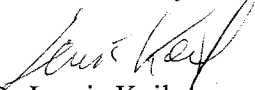
Whitland WwTW and Terminal Pumping Station

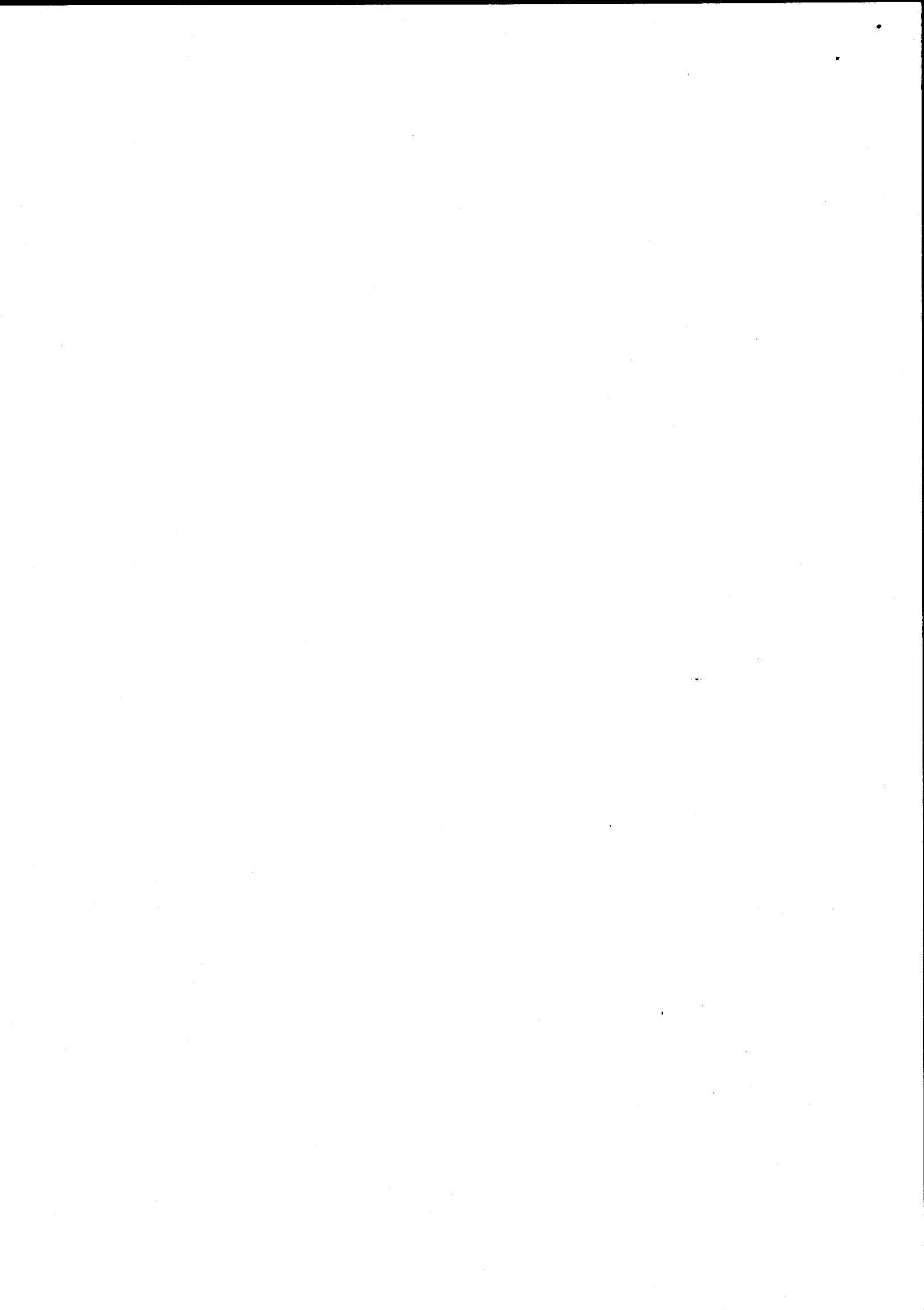
Please find enclosed applications for variation of consents for

Whitland WwTW Final Effluent Discharge	BL0138501
Whitland WwTW Settled Storm Discharge	BL0138502
Whitland Terminal Sewage Pumping Station CSO & EO	BP0113001

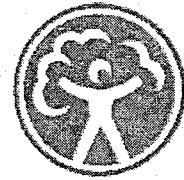
I enclose cheque no. 406061 for £2,316

Yours sincerely,


Dr Lewis Keil
Scientist - Wastewater



PK: SETTLED STORM



ASiantaeth YR
AMGYLCHEDD
ENVIRONMENT
AGENCY

WATER RESOURCES ACT 1991 (schedule 10)

(as amended by the Environment Act 1995)

Application for variation to an existing consent* to discharge

(* delete as appropriate)

Regional/Area Address: The Regional Finance Manager Environment Agency Welsh Region PO Box 425 St Mellons Business Park CARDIFF CF3 0LT	<u>Official Use Only</u> Dist/Area Ref: 1303 Application No. BL0138502 Date Received: 24/8/05 Fee Received: £772 (24/8/05).
--	---

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.

Whitland WwTW

Post Code:

E. A. WALES
 Rec No 5533
 24 AUG 2005
 PAID

Part 2
 of 3

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

842 m³/day

See copy of table 4 from Phase 3 Report from City and County of Swansea

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 (please specify below) <input type="checkbox"/> |

10 inch NB

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

S	N	2	0	5	5	0	1	6	0	5	0
---	---	---	---	---	---	---	---	---	---	---	---

(please indicate on accompanying plans)

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

- At the outlet At a manhole or sampling chamber

Other (please specify)

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

S	N	6	1	7	9	8	2	1	1	3	0
---	---	---	---	---	---	---	---	---	---	---	---

(please indicate on accompanying plans)

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

None

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

Mechanical screening 6mm x 6mm plus Storm retention tanks, 250 m3

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

no

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

31/12/2005

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.

