Section B

General

SECTION B: GENERAL

Advice on completing this section is provided in the accompanying Guidance Note.

B.1 Applicant's Details*

Name and Address for Correspondence

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Provide a drawing detailing the agglomeration to which the licence application relates. It should have the boundary of the agglomeration to which the licence application relates clearly marked in red ink.

Name:**	Gearoid McCarthy
Address:	Monaghan County Council, Water Services
	County Offices
	The Glen
	Monaghan
Tel:	047 30537
Fax:	047 82739
e-mail:	GMcCarthy@monaghancoco.ie

*This should be the name of the water services authority in whose ownership or control the waste water works is vested.

**Where an application is being submitted on behalf of more than one water services authority the details provided in Section B.1 shall be that of the lead water services authority.

Name*:	T.J. O'Connor & Associates
Address:	Corrig House
	Corrig Road
	Sandyford
	Dublin 18
Tel:	01 – 295 2321
Fax:	01 – 295 4541
e-mail:	LClear@tjoc.iol.ie

*This should be the name of person nominated by the water services authority for the purposes of the application.

Co-Applicant's Details

Name*:	not applicable
Address:	
Tel:	
Fax:	
e-mail:	

*This should be the name of a water services authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge (authorisation) licence application.

Design, Build & Operate Contractor Details

Name*:	not applicable
Address:	
Tel:	
Fax:	
e-mail:	

*Where a design, build & operate contract is in place for the waste water works, or any part thereof, the details of the contractor should be provided.

Attachment B.1 should contain appropriately scaled drawings / maps (≤A3) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.2 Location of Associated Waste Water Treatment Plant(s)

Give the location of the waste water treatment plant associated with the waste water works, if such a plant or plants exists.

Name*:	Matthew Lamb
Address:	Carrickmacross Wastewater Treatment Plant
	Magheross
	Carrickmacross
Grid ref (6E, 6N)	E: 284555 N: 302802
Level of Treatment	Tertiary
Primary Telephone:	042 9663372
Fax:	-
e-mail:	mlamb@monaghancoco.ie

*This should be the name of the person responsible for the supervision of the waste water treatment plant.

Attachment B.2 should contain appropriately scaled drawings / maps (≤A3) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.1, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.3 Location of Primary Discharge Point

Give the location of the primary discharge point, as defined in the Waste Water Discharge (Authorisation) Regulation, associated with the waste water works.

Type of Discharge	Ø250mm Outfall pipe
Unique Point Code	SW1
Location	Carrickmacross WWTW, Magheross, Carrickmacross
Grid ref (6E, 6N)	E: 284624 N: 302833

Attachment B.3 should contain appropriately scaled drawings / maps (≤A3) of the discharge point, including labelled monitoring and sampling points associated with the discharge point. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing the drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.4 Location of Secondary Discharge Point(s)

Give the location of **all** secondary discharge point(s) associated with the waste water works. Please refer to Guidance Note for information on Secondary discharge points.

Type of Discharge	Ø250mm Outfall pipe
Unique Point Code	SW2
Location	Carrickmacross WWTW, Magheross, Carrickmacross
Grid ref (6E, 6N)	E: 284588 N: 302860

Attachment B.4 should contain appropriately scaled drawings / maps (≤A3) of the discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.5 Location of Storm Water Overflow Point(s)

Give the location of **all** storm water overflow point(s) associated with the waste water works.

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW3
Location	Farney Street
Grid ref (6E, 6N)	E: 284333 N: 303692

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW4
Location	Farney Street
Grid ref (6E, 6N)	E: 284439 N: 303760

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW5
Location	School Lands
Grid ref (6E, 6N)	E: 284500 N: 303500

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW6
Location	Rockdaniel Road
Grid ref (6E, 6N)	E: 284520 N: 304051

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW7
Location	Cloughvalley
Grid ref (6E, 6N)	E: 284422 N: 304002

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW8
Location	Rear of Main Street
Grid ref (6E, 6N)	E: 284149 N: 303741

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW9
Location	Lands off Chapel Lane
Grid ref (6E, 6N)	E: 284172 N: 303899

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW10
Location	Parnell Street
Grid ref (6E, 6N)	E: 283901 N: 303769

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW11
Location	Mullanarry Street
Grid ref (6E, 6N)	E: 283773 N: 303833

Type of Discharge	Combined Sewer Overflow
Unique Point Code	SW12
Location	Ardee Road
Grid ref (6E, 6N)	E: 284198 N: 303176

Attachment B.5 should contain appropriately scaled drawings / maps (≤A3) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.6 Planning Authority

Give the name of the planning authority, or authorities, in whose functional area the discharge or discharges take place or are proposed to take place.

Name:	Monaghan County Council
Address:	Planning Section
	County Offices
	The Glen
	Monaghan
Tel:	047 – 30500
Fax:	047 – 82739
e-mail:	planning@monaghancoco.ie

Planning Permission relating to the waste water works which is the subject of this application:- (tick as appropriate)

has been obtained	✓	***is being processed***	
is not yet applied for		***is not required***	

Local Authority Planning File Reference N^{o}:	18.EL2050

Attachment B.6 should contain ***the most recent*** planning permission, including a copy of ***all*** conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS, should also be enclosed. Where planning permission is not required for the development, provide reasons, relevant correspondence, *etc.*

Attachment included	**Yes**	**No**
	✓	

B.7 Other Authorities

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

Attachment B.7(i) should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	**Yes**	**No**
		✓

B.7 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region** where the discharge or discharges are or will be located.

Name:	Health Service Executive
Address:	Regional Health Office, HSE Dublin and North East
	Dublin Road
	Kells, Co. Meath
Tel:	046 – 9280621
Fax:	046 – 9241784
e-mail:	rhodublinnortheast@maile.hse.ie

B.7 (iii) Other Relevant Local Authorities

Regulation 13 of the Waste Water Discharge (Authorisation) Regulations, 2007 requires all applicants, not being the local authority in whose functional area the relevant waste water discharge or discharges, to which the relevant application relates, takes place or is to take place, to notify the relevant local authority of the said application.

Name:	Carrickmacross Town Council
Address:	Old fever Hospital
	Shercock Road
	Carrickmacross
Tel:	042 9661236
Fax:	042 9661236
e-mail:	clerk@carrickmacrosstc.ie

Relevant Authority Notified	**Yes**	**No**
	✓	

Attachment B.7(iii) should contain a copy of the notice issued to the relevant local authority.

Attachment included	**Yes**	**No**
	✓	

B.8 Notices and Advertisements

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 require all applicants to advertise the application in a newspaper and by way of a site notice. See *Guidance Note.*

Attachment B.8 should contain a copy of the site notice and an appropriately scaled drawing (≤A3) showing its location. **The original application must include the original page of the newspaper in which the advertisement was placed**. The relevant page of the newspaper containing the advertisement should be included with the original and two copies of the application.

Attachment included	**Yes**	**No**
	✓	

B.9 (i) Population Equivalent of Agglomeration

TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

Population Equivalent	**21,666**
Data Compiled (Year)	**2006**
Method	**Census figures, metered water consumption readings, influent flow and Biochemical Oxygen Demand (BOD) measurement**

B.9 (ii) FEES

State the relevant Class of waste water discharge as per Column 1 of the Second Schedule, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
	€ 30,000.-

Appropriate Fee Included	Yes	No
		✓

B.10 Capital Investment Programme

State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding, (local or national), allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

Attachment B.10 should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

B.11 Significant Correspondence

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

Attachment B.11 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	**Yes**	**No**
		✓

B.12 Foreshore Act Licences.

Provide a copy of the most recent Foreshore Act licence issued in relation to discharges from the waste water works issued under the Foreshore Act 1933.

Attachment B.12 should contain the most recent licence issued under the Forsehore Act 1933, including a copy of ***all*** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	**Yes**	**No**
		✓

Attachment No. B.1

Drawing of the agglomeration served by the waste water works showing the boundary.

OSI COPYRIGHT LICENCE NO. MONAGHAN CCMA 9802

AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: AGGLOMERATION MAP

SCALE: N.T.S		JOB NO:	DRAWING NO:
DATE: DEC'07	DRAWN BY: GJD	1124	CARRICK 03

Attachment No. B.2

Drawings of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points.

BM 35.19
LS
33.8
Mhs
Mh
Car Park
H
33.3
Highfield
94
93
39.6
32.9
NEW LINK ROAD
CARRICKMACROSS TOWN CENTRE
CS
UND
Area Underconstruction 2008
PROPOSED SITE BOUNDARY EXTENSION TO WWTP
T
WASTEWATER TREATMENT PLANT 284549, 302730
WASTEWATER TREATMENT PLANT BOUNDARY
ARDEE ROAD
DUBLIN
40.2

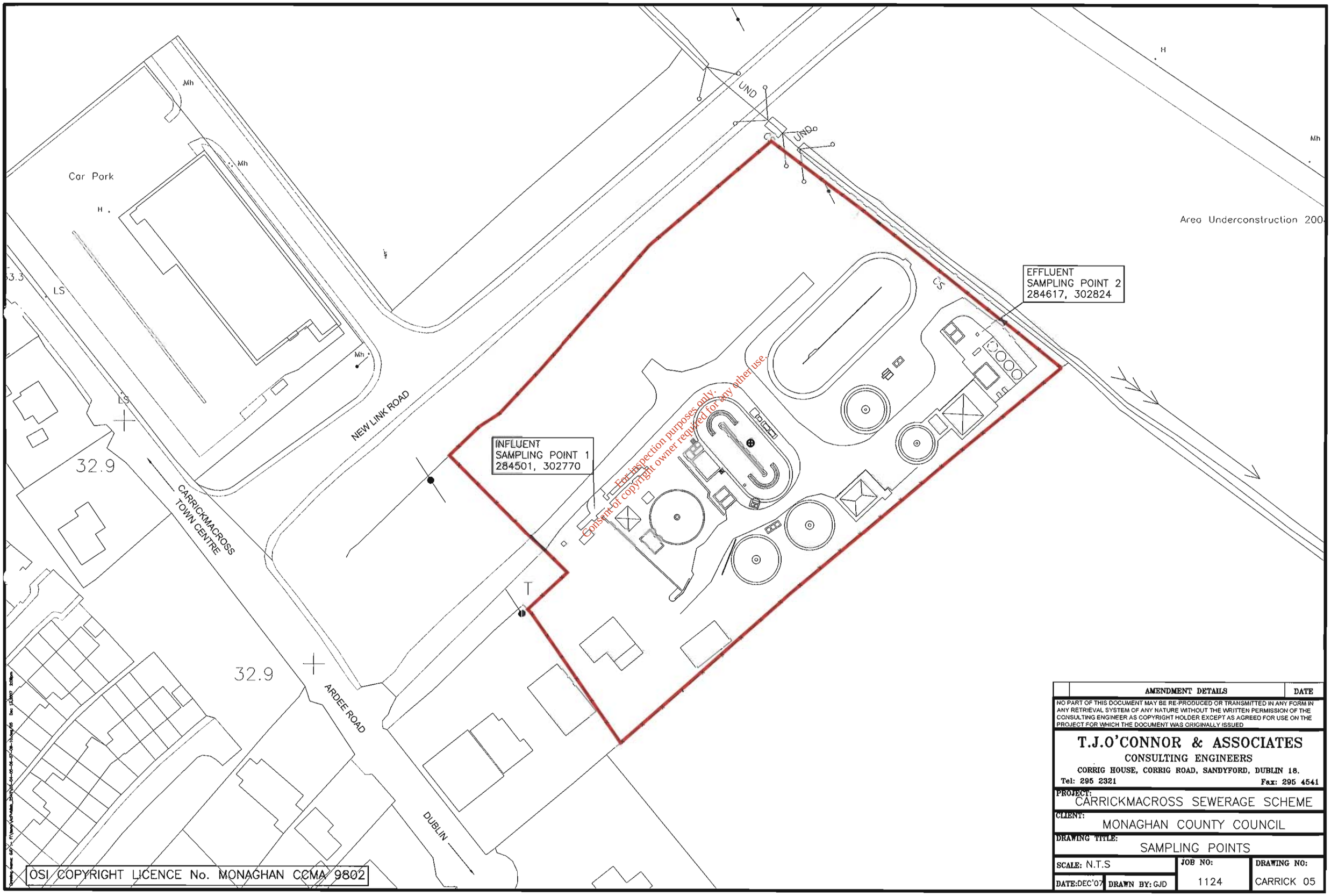
OSI COPYRIGHT LICENCE No. MONAGHAN CCMA 9802

	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME
CLIENT: MONAGHAN COUNTY COUNCIL
DRAWING TITLE: SITE BOUNDARY

SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE: DEC'07 DRAWN BY: GJD	1124	CARRICK 04



