ATTACHMENT No: A.1
NON TECHNICAL SUMMARY

ATTACHMENT No: A.1
NON TECHNICAL SUMMARY

1.0 The waste water works and the activities carried out

Rosses Point is located approximately 8km to the North West of Sligo Town. The current population equivalent served by the WwTW is approximately 1409 p.e. This figure was advised by Sligo County Council in February 2009 and is based on the results of a house count in June 2006 and estimation of number of houses completed since that date.

Currently sewage from the village is conveyed via a combined collection network to a septic tank located to the east of the village. This tank discharges to the sea via an outfall pipe. The tank has a liquid holding capacity of approximately 350m^2.

At present a new WwTP is being constructed to serve Sligo Town. The plant is due to be commissioned during January 2009 and is the subject of the EPA WwDL Application Register Number: D0014-01. As detailed in the Sligo Town WwDL Application, it is proposed to pump sewage from Rosses Point to the Sligo Town WwTP.

It is proposed to construct a pumping station and an emergency overflow tank at the existing Septic Tank site in Rosses Point. It is also proposed to convert the existing septic tank to an emergency storm holding tank. Plans for this development are currently available in Sligo County Council offices and it is expected to be approved in a Council Meeting in April 2009. Drawings are contained in Attachment B.6.

2.0 The sources of emissions from the waste water works

Primary Discharge

The primary discharge from the septic tank is to the sea at Sligo Harbour. The performance of the holding tank in removing solids is not known as no monitoring of the influent or effluent of the tank is carried out by Sligo County Council due to Health and Safety access issues.

During storm conditions flows in excess of the septic tank capacity discharge directly into the sea through a bypass overflow system. Discharge is to the sea through the same outfall pipe as the primary discharge pipe.

Storm Water Overflow from the network

There are currently 3 storm water overflows from the sewage network in Rosses Point. It is not known how often overflow occurs. As detailed in the Sligo Main Drainage WwDL Application, these overflows will remain after the decommissioning of the existing septic tank. In the event of an emergency or extreme storm event, where flows entering the main pumping station in Sligo Town exceed the design capacity or in the event of a power failure, the overflows at Rosses Point may be utilized.

3.0 The nature and quantities of emissions from the waste water works (into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment)

The performance of the septic tank in removing solids is not known as no monitoring of the influent or effluent of the tank is carried out due to Health and Safety access issues. However, for the purposes of this application, a two day flow and load survey was carried out the results of which are summarized below.

Influent				
Date	**Cert No.**	**Daily Flow (m3)**	**BOD Load (kg)**	
13-14.10.08	15290	133.53	4.01	
14-15.10.08	15291	185.85	12.82	
Effluent				
Date	**Cert No.**	**Daily Flow (m3)**	**COD Load (kg)**	**BOD Load (kg)**
13-14.10.08	15294	134.833	7.42	2.56
14-15.10.08	15296	194.485	16.92	4.67

	13-14.10.08	14-15.10.08
Parameter	**Result**	**Result**
pH	7.5	7.3
Temperature	17	16
Ammonia	8.76	10.7
Total-P	1.745	2.233
Ortho-P	1.16	1.406
Conductivity	803	2073
Nitrate	2.3	2.2
Nitrite	0.015	0.085
Total Nitrogen	17.12	20.92
Sulphate	57.54	90.74
T.S.S	27	46
BOD5	19	24
COD	55	87

4.0 Identification of significant effects of the emissions on the environment

Emssions from the Septic Tank are to the sea at Sligo Harbour. This Section of Sligo Harbour is designated under the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. The part of the Bay where the primary discharge enters the sea is also designated under the SPA Drumcliff Bay. The NPWS have been asked to comment on the likely effect of the discharge on the SAC (detailed in section F of this application).

5.0 The proposed technology and other techniques for preventing or reducing emissions / pollution from the waste water works

The plan to treat discharges from the WwTW at Rosses Point at the new WwTP serving Sligo Town will ensure that there are reduced emissions from the Rosses Point Septic Tank.

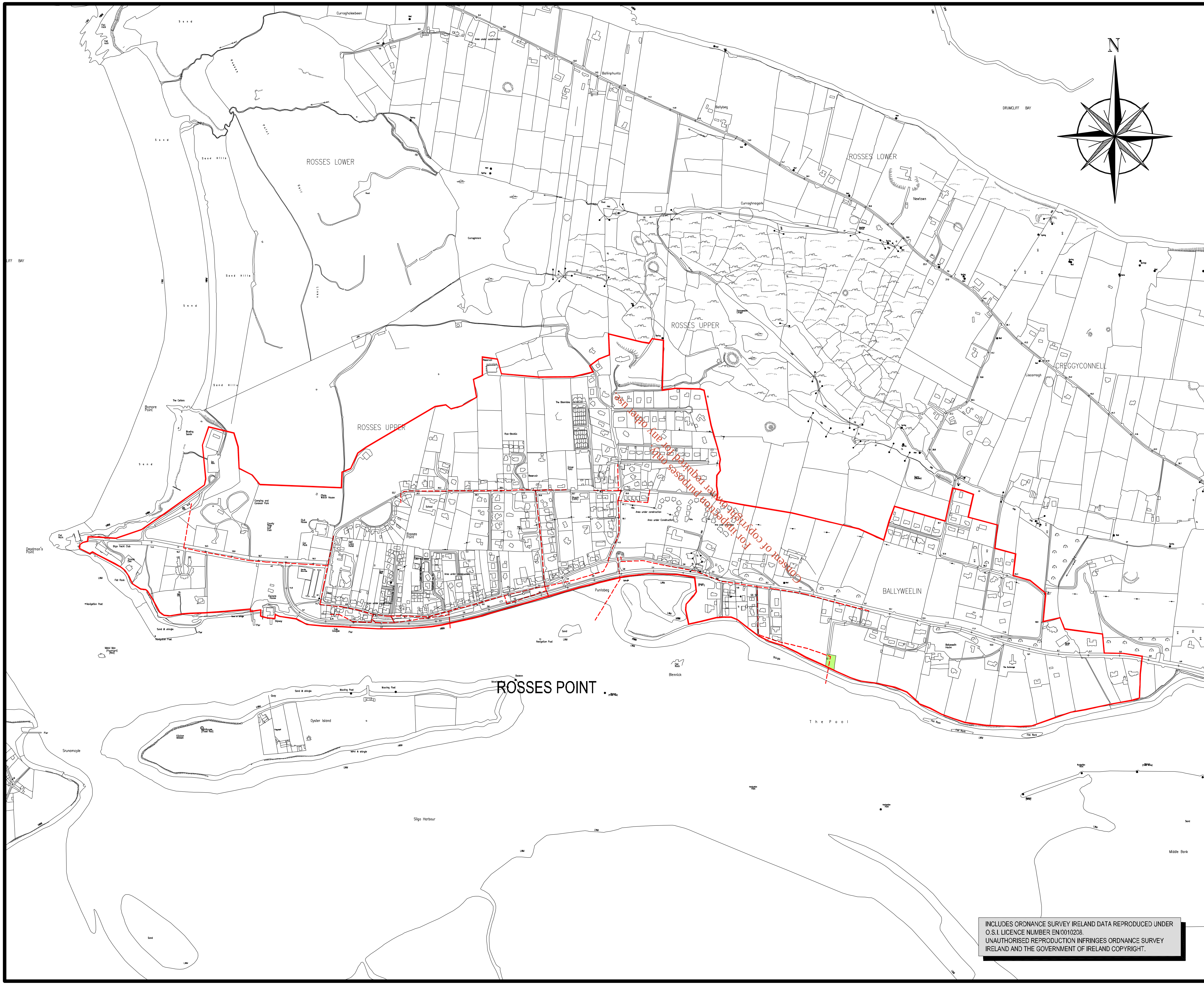
6.0 Measures planned to monitor emissions into the environment

As a condition of the EIS for the Sligo Main Drainage WwTP, a monitoring programme of the Garavogue River and estuary has been in operation since April 2000. This programme is to continue after the commissioning of the WwTP in October 2008. This sampling programme is carried out to ascertain the quality of fresh and marine waters in the area. Sampling is carried out at 8 sample locations on the Garavogue River and Sligo Estuary on a quarterly basis. More detail can be found in the WwDL Application for Sligo Town.

7.0 Other

The septic tank and network is maintained by a caretaker from Sligo County Council and on average is visited a few times a week to ensure that it is operating correctly.

ATTACHMENT No: B.1
BOUNDARY OF AGGLOMERATION



NOTES

LEGEND

- AGGLOMERATION BOUNDARY
- WASTEWATER TREATMENT PLANT
- SEWER NETWORK

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT

SLIGO COUNTY COUNCIL

PROJECT

ROSSES POINT
WASTEWATER TREATMENT PLANT

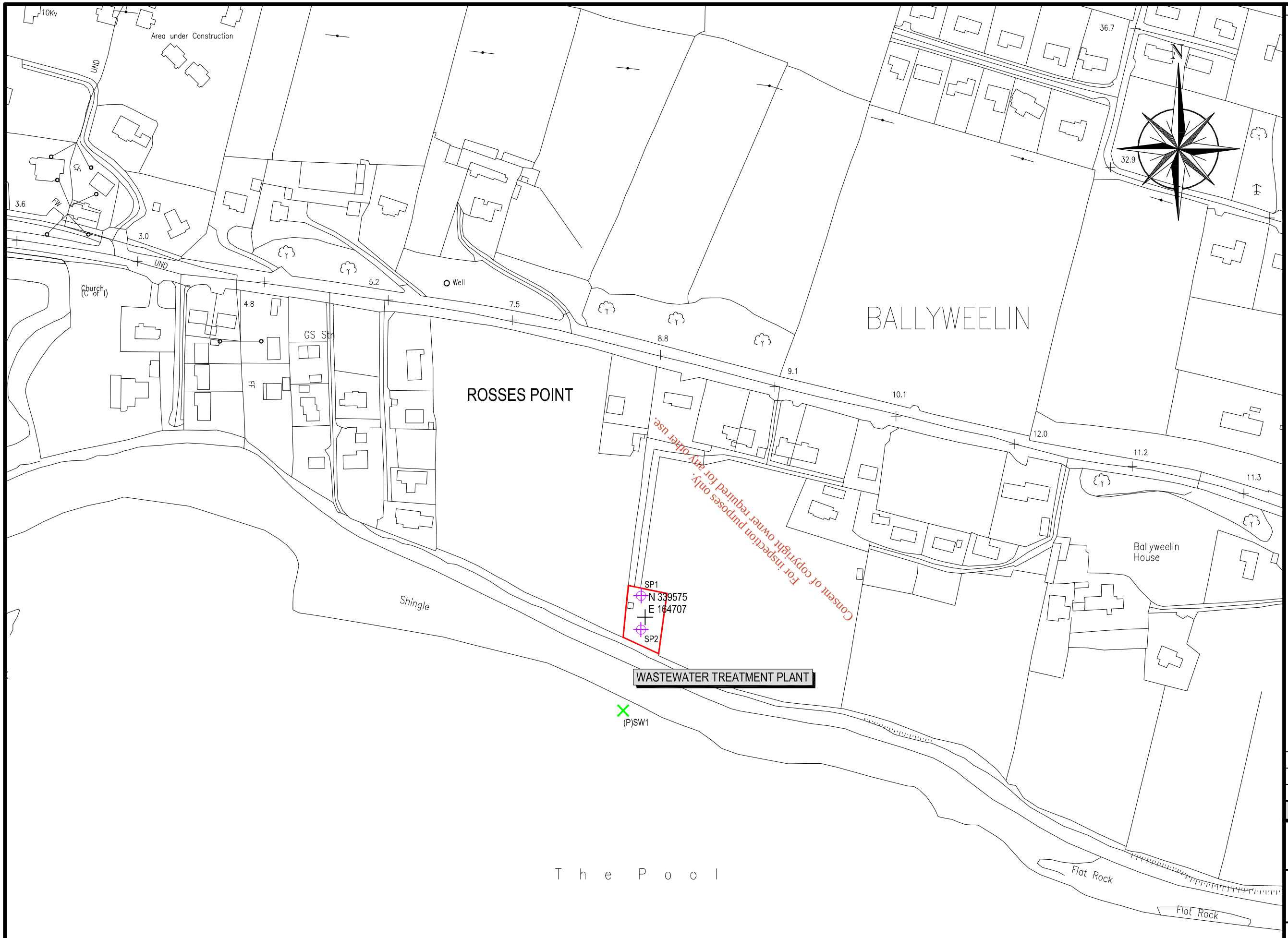
TITLE

DISCHARGE LICENCE
AGGLOMERATION

SCALES	DRAWN	
1:10000	D.Smithers	
	DATE 31.01.09	

CAD REFERENCE	SECTION	DRAWING No.	REV
B.1 20438-DL-RT-01	B.1	01	-

ATTACHMENT No: B.2
LOCATION OF WwTP



NOTES

LEGEND

SITE BOUNDARY OF WwTP

SPX WwTP SAMPLING POINT

PRIMARY DISCHARGE POINT (P)SW1

POINT	NORTHING	EASTING
SP1 (INFLUENT)	339590	164704
SP2 (EFFLUENT)	339567	164704
(P)SW1	339511	164692

9 of 75

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
WwTP OVERALL SITE PLAN

SCALES	DRAWN	DRAWING No.	REV
1:2500	D.Smithers	02	-
	DATE 31.01.09		
CAD REFERENCE B.2 20438-DLM-E-02	SECTION B.2		

ATTACHMENT No: B.3
LOCATION OF PRIMARY DISCHARGE POINT

NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- aSW1 — AMBIENT MONITORING POINT
- (P)SW1 — PRIMARY DISCHARGE POINT