During storm events that exceed the storage capacity

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

yes

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

BL0138501 & BL 0138502

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

no

3 SITE DETAILS

3.1 Please give the name of the relevant Planning Authority.

Carmarthen County Council

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

1. Single Dwelling

6. Fish Farm

2. Multiple Dwellings

7. Mineral Workings

3. Industrial Premises

8. Water Services plc STW

4. Vehicle Parking Area

9. Water Supply

5. Commercial Premises *(please specify)*

10. Other *(please specify)*

- 3.3 Please indicate source of the water supply - tick as appropriate: not applicable
- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Well | <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:

Afon Taf

- 4.2 In the case of sub-irrigation systems, soakaways or boreholes: not applicable
- (a) Is any part of the system within 5 metres of the boundary of the premises? Y/N
- (b) Is any part of the system within 10 metres of a watercourse? Y/N
- (c) Is any part of the system within 50 metres of a borehole or spring? Y/N
- (d) For wells and boreholes state dimension(s) in metres. m
- (e) For sub-irrigation systems, soakaway pits, wells and boreholes, state maximum depth in metres. m
- (f) For boreholes, state details of lining in metres:
- | | |
|------------------------------------|---|
| (i) Depth of lining | m |
| (ii) Depth of perforated lining | m |
| (iii) Depth of unperforated lining | m |
- (g) A percolation test must be carried out in accordance with British Standard BS6297:1983.
Have the results been provided? Y/N
- 4.3 Is there a foul sewer available to which the discharge(s) could be made (see note viii)? Y/N
- If yes, please give the reasons it is not practical to connect to it (eg distance, flow etc).
-

5 DETAILS OF APPLICANT AND OTHER INFORMATION

5.1 (See general notes and note ix)

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

Dwr Cymru Cyf
Pentwyn Road
Nelson
Treharris
Mid Glam

Post Code: CF46 6LY

Daytime Telephone Number:

Company Registration Number (if appropriate): 236677

(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 Keir</i>	PRINT NAME:	LEWIS KEIR
ON BEHALF OF:	DWR CTMRU CYF	DATED:	22/8/05

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 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 Annex 3 should also be completed).

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

1. Site Name.

Whitland WwTW

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

Storm tanks	<input checked="" type="checkbox"/>
Combined Sewer Overflow from sewerage system	<input type="checkbox"/>
Combined Sewer Overflow from pumping station	<input type="checkbox"/>
Emergency overflow from sewerage system	<input type="checkbox"/>
Emergency overflow from pumping station	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

--

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

yes

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

BL0138501

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

S	N	6	1	7	9	8	2	1	1	3	0
---	---	---	---	---	---	---	---	---	---	---	---

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

N/a

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

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

5. Overflow settings

- a) Overflow setting to storm tanks
- b) Maximum flow to storm tanks (pumped flow – FFT)
- c) Overflow setting to storm sewage overflow
- d) Maximum flow to storm sewage overflow

6. Storage capacity

- a) Volume of Storm tanks
- b) Retention time of storm tanks at maximum flow
- c) Storage capacity of sewer/wet well

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

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

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

10. What provisions will be made to deal with:

- a) power failure (eg standby generators)?
- b) mechanical breakdown (eg standby pumps)?
- c) rising main failure?
- d) tanker access?

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.



ANNEXE 3 TRADE EFFLUENT DISCHARGES

Please complete this annexe if you are proposing to make a discharge trade effluent (this includes site drainage).

Official Use Only
Application No.

1. Site Name.

Whitland WwTW

2. a) Describe in full the trade effluent and the process(es) from which it arises.

Wincanton Group - Tanker washing No 389 of 2002
King Thomas Lloyd Jones and Williams – Whitland New Livestock Mart SW481

b) Please state the type and number of treatment units you are proposing to use (if site drainage please include details of oil/petrol interception facilities).

3. Rainfall Dependent Discharges

not applicable

a) Is the volume going to be rainfall dependent?

Y/N

b) If yes, please give the total area drained.

m²

c) Please give details of any activities which occur in the drainage area which could contaminate surface water (see note b)

4. Rainfall Independent Discharges

a) What is the maximum rate of discharge?

0.56 + 0.7 l/s

b) What is the average daily flow?

15 + 10 m³/d

c) For discharges where the source of supply is other than mains water:

i) give the abstraction licence number

ii) give the National Grid Reference of a point where the influent can be sampled.

(please mark on the plan)

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

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

6. a) Please state the maximum temperature in degrees Celsius of the effluent when discharged if different from ambient.

Ambient

b) Will the discharge be monitored for temperature? no
If yes, please give details of type and location (*please indicate on plan*)

7. Has an application for Authorisation been made for a 'prescribed process' as defined in Part 1 of the Environmental Protection Act 1990? no

If yes, please complete the following:

a) The application reference.

b) Contact name of case officer.

8. a) Please indicate if any of the specified substances given below or their compounds will be present in the effluent and if so at what maximum concentration (please give values in micrograms per litre - ug/l). Please see note c.

SUBSTANCE	CONCENTRATION (ug/l)			SUBSTANCE	CONCENTRATION (ug/l)		
	Max	Min	Mean		Max	Min	Mean
Iron				Lead			
Arsenic				Malathion			
Atrazine				Mercury			
Azinphos-ethyl				Nickel			
Azinphos-methyl				PCB's			
Boron				PCSD's			
Cadmium				Parathion			
Carbon tetrachloride				Parathion-methyl			
Chloroform				Pentachlorophenol (PCP)			
Chromium				Perchloroethylene			
Copper				Permethrin			
Cyanide				pH <5.5 or >9.0			
Cyfluthrin				Phosphorus			
DDT				Polychlorinated biphenyls			
1,2 Dichloroethane				Simazine			
Dichlorovos				Sulcofuron			
Dioxins				Tetrachloroethylene			
Drins (eg Aldrin, Dieldrin)				Tributyltin compounds			
Endosulfan				Trichlorobenzene			
Fenitrothion				Trichloroethane			
Fenthion				Trichloroethylene			
Flucofuron				Trifluralin			
Hexachlorobenzene (HCB)				Triphenyltin compounds			
Hexachlorobutadiene (HCBD)				Vanadium			
Hexachlorocyclohexanes (HCH's)				Zinc			

- b) Are there any other significant chemical components used on site which may be contained in the effluent, including biocides or additives? No
If yes, please give details.