	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

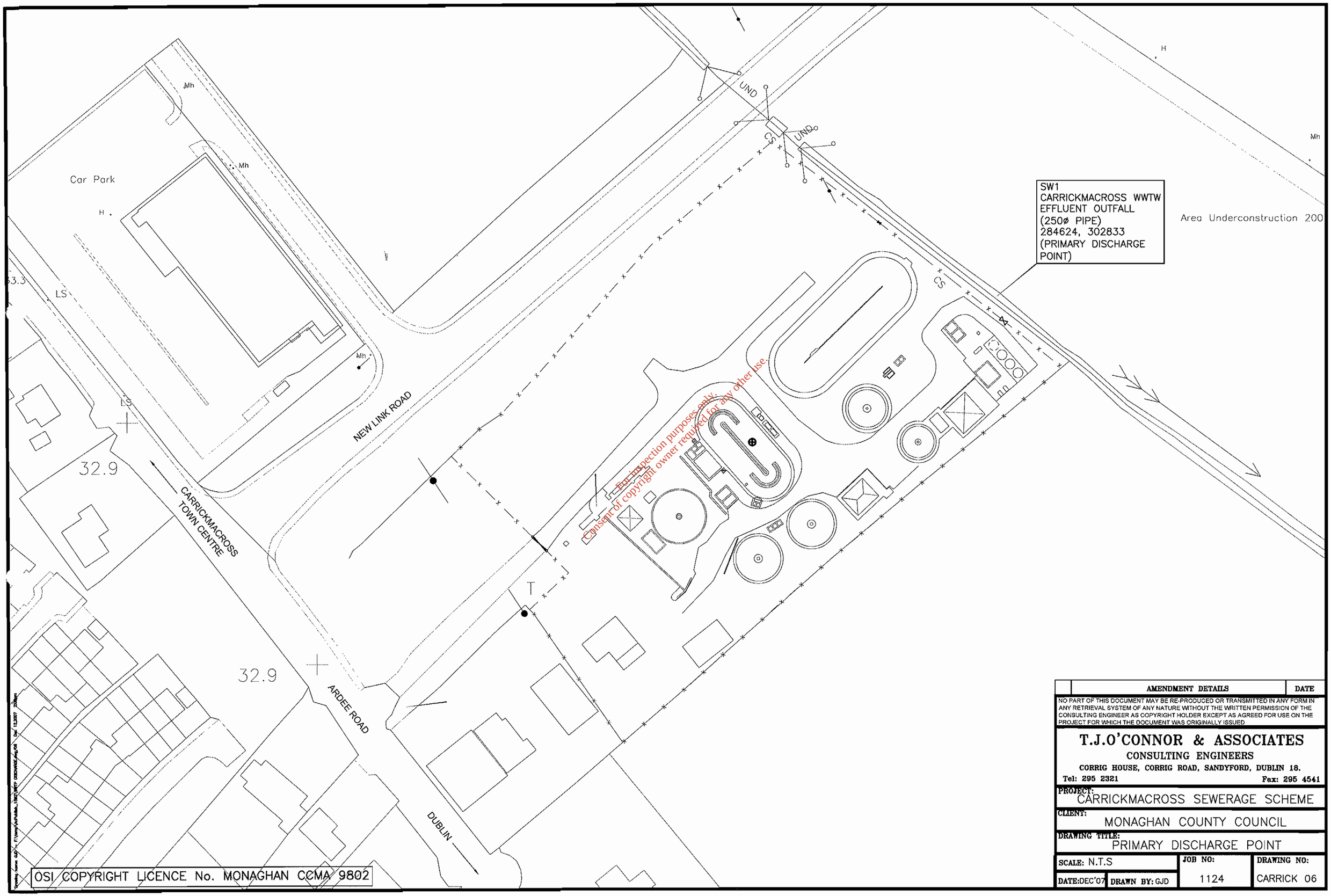
CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: SAMPLING POINTS

SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE: DEC'07 DRAWN BY: GJD	1124	CARRICK 05

Attachment No. B.3

Drawings of the primary discharge point, including labelled monitoring and sampling points associated with the discharge point.



	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: PRIMARY DISCHARGE POINT

SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE:DEC'07 DRAWN BY: GJD	1124	CARRICK 06

Attachment No. B.4

Drawings of the secondary discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s).

SW2
CARRICKMACROSS WWTW
STORM WATER OUTFALL
(???ø PIPE)
284588, 302860
(SECONDARY DISCHARGE POINT)

Area Underconstruction 200

Car Park

NEW LINK ROAD

CARRICKMACROSS TOWN CENTRE

ARDEE ROAD

DUBLIN

UND

Mh

LS

32.9

	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

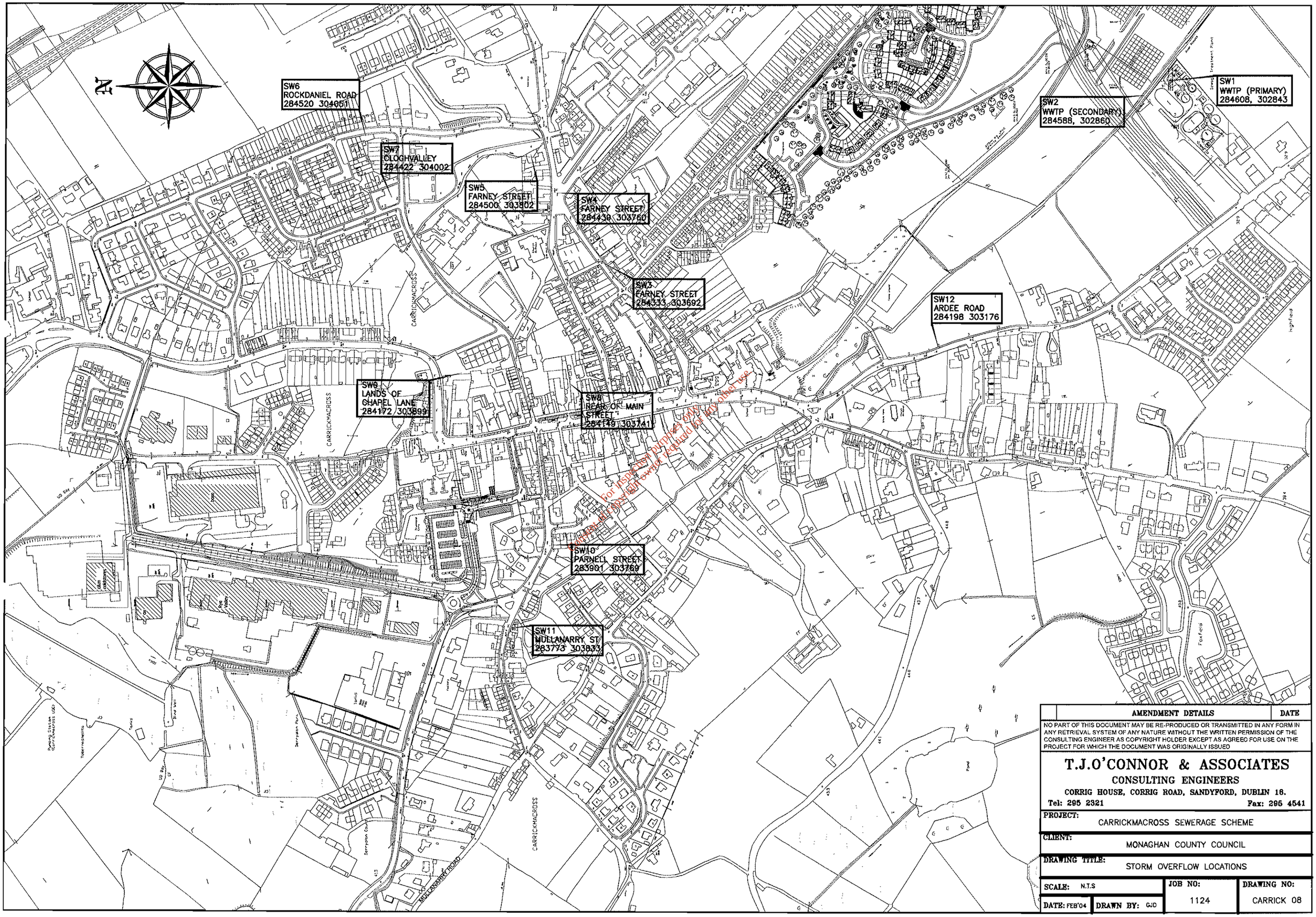
CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: SECONDARY DISCHARGE POINT

SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE:DEC'07 DRAWN BY: GJD	1124	CARRICK 07

Attachment No. B.5

Drawings of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s).



AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 16.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: STORM OVERFLOW LOCATIONS

SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE: FEB'04 DRAWN BY: GJD	1124	CARRICK 08

Attachment No. B.6

Attachment B.6 is enclosed in a separate folder.

Attachment No. B.7 (i)

Location of discharges located within Shannon Free Airport Development Company area

Not Applicable

Attachment No. B.7 (iii)

A copy of the notice issued to the relevant local authority.

COMHAIRLE CHONTAE MHUINEACHÁIN
MONAGHAN COUNTY COUNCIL

Oifigí Contae,
An Gleann,
Muineachán.

Guthán: 047 - 30500

County Offices,
The Glen,
Monaghan.

Tel:047 30500
Fax: 047 82739
Email: info@monaghancoco.ie
Website: www.monaghan.ie

Community & Enterprise (047) 38140

Environment (047) 30592/30593

Finance (047) 30589

Fire/Building Control (047) 30521

Higher Education Grants (047) 30550

Housing Construction (047) 30529

Housing Loans/Grants (047) 30527

Human Resource Management (047) 30586

Motor Taxation (047) 81175

Planning (047) 30532

Register of Electors (047) 30547

Roads (047) 30597

Water Services (047) 30504

The Town Clerk,
Carrickmacross Town Council,
Old Fever Hospital
Shercock Rd.,
CARRICKMACROSS

07/12/2007

Re: Urban Wastewater Authorisation Regulations 2007

NOTICE OF INTENT TO APPLY FOR DISCHARGE LICENCE

A Chara,

I wish to advise that Monaghan County Council, Water Services, The Glen, Monaghan intend to apply to the EPA for a Discharge Licence for Carrickmacross Wastewater Treatment Plant and associated agglomeration. These facilities are in the functional area of Carrickmacross Town Council.

A copy of the application for the Waste Water Discharge Licence, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie
and at
Monaghan County Council Offices, The Glen, Monaghan, Co. Monaghan, Telephone: 047 30500 Fax: 047 82739.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

Gearoid McCarthy
Water Services
Monaghan County Council

Attachment No. B.8

A copy of the site notice and a drawing showing its location

• Public Notices • Announcements • Situa

Contact our Advertising Office Monday to Friday tel: 047 82188 fax: 047 84070 email: ads@northern-standard.ie

Comhairle Contae Mhuineacháin
www.monaghan.ie
MONAGHAN COUNTY COUNCIL

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007 SI No. 684 of 2007, Water Services, of Monaghan County Council, The Glen, Monaghan, Co. Monaghan is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for Carrickmacross Waste Water Treatment Plant, Magheross, Carrickmacross at the following locations:

Plant Name		**Location**	**National Grid Ref.**	
Carrickmacross WWTP		**Magheross, Carrickmacross**	**E284557 N302799**	
Discharge	Function	Townland	Receptor	Grid Reference
Primary	Main	Magheross	Pooles	E284608 N302843
Secondary	Emergency	Magheross	Pooles	E284588 N302860
Secondary	Emergency	Farney St		E284333 N303692
Secondary	Emergency	Farney St		E284439 N303760
Secondary	Emergency	School Lands		E284500 N303500
Secondary	Emergency	Rockdaniel Rd		E284520 N304051
Secondary	Emergency	Cloughvalley		E284422 N304002
Secondary	Emergency	Rear of Main St		E284149 N303741
Secondary	Emergency	Lands off Chapel Lane		E284172 N303899
Secondary	Emergency	Parnell St		E283901 N303769

It is intended to submit the Environmental Impact Statement associated with the proposed upgrading of the Waste Water Treatment Plant to the Agency along with the Application.

A copy of the application for the Waste Water Discharge Licence, the Environmental Impact Statement and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

- Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie

and at

- Monaghan County Council Offices, The Glen, Monaghan, Co. Monaghan, Telephone: 047 30500 Fax: 047 82739.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007 SI No. 684 of 2007, Water Services, of Monaghan County Council, The Glen, Monaghan, Co. Monaghan is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for Monaghan Waste Water Treatment Plant, Tirkeenan, Monaghan at the following locations:

Plant Name		**Location**	**National Grid Ref.**	
Monaghan WWTP		**Tirkeenan, Monaghan**	**E267912 N333738**	
Discharge	Function	Townland	Receptor	Grid Reference
Primary	Main	Tirkeenan	Shambles	E268048 N333859
Secondary	Emergency	Tirkeenan	Shambles	E267845 N333776
Secondary	Emergency	Old Cross Square	Shambles	E267405 N333531
Secondary	Emergency	Old Cross Square	Shambles	E267536 N333637
Secondary	Emergency	Dawson St	Shambles	E267123 N333596
Secondary	Emergency	Park St	Shambles	E266996 N333605
Secondary	Emergency	Market Rd	Shambles	E267045 N333500
Secondary	Emergency	Cootehill Rd	Shambles	E267324 N332645

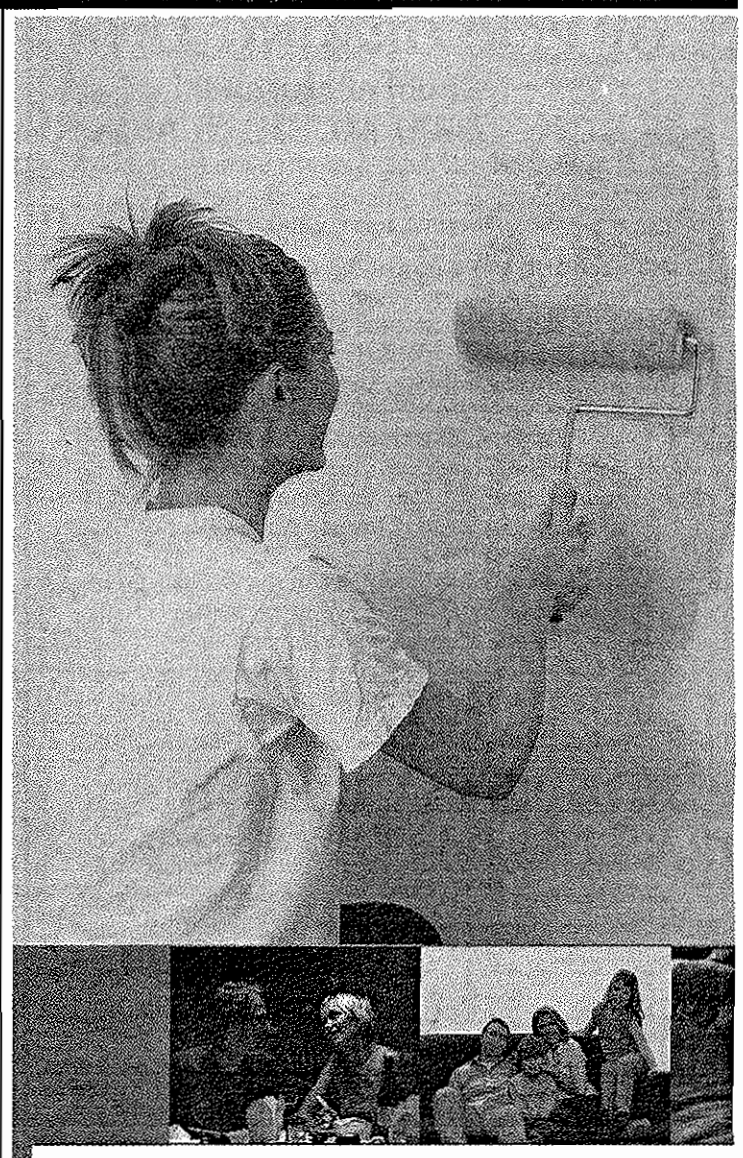
A copy of the application for the Waste Water Discharge Licence, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

- Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie

and at

- Monaghan County Council Offices, The Glen, Monaghan, Co. Monaghan, Telephone: 047 30500 Fax: 047 82739.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above



Affordable Homes are now available in Lisda
This is a great opportunity for first time buy discount to the market value.