POINT	NORTHING	EASTING
aSW1	340274	162678
(P)SW1	339511	164692

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV.	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
PRIMARY DISCHARGE POINT

SCALES	DRAWN	DATE	CAD REFERENCE	SECTION	DRAWING No.	REV
1:10000	D.Smithers	31.01.09	B.3 20438-DLRT-03	B.3	03	-

ROSSES LOWER

ROSSES POINT

ROSSES UPPER

CREGGYCONNELL

BALLYWEELIN

DRUMCLIFF BAY

aSW1

N 339575
E 164707

WASTEWATER TREATMENT PLANT

(P)SW1

Oyster Island

Sligo Harbour

Blennick

Puntabeg

ATTACHMENT No: B.5
LOCATION OF STORM WATER OVERFLOWS

NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- EXISTING SEWER NETWORK
- EXISTING PUMPING STATIONS
- STORM WATER OVERFLOW POINT (SWX)

POINT	NORTHING	EASTING
SW2	339696	164016
SW3	339765	163880
SW4	339674	163591

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
STORM WATER OVERFLOWS

SCALES	DRAWN	
1:5000	D.Smithers	
CAD REFERENCE	DATE	
B.5 20438-DLRT-04	31.01.09	
	SECTION	DRAWING No.
	B.5	04

REV -

ATTACHMENT No: B.6
PLANNING PERMISSION

Your Plan - Your Future

National Development Plan 2007 - 2013

Comhaírle Chontae Shligigh

SLIGO COUNTY COUNCIL

BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

DECEMBER 2008

BALLYWEELIN PUMPING STATION

PART 8 PLANNING DRAWINGS

SLIGO COUNTY COUNCIL,
COUNTY BUILDINGS,
RIVERSIDE,
SLIGO

JENNINGS O'DONOVAN & PARTNERS,
CONSULTING ENGINEERS,
FINISKLIN, SLIGO.
Tel: 071 9161416
Fax: 071 9161080
Web: www.jodireland.com
Email: info@jodireland.com

SLIGO COUNTY COUNCIL

BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

PART 8 PLANNING DRAWINGS

2995/BP8/000	Schedule of Drawings
2995/BP8/100	Proposed Ballyweelin Pumping Station Site Location Map
2995/BP8/101	Proposed Ballyweelin Pumping Station Existing and Proposed Site Layout Plans
2995/BP8/102	Proposed Ballyweelin Pumping Station Site cross sections

Notes

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES.
4. ALL LEVELS REFER TO ORDNANCE DATUM (MALIN HEAD).

rev.	modifications	by	date

client
SLIGO COUNTY COUNCIL

project
BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

stage
PART 8 PLANNING

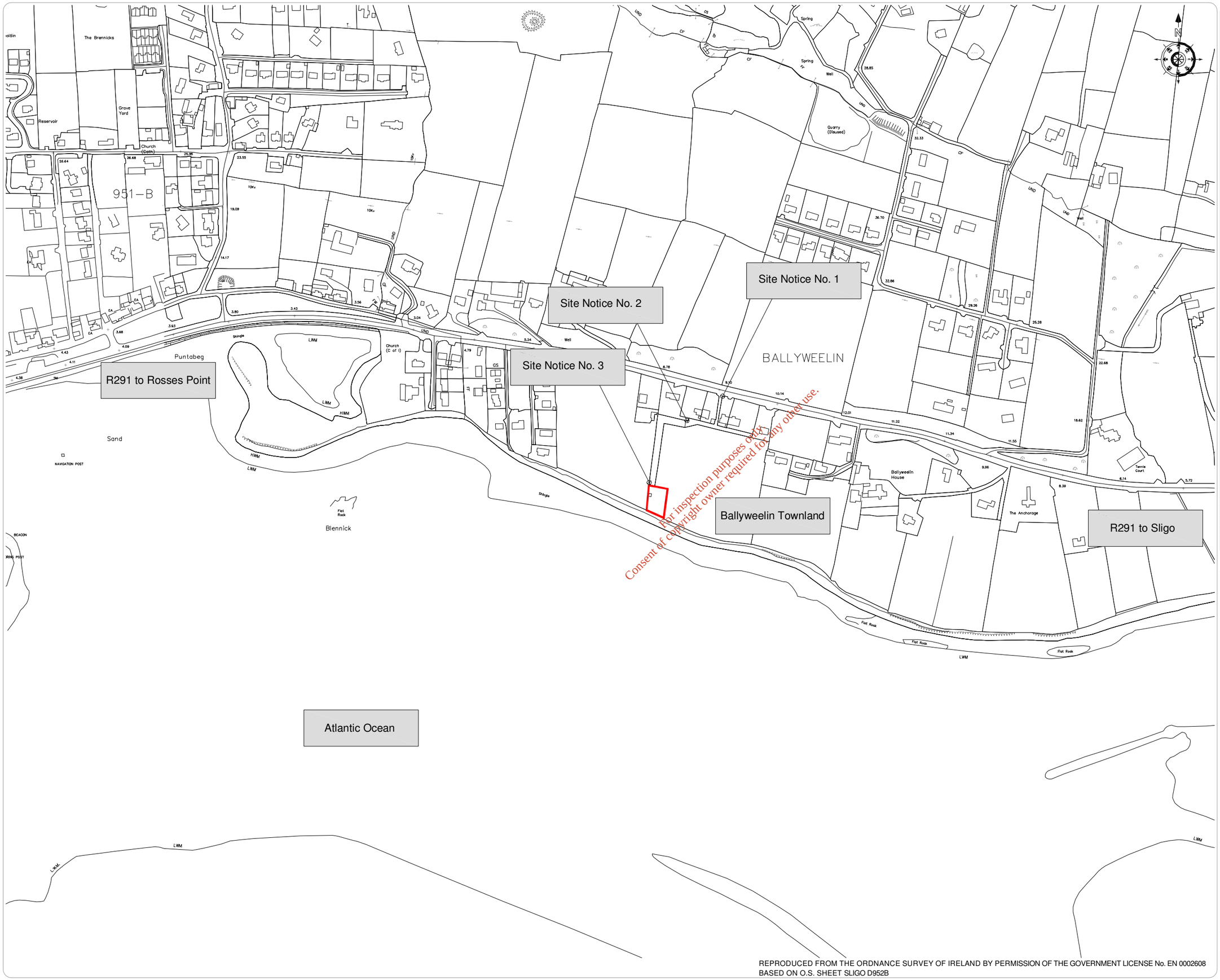
title
SCHEDULE OF DRAWINGS

scales
-

surveyed	drawn	checked	date
	PM	WM	Dec '08

JENNINGS O'DONOVAN & PARTNERS
CONSULTING ENGINEERS,
FINISKLIN BUSINESS PARK,
SLIGO.
Tel. (071) 9161416.
Fax. (071) 9161080.
Email info@jodirl.com

drawing no. 2995/BP8/000
revision



REPRODUCED FROM THE ORDNANCE SURVEY OF IRELAND BY PERMISSION OF THE GOVERNMENT LICENSE No. EN 0002608
BASED ON O.S. SHEET SLIGO D952B

Notes

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
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4. ALL LEVELS REFER TO ORDNANCE DATUM (MALIN HEAD).

LEGEND

PROPOSED SITE OUTLINED THUS.....

rev.	modifications	by	date

client
SLIGO COUNTY COUNCIL

project
BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

stage
CONTRACT DRAWINGS

title
PROPOSED BALLYWEELIN PUMPING STATION
SITE LOCATION MAP

scales
1/2,500

surveyed	drawn	checked	date
	PM	WM	Dec '08

JENNINGS O'DONOVAN & PARTNERS
CONSULTING ENGINEERS,
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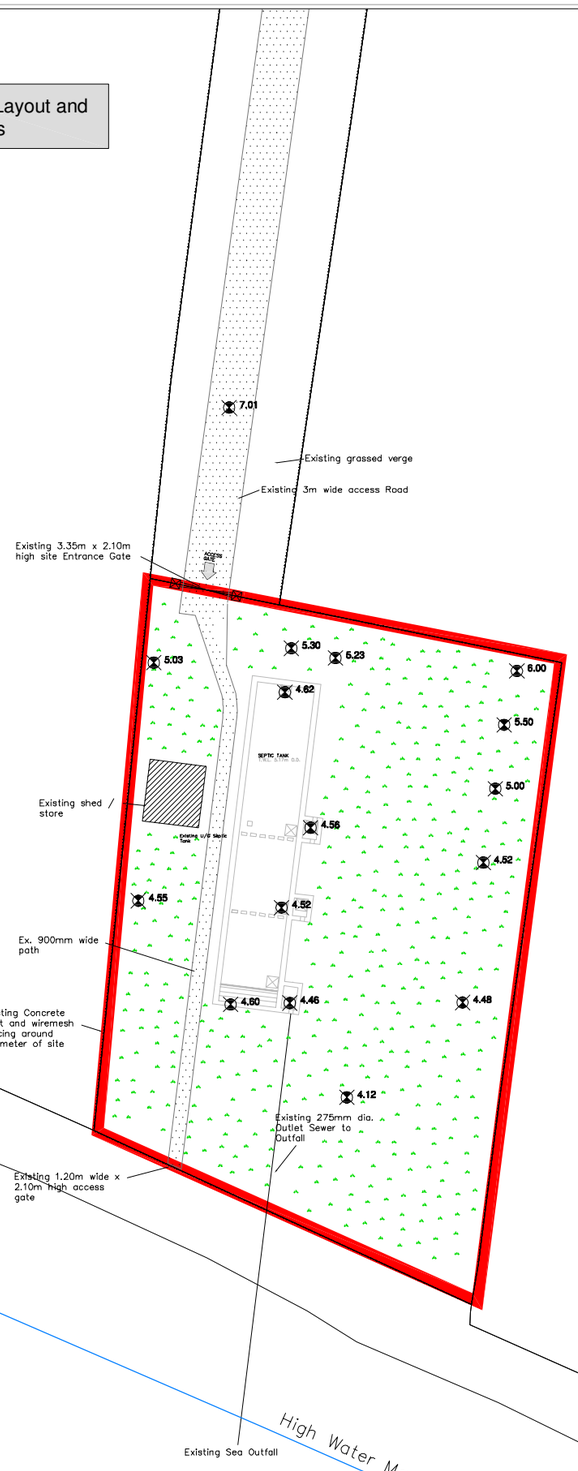
Fax. (071) 9161080.
Email info@jodirl.com