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

- a) *For direct trade effluent discharges, full details of the type of the effluent are required (eg cooling water from air conditioning units), along with typical analytical details and the results of any toxicity studies on the effluent or its constituents. In certain circumstances the Agency may require that specific samples be taken and tests and analysis carried out. The Agency is empowered to recover any costs incurred as a result of special studies.*
- b) *Possible sources of contamination include oil/chemical storage areas, vehicle loading/unloading areas, heavy vehicle parking areas and oil/petrol filling points. Any other potential sources of contamination should be detailed.*
- c) *Where discharges of trade effluent take place to a sewerage system, as covered by this application, please give details of all authorised discharges of substances listed in table 8 overleaf.*



DŴR CYMRU
WELSH WATER

Trade Effluent Licence: SW481

Owner's Name:	JJ Morris Estate Agents	Trader's Name:	JJ Morris Estate Agents
Owner's Address:	5 High Street	Trader's Address:	5 High Street
	Cardigan		Cardigan
	Cardiganshire		Cardiganshire
	SA43 1HJ		SA43 1HJ
SPT:	110041	Contact Name:	
Responsible Officer:		Grid Reference:	
SIC Name:	SLAUGHTERING/MEAT PROCESSING	Consent Granted:	14 December 1981
Name of Division:	South West	Current Var/Dir:	
Name of STW:	Whitland	Consent Closed:	
Hydro. Ref. Point:	0	Consent Revoked:	
		Hydro. Distance:	0

Discharge Description:

Consent Comments:

Chemical:	Amount:	Units:
COD - Settled (Det Code 91)	5000	mg/Litre
Total Suspended Solids (Det Code 135)	5000	mg/Litre
Sulphate (Det Code 183)	500	mg/Litre
Oil and Grease (Det Code 666)	100	mg/Litre

Volume	VolumeUnits	Rate	RateUnits	PeriodFrom	PeriodTo	pHLowerID	pHUpperID
10	m3/Day	2	m3/Hr	22:30:00	07:30:00	6	10

**DWR CYMRU CYFYNGEDIG
WATER INDUSTRY ACT 1991**

**CONDITIONAL CONSENT TO THE DISCHARGE
OF TRADE EFFLUENT TO THE PUBLIC SEWER**

TO: WINCANTON GROUP LTD.

the Owner and/or Occupier of the trade premises (hereinafter called "the Occupiers") whose registered office is situated at **CALE HOUSE, STATION ROAD, WINCANTON, SOMERSET.**

RECITALS

1. The 31st July 2002 you applied for consent under Section 119 of the Water Industry Act 1991 for consent to discharge trade effluent from the following trade premises known as **WINCANTON GROUP LTD.** and situated at **SPRING GARDENS, WHITLAND, CARMARTHENSHIRE** (hereinafter, the Application) and which trade premises are for the purpose of identification only shown on the location plan attached hereto and marked "A" (hereinafter, "the said trade premises").
2. [Reference was made to the Secretary of State for Wales under Section 120 of the Water Industry Act 1991 and his Determination is dated] N/A
3. Compliance with the conditions hereunder shall be ascertained by reference to the method of analysis as from time to time employed by the Undertaker, its servants, agents or contractors, save where the said condition(s) otherwise expressly provide(s) **DWR CYMRU CYFYNGEDIG** ("the Undertaker) in the exercise of its powers under Section 121 of the Water Industry Act 1991, and thinking it fit to impose conditions as hereinafter appear, **GIVES ITS CONSENT** to the discharge of trade effluent from the said trade premises into the Undertaker's public sewers, **SUBJECT TO THE FOLLOWING CONDITIONS AND NOT OTHERWISE**
 - (1) The public sewer into which the trade effluent may be discharged is the **150 mm** more particularly identified by means of a line coloured **RED** drawn on the plan attached hereto and marked "B".

- (2) The discharge of trade effluent shall be made at the point marked "X" on the said plan and the said trade effluent shall enter into the public sewer shown on the said plan at the point marked "Y" thereon and not otherwise. Further, no connection, linkage, conduit, pipe, channel or other communication whatsoever shall be made to the said sewer between the said points "X" and "Y" without the prior approval in writing of the Undertaker.
- (3) The trade effluent to be discharged shall consist solely that which is specified in the Application and derived exclusively from **Cleaning of milk tankers**.
- (4) Without prejudice to condition 3 above, the nature and/or composition of the trade effluent which may be discharged is as specified in the **FIRST SCHEDULE** hereto.
- (5) The trade effluent shall not include any of the substances or properties listed in the **SECOND SCHEDULE** hereto in concentration greater than stated therein.
- (6) The maximum quantity of trade effluent discharged on any day (being any continuous 24 hour period) shall not exceed **15** cubic metres.
- (7) The highest rate at which trade effluent may be discharged shall not exceed **0.7** litres per second
- (8) The trade effluent may be discharged into the public sewer between 2200 hrs and 0600 hrs
- (9) No uncontaminated condensing water shall be discharged.
- (10) There shall be eliminated from the trade effluent before it is discharged the matters listed below:
 - (a) Effluent with a temperature in excess of 43° Celsius (110° Fahrenheit);
 - (b) Calcium Carbide;
 - (c) Petroleum Spirit within the meaning of Section 111 of the Water Industry Act 1991 and/or the Petroleum Act 1928, save as otherwise permitted herein;

- (d) Other material forming a constituent of the trade effluent, whether alone or in combination with other materials, specified hereby as that which is explosive;
 - (e) Any other substance forming a constituent of the trade effluent which is hereby specified as that which is likely to injure the sewers or to interfere with the free flow of their contents or to affect prejudicially the treatment and disposal of their contents;
 - (f) Any other substance forming a constituent of the trade effluent which is hereby specified as that which in its pure state or in combination with other materials in the contents of the sewer(s) ("the sewage") is capable of producing toxic or flammable vapours.
- (11) No trade effluent shall be discharged the pH value of which is less than 6.0 or greater than 10.0.
- (12) No trade effluent shall be discharged the nature or composition of which includes a matter, substance, property or matters, substances or properties which would constitute the trade effluent as Special Category Effluent within the meaning of Section 138 of the Water Industry Act 1991.
- (13) The Occupier shall give to the Undertaker prior written notice of any change in the process of manufacture, materials, or other circumstances howsoever arising capable of altering the nature and/or composition of the trade effluent. No new substances or properties shall be discharged until the Undertaker has agreed thereto, either with or without imposing a limit and thereafter the said substance(s) and/or property(ies) shall be deemed incorporated into the SECOND SCHEDULE.
- (14) An inspection chamber or manhole shall be provided and maintained by the Occupier in a suitable position and/or at the point(s) marked "X" on the plan annexed hereto in connection with each pipe through which the trade effluent is discharged and such inspection chamber or manhole shall be constructed and maintained in accordance with the Undertaker's reasonable requirements as from time to time notified in writing to the occupier so as to enable a person

SCHEDULE TWO

1. Total suspended solids shall not exceed 500 milligrams per litre.
2. Total free and/or emulsified oil and grease shall not exceed 300 milligrams per litre.
3. The chemical oxygen demand of the trade effluent after one hour quiescent settlement at pH 7 shall not exceed 3000 milligrams per litre.
4. Total synthetic anionic detergents shall not exceed 30 milligrams per litre (expressed as Manoxol OT)



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.