3 bedroom house from €140,000 | 4 bedroom house from €144,000

On the open market these houses would cost around €180,000 - €210,000

Monaghan County Council currently have 2 storey detached houses to sell the Affordable Housing Scheme at Lisdarragh, Newbliss, Co. Monaghan.

An affordable home is provided at a discount to the market price to qualifyi first time buyers. If you sell within 20 years you will have to pay back a perc of the sale price.

TO QUALIFY YOU MUST:
- be first time buyers (certain exceptions apply)
- be currently permanently employed
- have savings to cover a deposit of 3%
- become an owner occupier

Limited availability also remaining in Corlatt, Knockatallon, Co. Monaghan starting from

Further information and application forms available at www.monaghanacoco.ie or contact Bernie in Housing Loans & Grants on 047 30503.

Information Day: Carrickma
Friday 14th Decem
Venue - Workhouse, Sherco

Monaghan County Council invites Local Traders and other intere December in the Workhouse, Shercock Road, Carrickmacross betw The Carrickmacross Sewerage Scheme is of major importance to th rons. It comprises of two major work elements, the first of whicl replacement and extension of the existing sewer collection networ ment and expansion of the existing wastewater treatment plant. This information day is open to all and shall inform the public, loca to be carried out under the Carrickmacross Sewerage Scheme and p schemes appointed contractor, consultant and Monaghan County C

Eugene O'Doherty

MONAGHAN TOWN COUNCIL

MONAGHAN COUNTY COUNCIL

SITE NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, Water Services, Monaghan County Council, The Glen, Monaghan is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for Carrickmacross Waste Water Treatment Plant, Magheross, Carrickmacross, at the following locations:

Plant Name	Location	National Grid Ref.
Carrickmacross WWTP	Magheross, Carrickmacross	E284557 N302799

Discharge	Function	Townland	Receptor	Grid Reference
Primary	Main	Magheross	Proules	E284608 N302843
Secondary	Emergency	Magheross	Proules	E284588 N302860
Secondary	Emergency	Farney St		E284333 N303692
Secondary	Emergency	Farney St		E284439 N303760
Secondary	Emergency	School Lands		E284500 N303500
Secondary	Emergency	Rockdaniel Rd		E284520 N304051
Secondary	Emergency	Cloughvalley		E284422 N304002
Secondary	Emergency	Rear of Main St		E284149 N303741
Secondary	Emergency	Lands off Chapel Lane		E284172 N303899
Secondary	Emergency	Parnell St		E283901 N303769
Secondary	Emergency	Mullanarry St		E283773 N303833
Secondary	Emergency	Ardee Rd		E284198 N303176

It is intended to submit the Environmental Impact Statement associated with the proposed upgrading of the Waste Water Treatment Plant to the Agency along with the Application.

A copy of the application for the Waste Water Discharge Licence, the Environmental Impact Statement and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

- **Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie**

and at

- **Monaghan County Council Offices, The Glen, Monaghan, Co. Monaghan, Telephone: 047 30500 Fax: 047 82739.**

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above

Car Park

Mh

H

LS

NEW LINK ROAD

CARRICKMACROSS TOWN CENTRE

ARDEE ROAD

DUBLIN

SITE NOTICE

32.9

UND

CS

T

Area Underconstruction 200

	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: SITE NOTICE LOCATION

SCALE: N.T.S		JOB NO:	DRAWING NO:
DATE: DEC'07	DRAWN BY: GJD	1124	CARRICK 09

Attachment No. B.10

Development programme including copies of approved funding and timeframes for completion

Development Programme Including Copies of Approved Funding and Timeframe for Completion

Expansion of Carrickmacross WWTP
Monaghan County Council proposes to extend the existing wastewater treatment works to treat wastewaters from both domestic and industrial sources in Carrickmacross Town and its environs.

It is proposed to construct an extension to the existing wastewater treatment plant at the Ardee Road to cater for an ultimate PE of 44,000. Tgis includes for pollution loads from both domestic and non-domestic sources, such as shops, hotels, restaurants and local industries. In accordance with the regulations, the WWTW will continue to treat flows arising to a tertiary standard, including Phosphorus removal. However, a much higher standard will be required as part of the upgrading process.

An EIS has been prepared and Planning permission was granted. It is anticipated that a Contractor will be appointed at the end of 2008. Construction of the extension should be finished half 2010.

A detailed description of the Scheme is provided in the Environmental Impact Statement, please refer to Attachment B.6.

Enclosed is a copy of the Department of Environments approval to proceed with the project and allocated funding.

Carrickmacross Sewerage Scheme
Monaghan County Council proposes to upgrade and extend the existing sewage network to serve the town and its environs.

Contract documents for the Scheme have been prepared and construction of the scheme will commence early 2008. The Scheme should be finished by the end of 2010.

Enclosed is the Executive Summary of the Scheme and a copy of the Department of Environments approval to proceed with the project and allocated funding.

FILE

14th July 2005.

AN ROINN COMHSHAOIL AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT AND LOCAL GOVERNMENT

Mr. Paul Clifford,
Director of Services,
Monaghan County Council,
The Glen,
Monaghan.

AN ROINN COMHSHAOIL
AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF
THE ENVIRONMENT AND
LOCAL GOVERNMENT

BLOCK 1, FLOOR 2
FOIBHEACH IRISH LIFE
SRÁID MACLISTEARCAIGH ÍOCHTAR
BAILE ÁTHA CLIATH 1
BLOCK 1, FLOOR 2
IRISH LIFE CENTRE
LOWER ABBEY STREET
DUBLIN 1

Tel No: +353 1 888 2000
LoCall No: 1890 20 20 21
Fax No: +353 1 888 2687

Re: Carrickmacross Sewerage Scheme- Wastewater Treatment Plant
Approval of Preliminary Report

Dear Mr. Clifford,

I am directed by the Minister for the Environment, Heritage and Local Government to convey approval to the Preliminary Reports submitted by Monaghan County Council for the proposed Wastewater Treatment Plant under the Carrickmacross Sewerage Scheme.

This approval is subject to:

- The Council ensuring that all lands in their ownership in the vicinity of the existing treatment works are not developed until a decision is reached on the siting of the proposed new wastewater treatment plant;

- Consideration being given to the inclusion of some key pumping stations in the DBO documents;

- The Council advancing the E.I.S. process for this scheme at the earliest possible time;

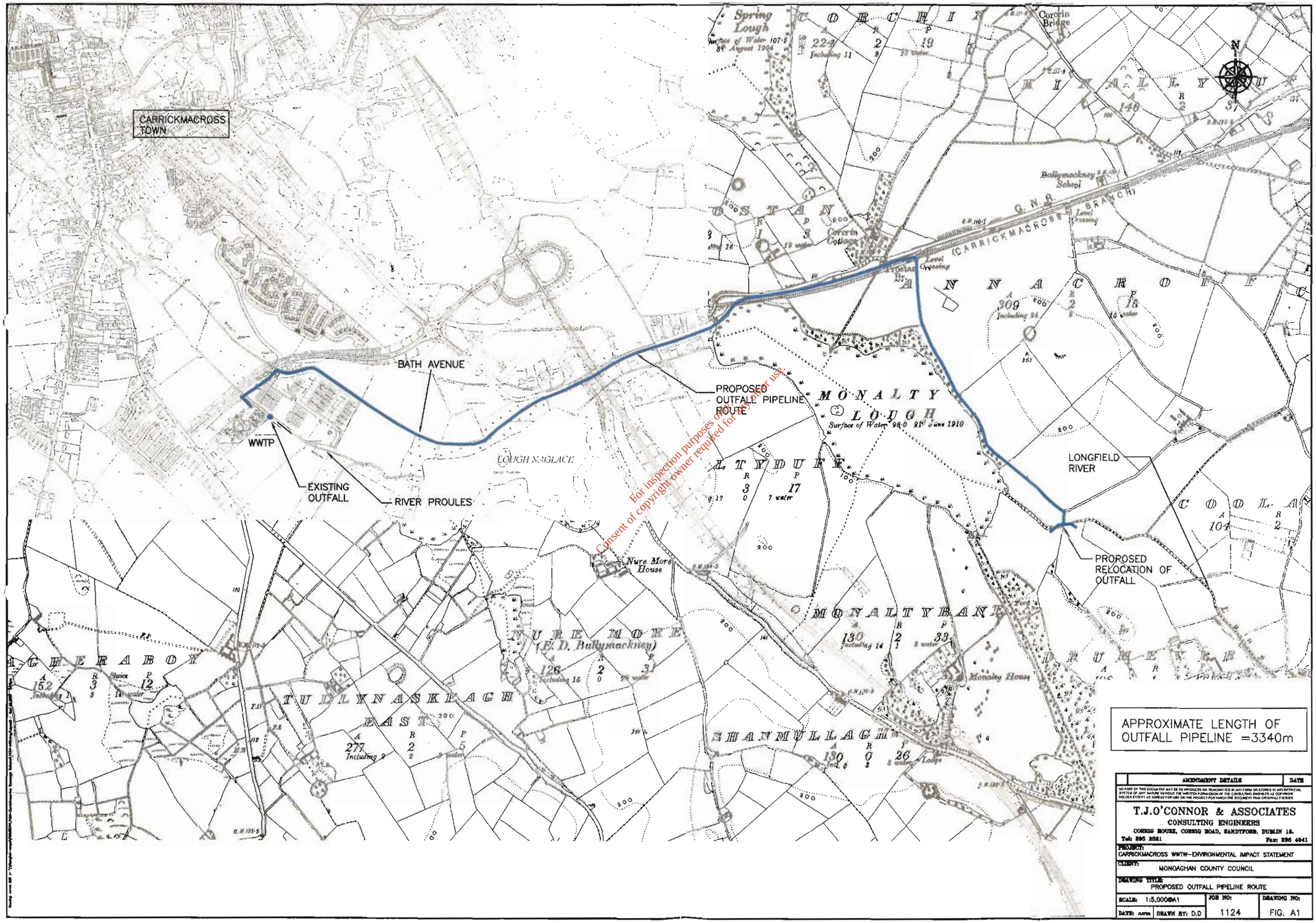
- The Council submitting a programme of works that sets out the timeframe for the delivery of the overall project, i.e. the new treatment works and collection network, which will minimize the environmental impacts particularly on the receiving waters;

- The Council revising the Water Charging Policy Report to take into account a detailed assessment of the marginal cost, including a detailed justification for independent costs. This revised WCP Report should be submitted with the Contract Documents.

Should you have any queries with regard to the above then you can contact me at the number below.

Yours sincerely,

David Mehlhorn,
Higher Executive Officer,
Water Services Section,
Tel. (01) 888 2150.



AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2521 Fax: 295 4841

PROJECT:	CARRICKMACROSS WWTW—ENVIRONMENTAL IMPACT STATEMENT
CLIENT:	MONAGHAN COUNTY COUNCIL
DRAWING TITLE:	PROPOSED OUTFALL PIPELINE ROUTE

SCALE: 1:5,000@A1	JOB NO:	DRAWING NO:
DATE: Aug'96 DRAWN BY: D.D	1124	FIG. A1

AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

County Manager,
Monaghan County Council,
County Offices,
The Glen,
Monaghan,
Co. Monaghan

Paul Clifford

AN ROINN COMHSHAOIL
OIDHREACHTA AGUS
RIALTAIS ÁITIÚIL
DEPARTMENT OF
TI NVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

BLOC 1, URLÁR 2
FOIRGNIMH IRISH LIFE
SR. NA MAINISTREACH ÍOCHT
BAILE ÁTHA CLIATH 1
BLOCK 1, FLOOR 2
IRISH LIFE CENTRE
1 R ABBEY STREET
DUBLIN 1

Tel No: +353 1 888 2000
LoCall No: 1890 20 20 21
Fax No: +353 1 888 2687

FAO: Mr. Paul Clifford
Director of Services

30th May 2007 Our Ref: 2401001.03

Re: Carrickmacross Sewerage Scheme
Collection Network – Approval of Contract Documents

Dear Mr. Clifford,

I am directed by Mr. Dick Roche T.D., Minister for the Environment, Heritage and Local Government to convey approval to the contract documents for the sewer network contract of the Carrickmacross Sewerage Scheme subject to the following: -

- The submission of a revised Water Pricing Policy Report.
- The elimination of standby generation.
- The elimination of storm retention storage at the Ardee, Dundalk, Lisanisk (Crossmaglen) and Drumconrath Roads pumping stations.
- **Submission of the Contract Documents for the Treatment Plant** for approval by the Department before work begins on the network.

Water Pricing Policy Report
The Consultants have not allowed any Non-Domestic Marginal Costs. In revising the Water Pricing Policy Report the Council should take account of the following: -

1. The calculation should be based on the entire network including the advance section.

2. The non-contract costs should be at the same percentage as the contract costs.

3. The Department's funding of the watermains will be 75% and the Council's contribution will be 25%.

4. The exponent for the Non-Domestic cost calculations can be 0.5 instead of 0.75

As the existing wastewater treatment plant, for which there is a proposal to upgrade, is severely overloaded any additional loads arising from improvement/expansion of the network could seriously exacerbate the overloading problems at the treatment plant. This could lead to further failures to meet discharge standards and cause pollution to the receiving waters. For this reason the Council must dove-tail both elements of the scheme **so that no additional load can be added to the influent to the treatment works until such time as the treatment works is fully refurbished and upgraded**.

You are reminded that the NDP logo should be used in all signage and publicity material for this scheme. A copy of the advertisement for tenders in the National Media should be submitted to the Department in due course.