drawing no. 2995/BP8/100

revision

Existing Layout and site levels



Ballyweelin Townland

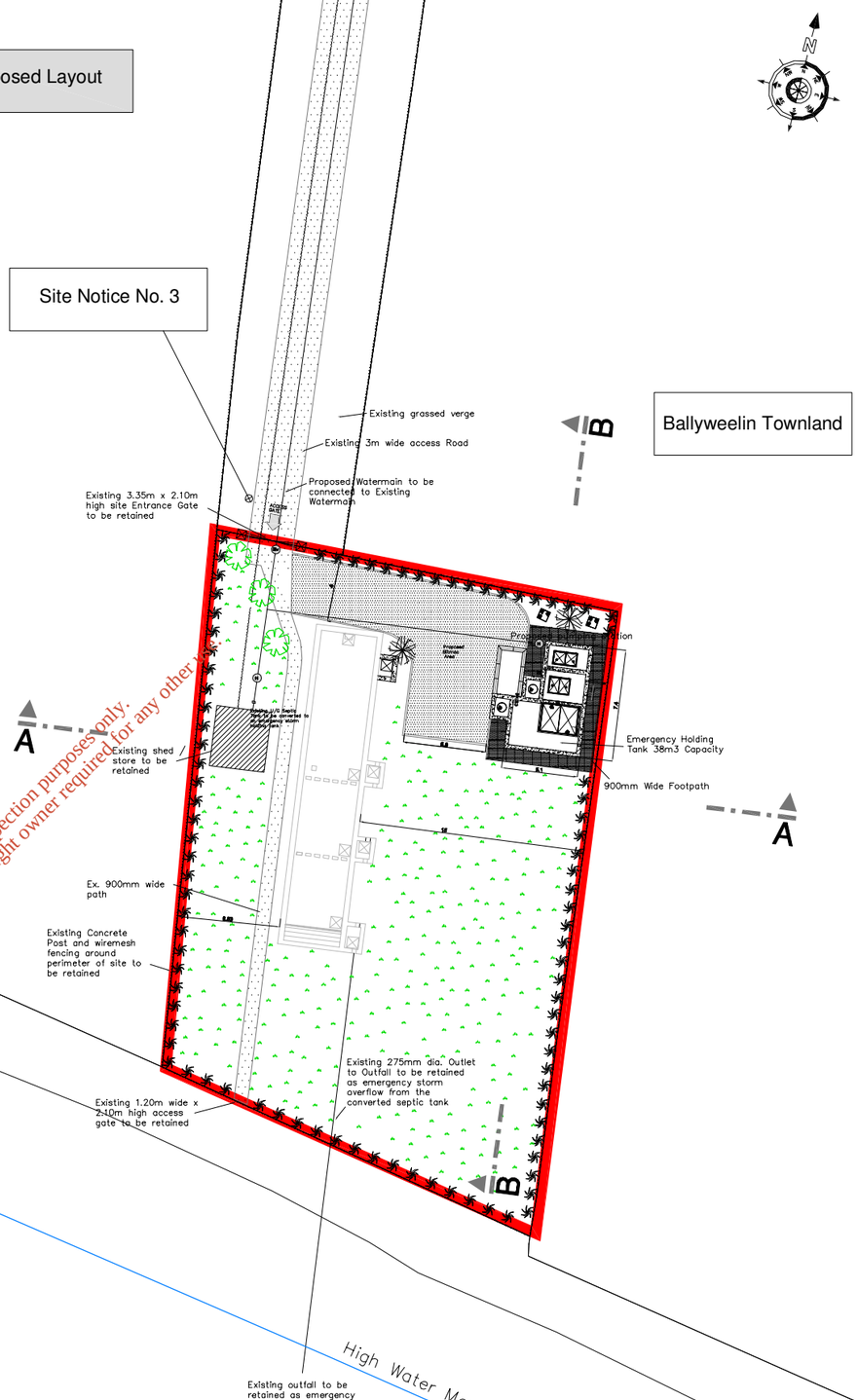
Atlantic Ocean

High Water Mark

Low Water Mark

Proposed Layout

Site Notice No. 3



Ballyweelin Townland

Atlantic Ocean

High Water Mark

Low Water Mark

Notes

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LEGEND

PROPOSED SITE OUTLINED THUS.....

rev.	modifications	by	date

client
SLIGO COUNTY COUNCIL

project
BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

stage
PART 8 PLANNING

title
PROPOSED BALLYWEELIN PUMPING STATION
EXISTING AND PROPOSED SITE LAYOUT PLANS

scales
1/200

surveyed	drawn	checked	date
	PM	WM	Dec '08

JENNINGS O'DONOVAN & PARTNERS
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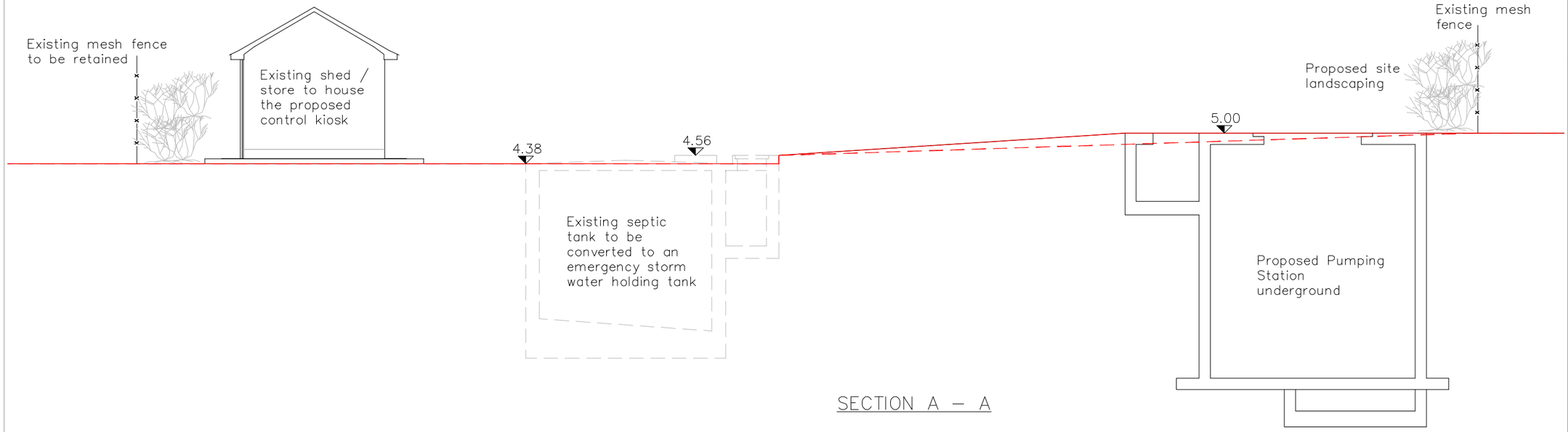
drawing no.
2995/BP8/101

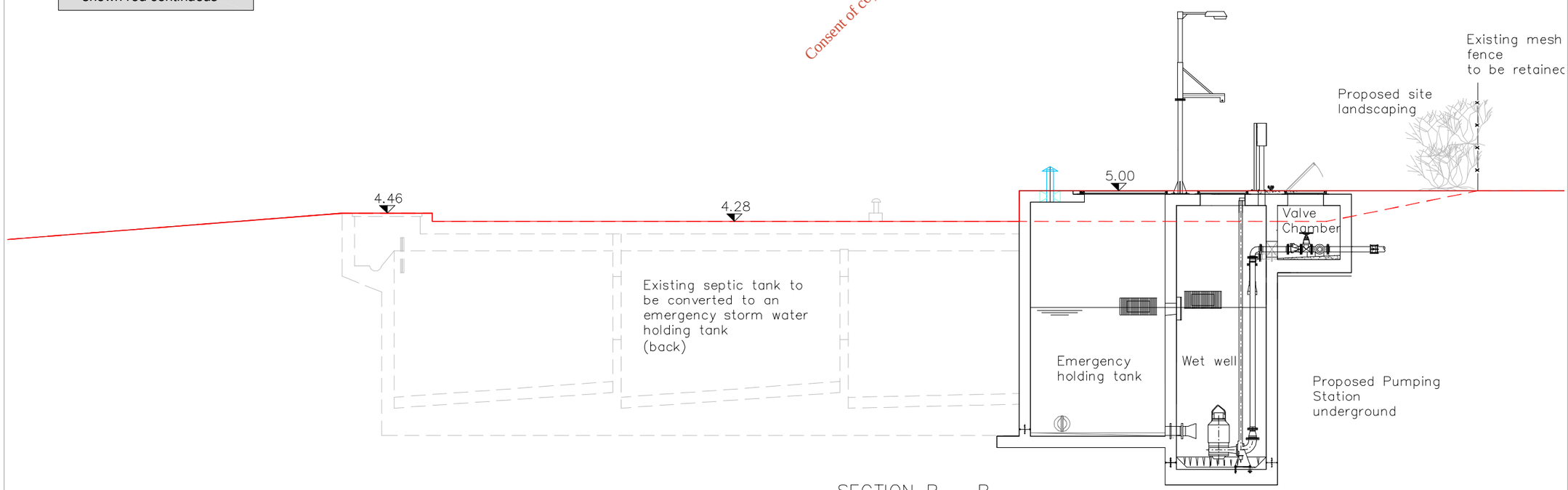
revision



SECTION A – A

Existing Ground profile shown red dashed

Proposed Ground profile shown red continuous



SECTION B – B

Notes

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
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3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES.
4. ALL LEVELS REFER TO ORDNANCE DATUM (MALIN HEAD).

rev.	modifications	by	date

client
SLIGO COUNTY COUNCIL

project
BALLINCAR, CREGG, ROSSES POINT SEWERAGE SCHEME

stage
PART 8 PLANNING

title
PROPOSED BALLYWEELIN PUMPING STATION SITE CROSS SECTIONS

scales
1/50 (A1) -1/100 (A3)

surveyed	drawn	checked	date
	PM	WM	Dec '08

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Email info@jodirl.com

drawing no.
2995/BP8/102

revision

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ATTACHMENT No: B.8
NOTICE OF APPLICATION

AUTHORITIES

LIGO BOROUGH COUNCIL

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, Sligo County Council, County Buildings, Riverside, Co. Sligo, is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for discharges from the **Rosses Point Septic Tank, Ballyweelin, Rosses Point, Co. Sligo.**

The application concerns the primary discharge from the Septic Tank at Rosses Point E164692 N339511 and Storm Water Overflows at E164016 N339696, E163880 N339765 and E163591 N339674.

Treated effluent is discharged to the sea at Rosses Point.

The National Grid Reference of the centre point of the Septic Tank is E164707 N339575. The treatment is provided by the septic tank.

A copy of Sligo County Councils Licence Application and any further information which may be furnished to the Agency will be available for inspection or purchase at the Environmental Protection Agency Headquarters, Johnstown Castle Estate, Wexford, and at the offices of Sligo County Council, County Buildings, Riverside, Sligo after the **28th of February 2009.**

Any submissions in relation to this application may be made to the Environmental Protection Agency Headquarters at the above address.

Mr. T. Kilfeather,
Director of Services.

DRAFT TRAFFIC MANAGEMENT PLANS

Draft Traffic Management Plans for the following Towns will be on display from Monday the 23rd February, 2009 for four weeks.

- Ballymote Traffic Management Plan in Ballymote Court House
- Ballisodare Traffic Management Plan in Ballisodare Post Office
- Collooney Traffic Management Plan in Teeling Centre, Collooney

All submissions are to be made to the Area Engineers Office, Sligo County Council, Ballymote Court House, Ballymote, Co. Sligo.

All and any improvements are subject to Central Government Funding.

T. Kilfeather,
Director of Services.

TEMPORARY CLOSING OF ROAD SECTION 75 OF THE ROADS ACT 1993 AND PART 8 ROADS REGULATIONS, 1994 (SI NO.119 OF 1994)

Notice is hereby given that it is intended to close **Rockwood Parade** to all vehicular traffic **from 4.00 am on Sunday 8th March 2009 to 8.00 am on Monday 9th March 2009** to facilitate construction works.

Pedestrians will be re-routed via the pedestrian bridge. Traffic control will be in operation. Signed traffic diversions will be in operation.