Whitland WwTW

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

no

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

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

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

10 inch NB

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

Scheme cost approx £1.83M

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

Yes

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

Tick

✓

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

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

For proposed discharges of sewer in storm or emergency conditions:

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

8. Please state:

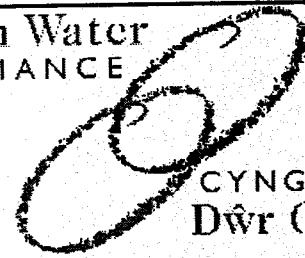
Population served (head)	2120 PE
Consumption (l/head/day) default = 180	180
Infiltration (m ³ /day)	115
Industrial effluent flow (m ³ /day)	25
Dry Weather Flow (m ³ /day)	522
Soc A (l/sec)	40
Predicted spill frequency (per annum)	0.85% ie.24/annum

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.**

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

Welsh Water
 ALLIANCE



CYNGHRAIR
 Dŵr Cymru

Document Cover Sheet

Project Title
Project Number
Client
Document Reference Number

Whitland WwTW
 C631
 DWR CYMRU/WELSH WATER
 C631/6.1/01

Whitland WwTW

Consent application support document

Rev.	Date	Description/Purpose	Prepared	Checked ¹			Approved for Issue ²	
				Mech	Proc	Elect	EM	PM
0	15.07.05	First issue	MR		MR		AJW	SW
A	08.08.05	Revised attachments	MR		MR			
B								
C								
D								

Contents

Scheme justification

Extracts from phase 3 report, table 3, table 4, fig 1, fig 2, page 15 and page 16.

Drg C631 – 2001

Drg C631 – 2006

Drg C631 – 2008

Notes

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

SCHEME JUSTIFICATION – C631

INTRODUCTION

Whitland WwTW treats wastewater from the domestic dwellings in the village of Whitland, where there are a number of local businesses as well as a school.

All gravity sewers meet at the terminal pumping station from where sewage is pumped some 400m to the works. There is an overflow from this pumping station that discharges to the Afon Taf.

Treated effluent and storm tank overflow from the works discharge under gravity to the Afon Taf, at a different location to the pumping station overflow.

Current consent limits for the works are as follows

Biological Oxygen Demand (BOD) :	40 mg/l
Suspended Solids (SS) :	50 mg/l
Ammoniacal Nitrogen :	n/a mg/l
Dry Weather Flow (DWF)	216 m ³ /d
Maximum flow rate	14.8 l/sec

EXISTING WORKS

The existing works comprises grit removal (out of commission), comminutor (out of commission), measuring flume, balance tank c/w floating arm, overflow to 2 off storm storage tanks which overflow via a pyramidal settlement tank to the outfall.

Four pyramidal primary settlement tanks are fed from the balance tank via a flow splitter, biological treatment is by 3 off rock media filters followed by a pair of pyramidal humus tanks. Pumping system is provided for humus sludge and liquor returns. Sludge storage is in converted drying beds.

Walls have structurally failed on 2 of the 3 filters.

FLOWS AND LOAD

A flow survey has been carried out and the results have been used to support the design basis.

The process design on which this report is based has been calculated from house counts, occupancy densities, and UDP expansions projected.

The basis for design for the works upgrade, including relevant wastewater inflow characteristics is summarised below:

	BASIS	VALUE
Population Equivalent (PE)	Flow	2120
Dry Weather Flow (DWF)	m ³ /day	522
	l/s	6.0
Average Flow	m ³ /day	652
	l/sec	7.5
3DWF	m ³ /d	1335
	l/sec	15.45
Design flow	m ³ /d	1335
	l/s	15.5
SOC A	m ³ /d	3455
	l/sec	40
BOD Load	kg/day	127
SS Load	kg/day	148
NH ₃ – N Load	kg/day	17

PROCESS SOLUTION.

The EA have confirmed the final effluent consent conditions to be BOD/TSS/Amm-N < 16/20/4 mg/l, 95 %ile.

In order to negate the need for additional storage to be constructed at the pumping station a flow of 45 l/s will be pumped forward to the works where treatment rate split of 15.5 l/s will be made, all excess flows are directed to the storm settlement tanks.

Mechanical 6mm x 6mm screening to storm and emergency overflows will be provided at the pumping station together with a standby generator.

In order to limit the spills to the watercourse the storm storage volume at the works will be increased to a total of 250 m³.

Mechanical 6mm x 6mm screening to all pumped flows arriving at the works will be required.

Existing primary tanks are considered satisfactory for the projected FFT provided that the flow is accurately split, that the rate of return of humus sludge is limited to less than 2 l/s, and that the recirculation flows are automatically controlled by treatment flow rate.

Biological capacity will not be adequate to meet the expected new consent; the rock media in the existing 15mØ filter will be replaced with structured plastic media.

It will be necessary for re-circulation to be added together with a new electrically powered distributor to suit the needs of wetting rates on the filters.

Humus tank capacity will need to be increased to limit the upflow velocity to achieve the indicative solids consented values, the size of additional tankage is suggested as 6.0m dia.

There is a need to pay attention to flow distribution at various points within the process stream.

It is not envisaged that any major change will be made to the sludge storage arrangements.