If you have any queries relating to the above, please contact the undersigned on (01) 888 2095

Yours sincerely,

Sinead O'Brien
Water Services Section,
Water & Natural Heritage Division

Monaghan

Water Services Investment Programme 2007 - 2009

Schemes to start 2007	W/S	Est. Cost
Carrickmacross Sewerage Scheme	S	22,000,000
		22,000,000
Schemes to start 2008		
Castleblaney/Ballybay/Clones Wastewater Treatment Plant	S	12,000,000
		12,000,000
Schemes to start 2009		
Monaghan Sludge Management (H)	S	2,570,000
Monaghan Town Sewerage Scheme (H)	S	27,500,000
		30,070,000
Serviced Land Initiative		
Monaghan Town Sewerage Scheme (North Eastern Collection Area)(H)	S	2,700,000
		2,700,000
Rural Towns and Villages Initiative		
Carrickmacross Water Supply Scheme	W	4,500,000
Castleblaney Water Supply Scheme Stage 2	W	1,100,000
		5,600,000
Water Conservation Allocation		**3,185,000**
Asset Management Study		**50,000**
Programme Total		**75,605,000**

(H) Refers to a Hub as designated in the National Spatial Strategy

Carrickmacross Town Council /
Monaghan County Council

Carrickmacross Sewerage Scheme

Review of Preliminary Report – Pipelines Contract

&

Preliminary Report – Wastewater Treatment Works

Prepared For:
Monaghan County Council
County Hall
Monaghan

Prepared By:
T. J O' Connor & Associates
Corrig House
Corrig Road
Sandyford
Dublin 18

May 2004

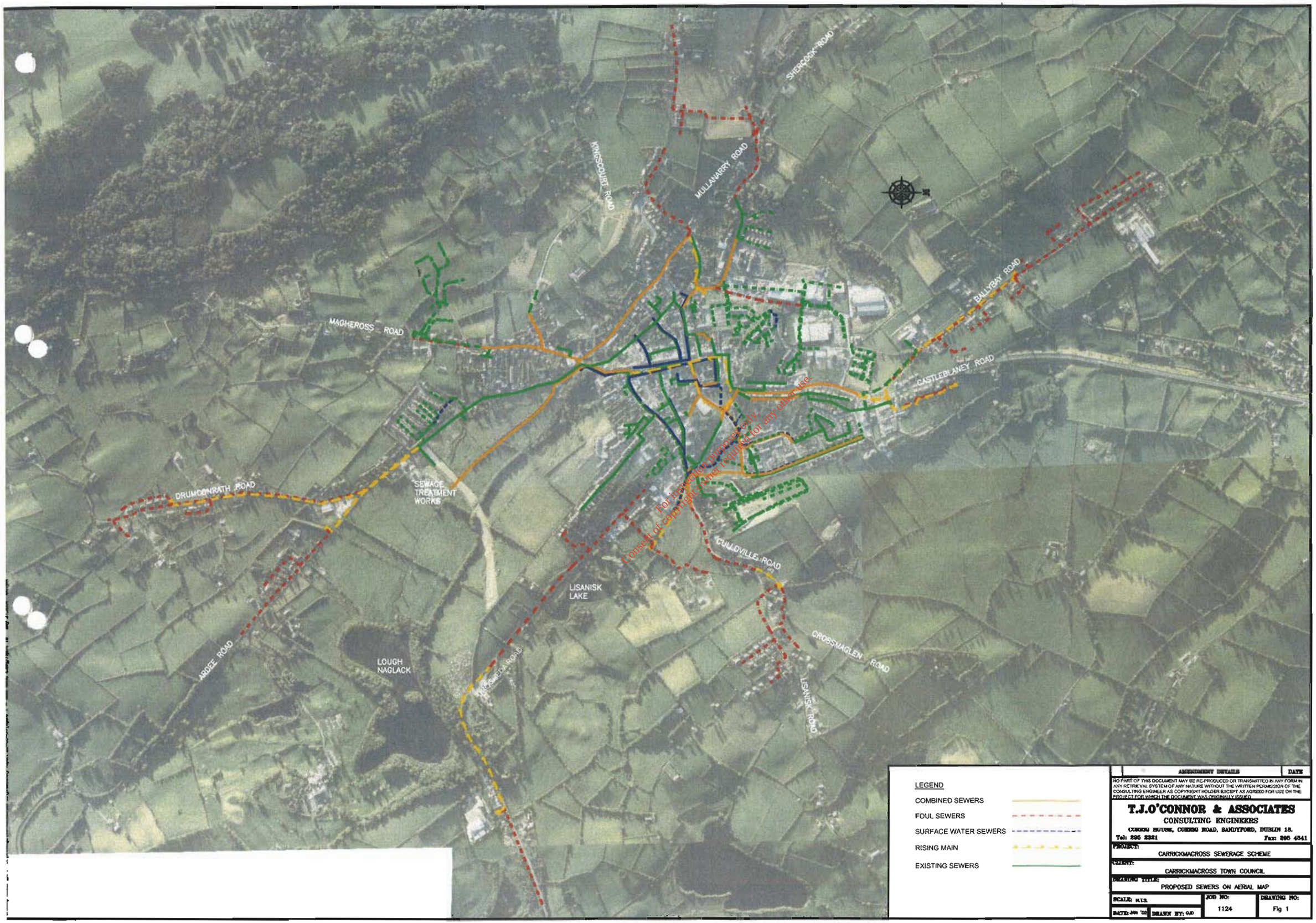
EXECUTIVE SUMMARY

This report describes the results of a study of the combined and surface water collection systems serving the town of Carrickmacross in County Monaghan. The report was commissioned by Monaghan County Council and comprises a review of an earlier preliminary report on the Carrickmacross collection system in 1994. The 1994 report examined the condition and capacity of the collection systems at that time and the requirements of the system over a twenty-year design horizon. In addition to a review of the 1994 report, this report also considers the servicing of zoned lands in the environs of the town under the Carrickmacross town development plan of 1999 as well as recent proposals to re-zone a significantly increased area of land under a draft discussion report prepared by Messrs. Cunnane Stratton Reynolds for Monaghan County Council in July 2003.

Carrickmacross is situated in the south of County Monaghan and has a population within the town boundary of 1,964 in 2002 with a further 2,540 living in the environs of the town (4,504 total). A number of the houses outside the town council boundary are one-off developments and are not connected to the main drainage system. In common with many other towns in the country, Carrickmacross has undergone a considerable amount of urban expansion in recent years and the 2002 population represents a 8% increase on the 1996 figure. This rate of growth is expected to be maintained and to increase following the completion of the bypass of the town in 2005 and given its relative proximity to larger urban centres including Dublin. The collection system also serves a number of food processing industries within the town and these discharges, together with the domestic sewage, are conveyed to a wastewater treatment works (wastewater treatment works) located off the Ardee Road (N2), south of the town. The works discharges the treated effluent to the Proules River which in turn discharges to Lough Naglack.

The sewerage system serving the town comprises a mixture of separate and fully combined drainage areas, with the town centre being mainly combined and the newer developments having separate foul and surface water systems. The main sewer conveying the discharges to the wastewater treatment works runs along the valley of the Proules River before heading east through the town centre where it connects with sewers serving the northern and eastern parts of the town. This sewer is 300mm diameter as it enters the wastewater treatment works but is 450mm for a length upstream of a combined sewer overflow on the Ardee Road. Topographical constraints dictate that there are a number of pumping stations on the system, both to the north and the south of the town. Figure 1 shows an aerial photograph of the town with the principal sewers overlaid.

The combined sewerage system is relieved at various points on the network by ten Combined Sewer Overflows (CSOs). These discharge to surface water sewers and culverts in storm conditions which in turn discharge to the Proules River or the headwaters of Lisanisk Lake in the north of the town. The overflows control the flows in the combined sewerage system and as a result there have been no known instances of serious flooding from the sewers in recent times. The final CSO on the system on the Ardee Road restricts the flow forward to the wastewater treatment works to around 48 l/s. This represents less than 3 multiples of the calculated dry weather flow and it is possible (but unproven) that discharges to the



AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

CLIENT: CARRICKMACROSS TOWN COUNCIL

DRAWING TITLE: PROPOSED SEWERS ON AERIAL MAP

SCALE: N.T.S.	JOB NO: 1124	DRAWING NO: Fig 1
DATE: Jun '05	DRAWN BY: GJD	

Proules could occur at the peak diurnal flowrate to the works in dry weather.

Since June of 2001, the Proules River has been designated a 'sensitive water' for the purpose of the Urban Waste Water Treatment directive (SI 254 of 2001) and nutrient removal at the wastewater treatment plant is now mandatory. Routine monitoring of the water quality of the Proules has been undertaken by the Environmental Protection Agency (EPA) and its predecessor over many years. In general terms this monitoring shows that the Proules is moderately polluted, particularly downstream of the town suggesting that the source of the pollution might include the overflows from the sewerage system.

The 1994 preliminary report recommended the complete abandonment of the overflows and various additional measures to upgrade the system to cater for the expected hydraulic loads. These measures mainly comprised upsizing of the main trunk sewer, the replacement of structurally damaged sewers identified from a CCTV survey, and upsizing of miscellaneous hydraulically deficient pipelines in various parts of the town. The basis of the hydraulic design of the remedial measures was a mathematical model of the existing system, which was amended to include proposed developments indicated by the planning officers and those designated in the local development plan. The output from the model of the existing system was checked against the results from a flow and rainfall survey (by others) in 2000. A comparison between the flows and depths predicted by the model in response to the recorded rainfall events and the flows and depths recorded in the actual sewers, showed that the model results were broadly representative and that the model would provide a reasonable but conservative basis for a detailed hydraulic design.

In addition to the increased flows in the combined system associated with the abandonment of the overflows, there is also expected to be significantly increased residential development both within and outside the town council boundary. The extent of the developments likely to take place has been assessed with reference to the Carrickmacross Development Plan of 1999, as well as planning applications submitted to both Carrickmacross Town Council and Monaghan County Council and more recently the implications of the draft discussion report prepared by Messrs. Cunnane Stratton Reynolds in 2003. With the abandonment of the overflows as recommended, and the connection of the new developments projected by the planning authorities, parts of the combined sewerage system are predicted to become severely overloaded with flooding predicted from manholes at a number of points on the system for rainfall events with return periods of two years and less. Accordingly substantial upgrading measures will be required to accommodate the increased flows. The main trunk sewer in particular carries most of the flows generated in the town. It is currently relieved by 4 combined sewer overflows and their abandonment will significantly increase the flows to be carried.

A number of options were investigated to deal with these increased flows as listed below :

1. Increased separation of surface water from the combined system,

2. Upsizing the trunk sewer to provide increased hydraulic capacity,

3. Interception of branch sewers currently discharging to the trunk sewer and the provision of an alternative connection to the wastewater treatment works.

Option 1 was investigated and quickly emerged as being completely impractical. The older part of the town is the main source of surface water in the combined system and the works required would involve reconnecting a substantial number of individual house connections to newly laid storm water sewers in a congested part of the town. It would not be possible to separate storm water from connections at the rear of properties in many instances.

Option 2, which was the preferred option in the 1994 preliminary report, involves completely relaying the main sewer from O'Neill Street/Farney Street to the wastewater treatment works. A number of options had to be considered for the upper section of this sewer given the route constraints imposed by new and infill developments since the preparation of the 1994 preliminary report and these are discussed in more detail in Section 3 of this report.

Option 3 was investigated in detail and an alternative route to the wastewater treatment works via the Dundalk Road and the new bypass link road from the Ardee Road was considered. This route could convey flow to the wastewater treatment works under gravity. However deep excavations would be necessary along various sections of this sewer. Additionally it was found that this sewer could only intercept flows from a limited number of branch sewers and that the amount of flow that could thus be removed from the existing Proules trunk sewer would not be sufficient to allow this sewer to be retained. Accordingly work to the trunk sewer along the Proules River would still be necessary under this option albeit at a smaller diameter.

Option 2 above emerged as being the preferred means of accommodating the extra flows although the construction of the trunk sewer along the line proposed in the 1994 report at Main Street was found to be impossible (see section 2.10). A number of means of conveying the flow onward to the wastewater treatment works were investigated to overcome the problems with the previously defined route at Main Street, namely tunnelling and pumping. The tunnelling option was investigated in detail but was found to be impractical for a number of reasons most particularly geotechnical considerations, overlying buildings and suitable locations for drive shafts and reception pits. As a result, the final proposal now includes for the construction of a sewage pumping station off Chapel Lane to pump flows along Main Street up to a new gravity sewer on Castle Street with a second pumping station sited on the Shercock Road which pumps along Mullanarry Street to a gravity sewer on Mullanarry Road. Both of these sewers link at the bridge and continue to the wastewater treatment works. It is proposed to rehabilitate the existing sewer along the Proules for approximately 450m of its length. (See figure 2).

For the surface water system, works to the existing storm water culverts on Main Street, Castle Street, Shirley House Lane, Parnell Street, O'Neill Street and Farney Street are proposed. These works will see the old masonry culverts abandoned with new circular sewers laid on the invert of the existing culverts.

CHAPEL LANE
PUMPING STATION

SHERCOCK ROAD
PUMPING STATION

	AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – PIPELINES CONTRACT

CLIENT: CARRICKMACROSS TOWN COUNCIL

DRAWING TITLE: TRUNK SEWER ROUTE

SCALE: N.T.S		JOB NO:	DRAWING NO:
DATE: FEB'04	DRAWN BY: GJO	1124	FIGURE 2

Other works to the surface water system will include upgrading works to increase the capacity of the main surface water sewer from lands off Chapel Lane traversing the town park and discharging to the Proules River close to the site of the towns' original treatment works.

This report includes a detailed assessment of the works required to accommodate the increased flows and to provide sewers to previously unserviced lands and developments. The works proposed are defined on the drawings accompanying this report including both plans and longitudinal sections. The total meterage of pipelines to be constructed comes to some 20.6 km with a further 3.9km of rising main associated with the new pumping stations. The cost of the works proposed has been estimated using rates from recently returned tenders for works of a similar size and nature. A complete breakdown of the estimates is provided in Appendix A of this document and the total construction cost has been estimated at € 10.82 M including VAT.

The recently undertaken site investigation works revealed the presence of a considerable number of old cast iron, gun barrel and some lead watermains within the main town centre area. Much of this pipework will be in excess of fifty years of age and can be expected to be brittle in nature. Previous experience of similar type pipelaying schemes as that to be undertaken in Carrickmacross has shown that when ground disturbance associated with the proposed pipelaying works occurs, it can be expected that much of the existing watermains of the types listed above will begin to fracture and leak even at locations where the proposed pipe works are not immediately adjacent to the watermains. Accordingly, an assessment has been carried out of the cost of replacement of these watermain in the town centre area and is likely to be in the order of € 1.5M inclusive of VAT.