Objections may be made in writing to the Town Clerk, Sligo Borough Council, City Hall, Quay Street, Sligo before **12 noon Wednesday 25th February 2009.**

Sligo Borough Council regrets any inconvenience that this closure may cause.

For further information please contact Ms. P. Devins at 071 9111493.

John McNabola,
Town Clerk.

EXPRESSIONS OF INTEREST FOR THE LONG TERM LEASING OF PRIVATE DWELLINGS AS A MEANS OF MEETING HOUSING NEED

Further to a recent initiative introduced by the Department of the Environment, Heritage & Local Government, Sligo Local Authorities wish to test the market to establish if there is a supply available of suitable dwellings which could be used for this purpose. The Councils are now inviting expressions of interest from property owners.

Leases will be for a minimum period of 10 years and a maximum period of 20 years.

Full particulars including terms, conditions and suitability criteria can be obtained at the following locations:

- **Customer Services, Sligo Borough Council, City Hall, Quay Street, Sligo,** Monday – Friday: 9.00 am – 5.00 pm.
- **Customer Services, Sligo County Council, County Hall, Riverside, Sligo,** Monday – Friday: 9.00 am – 5.00 pm.

Alternatively, documents are available for download from both Councils' websites at: www.sligoborough.ie and www.sligococo.ie

Closing date for receipt of Expressions of Interest is **4.00 pm on Friday, 6th March, 2009.**

D. Breen,
Director of Services, Sligo Borough Council.

D. Clarke,
Director of Services, Sligo County Council.

SLIGO COUNTY COUNCIL

"APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE"

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, Sligo County Council, County Buildings, Riverside, Co. Sligo, is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for discharges from the **Rosses Point Septic Tank, Ballyweelin, Rosses Point, Co. Sligo.**

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Any submissions in relation to this application may be made to the Environmental Protection Agency Headquarters at the above address.

Signed

Mr. T. Kilfeather,
Director of Infrastructural Services

ATTACHMENT No: B.9
POPULATION EQUIVALENT OF AGGLOMERATION

ATTACHMENT No: B. 9
POPULATION EQUIVALENT OF AGGLOMERATION

Population Equivalent	**1409**
Data Compiled (Year)	**2009**
Method	**House count in 2006 and 2009 estimation of houses completed since that date**

ATTACHMENT No: B. 9 (ii)
PENDING DEVELOPMENT

- The calculated p.e. to be contributed to the WwTW as a result of those planning permissions granted is 177. This figure relates to domestic houses only.
- The projected p.e. from non domestic activities is unknown.
- The total future p.e. is 1,586.

The design for the new WwTW in Sligo town allows for a p.e. of 50,000. Of this 50,000 a figure of 4,330 is estimated for sewage that will be pumped from Ballincarr/Cregg/Rosses Point. This 4,300 includes existing domestic (2002), future domestic and total non-domestic. It is expected that the Sligo Town WwTW and receiving water habitat is able to accommodate this extra hydraulic and organic loading without posing a risk.

ATTACHMENT No: B.10
CAPITAL INVESTMENT PROGRAMME

Sligo

Water Services Investment Programme 2007 - 2009

Schemes at Construction	**W/S**	**Est. Cost.**
Sligo & Environs Water Supply Scheme Stage 2 (G)	W	14,700,000
Sligo Wastewater Treatment Plant (DBO Contract)(G)	S	24,000,000
		38,700,000
Schemes to start 2007		
Enniscrone Sewerage Scheme	S	3,100,000
		3,100,000
Schemes to start 2008		
Ballygawley, Mullaghmore, Ballinacarrow* & Cliffoney* Grouped Sewerage Scheme	S	6,500,000
Mullaghmore Water Supply Scheme Stage 2	W	1,430,000
Sligo Sewerage Scheme (Network Improvement)(G)	S	5,300,000
		13,230,000
Schemes to start 2009		
Carrowroe Sewerage Scheme	S	2,300,000
Lough Talt Water Supply Scheme	W	1,870,000
Rosses Point/ Cregg/ Ballincar Sewerage Scheme	S	4,500,000
		8,670,000
Serviced Land Initiative		
Grange, Strandhill & Tubbercurry Grouped Sewerage Improvement Scheme	S	4,250,000
Teesan/Lisnalurg Sewerage Scheme	S	1,420,000
Ballinacarrow Sewerage Scheme*	S	-
Cliffoney Sewerage Scheme*	S	-
*Previously listed with grouped scheme above		**5,670,000**
Schemes to Advance through Planning		
Ballymote Sewerage Scheme (Upgrade)	S	5,000,000
Collooney Sewerage Scheme (Upgrade)	S	5,000,000
North Sligo Regional Water Supply Scheme Phase 2	W	3,570,000
Sligo & Environs Water Supply Scheme Phase 3 (G)	W	4,080,000
		17,650,000
Water Conservation Allocation		**2,652,000**
Asset Management Study		**60,000**
Programme Total		**89,732,000**

(G) Refers to a Gateway as designated in the National Spatial Strategy

ATTACHMENT No: C.1
OPERATIONAL INFORMATION REQUIREMENTS

ATTACHMENT No: C1
OPERATIONAL INFORMATION REQUIREMENTS

C.1.1 Storm Water Overflows

For each storm water overflow from within the waste water works the following information shall be submitted:

- An assessment to determine compliance with the criteria for storm water overflows, as set out in the DoEHLG "Procedures and Criteria in Relation to Storm Water Overflows", 1995 and any other guidance as may be specified by the Agency, and
- Identify whether any of the Storm Water Overflows are to be decommissioned, and identify a date by which these overflows will cease, if applicable

After decommissioning of the existing septic Tank in Rosses Point the three storm water overflows at Rosses Point will remain. In the event of an emergency or an extreme storm event, where flows entering the main pumping station in Sligo town exceed the design capacity or in the event of a power failure, the overflows at Rosses Point may be utilized. If flows exceed the designed storage capacity at each of the pumping stations and the existing wastewater treatment site in Rosses Point, the overflows will be used. The storage capacity at each of these locations is designed to hold 3DWF (6 hour storm storage), in accordance with the DoEHLG "Procedures and Criteria in Relation to Storm Water Overflows", 1995.

C.1.2 Pumping Stations

PS1

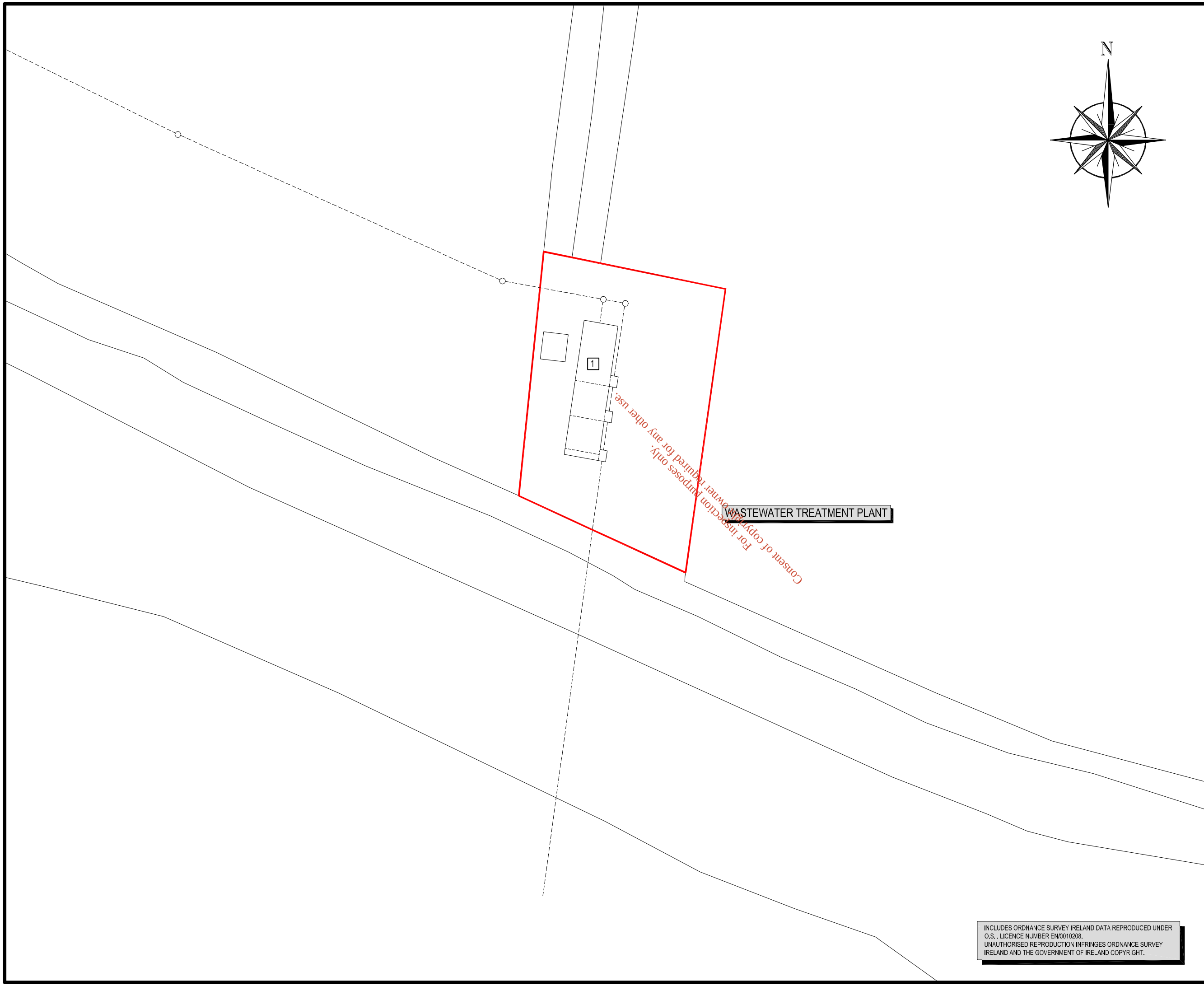
This Pumping Station is located to the West of Rosses Point. It has 2 pumps in a duty/standby arrangement. There is an emergency overflow facility from this pumping station. The emergency overflow discharges from SW4.

PS2

This Pumping Station is located to the East of Rosses Point. It has 2 pumps in a duty/standby arrangement. There is an emergency overflow facility from this pumping station. The emergency overflow discharges from SW2.

PS3

This Pumping station is located to the West of Rosses Point at the caravan park. It has 2 pumps in a duty/standby arrangement. There is no emergency overflow facility from this pumping station.



NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- PROCESS LINES
- [1] SEPTIC TANK

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT

SLIGO COUNTY COUNCIL

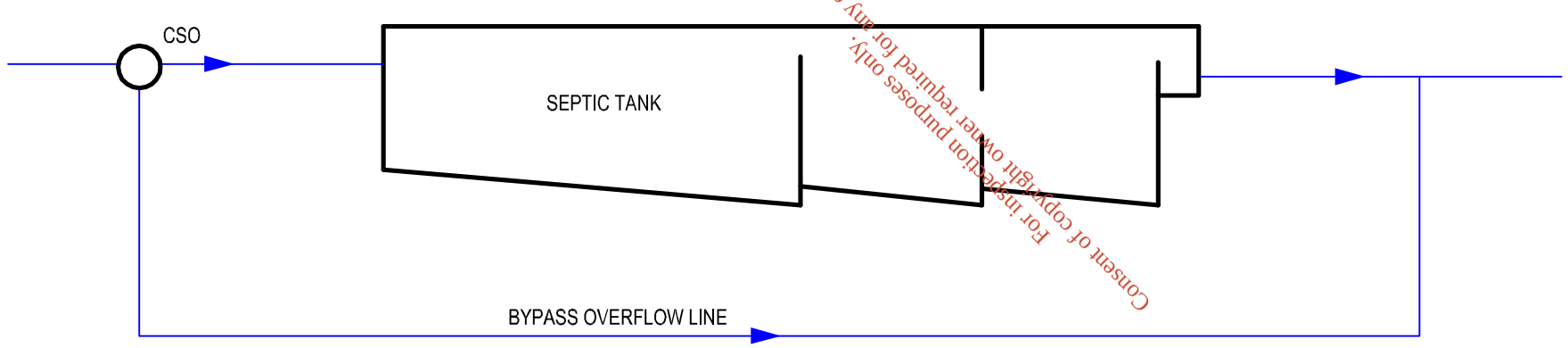
PROJECT

ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE

DISCHARGE LICENCE
WwTP LAYOUT PLAN

SCALES	DRAWN	DRAWING No.	REV
1:500	D.Smithers	06	-
CAD REFERENCE	DATE	SECTION	
C.1 20438-DL-RT-06	31.01.09	C.1	



NOTES

SIGNED :	
PRINT NAME :	
POSITION :	
DATE :	
FOR SLIGO COUNTY COUNCIL	

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

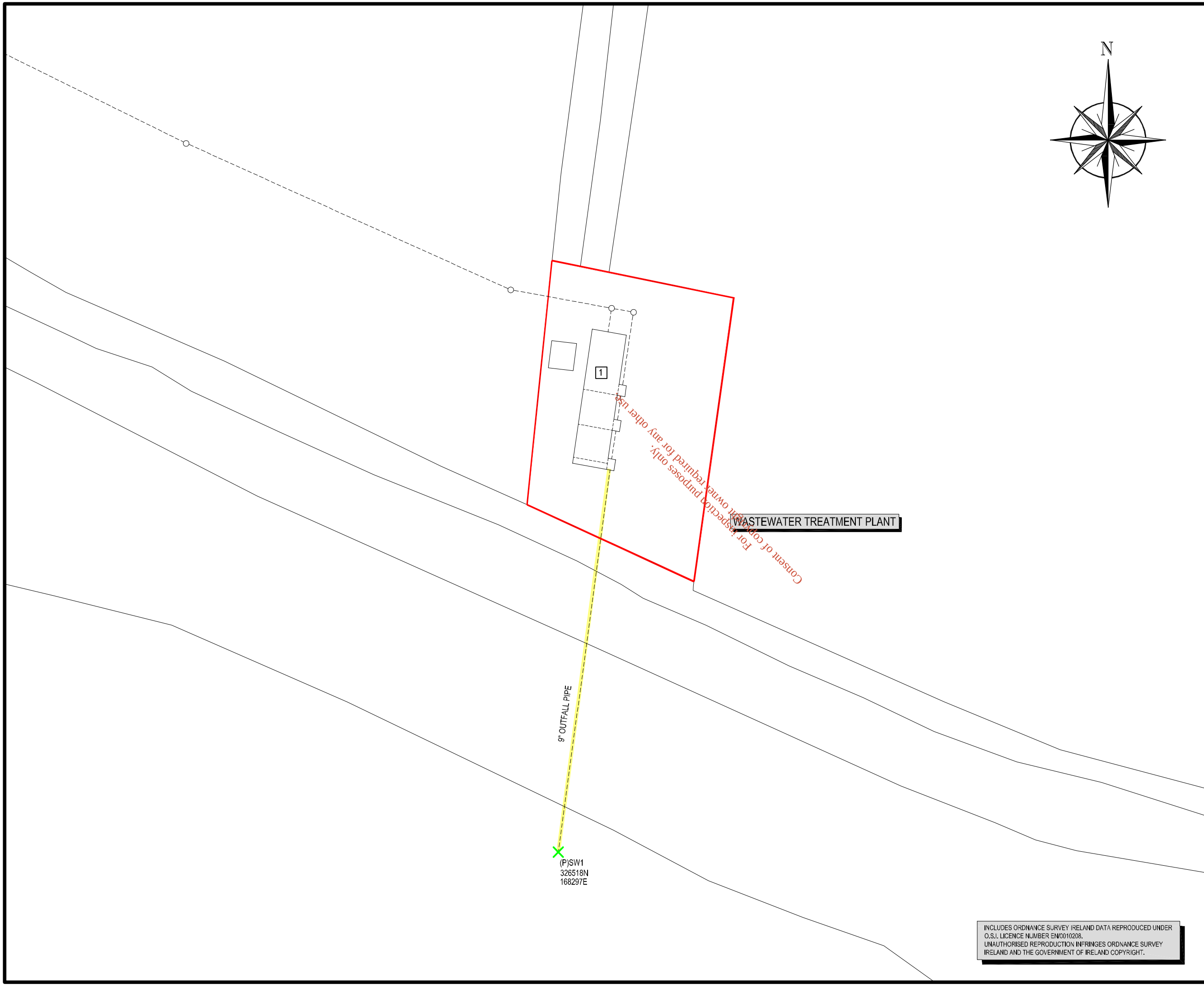
CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
PROCESS FLOW DIAGRAM

SCALES	DRAWN	DRAWING No.	REV
N.T.S.	D.Smithers	07	-
DATE: 31.01.09			
CAD REFERENCE: C.1 20438-DL-RT-07	SECTION: C.1		

ATTACHMENT No: C.2
OUTFALL DESIGN AND CONSTRUCTION



NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- PROCESS LINES
- OUTFALL LINE
- PRIMARY DISCHARGE POINT (P)SW1

SIGNED :	
PRINT NAME :	
POSITION :	
DATE :	
FOR SLIGO COUNTY COUNCIL	

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
OUTFALL LOCATION

SCALES	DRAWN	DATE
1:1000	D.Smithers	31.01.09

CAD REFERENCE	SECTION	DRAWING No.	REV
C.2 20438-DL-RT-08	C.2	08	-

ATTACHMENT D1
DETAILS OF INFLUENT

Flow & Load Report

Rosses Point

Wastewater Treatment Plant, Co. Sligo

October 2008

Site ID:

200508RP/10/08

Client:

Nicholas O'Dwyer Consulting Engineers

Nutgrove House

Nutgrove Avenue

Dublin 14

Job number	200508RP
Quotation number	NQ200508
Date of commencement	13 October 2008
Nutrisolv project manager	Mr. S. Reid
Number of monitoring locations	3

Sampling locations:

Site 1: Influent Flow Monitoring & Sampling, Rosses Point Wastewater Treatment Plant

Site 2: Effluent, Flow Monitoring & Sampling, Rosses Point Wastewater Treatment Plant

Site 3: Sea Grab Sample

Introduction

The Rosses Point 2 day flow and load survey was conducted as part of the County Sligo Monitoring Survey for Waste Water Discharge License Applications.

All monitoring locations were agreed with the engineer prior to commencement of the programme. The Rosses Point monitoring programme was part of Set 2 of 3 as determined by the tender documentation.

A pre-monitoring site investigation was conducted prior to installation at Rosses Point and it was agreed that sampling and flow monitoring would be conducted on the influent and effluent lines. A raingauge was installed for the duration of the monitoring period. The sea sampling location was given to ENSEN.ie by the Environmental Department of Sligo County Council.

1.0 Monitoring Programme - location & objectives:

1. Take flow proportional samples from the influent and effluent lines to Rosses Point WWTP.
2. Monitor flow on the influent and effluent lines of Rosses Point WWTP.
3. Have effluent samples tested for the listed parameters.
4. Have the influent samples tested for BOD only.
5. Take sea grab samples on both days of the programme.
6. Record relevant site notes on observations made during the course of the monitoring period.

Flow was recorded using Isco 730 Bubbler flow modules with appropriate flow pokes. Data was recorded at 2 minute intervals and hourly and daily summaries were compiled. Samples were taken using Isco 6712 programmable samplers. Where appropriate, the sampler was connected to the flow meter and operated on a flow proportional basis.

Recorded daily flows and analytical data are given in this report. Reference should be made to the attached files '*200508, County Sligo DL, Set 2, Flow Data, 10/08.xls*' and '*200508, County Sligo DL, Set 2, Analytical Data, 10/08.xls*'.

Note: Reference should be made to all site notes in section 3.

Plate 1: Rosses Point WWTP Influent Sampling & Flow Monitoring Location

Plate 2: Rosses Point WWTP Effluent Sampling & Flow Monitoring Location

2.0 Results

2.1 Rosses Point WWTP Influent Dat

2.1.1 Daily Flow and Analytical Data

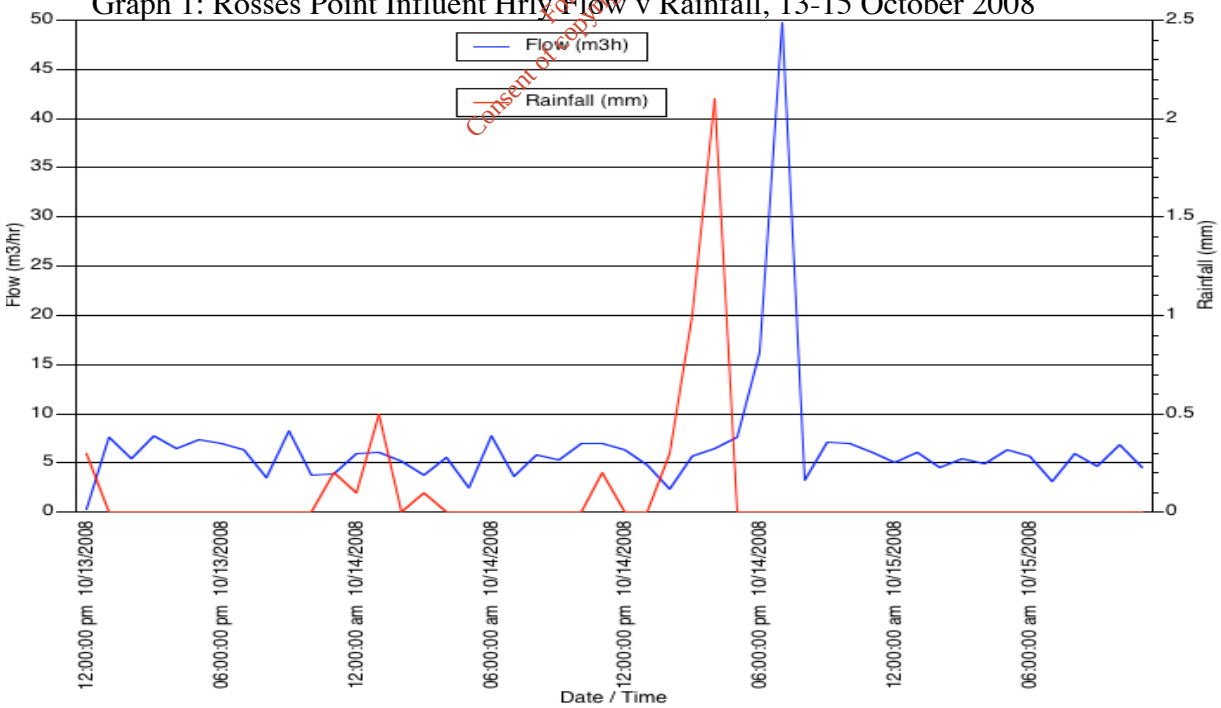
Table 1: Daily Flow & Load Values for Rosses Point WWTP Influent Stream

Date	Cert No.	Daily Flow (m3)	BOD Load (kg)
13-14.10.08	15290	133.53	4.01
14-15.10.08	15291	185.85	12.82