CONSENT APPLICATIONS

It will be necessary to apply for the following consent variations

Variation to works final treated effluent consent, BL0138501, comprising

- Schedule 10
- Annex 1
- Annex 3
- Annex 4

Variation to works storm discharge consent, BL0138502, comprising

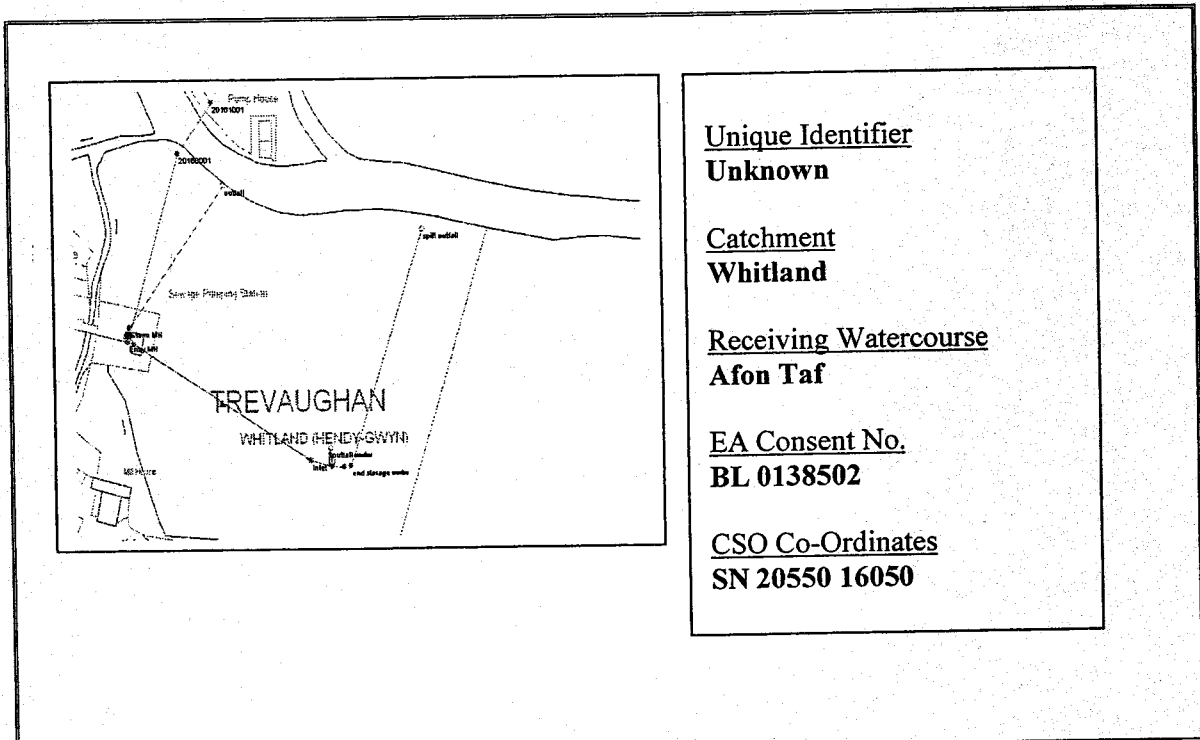
- Schedule 10
- Annex 2
- Annex 3
- Annex 4

Variation to pumping station storm/emergency discharge consent, BL0113001, comprising

- Schedule 10
- Annex 2
- Annex 3
- Annex 4

CITY AND COUNTY OF SWANSEA
DINAS A SIR ABERTAWE

Figure 1 - Whitland Treatment Works



Unique Identifier
Unknown

Catchment
Whitland

Receiving Watercourse
Afon Taf

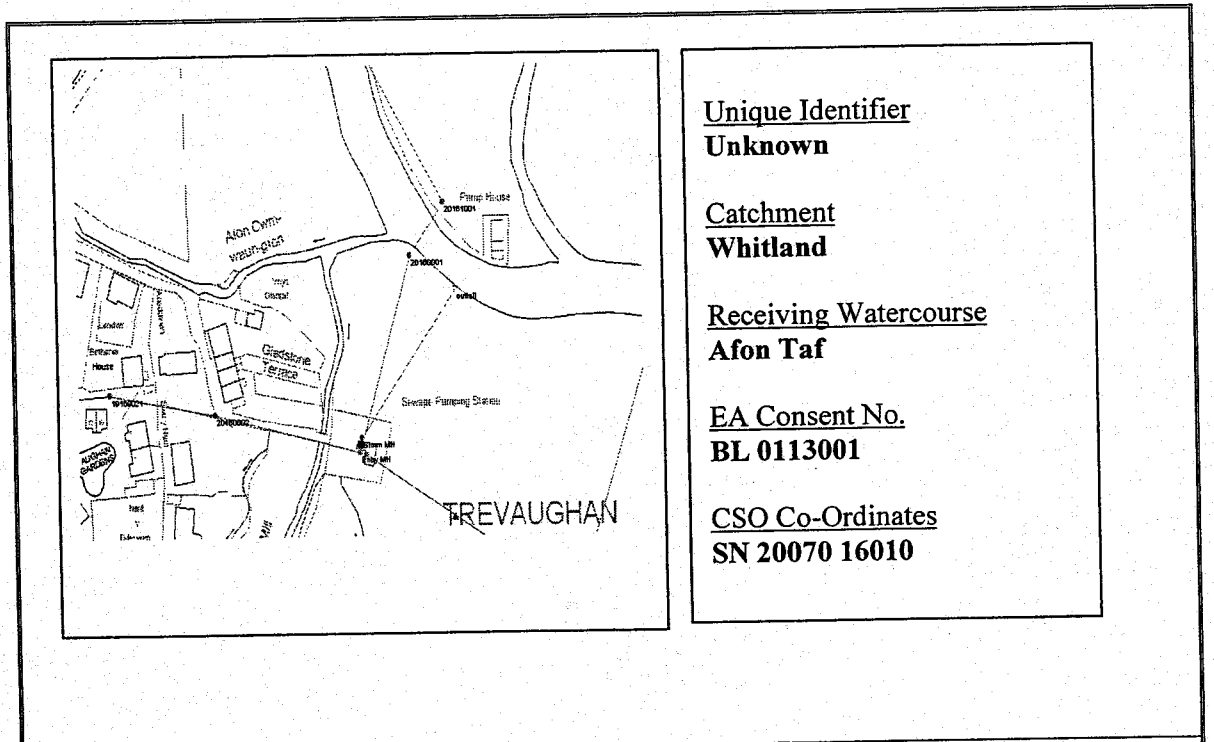
EA Consent No.
BL 0138502

CSO Co-Ordinates
SN 20550 16050

Amenity rating	M (Possibly H)		Significance rating				
Priority			EA ranking				
EA perceived problems							
Overflow classification	CSO		Degree of solids separation	6mm			
Existing 2003				Future 2016			
SOC A	31.31 l/s	CSO setting	15 l/s	SOC A	39.98l/s	CSO setting	15.45 l/s
DWF	4.76 l/s			DWF	6.03 l/s		
Typical year Spills / year	Not Used	Total annual spill volume (m³)	908	Typical year Spills / year	Not Used	Total annual spill volume (m³)	4555
Bathing Season Spills / year	N/A	Spills/Bathing Season >50m³	N/A	Bathing Season Spills / year	N/A	Spills/Bathing Season >50m³	
Sequential Storms Spill / year	10	Spills /sequential Season >50m³	5	Sequential Storms Spill / year	24	Spills /sequential Season >50m³	15
Provisional screening requirement				Future deterioration >10%			
Comments							
Indicative isolated solution							
Screening	6mm Mechanical screen						
Storage	230m³						
Other sewerage							