Attachment No. B.11

Relevant correspondence issued in relation to a Section 63 Notice

Not Applicable

Attachment No. B.12

The most recent licence issued under the Foreshore Act 1933

Not Applicable

SECTION C: INFRASTRUCTURE & OPERATION

Advice on completing this section is provided in the accompanying Guidance Note.

C.1 Operational Information Requirements

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

Attachment C.2 should contain any supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works.

Attachment included	Yes	No
	✓	

Section C

Infrastructure & Operation

Attachment No. C.1

Documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information.

2 EXISTING WASTEWATER TREATMENT WORKS

2.01 INTRODUCTION

The existing wastewater treatment plant serving Carrickmacross is located approximately one kilometre to the southeast of the town, adjacent to the Dublin Road. A layout of the existing treatment works is included in Appendix A.

A treatment works has been located at this location since the early twentieth century. The development of the works to its existing form is described as follows:

- The original works consisted of six rectangular flat-bottomed settling tanks, four circular biological filters and two humus settling tanks.

- In the 1970s, this plant was decommissioned and replaced by an extended aeration plant consisting of preliminary treatment, an oxidation ditch, settlement tank and sludge drying beds.

- In the early 1990s, the plant was updated to provide operational flexibility and to minimise sludge handling and eliminate manual screening. The following alterations and additions were made to the works (referred to as Stage 2):
  - upgrading of inlet works
  - installation of monitoring and sampling equipment
  - provision of stormwater balancing facilities
  - upgrading of oxidation ditch equipment
  - construction of sludge thickener and pumping plant
  - installation of sludge press and poly dosing plant
  - provision of phosphorus removal equipment
  - updating of plant controls.

- As loadings continued to increase, a further upgrading of the works was completed in 1998. This work (referred to as Stage 3) included provision of the following:
  - anoxic tank c/w submersible mixer
  - oxidation ditch c/w Fine Bubble Diffusion (FBD) system and automatic Dissolved Oxygen (DO) control
  - 2 No. settling tanks c/w rotating half bridge scrapers and other ancillary equipment
  - sludge pumping facilities
  - final effluent monitoring and sampling equipment
  - all associated electrical and control equipment

2.02 DESIGN LOADINGS AND EFFLUENT STANDARDS

Design Data:

The existing Wastewater Treatment Works, as commissioned in 1997-98, is designed to cater for the following loadings:

- Population Equivalent (p.e.) = 12,150
- Dry Weather Flow (DWF) = 2322.4 m^3/day (26.88 l/s)
- BOD_5 = 729.1 kg BOD/day
- Suspended Solids (SS) = 896 kg SS/day

A maximum of 3 DWF (80.63l/s) receives full treatment at the works. After preliminary treatment, flows in excess of this are diverted to the Stormwater Tank and settled prior to return after passage of the storm peak.

Final Effluent Standards:

The installed plant is capable of treating the design loadings set out above to the following final effluent standards:

- BOD_5 concentration = 10 mg/l
- SS concentration = 10 mg/l
- Total Phosphate = 2 mg/l (as P)

0.00 EXISTING TREATMENT WORKS

0.00.0 Preliminary Treatment

All wastewater entering the treatment works gravitates to the preliminary treatment units. The existing preliminary treatment facilities include the following equipment:

- 1 No. mechanically raked screen (12mm spacing) with a screw compactor incorporating a washing unit discharging to a bagging unit.
- 1 No. pista grit trap (size 200) which discharges via a compressed air suction unit to a grit classifier complete with a screw conveyor. The separated grit is automatically bagged.
- 1 No. inflow measurement flume complete with ultra-sonic flow measurement device.
- 1 No. inflow automatic sampler.

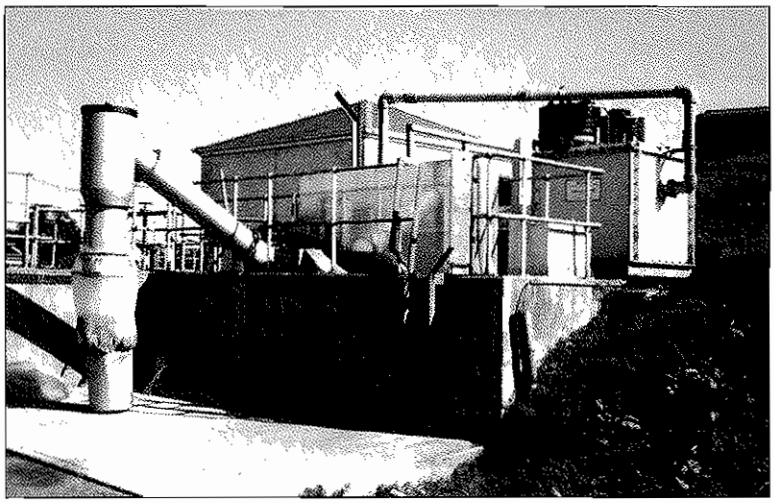


Fig. 2.01 – Inlet Works

- A storm overflow facility, whereby flows in excess of 3DWF are diverted to the stormwater tank, which provides a storage volume of 634 m^3. Diversion is achieved by means of an actuated penstock controlled by the inlet flow measurement system. Storm water pumps return stormwater to the inlet works at times of low flow.

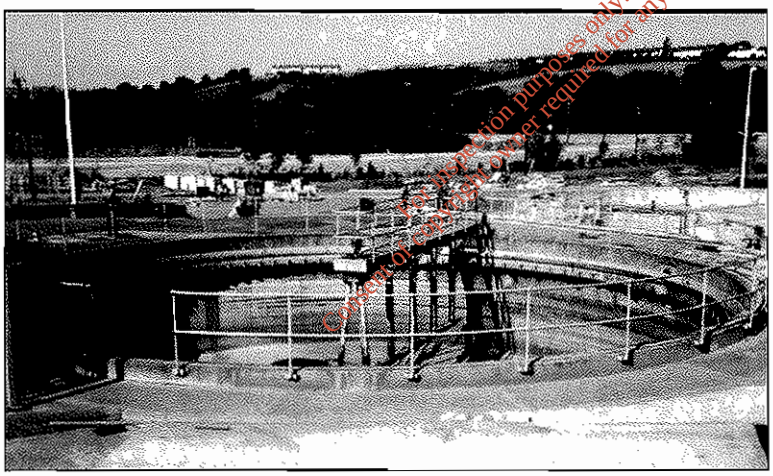


Fig. 2.02 – Storm Water Tank

0.00.0 Secondary Treatment

From the inlet works the flow gravitates to secondary treatment, which comprises an anoxic tank, 2 No. oxidation ditches and 3 No. settling tanks, with associated sludge recycle.

0.00.0 Anoxic Tank

After preliminary treatment the flow gravitates to an anoxic tank, which has a volume of 145 m^3 giving a retention time of 90 minutes at 1 DWF. The main purpose of the anoxic tank is the process of denitrification, or the conversion of nitrate to gaseous nitrogen end-products. In addition the anoxic tank helps to promote good settling characteristics of the sludge and also acts as a flow splitting and combination chamber.

The tank is equipped with a submersible mixer to maintain solids in suspension and ensure adequate mixing of the tank contents. Activated sludge from the settling tanks is returned upstream of the anoxic chamber. The outlet of the anoxic tank comprises two weir plates, which manually control the flow to the 2 No. oxidation ditches.

0.00.0 Oxidation Ditches

In the oxidation ditches, biological processes convert the organic matter in the incoming wastewater into flocculant settleable biological and inorganic solids that can be removed in the sedimentation tanks. The process is based on provision of plug flow aeration conditions to provide extended aeration with nitrification conditions.

Fig. 2.03 – Oxidation Ditch No. 1

In Oxidation Ditch No. 1 the oxygen supply is by means of a mechanical rotor assembly, with 4 No. horizontal rotors. The dissolved oxygen concentration in this tank is maintained at 2.5mg/l by varying the outlet weir, which in turn controls the level of immersion of the rotors. The specific design details of this ditch are as follows:

Volume	=	1,402 m^3
Liquid Depth	=	1.5 m
Design Capacity	=	270 kg BOD/day
Oxygen Capacity	=	44.8 kg O_2/hr

In Oxidation Tank No. 2 the oxygen supply is by means of a fine bubble diffused (FBD) air system complete with 2 No. variable speed positive displacement type air blowers. 2 No. submersible mixers ensure adequate mixing and circulation of the tank contents. An automatic control system maintains the dissolved oxygen concentration at 2.5mg/l by varying the output from the air blowers.

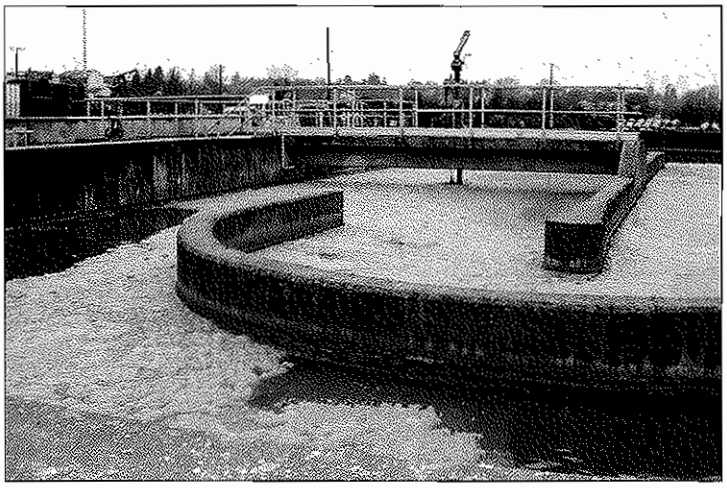


Fig. 2.04 – Oxidation Ditch No. 2

The specific design details of this ditch are as follows:

Volume	=	2,300 m^3
Liquid Depth	=	4.9 m
Design Capacity	=	460 kg BOD/day
Oxygen Capacity	=	88.7 kg O_2/hr

0.00.0 Settling Tanks

Mixed liquor from Oxidation Tank No. 1 gravitates to Settling Tank No. 1. The mixed liquor from Oxidation Ditch No. 2 is split between Settling Tank No. 2 and Settling Tank No. 3.

Each settling tank is a circular, hopper-bottomed type tank complete with the following equipment:

- inlet diffusion drum
- rotating half bridge with access platform and scraper assembly
- scum collection and removal system
- peripheral supernatant draw-off weir with baffle board

The function of the settling tanks is to separate the activated-sludge solids from the mixed liquor. In each tank the biological and inorganic solids settle to the floor of the tank, where they are scrapped to the central hopper. From here the sludge gravitates to sludge draw-off chambers. As the solids settle, the clarified supernatant overflows the outlet weir and gravitates to tertiary treatment.

The scum removal system comprises a blade fixed to each rotating bridge which directs any scum build-up towards a scum collection bellmouth, from where the scum gravitates to the sludge draw-off chamber. The specific design details of the settling tanks are as follows:

Settling Tank No. 1:

Tank diameter	=	10.5 m
Surface Area	=	86.6 m^2
Hydraulic Capacity	=	77.9 m^3/hr

Settling Tank No. 2:

Tank diameter	=	12.5 m
Surface Area	=	122.7 m^2
Hydraulic Capacity	=	110.4 m^3/hr

Settling Tank No. 3:

Tank diameter	=	12.5 m
Surface Area	=	122.7 m^2
Hydraulic Capacity	=	110.4 m^3/hr

2.03.6 Sludge Transfer

Sludge from Settling Tank No. 1 gravitates to Sludge Draw-off Chamber No. 1, at a rate controlled by a manually adjustable penstock. This sludge is combined with the scum and gravitates to the Sludge Pumping Station.

Sludge and scum from Settling Tank No. 2 and No. 3, gravitate to Sludge Draw-off Chamber No. 2, at rates controlled by 2 No. manually adjustable penstocks. From here the sludge gravitates to the Sludge Pumping Station.

In the Sludge Pumping Station, 2 No. variable speed submersible Return Activated Sludge Pumps (duty/standby), operating on level control, transfer the sludge to the Anoxic Tank. This return sludge ensures an adequate biomass concentration is maintained in the anoxic tank and oxidation ditches.

Also in the Sludge Pumping Station, 2 No. variable speed submersible Waste Activated Sludge Pumps (duty/standby), operating on timer and level control, transfer the sludge to sludge treatment.

2.03.7 Nutrient Removal

The primary purpose of the secondary treatment stage is the combined removal of organic carbon and nutrients from the wastewater. Nitrogen and phosphorous are the key nutrients, as they cause 'pollution' of the receiving water.

Nitrogen removal is achieved as a two step biological process; the first step, nitrification i.e. the conversion of ammonia to nitrate is accomplished by autotrophic organisms in an aerobic reactor i.e. the oxidation ditch, while the second step, denitrification i.e. the reduction of nitrate to gaseous nitrogen is accomplished by heterotrophic organisms in the anoxic tank or in zones of the oxidation ditch with low oxygen concentrations.

In this plant phosphorous is removed by a chemical process. Biological treatment, such as the conventional activated sludge process used in this plant, converts most phosphorous to the ortho-phosphate form. In this form the phosphorous can then be removed by chemical precipitation using ferric sulphate, which is dosed into the effluent stream at the inlet works.

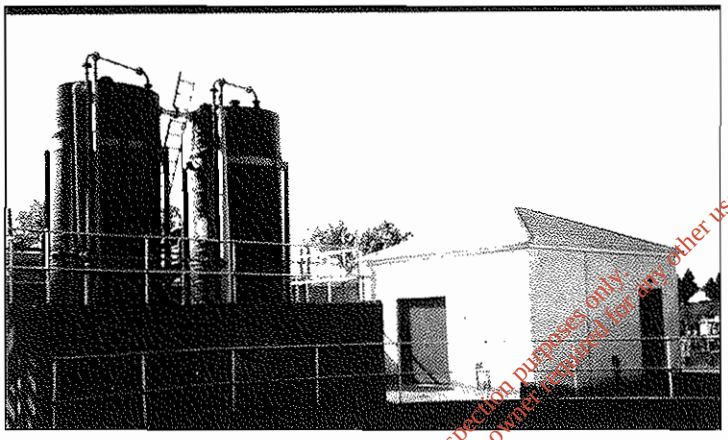


Fig. 2.05 – Ferric Dosing Plant

Also in the current situation, a substantial proportion of the nutrients (both nitrogen and phosphorus) becomes attached to the activated sludge and is removed as part of the waste activated sludge. This explains how it is possible to achieve full nitrification and denitrification, while the treatment works is loaded at twice the design load.