Table 2: Daily Analytical Results for Rosses Point WWTP Influent Stream

Parameter	Units	13-14.10.08	14-15.10.08
BOD5	mg/l	30	69

Graph 1: Rosses Point Influent Hrly Flow v Rainfall, 13-15 October 2008



2.2 Rosses Point WWTP Effluent Data

2.2.1 Daily Flow and Analytical Data

Table 3: Daily Flow & Load Values for Rosses Point WWTP Effluent Stream

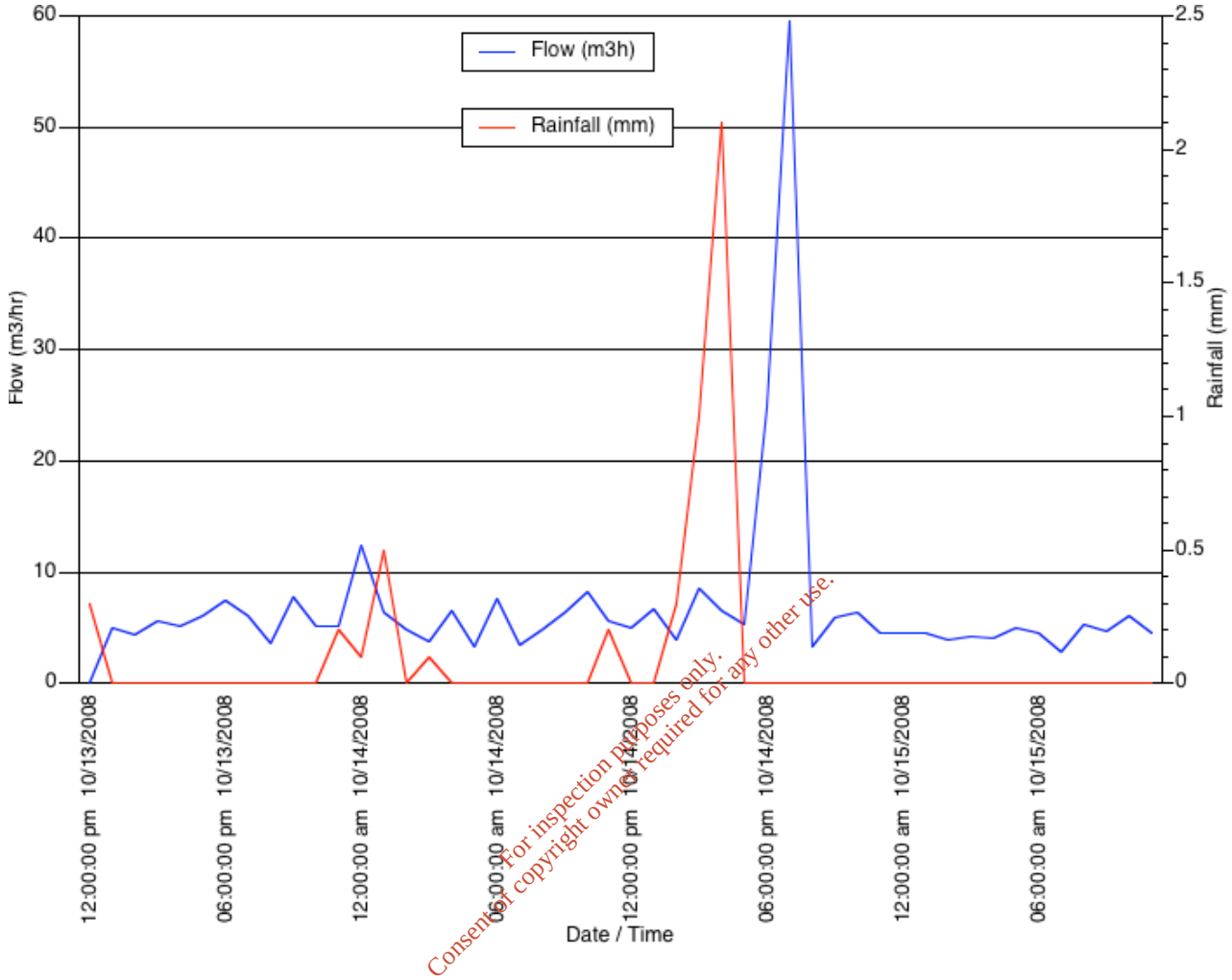
Date	Cert No.	Daily Flow (m3)	COD Load (kg)	BOD Load (kg)
13-14.10.08	15294	134.833	7.42	2.56
14-15.10.08	15296	194.485	16.92	4.67

Table 4: Daily Analytical Results for Rosses Point WWTP Effluent Stream

Parameter	Units	13-14.10.08	14-15.10.08
pH	units	7.5	7.3
Temperature	oC	17	16
Ammonia	mg/l as NH3	8.76	10.7
Total-P	mg/l as P	1.745	2.233
Ortho-P	mg/l as PO4	1.16	1.406
Conductivity	µs/cm	803	2073
Nitrate	mg/l as N	2.3	2.2
Nitrite	mg/l as N	0.015	0.085
Total Nitrogen	mg/l as N	17.12	20.92
Sulphate	mg/l as SO4	57.54	90.74
T.S.S	mg/l	27	46
Hardness	mg/l	N/R	N/R
Phenols	µg/l	<10	<10
Antrazine	µg/l	<1	<1
Simazine	µg/l	<1	<1
Dichloromethane	µg/l	<1	<1
Toluene	µg/l	<1	<1
Xylene	µg/l	<1	<1
Tributyltin	µg/l	<0.02	<0.02

Arsenic	µg/l	<1	1
Chromium	µg/l	5	6
Copper	µg/l	54	27
Cyanide	µg/l	<50	<50
Fluoride	µg/l	172	177
Lead	µg/l	2	2
Zinc	µg/l	78	104
Nickel	µg/l	13	4
Boron	µg/l	170	180
Cadnium	µg/l	0.9	0.2
Mercury	µg/l	<0.1	<0.1
Selenium	µg/l	1	3
Barium	µg/l	20	20
BOD5	mg/l	19	24
COD	mg/l	55	87
Dissolved Oxygen	mg/l	10.2	10.7

Graph 2: Rosses Point Effluent Hrly Flow v Rainfall, 13-15 October 2008



2.3 Rosses Point Sea Grab Sample Data

2.3.1 Daily Analytical Data

Table 5: Daily Analytical Results for Rosses Point Sea Grab Sample

Parameter	Units	14.10.08	15.10.08
pH	units	8.1	8.2
Temperature	oC	16.5	15
Ammonia	mg/l as NH3	0.0678	0.0285
Total-P	mg/l as P	<0.02	<0.02
Ortho-P	mg/l as PO4	<0.02	<0.02
Conductivity	µs/cm	27930	34120
Nitrate	mg/l as N	1	0.4
Nitrite	mg/l as N	0.004	0.006
Total Nitrogen	mg/l as N	12.1	9.806
Sulphate	mg/l as SO4	1575	1892
T.S.S	mg/l	73	69
Hardness	mg/l	N/R	N/R
Phenols	µg/l	<10	<10
Antrazine	µg/l	<1	<1
Simazine	µg/l	<1	<1
Dichloromethane	µg/l	<1	<1
Toluene	µg/l	<1	52
Xylene	µg/l	<1	<1
Tributyltin	µg/l	<0.02	<0.02
Arsenic	µg/l	10	310
Chromium	µg/l	5	5
Copper	µg/l	2	2
Cyanide	µg/l	<50	<50
Fluoride	µg/l	577	675
Lead	µg/l	<1	<1
Zinc	µg/l	9	12
Nickel	µg/l	4	5
Boron	µg/l	1920	2860
Cadnium	µg/l	<0.1	<0.1
Mercury	µg/l	<0.1	<0.1
Selenium	µg/l	37	38

Barium	µg/l	<10	<10
BOD5	mg/l	3	<2
COD	mg/l	20	25
Dissolved Oxygen	mg/l	12.4	12.5

General Materials and Methods

Flow meters: Nutrisolv F&L surveys are conducted using a variety of equipment for measuring flow.

- Area velocity probes.
- Flow inserts with bubbleometer depth measurement.
- Pump station monitors.
- Ultrasonic level detectors

In each case the parameter measured is logged as raw data and converted to flow using an appropriate mathematical algorithm.

Samplers used are peristaltic pump based 24 bottle and single bottle samplers. Samplers will take flow or time paced samples. A very wide range of sample types can be accommodated.

Other monitors:

A range of parameters can also be logged - pH, Turbidity, rainfall, Dissolved Oxygen.

Additional parameters by request.

3. Site Notes

A pre-survey site investigation was conducted on 29 September 2008. The site was checked for suitability, representation and safety for both personnel and equipment.

After consideration of the proposed monitoring sites and the possible limitations, it was agreed with Sinead Hanrahan to proceed with flow monitoring and sampling on the influent and effluent lines.

Installation and decommissioning notes are given below. Further site notes are given only when deviations occured from the normal operation of the monitoring programme.

Installation: 13 October 2008

Influent: An 8" flow monitor was calibrated and installed. Sampler installed and programmed to take flow proportional samples over a 24hr period.
Instant flow: 6.696 m3/hr.

Effluent: An 8" flow monitor was calibrated and installed. Sampler was programmed to take flow proportional samples over a 24hr period.
Instant flow: 5.991 m3/hr.

Raingauge: Calibrated and Installed

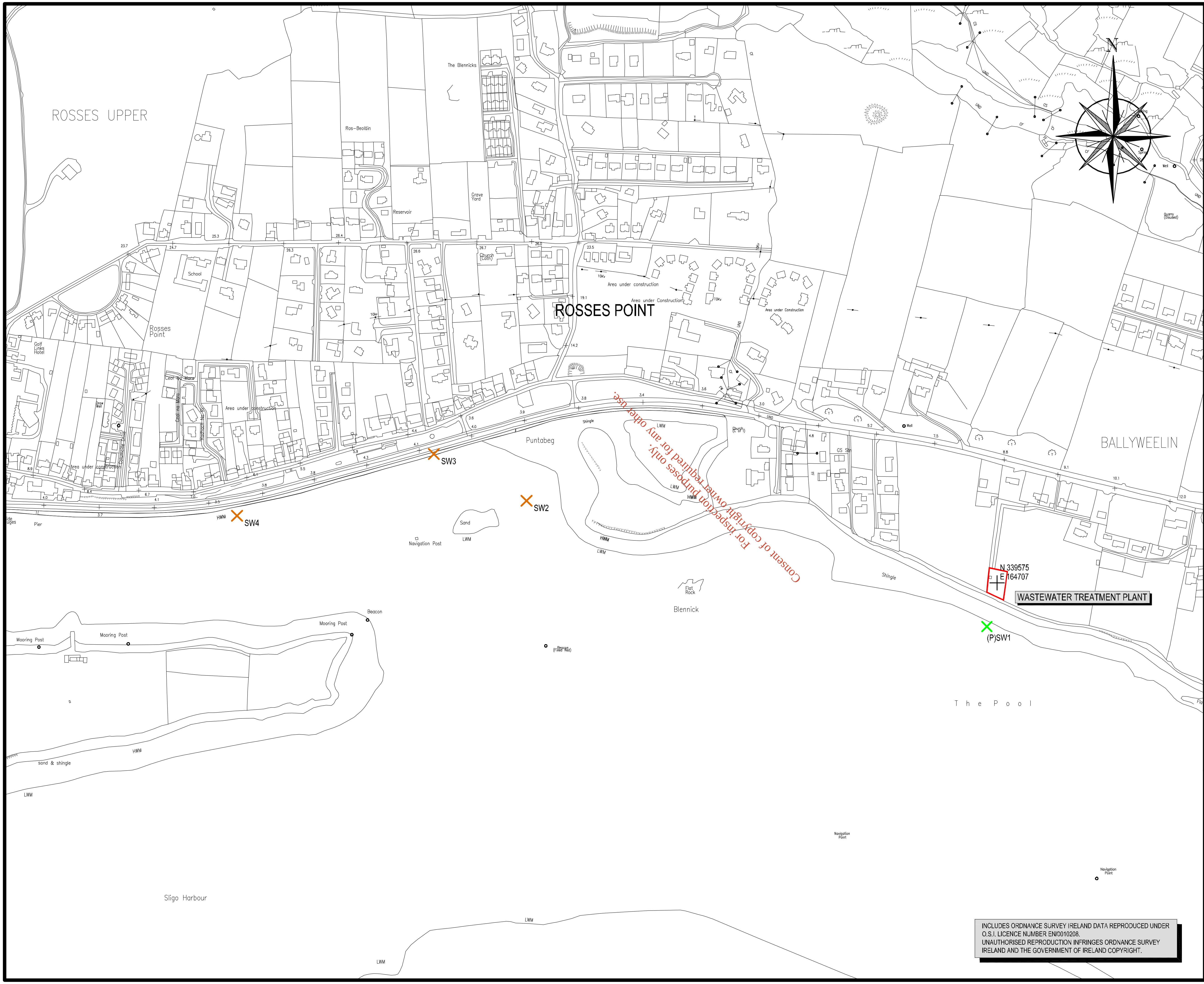
Decommission: 15 October 2008

Re-calibration of the flow meters gave a 0% calibration deviation for both the influent and effluent flow meters.