CITY AND COUNTY OF SWANSEA
DINAS A SIR ABERTAWE

Figure 2 - Whitland Pumping Station



Unique Identifier
Unknown

Catchment
Whitland

Receiving Watercourse
Afon Taf

EA Consent No.
BL 0113001

CSO Co-Ordinates
SN 20070 16010

Amenity rating		M (Possibly H)		Significance rating			
Priority		-		EA ranking		-	
EA perceived problems		-		-		-	
Overflow classification		CSO		Degree of solids separation		6mm	
Existing 2003				Future 2016			
SOC A	31.31 l/s	CSO setting	30 l/s	SOC A	39.98 l/s	CSO setting	45 l/s
DWF	4.76 l/s			DWF	6.03 l/s		-
Typical year Spills / year	Not Used	Total annual spill volume (m³)	16,289	Typical year Spills / year	Not Used	Total annual spill volume (m³)	3,604
Bathing Season Spills / year	N/A	Spills/Bathing Season >50m³	N/A	Bathing Season Spills / year	N/A	Spills/Bathing Season >50m³	N/A
Sequential Storms Spill / year	149	Spills /sequential Season >50m³	74	Sequential Storms Spill / year	47	Spills /sequential Season >50m³	21
Provisional screening requirement		-		Future deterioration >10%		-	
Comments							
Indicative isolated solution							
Screening	6mm Mechanical screen						
Storage	50m3 (Utilising Wet Well)						
Other sewerage							

Revised SOC Calculation for Whitland

$$\text{SOC A} = (P \times G) + I + E + 1360P + 2E$$

$$\begin{aligned}\text{SOC A ex} &= (1650 \times 180) + (745 \times 120) + 25,000 + (1360 \times 1650) + 50,000 \\ &= 297,000 + 89,400 + 25,000 + 2244000 + 50,000 \\ &= 2,705,400\end{aligned}$$

$$\text{SOC A ex} = 31.31 \text{ l/s}$$

$$\begin{aligned}\text{SOC ft} &= (2120 \times 180) + (959 \times 120) + 25,000 + (1360 \times 2120) + 50,000 \\ &= 381,600 + 115,080 + 25,000 + 2883200 + 50,000 \\ &= 3,454,880\end{aligned}$$

$$\text{SOC A ft} = 39.98 \text{ l/s}$$

$$3\text{DWF ex} = 3PG + I + 3E$$

$$\begin{aligned}(3 \times 1650 \times 180) &+ (745 \times 120) + 75,000 \\ &= 891,000 + 89,400 + 75,000 \\ &= 1,055,400\end{aligned}$$

$$3\text{DWF ex} = 12.2 \text{ l/s}$$

$$\begin{aligned}3\text{DWF ft} &= (3 \times 2120 \times 180) + (959 \times 120) + 75,000 \\ &= 1144800 + 115080 + 75,000 \\ &= 1334880\end{aligned}$$

$$3\text{DWF ft} = 15.45 \text{ l/s}$$

$$2 \text{ hours storage} = 2 \times 15.45 \times 3600 = 111.24\text{m}^3$$

$$1 \text{ hours storage} = 55.62\text{m}^3$$

Storage available is 55m³

Therefore 1 hours storage available

CITY AND COUNTY OF SWANSEA
DINAS A SIR ABERTAWE

Table 4 - Post-Design Volumes - Typical Sequential Year

Spill volumes at WWTW(Treatment works)

Storm Ref No.	Duration Min	Volume M3		Storm Ref No.	Duration Min	Volume M3
34	240	415		430	50	74
33	202	283		108	101	42
149	123	185		458	39	42
171	111	178		450	29	36
202	91	147		572	48	35
288	149	106		421	27	32
167	70	85		280	60	30
874/25	724	842		264/600	316	199
1955/22	482	762		2152/483	99	139
1219/26	292	506		948/1214	94	121
98/2833	393	488		1986/379	80	99
3238/31	263	374		1579/700	55	78
2329/462/1333/ 2713	292	362		1893/417	63	34
2818/154	135	227		3866/644	42	23