2.03.8 Tertiary Treatment

From the settling tanks the clarified effluent gravitates to the Tertiary Filter Pump Chamber. Tertiary treatment, in the form of rapid gravity sand filtration is provided to achieve the required discharge standards of 10mg/l BOD and 10mg/l suspended solids. The filter units are 3,000mm diameter mild steel tanks containing a nozzle plate under-drainage system, 150mm coarse grade support sand and 1,500mm single size filter media with an effective size of 1.35mm. The filtration process is designed for a maximum flow rate of 290 m^3/hr (3DWF) and an average flow rate of 96.8 m^3/hr.

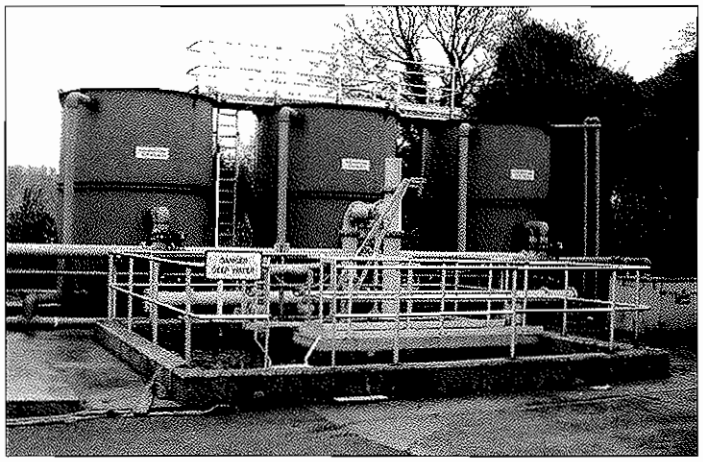


Fig. 2.06 – Tertiary Sand Filters

In the Tertiary Filter Pump Chamber, 2 No. variable speed submersible pumps (duty/standby) pump the effluent to 3 No. Rapid Gravity Sand Filters. Each sand filter is complete with the following equipment:

- mild steel tank with common access platform, ladder and handrailing
- nozzle plate and under-drain system
- coarse grade support sand
- single size filter media
- inlet distribution channel
- associated pipework and valves

A backwashing system is included to clean the material removed within each filter. The method used is a water backwash with auxiliary air scour. The backwash water is pumped by 2 No. submersible pumps (duty/standby), from the Washwater Holding Tank to each filter. Air scouring is achieved by means of 2 No. positive displacement air blowers (duty/standby). The backwash system is controlled by a PLC, which automatically washes on the basis of filter headloss or time. Dirty washwater gravitates from the filters to the Supernatant Pump Chamber. The backwash pumps and scour blowers give an upward flow through the 3m diameter filter of 10 m^3/hr and 50 m^3/hr respectively.

Filtered effluent from the filters gravitates to the Outlet Flow Measurement and Sampling Chamber. From here the treated effluent discharges to the River Proules.

2.03.9 Sludge Treatment

As mentioned in Section 2.03.6, the excess activated sludge generated by the secondary treatment processes is transferred to the sludge treatment facility by the 2 No. Waste Activated Sludge Pumps. Typically, the waste activated sludge has a concentration of 0.5-1.0%, which increases to 2-3% after thickening and 14-16% after dewatering. The existing sludge treatment plant consists of the following elements:

2.03.10 Sludge Thickener:

The existing sludge thickening tank is a circular, hopper-bottomed type tank, which has a diameter of 10 m and a volume of 246 m^3. The tank is complete with the following equipment:

- inlet diffusion drum
- fixed bridge with access platform, handrailing and ladder
- rotating picket-fence and scraper assemble
- variable-speed centre drive motor
- peripheral supernatant draw-off weir with baffle board

Fig. 2.07 – Sludge Thickener

The function of the sludge thickening tank is to increase the dry solids content of the sludge, which reduces the quantity of sludge for dewatering. The tank operates in a similar manner to a conventional sedimentation tank. Dilute sludge is fed to the centre feed well. The feed sludge is allowed to settle and compact, on the floor of the tank, where it is scrapped into the hopper. The vertical pickets stir the sludge gently, opening up channels for the water to escape and promoting densification.

As the solids settle, the clarified supernatant overflows the outlet weir and gravitates to the Supernatant Pump Sump Chamber, from where it is transferred by 2 No. submersible pumps (duty/standby) to Oxidation Ditch No.2. The thickened sludge gravitates from the central hopper to the Thickened Sludge Holding Chamber adjacent to the tank. From here the sludge is pumped to the dewatering stage.

2.03.11 Sludge Dewatering:

From the Thickened Sludge Holding Chamber, the thickened sludge is transferred to the dewatering plant by 2 No. (duty/standby) variable speed positive displacement pumps. The dewatering system consists of sludge-feed pumps, polymer make-up and feed equipment, a sludge-conditioning tank (flocculator), a belt filter press, a sludge cake conveyor and a press

washing facility. A second belt filter press was installed in 2004 to provide additional capacity and reduce the running hours of the existing press. Both of the belt presses have a hydraulic capacity of approximately 6 m^3/hr.

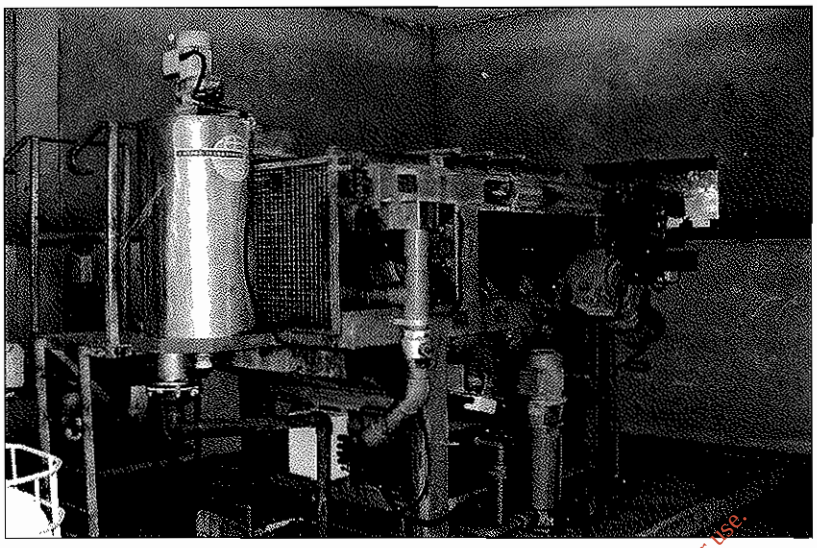


Fig. 2.08 – Filter Belt Press

Initially the sludge is pumped to the flocculator, where it is combined with the polymer. The polymer acts as a chemical conditioning agent, which results in the coagulation of the sludge solids and the release of the absorbed water. From the flocculator, the sludge overflows to the Sludge Dewatering Press.

The existing Sludge Dewatering Press is a double belt press with a belt width of 750mm. In the press, the conditioned sludge is first introduced on a gravity drainage section, where a majority of the free water is removed from the sludge by gravity. Following gravity drainage, pressure is applied to the sludge by squeezing it between opposing belts, which results in the release of additional quantities of water from the sludge. The final dewatered sludge cake is removed from the belts by scraper blades.

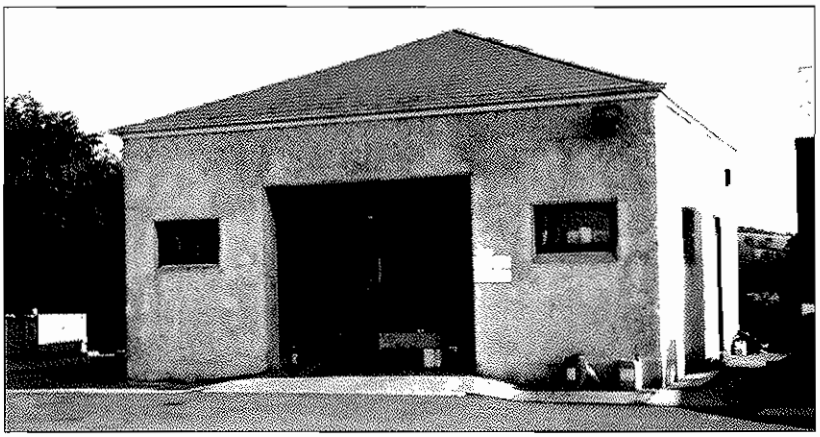


Fig. 2.09 – Sludge Treatment Building

The dewatered sludge cake falls into a hopper at the end of the belt press. From here it is transferred by a screw conveyor to a skip, for disposal to landfill.

2.03.12 Odour Removal

Odours from wastewater treatment works are due mainly to the presence of organic matter which decomposes under anaerobic conditions. This can result in the formation of hydrogen sulphide, organic sulphides, mercaptans and organic amines which result in the characteristic odour associated with sewage. A previous odour and air quality study, found that a low level odour was present at the inlet works and the sludge dewatering building. Based on the findings of this study, the following odour control measures were implemented:

i) The relevant areas of the inlet works were covered. The air is extracted from this location and passed through a biofilter, where the air is scrubbed to remove malodours before being discharged to the atmosphere.

ii) The second area of the works which has the potential to produce odours is the sludge treatment facility. The sludge dewatering equipment is housed in a building, but no odour removal equipment is provided.

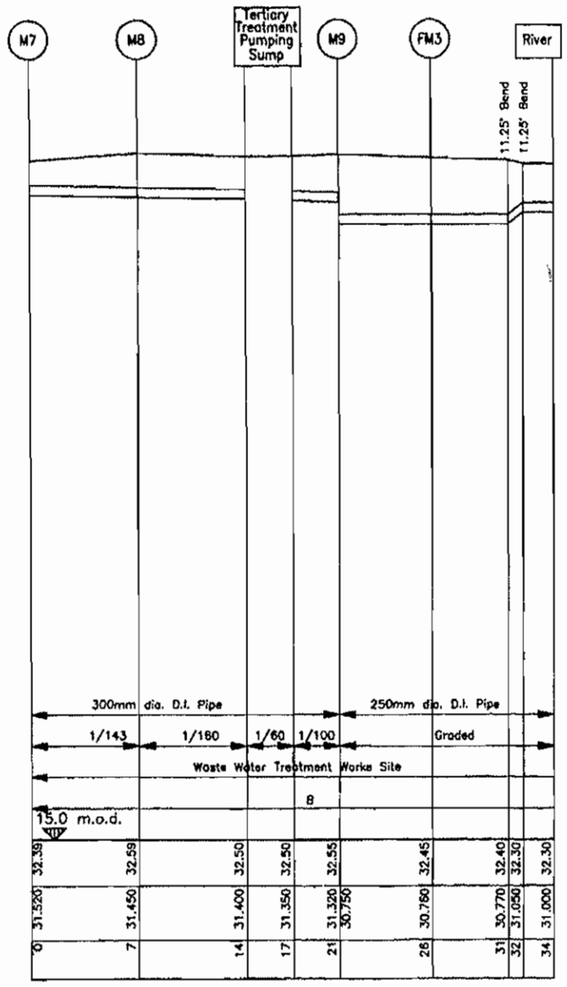
2.04 DEFICIENCIES IN EXISTING PLANT

In addition to the fact that the treatment works is currently overloaded, as described in Chapter 3 below, there are a number of other deficiencies or problems with the existing plant which are highlighted in the following section.

- Backwash water from the tertiary filters can cause the sludge return system to overflow into the outlet from the settling tank, if two or more filters wash in quick succession.
- Fat and grease tends to build up at the inlet channel of the anoxic tank.
- The sludge auger only allows discharge of dewatered sludge to one location, with resulting requirement to re-position skips regularly.
- There is limited space in the administration building, particularly in the room which houses the control panels.
- The existing inlet screen is in poor condition.
- Oxidation ditch No. 1 is not structurally sound – the pre-cast concrete structure appears to be separating at the joints. Also the existing rotors are very noisy.
- There is an on-going problem with plastic, paper and other floating solids circulating within the plant.
- There is no high-pressure ring main around the site to allow washing of process tanks, etc.