All samples and volumes were taken correctly.

ATTACHMENT D2
DETAILS OF DISCHARGE POINTS

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW1	Primary	Sligo County Council	Coastal	Sligo Harbour	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC & SPA Drumcliff Bay	164692	339511	Y
SW2	Storm Water Overflow	Sligo County Council	Coastal	Sligo Harbour	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	164016	339696	Y
SW3	Storm Water Overflow	Sligo County Council	Coastal	Sligo Harbour	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	163880	339765	Y
SW4	Storm Water Overflow	Sligo County Council	Coastal	Sligo Harbour	Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC	163591	339674	y



NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- (P)SW1 — PRIMARY DISCHARGE POINT
- (S)SW1 — SECONDARY DISCHARGE POINT (NONE)
- SWX — STORM WATER OVERFLOW POINT

POINT	NORTHING	EASTING
(P)SW1	339511	164692
SW2	339696	164016
SW3	339765	163880
SW4	339674	163591

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT: SLIGO COUNTY COUNCIL

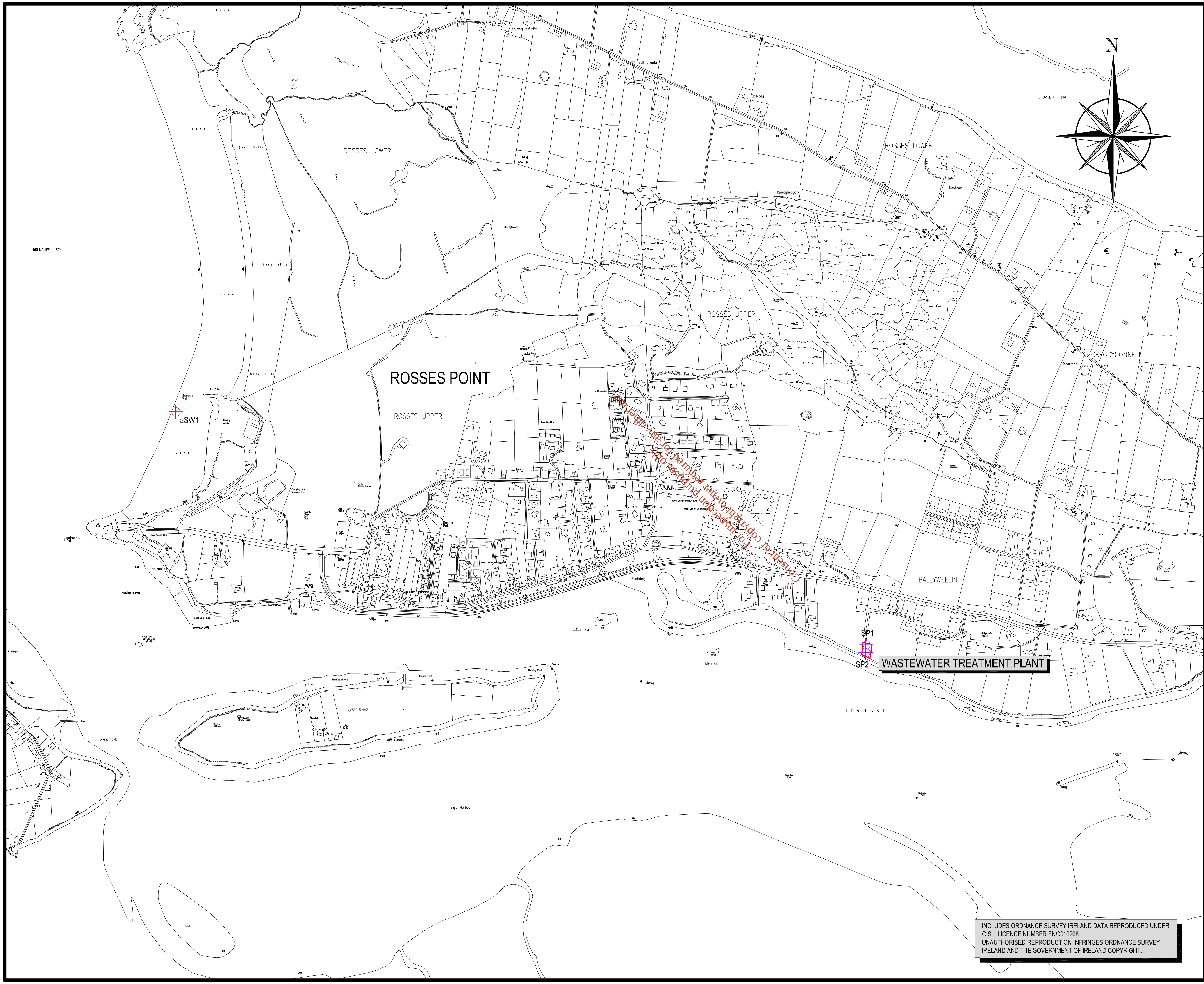
PROJECT: ROSSES POINT WASTEWATER TREATMENT PLANT

TITLE: DISCHARGE LICENCE DISCHARGE POINTS

SCALES: 1:2500
DRAWN: D.Smithers
DATE: 31.01.09
CAD REFERENCE: D.2 20438-DL-RT-09
SECTION: D.2
DRAWING No. 09
REV: -

ATTACHMENT E3
DETAILS OF MONITORING AND SAMPLING POINTS

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
aSW1	Primary	S	162678	340274	N
SP1	Influent Sampling Point	S	164704	339590	N
SP2	Effluent Sampling Point	S	164704	339567	N



NOTES

LEGEND

- SITE BOUNDARY OF WwTP
- SP1 — WwTP SAMPLING POINT
- aSW1 — AMBIENT MONITORING POINT

POINT	NORTHING	EASTING
SP1 (INFLUENT)	339590	164704
SP2 (EFFLUENT)	339567	164704
aSW1	340274	162678

SIGNED :

PRINT NAME :

POSITION :

DATE :

FOR SLIGO COUNTY COUNCIL

REV	DATE	DESCRIPTION	D	C	A

DISCHARGE LICENCE

CLIENT
SLIGO COUNTY COUNCIL

PROJECT
ROSSES POINT
WASTEWATER TREATMENT PLANT

TITLE
DISCHARGE LICENCE
MONITORING & SAMPLING POINTS

SCALES	DRAWN	
1:2500	D.Smithers	
	DATE 31.01.09	

CAD REFERENCE	SECTION	DRAWING No.	REV
E.2 20438-DL-RT-10	E.3	10	-

ATTACHMENT E4
SAMPLING DATA

Please refer to Flow and Load survey attached in D.1.

ATTACHMENT F1
IMPACT ON RECEIVING WATERS

ATTACHMENT No: F. 1
ASSESSMENT OF IMPACT ON RECEIVING WATER

- Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Emssions from the WwTW are to the sea at Sligo Harbour. This Section of Sligo Harbour is designated under the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. The part of the Bay where the primary discharge enters the sea is also designated under the SPA Drumcliff Bay. The NPWS have been asked to comment on the likely effect of the discharge on the SAC (attached).

- Tables F.1(i)(a) & (b) should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.

These tables are completed in the web based section of the Application.

- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.

Not Applicable.

- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.

Not Applicable.

- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the **most recent water quality management plan or catchment management plan in place for the receiving water body.** Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving water.

Currently a River Basin Management project for the Western Region is being prepared. This is currently at draft stage. The Western Region includes major lakes such as Loughs Arrow, Carrowmore, Conn, Corrib and Mask, river systems such as the Bonet, Clare, Robe, Moy and Owenmore and the related estuaries, and groundwaters and coastal waters out to a distance of one nautical mile or more. This plan is at draft stage at present.

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

Monitoring for dangerous substances in the final effluent and at an ambient monitoring point was carried out on two occasions.

Calculations to determine total concentration of Metals and Other Substances in the receiving water were carried out and are attached.

AMBIENT MONITORING POINT

Concentrations of Table 1 parameters, Pesticides and Solvents in the receiving water (sea) are lower than the prescribed maxima for all parameters except for Toulene. The concentration measured on 1 of the 2 monitoring occasions shows a value of 52ug/l, compared with a limit of 10ug/l.

Concentrations of Table 2 parameters, Metals and Other Substances in the receiving water (sea) are lower than the prescribed maxima in all cases except for Arsenic. The concentration measured on 1 of the 2 monitoring occasions shows a value of 310ug/l, compared with a limit of 25ug/l.

EFFLUENT MONITORING POINT

Concentrations of Table 1 and 2 parameters in the effluent are lower than the prescribed parameter for all parameters except Copper and Zinc.

The average (average of samples carried out on two occasions) measured effluent concentration of Copper is 40.5ug/l This compares with a prescribed maxima for tidal waters of 5ug/l, requiring a dilution factor of 8.1.

The average measured effluent concentration of Zinc is 91ug/l. This compares with a prescribed maxima for tidal waters of 40ug/l, requiring a dilution factor of 2.3.

Nicholas O'Dwyer CONSULTING ENGINEERS

Calculation Sheet

Project Number:	20391	Rev	Date	By
Calc Ref:	SH09012009	*1.0*	*26/01/09*	*S.Hanrahan*
Sheet:	1 of 1			

						Data Source
DWF from WWTW		317			m³/d	NOD Calcs
River Name		N/A				
DWF of river		N/A			m³/d	EPA
95%ile flow in river		N/A			m³/d	EPA
Mean annual flow in river		N/A			m³/d	NOD Calcs
	Dangerous Substances Regulations Value NB for TIDAL WATERS	Measured Effluent Concentration	Comment	Calculated Effluent Load	Calculated Effluent Load	
Parameter	ug/l	ug/l		mg/d	kg/d	
Copper	5.000	40.5	POTENTIAL HIGH	12838.500	12.839	
Arsenic	20	1				
Chromium	15	5.5	OK	1743.500	1.744	
Cyanide	10	<50				
Flouride	1500	174.5	OK	55316.500	55.317	
Lead	5	2	OK	634.000	0.634	
Nickel	25	8.5	OK	2694.500	2.695	
Zinc	40	91	POTENTIAL HIGH	28847.000	28.847	

- In circumstances where water abstraction points exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.

Not Applicable

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –

  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

(i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,

(ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or

(iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,

(b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[1] in accordance with the procedures laid down in Article 21 of that Directive,

(c) a special area of conservation within the meaning of the Natural Habitats Regulations, or

(d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC[2];

[1]Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

[2]Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

Emissions from the WwTP are to the sea at Sligo Harbour. This Section of Sligo Harbour is designated under the Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC. The part of the Bay where the primary discharge enters the sea is also designated under the SPA Drumcliff Bay. The NPWS have been asked to comment on the likely effect of the discharge on the SAC (detailed in section F of this application).

- Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

Not Applicable

- This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Modelling of the discharges from the agglomeration has not been carried out.

16 January 2009 **Our Ref:** 20438/sh/160109

National Parks and Wildlife Service
7 Ely Place
Dublin 2

RE: EPA WASTE WATER DISCHARGE LICENCE
NPWS Assessment Recommendation

Dear Sir/Madam,

We are preparing Wastewater Discharge Licences Applications for four wastewater treatment plants in County Sligo;

Agglomeration Name	**Receiving Waters**	**Designation**	**E.I.S.**
Rosses Point (Approximate PE 1679)	Sligo Harbour	Cummen Bay/Sligo Bay SAC & SPA Drumcliff Bay	No
Mullaghmore (Approximate PE 1241)	Mullaghmore Harbour	Bunduff Lough And Machair/Trawalua/Mullaghmore SAC	No
Coolaney (Approximate PE 1488)	Owenbeg River	Unshin River SAC	No
Gurteen (Approximate PE 1595)	Owenmore River	Not Designated at Gurteen	No

All of the above waste water treatment plants are existing and fully operational. The licence applications will include information on waste assimilative capacity, storm overflows, design population equivalents, flows and treatment standards etc.

The licence applications will be submitted to the EPA on the 28/02/09.