Annual Spill Percentage WWTW = 0.85%

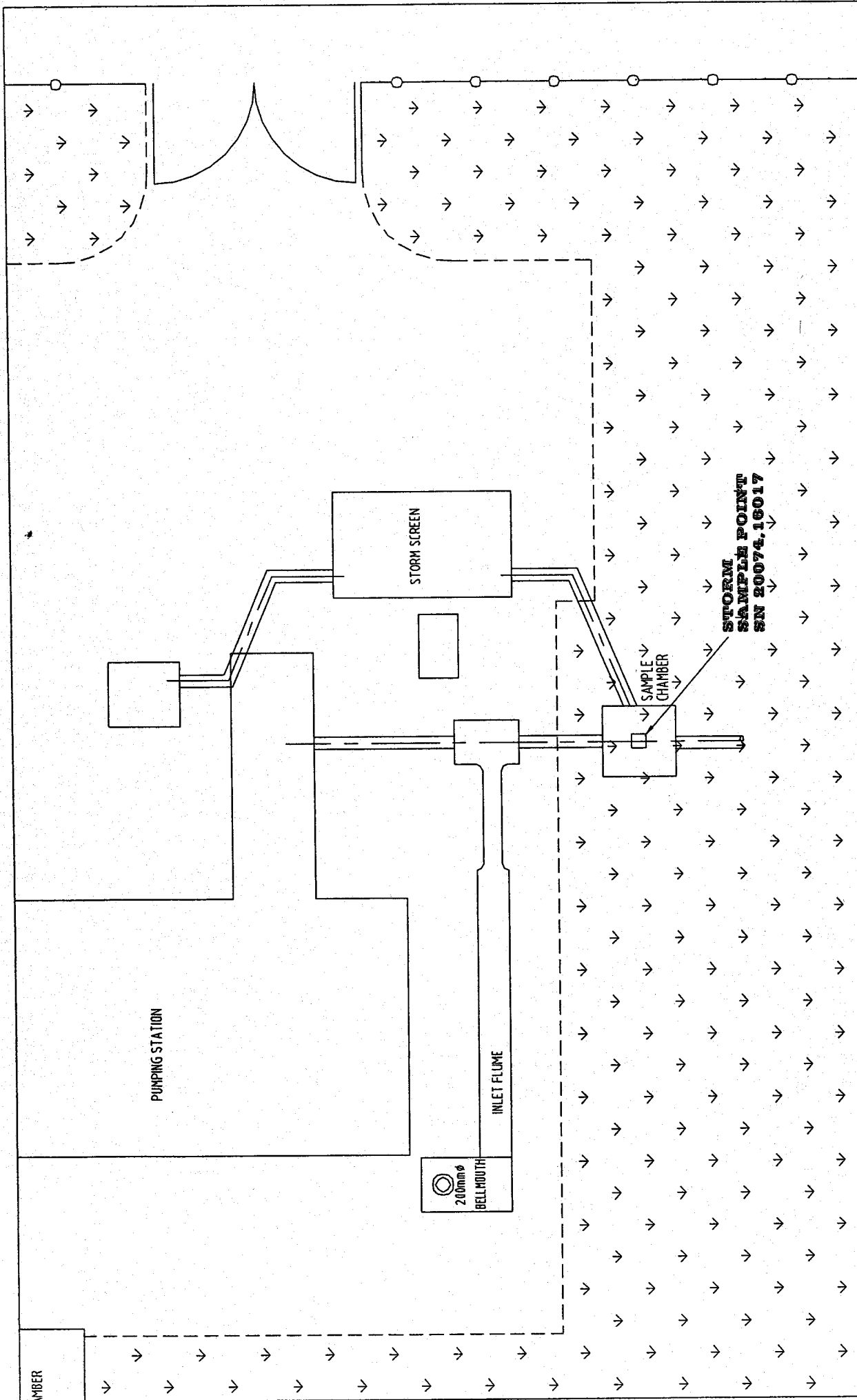
CITY AND COUNTY OF SWANSEA
DINAS A SIR ABERTAWE

Table 3 - Post-Design Volumes - Typical Sequential Year

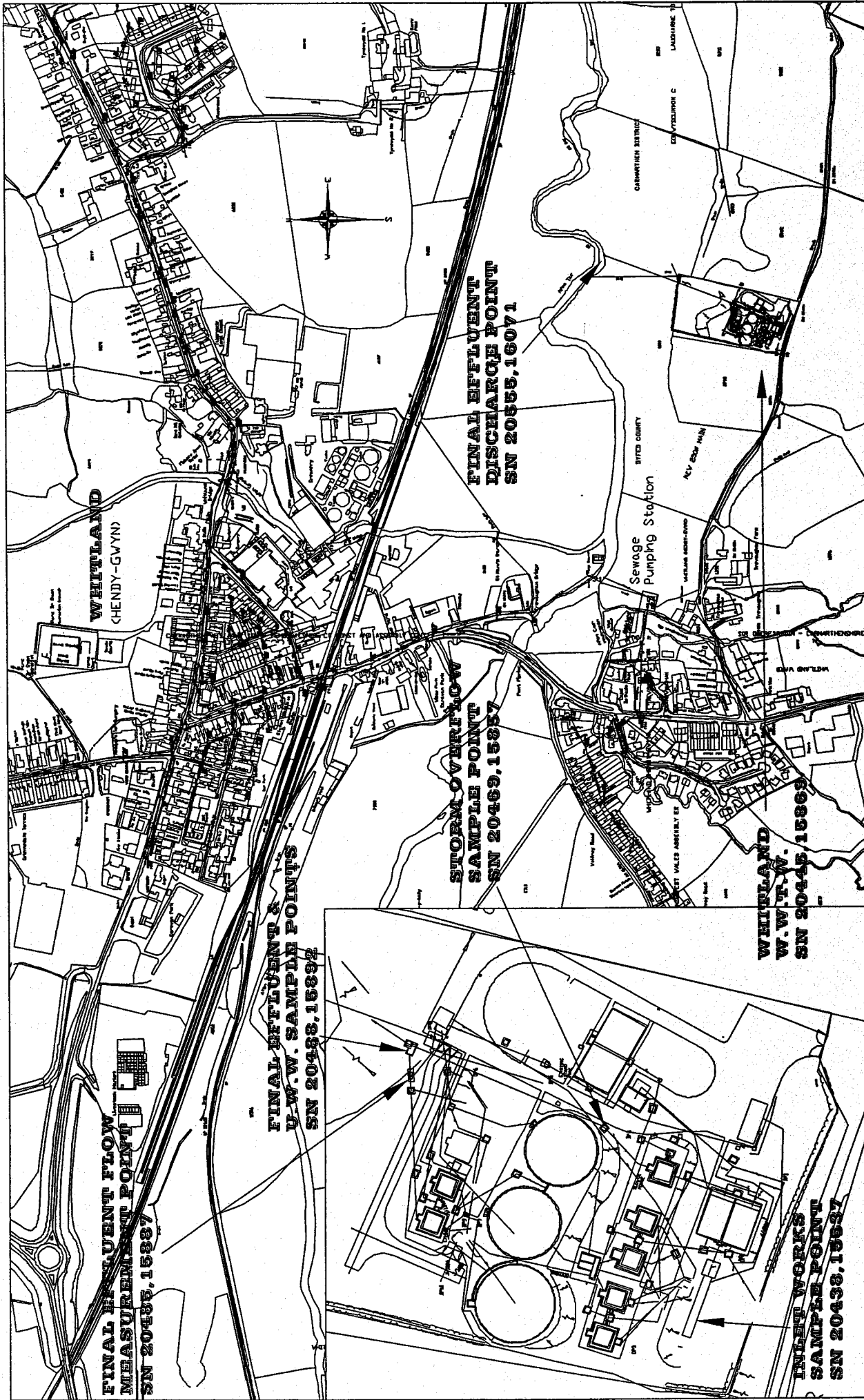
Spill Volumes at Whitland Pumping Station

Storm Ref No.	Duration Min	Volume M3		Storm Ref No.	Duration Min	Volume M3		Storm Ref No.	Duration Min	Volume M3
34	275	780		723	40	137		572	35	28
33	145	605		202	95	135		288	20	24
108	110	592		733	50	121		965	20	16
167	150	400		738	50	121		1024	20	13
171	160	397		602	40	109		1348	15	11
220	85	383		746	35	101		2294	10	11
149	170	379		1026	35	94		1507	10	10
357	65	283		1028	30	90		421	20	7
541	80	279		1425	40	87		280	10	4
420	60	279		1701	30	79		1320	5	2
390	60	249		671	30	79		1586	10	2
450	105	210		1128	30	55				
458	80	204		831	35	43				
430	90	203		986	25	41				
559	70	183		1460	20	32				
489	55	152		741	25	30				
749	60	141		1142	45	29				
3238/31	270	939		1986/379	40	98				
1955/22	365	867		88/2833	105	95				
1219/26	295	690		948/1214	60	54				
2818/154	140	339		1579/700	40	40				
				2329/462/1						
1893/417	80	326		333/2713	35	28				
264/600	90	306		1217/2022	15	17				
349/3817	75	285		852/4117	5	2				
874/25	190	261		3329/1482	5	1				
				1400/3512/						
3740/465	70	209		2617	5	1				
642/3858	50	120								