Attachment No. C.2

Supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works



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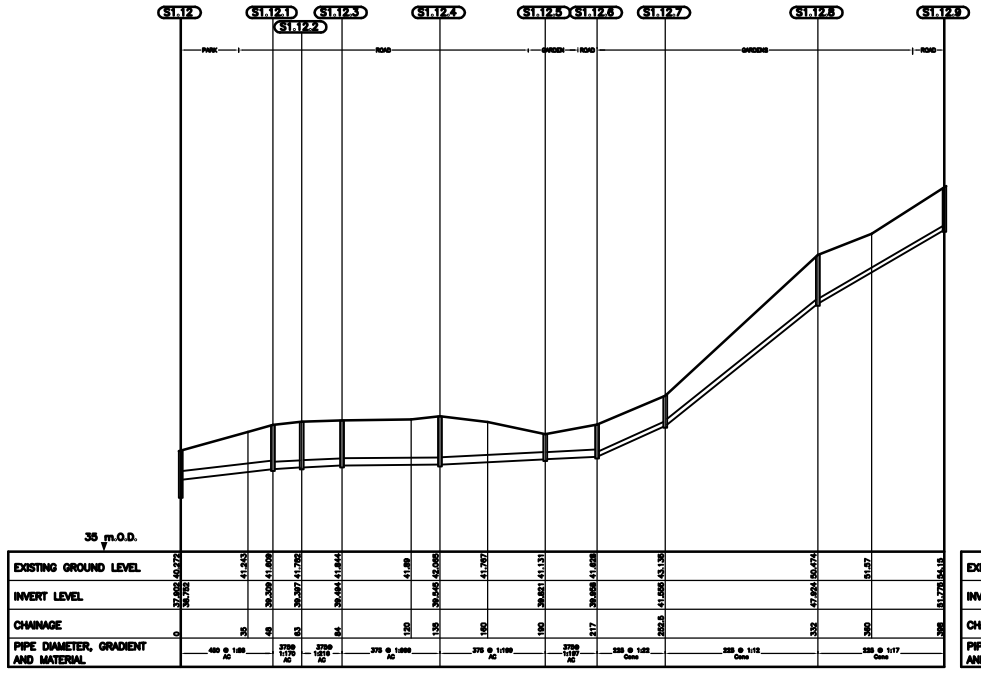
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME

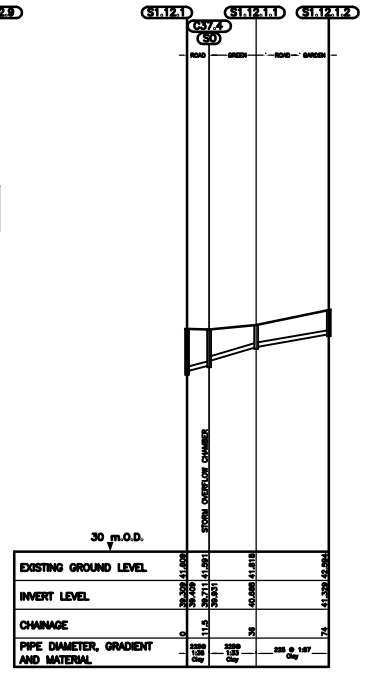
CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: OUTFALL SECTION

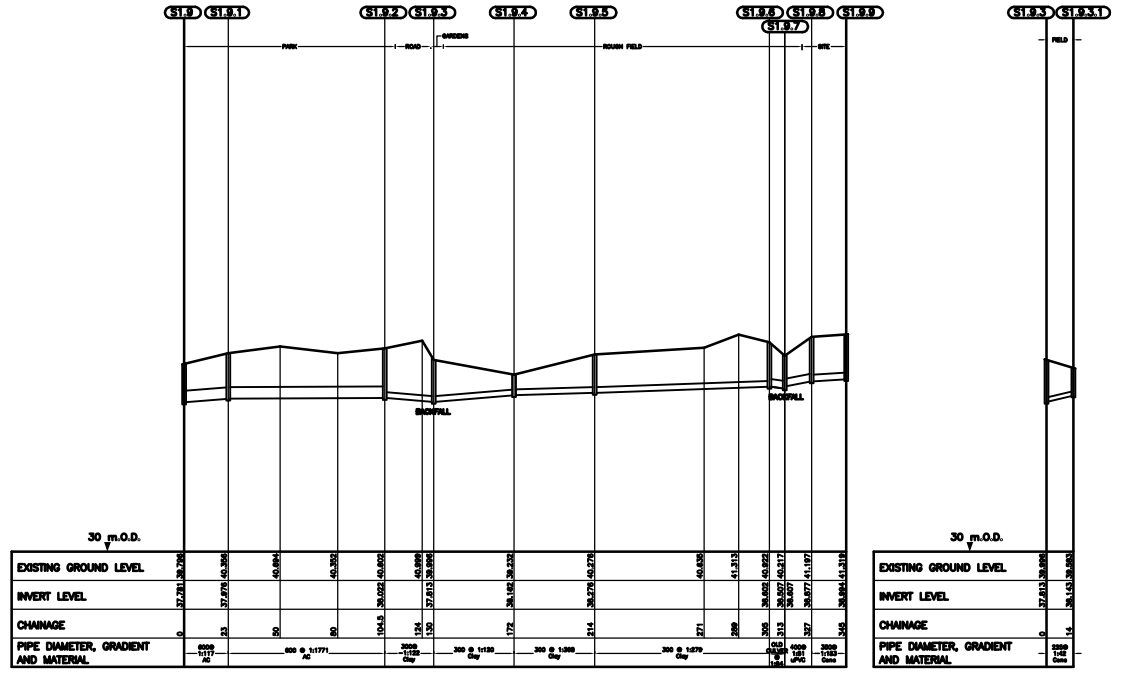
SCALE: N.T.S	JOB NO:	DRAWING NO:
DATE:DEC'07 DRAWN BY: GJD	1124	CARRICK 10



EXISING SURFACE WATER SEWER – ARDROIS AVENUE TO PARK



EXISTING SURFACE WATER SEWER – CLOUGHVALLEY



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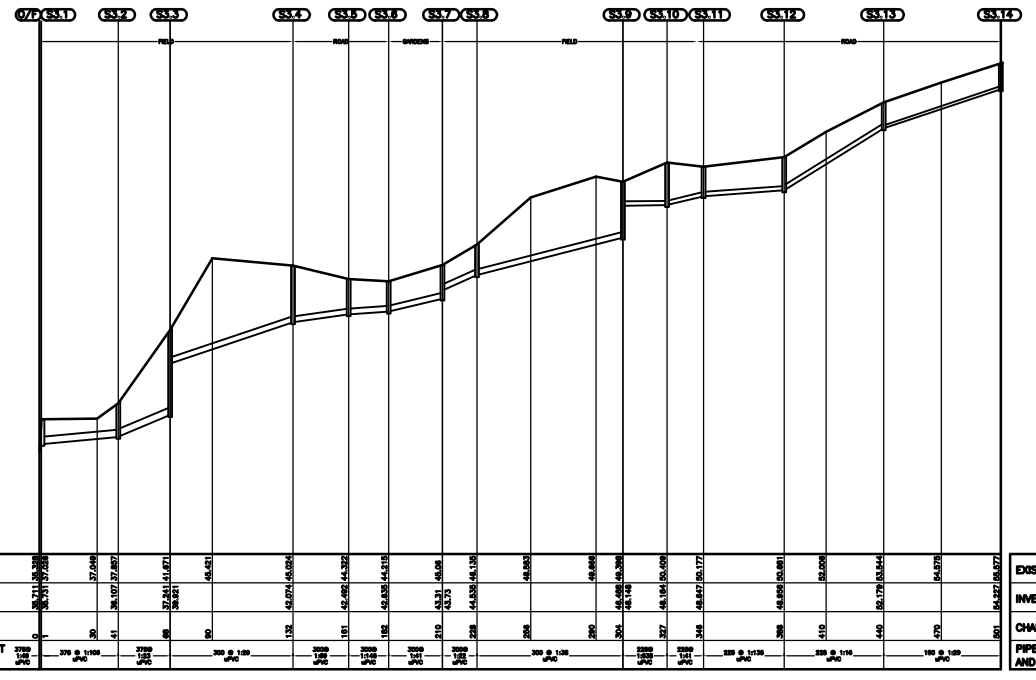

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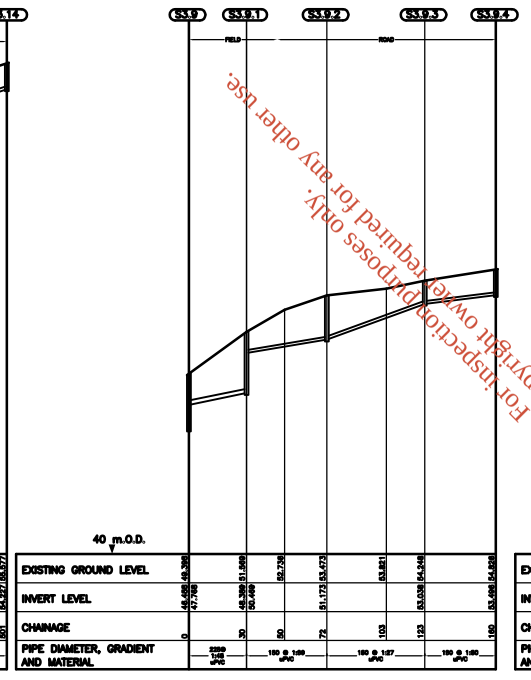

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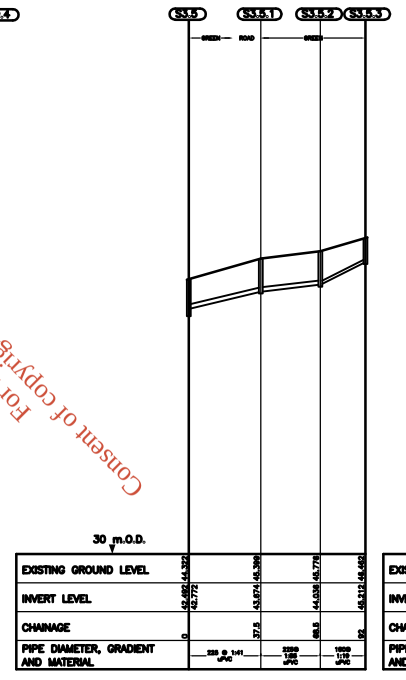

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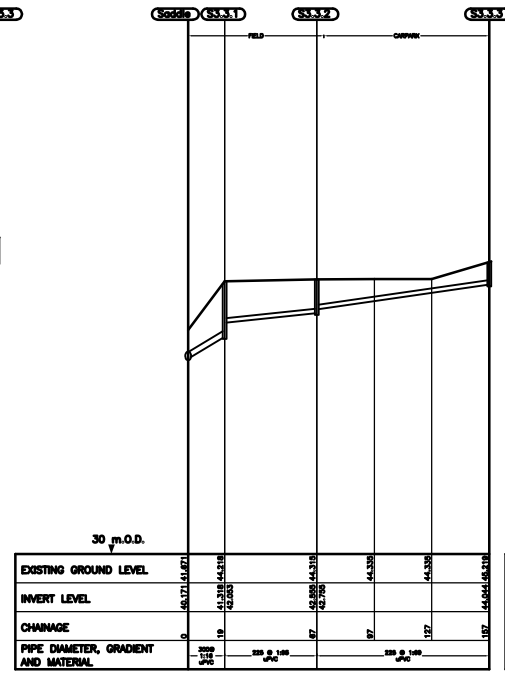

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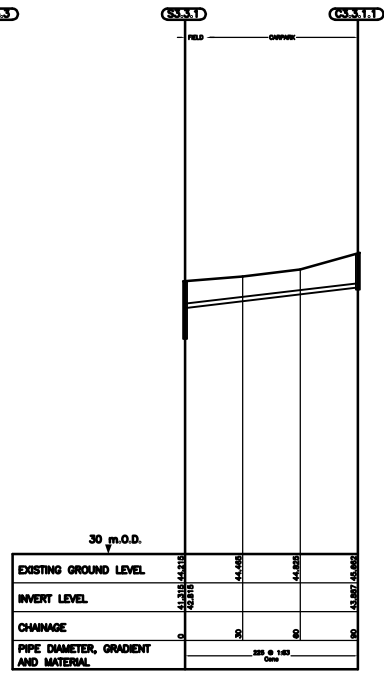

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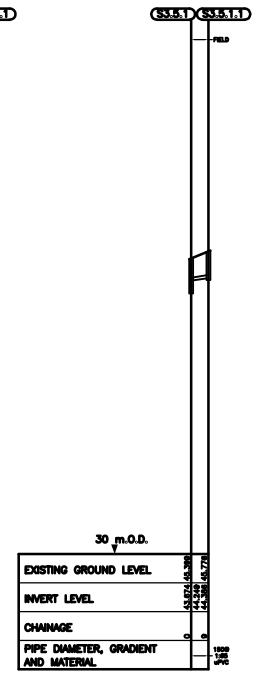

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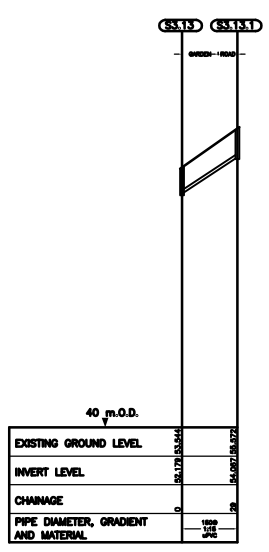

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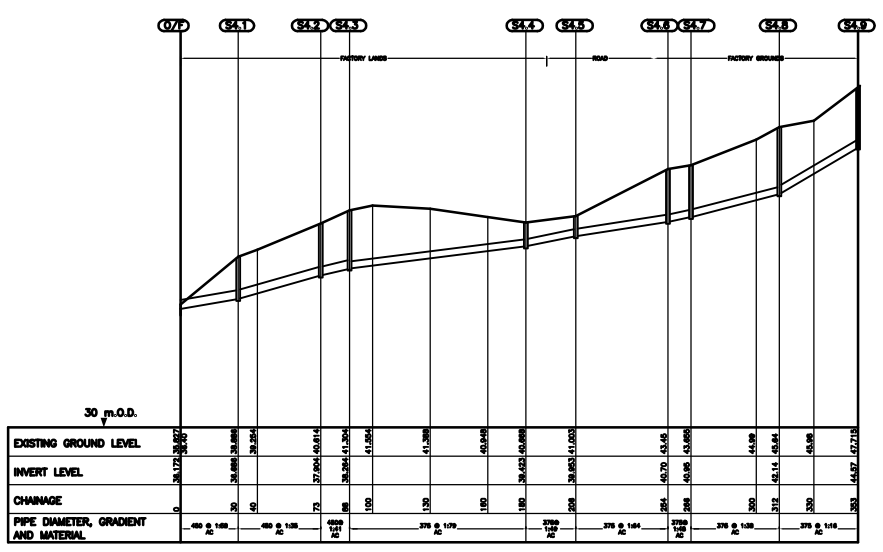

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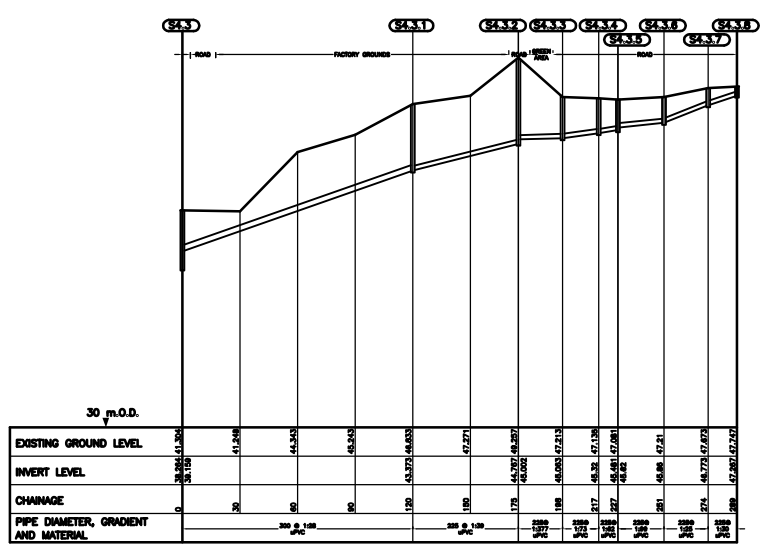
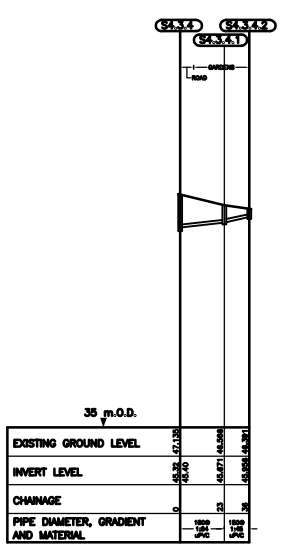