The EPA guidelines for the waste water discharge licence application state that;

Information on the receiving waters should be given with details of;

- *Discharges, either from the waste water works or in proximity to the waste water works, likely to have a significant effect on a European site. If deemed likely to have a significant effect an appropriate assessment of the implications for the site in view of the sites conservation objectives must be carried out.* ***The determination of the likely effect on a European site shall be carried out in consultation with the National Parks and Wildlife Service. Evidence of this consultation process shall be provided as part of the application documentation.***

- *Any specific correspondence from the National Parks and Wildlife Service in relation to the European site, i.e., correspondence in relation to the extent of the designated area, the rationale for such a designation and details of the flora and fauna protected.*

- ***Where no EIS has been prepared for a waste water works it is necessary for Water Services Authorities to liaise with NPWS to determine whether an appropriate assessment is required for the site.***

As part of the WWDL Application Process, we would like to enter into consultation with you as to whether the discharges are deemed likely to have a significant effect on a European Site and the requirement for Appropriate Assessment for each of the schemes. **As the applications are due to the EPA on the 28/02/09 we would request an urgent response to this letter. On previous applications which Nicholas O'Dwyer have prepared on behalf of local authorities, the EPA have requested a definitive statement as to whether an appropriate assessment is required.**

We are available to meet with you to discuss each of the schemes and provide additional information as required.

Please feel free to contact the undersigned at Nicholas O'Dwyer LTD, to discuss further.

Yours faithfully,

_____

Sinead Hanrahan
for NICHOLAS O'DWYER LTD.

SITE SYNOPSIS

SITE NAME: CUMMEEN STRAND/DRUMCLIFF BAY (SLIGO BAY)

SITE CODE: 000627

This large coastal site extends from Cullamore in the north-west to Killaspug in the south-west, and from Sligo town in the south-east to Drumcliff village in the north-east. It encompasses two large, shallow bays (Drumcliff Bay and Sligo Harbour), Ardboline and Horse Islands, sand dunes and sand hills at Rosses Point, Killaspug, Yellow Strand and Coney Island, grassland at Ballintemple and Ballygilgan (Lissadell) and a variety of other habitats (woodland, salt marsh, sandy beaches, boulder beaches, shingle, fen, freshwater marshes, rocky sea cliffs, lakes). The site is largely underlain by Carboniferous limestone, but acidic rocks are also found on the Rosses Point peninsula. At Serpent Rock in the north-western section of the site the most complete section of the north-western Carboniferous strata is exposed. Here are found an excellent series of fossilised corals which, in some strata, stand out from the rock matrix.

The dominant habitats on the site are estuaries and intertidal sand and mud flats. Sligo Harbour receives the waters of the Garavogue River, which flows from Lough Gill, while Drumcliff Bay receives the Drumcliff River which flows from Glencar Lough. At low tide extensive areas of intertidal flats are exposed in both of these sheltered estuarine bays. The intertidal flats support a diverse macrofauna, with invertebrate species such as lugworm (*Arenicola marina*), cockles (*Cerastoderma edul*e), sand mason (*Lanice conchilega*), Baltic tellin (*Macoma balthica*), spire shell (*Hydrobia ulvae*) and mussels (*Mytilus edulis*) being frequent. Of particular note is the presence of eelgrass (*Zostera noltii* and *Z. angustifolia*) beds in both bays. Both estuaries and intertidal flats are of conservation significance and are listed on Annex I of the EU Habitats Directive. Areas of salt marsh fringe both bays in places.

Sand dunes, sand hills and dune grassland are found at Rosses Point, Killaspug, Yellow Strand and Coney Island. The dominant species of the dune grassland behind Yellow Strand are Sand Sedge (*Carex arenaria*) and Meadow-grass (*Poa pratensis*), with associated species including Lady's Bedstraw (*Galium verum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Common Milkwort (*Polygala vulgaris*), Common Dog-violet (*Viola riviniana*), Mountain Everlasting (*Antennaria dioica*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Early Marsh-orchid (*D. incarnata*), Frog Orchid (*Coeloglossum viride*) and Autumn Lady's-tresses (*Spiranthes spiralis*). Embryonic dunes, with characteristic species, including Sand Couch (*Elymus farctus*), occur at the southern end of Rosses Point. Sand dune habitats are rare and threatened in Europe and three types found on the site, embryonic dunes, Marram (*Ammophila arenaria*) dunes and fixed dunes, are listed on Annex I of the E.U. Habitats Directive, the last-named with priority status.

Wetlands on the site include Doonweelin Lake, a freshwater lake on the Rosses Point peninsula, which supports interesting vegetation communities that reflect the

juxtaposition of the underlying acidic and basic rocks. Ardtermon Fen, a small, floristically-rich area of freshwater marsh, swamp, wet grassland and fen is situated at the back of the Yellow Strand sandhills.

The site includes small areas of Hazel (*Corylus avellana*) and Ash (*Fraxinus excelsior*) woodland on limestone (e.g. Cummeen Wood) and several other stands of mixed woodland and wet Willow (*Salix* spp.) woodland (as at Ardtermon Fen).

Cliff-top grassland is common in the north-western part of the site. This is dominated by Red Fescue (*Festuca rubra*) and White Clover (*Trifolium repens*), with associated species including Daisy (*Bellis perennis*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Plantains (*Plantago coronopus, P. lanceolata* and *P. maritima*), Bulbous Buttercup (*Ranunculus bulbosus*), Common Scurvygrass (*Cochlearia officinalis*), Field Wood-rush (*Luzula campestris*) and Spring Sedge (*Carex caryophyllea*).

The site has a good example of petrifying springs with tufa formations, with several species of bryophyte typical of the *Cratoneurion*. The springs occur along seepage zones in clay sea cliffs on the northern side of Sligo Harbour. Petrifying springs are listed with priority status on Annex I of the EU Habitats Directive.

The site has a very rich and diverse flora, on account of the wide variety of habitats found, and the presence of both basic and acidic substrates. Several rare, Red Data Book species have been recorded from the site, i.e. Rough Poppy (*Papaver hybridum*) which is also listed under the Flora (Protection) Order, 1999, Hoary Whitlowgrass (*Draba incana*) and Yellow Saxifrage (*Saxifraga aizoides*).

Both Drumcliff Bay and Cummeen Strand are important for the large numbers of waterfowl which use them in autumn/winter, including Ringed Plover, Redshank, Lapwing, Knot, Bar-tailed Godwit, Oystercatcher, Curlew, Golden Plover, Dunlin, Turnstone, Brent Goose, Grey Heron, Teal, Wigeon, Mallard, Shelduck and Red-breasted Merganser. The fields at Lissadell and Ballintemple support one of the largest populations of Barnacle Goose in the country (c2000 in winters of 1995/96 and 1996/97). Both Drumcliff Bay and Cummeen Strand have been designated as Special Protection Areas under the EU Birds Directive. The important feeding site for Barnacle Geese at Lissadell is a Statutory Nature Reserve.

The islands in the north-western section of the site hold important seabird colonies. A Cormorant colony of national importance occurs on Ardboline and Horse Islands, with a total of 261 pairs in 1998. Herring Gull and Great Black-backed Gull also breed on both islands. Common Tern formerly bred on both islands. The islands are also used by Barnacle Geese from the adjacent mainland, which roost or seek refuge here. The low sea cliffs on the adjacent mainland at Ballyconnell and Roskeeragh Points also support small numbers of seabirds and both Black Guillemot and Fulmar nest. Choughs feeds in the sandy/grassy areas of the site and one pair is known to nest. Several of the bird species that use the site are listed on Annex I of the EU Birds Directive, i.e. Barnacle Goose, Chough, Golden Plover and Bar-tailed Godwit.

Three species listed on Annex II of the EU Habitats Directive are found within this site. Drumcliff Bay, is important for the presence of a large breeding population of Common Seal and Ardboline and Horse Islands on the western side of the site are also important as haul-out areas for this species. The Marsh Fritillary butterfly is found at Rosses Point, while the rare snail, *Vertigo angustior* has recently been recorded from sand dunes at Killaspugbrone.

Cummeen Strand/Drumcliff Bay (Sligo Bay) is an important site of high conservation significance, which includes a wide variety of habitat types, including several listed on Annex I of the EU Habitats Directive, several species listed on Annex II of this directive, large and important populations of waterfowl and seabirds, and several rare plant species.

7.8.2003

ATTACHMENT G1
COMPLIANCE WITH COUNCIL DIRECTIVES

ATTACHMENT No: G. 1
COMPLICANCE WITH COUNCIL DIRECTIVES

Dangerous Substances Directive 2006/11/EC
This Directive concerns pollution caused by certain dangerous substances discharged into the aquatic environment of the EU.

Monitoring for dangerous substances in the final effluent and at an ambient monitoring point was carried out on two occasions.

Calculations to determine total concentration of Metals and Other Substances in the receiving water were carried out and are attached.

AMBIENT MONITORING POINT
Concentrations of Table 1 parameters, Pesticides and Solvents in the receiving water (sea) are lower than the prescribed maxima for all parameters except for Tolulene. The concentration measured on 1 of the 2 monitoring occasions shows a value of 52ug/l, compared with a limit of 10ug/l.

Concentrations of Table 2 parameters, Metals and Other Substances in the receiving water (sea) are lower than the prescribed maxima in all cases except for Arsenic. The concentration measured on 1 of the 2 monitoring occasions shows a value of 310ug/l, compared with a limit of 25ug/l.

EFFLUENT MONITORING POINT
Concentrations of Table 1 and 2 parameters in the effluent are lower than the prescribed parameter for all parameters except Copper and Zinc.

The average (average of samples carried out on two occasions) measured effluent concentration of Copper is 40.5ug/l This compares with a prescribed maxima for tidal waters of 5ug/l, requiring a dilution factor of 8.1.

The average measured effluent concentration of Zinc is 91ug/l. This compares with a prescribed maxima for tidal waters of 40ug/l, requiring a dilution factor of 2.3.

The Water Framework Directive 2000/60/EC
The WFD sets a framework for comprehensive management of water resources in the European Union, within a common approach and with common objectives, principles and basic measures. It addresses inland surface waters, estuarine and coastal waters and groundwater. The fundamental objective of the Water Framework Directive aims at maintaining “high status” of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least “good status” in relation to all waters by 2015. Member States will have to ensure that a co-ordinated approach is adopted for the achievement of the objectives of the WFD and for the implementation of programmes of measures for this purpose.

The Birds Directive 79/409/EEC
This Directive and amending acts, aim at providing long term protection and conservation of all bird species naturally living in the wild within the European territory of the Member States. These member states must conserve, maintain or restore the biotopes and habitats of birds by creating protection zones such as SPAs.

The Groundwater Directives 80/68/EEC & 2006/118/EC
Not Applicable.

The Drinking Water Directives 80/778/EEC
Not Applicable.

The Urban Waste Water Treatment Directive 91/271/EEC
The proposal to treat sewerage from Rosses Point at the Sligo Town WwTP will ensure compliance with this Directive.

The Habitats Directive 92/43/EEC
The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favorable conservation status, introducing robust protection for those habitats and species of European importance. Protection zones for annexed species such as SACs were designated as part of this Directive.

The Environmental Liabilities Directive 2004/35/EC
Regard to the EPA Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision was made during completion of this application.

The Bathing Water Directive 76/160/EEC
Not Applicable.

Shellfish Waters Directive (79/923/EEC)

Not Applicable.

ATTACHMENT G3
IMPACT MITIGATION

ATTACHMENT No: G. 3
IMPACT MITIGATION

The proposal to treat sewerage from Rosses Point at the Sligo Town WwTP will ensure that discharges from the agglomeration will not result in significant environmental pollution. A copy of the Capital Investment Programme is included in Appendix B.10.

ATTACHMENT G4
STORM WATER OVERFLOW

ATTACHMENT No: G. 4
STORM WATER OVERFLOW

There are currently 3 storm water overflows from the sewage network in Rosses Point. It is not known how often overflow occurs. As detailed in the Sligo Main Drainage WwDL Application, these overflows will remain after the decommissioning of the existing septic tank. In the event of an emergency or extreme storm event, where flows entering the main pumping station in Sligo Town exceed the design capacity or in the event of a power failure, the overflows at Rosses Point may be utilized.