Total Annual Spill Percentage = 0.87%

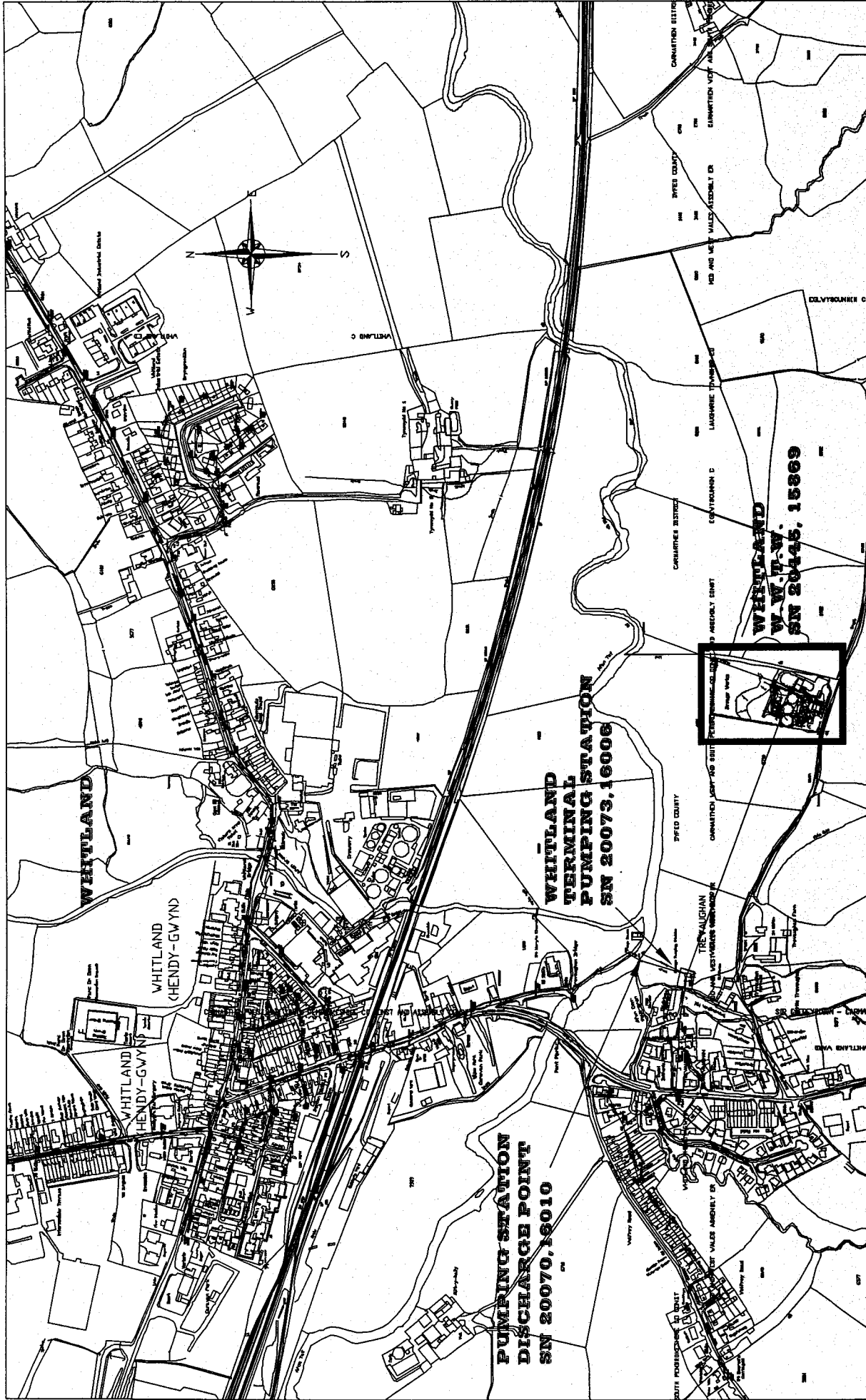


 MEICA PROCESS LTD Drawing No. C631/2008	Project Code C631	Issue A
	Project Name C631/2008	Date 06/31/2008
 DWR CYMRU WELSH WATER	 Welsh Water Capital Alliance	 Cymdeith Cymru Dŵr Cymru
THIS DESIGN IS CONFIDENTIAL AND THE COPYRIGHT THEREON IS THE PROPERTY OF MEICA LTD. NO PART OF THIS DESIGN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION AND THAT IT SHALL BE USED ONLY AS A REFERENCE TO WORK BY THE ABOVE NAMED COMPANY.		
Client DWR CYMRU WELSH WATER	Project WHITLAND W.W.T.W. THE TREVAUGHUN PUMPING STATION LOCATION OF STORM SAMPLING POINT	Scale as 1:50
Date 27.07.05	Title D.E.	Status LOCAL
Author ACH	Checked []	Approved []
Description A. FOR APPROVAL		



B FOR APPROVAL Date: 29.07.05 Author: [Signature] Description: [Blank]	DWIR CYMRU WELSH WATER	Scale A3 1:5000	Datum LOCAL	Project WHITLAND W.W.T.W.	Client DWR CYMRU WELSH WATER	Project Code C6.31	Drawing No. C6.31-2006	Sheet B
	This SITE LAYOUT SHOWING DISCHARGE, FLOW MEASUREMENT & SAMPLING POINTS		Welsh Water Capital Alliance		Central Cymru Dŵr Cymru	Project Code C6.31	Drawing No. C6.31-2006	Sheet B
MEICA PROCESS LTD Part Y Sgelli, Llansteffan Road Jarrstown, Carmarthen, SA31 3BU Tel: 01267 252919 Fax: 01267 221615								

THIS DRAWING IS CONFIDENTIAL AND IS THE PROPERTY OF MEICA LTD. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT TO BE REPRODUCED OR COPIED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF MEICA LTD.



Whitland W.W.T.W. SITE LOCATION PLAN		Welsh Water Capital Alliance Cynghrair Cymru Dwr Cymru DWR CYMRU WELSH WATER		MEICA PROCESS LTD Parc Y Stryd, Llantrisant, Road Junction of Llantrisant Road, Sully, Sully, SA1 3BU Tel: 01552 222993 Fax: 01552 221167	
Client: DWR CYMRU WELSH WATER		Project: WHITLAND W.W.T.W.		Drawing No: C631	
Date: 19.08.05		Scale: A3 1:5000		Project Date: C631-2001	
Description: B PUMP STATION DISCHARGE ADDED		Date: MR 19.08.05		Issue: B	
Author: MR		Date: MR		Issue: B	
Checked: MR		Date: MR		Issue: B	
Approved: MR		Date: MR		Issue: B	