EXISTING SURFACE WATER SEWER – VALLEY CLOSE TO RIVER PROUSE



EXISTING SURFACE WATER SEWER – VALLEY CLOSE

NOTES

1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (SO) : DENOTES STORM OVERFLOW MANHOLE

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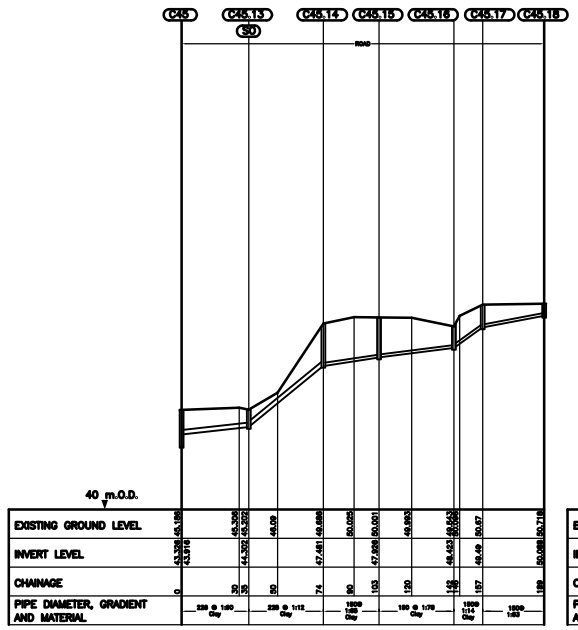
Tel: 295 2321 Fax: 295 4541

PROJECT:	CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES
CLIENT:	CARRICKMACROSS TOWN COUNCIL
DRAWING TITLE:	EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 7 OF 8
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO: 1124
DRAWING NO:	156
DATE: DEC'07	DRAWN BY: GJD



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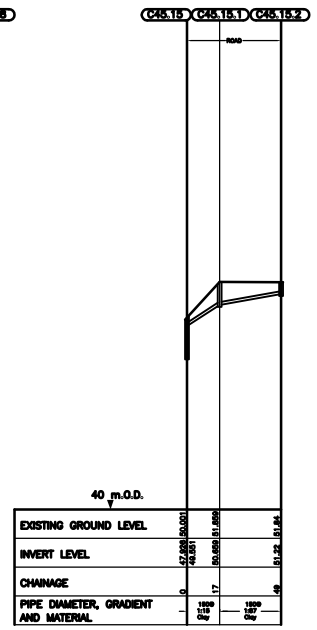

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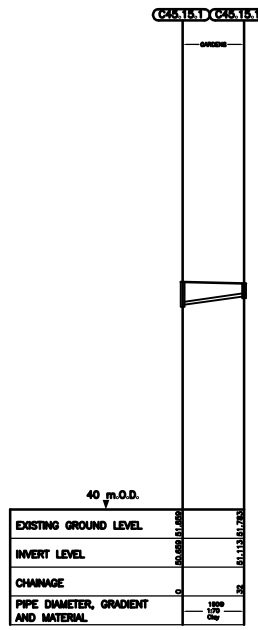

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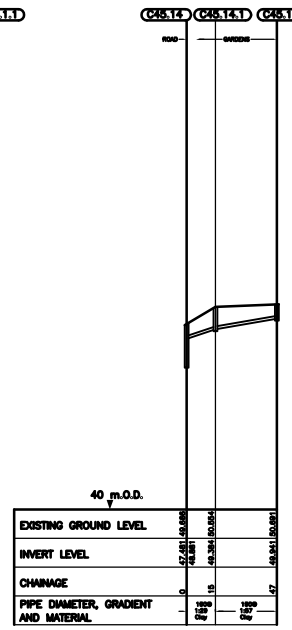

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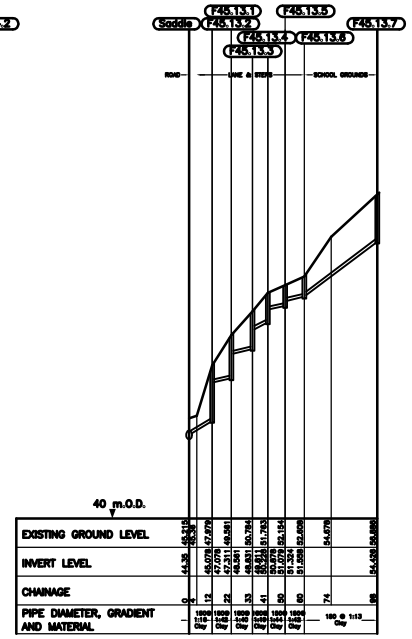

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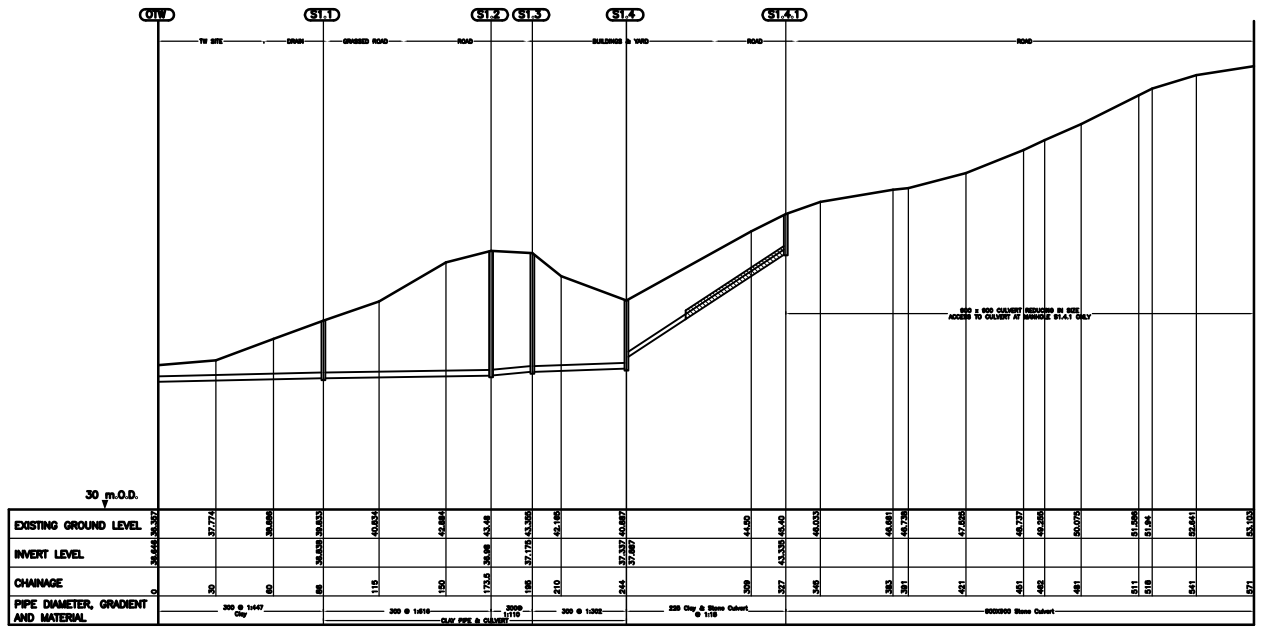

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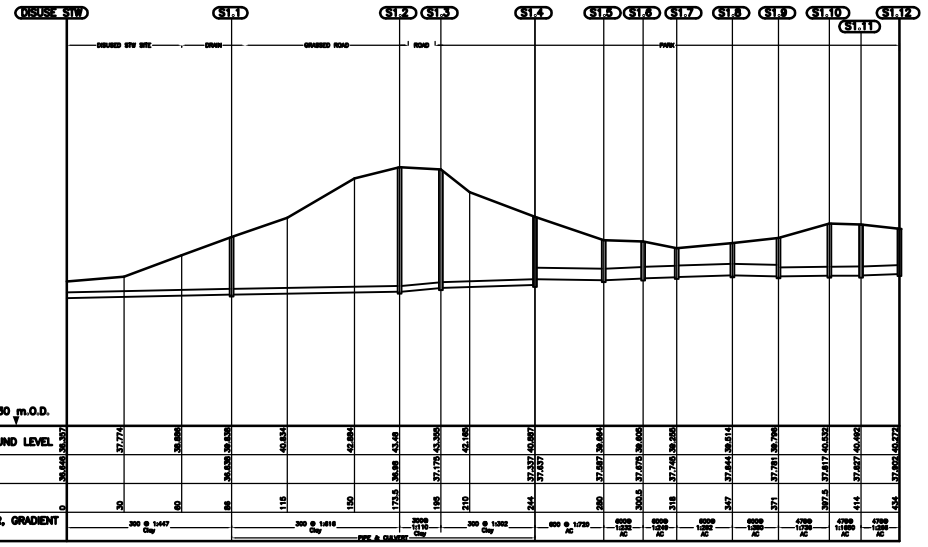

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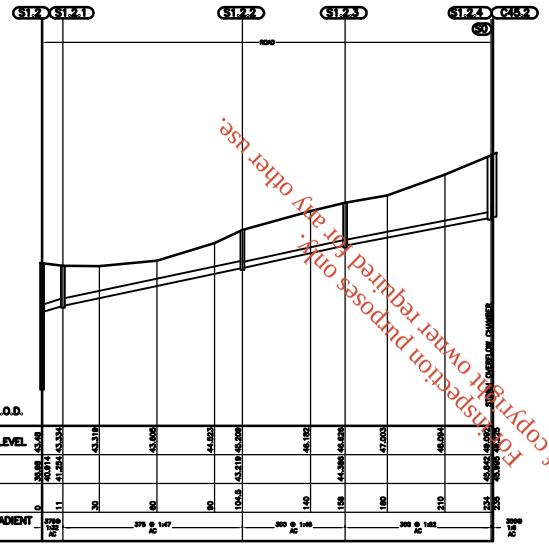

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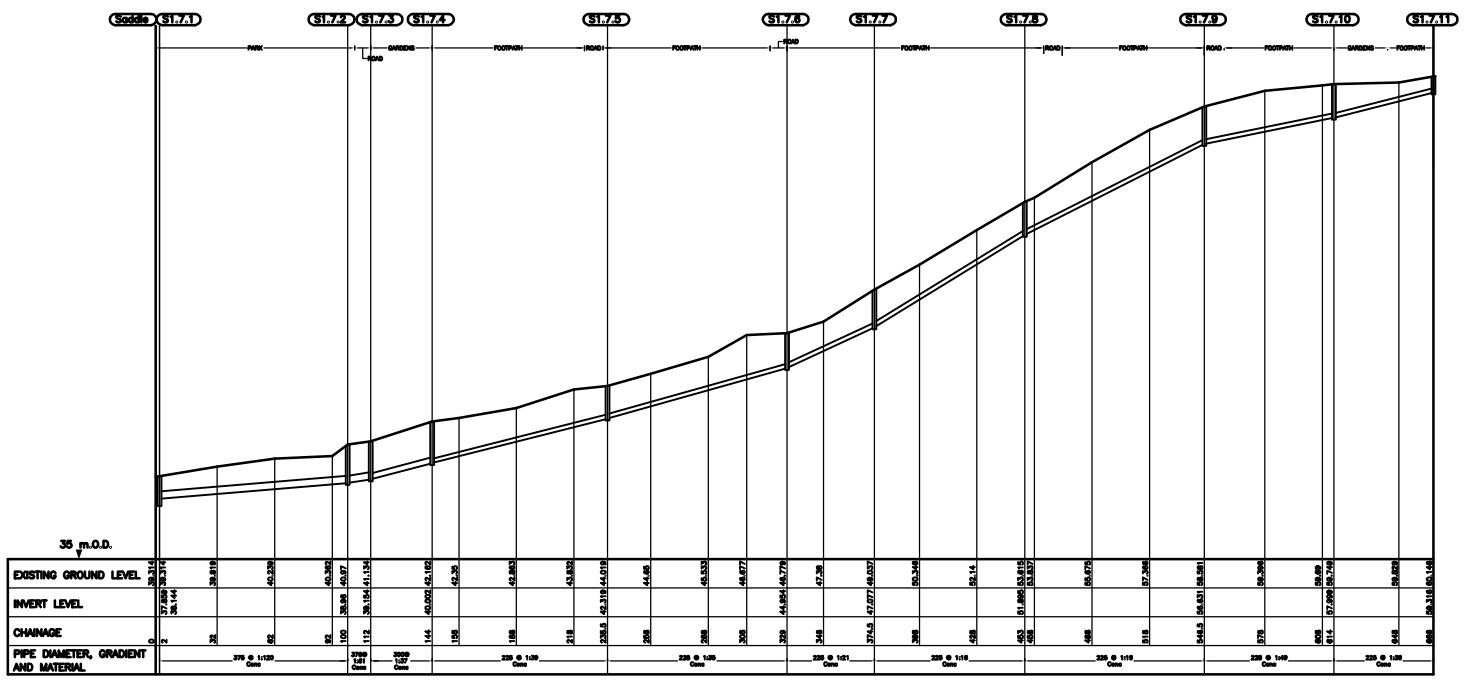

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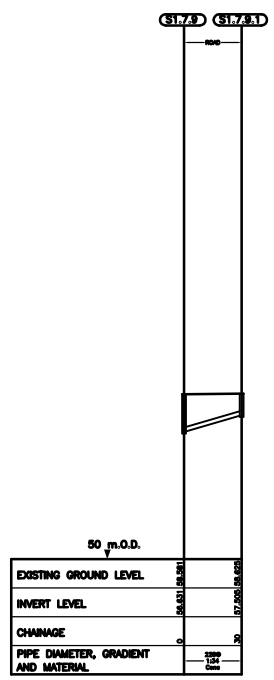

EXISTING SURFACE WATER SEWER – ARDEES AVENUE

NOTES

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2. (S0) : DENOTES STORM OVERFLOW MANHOLE

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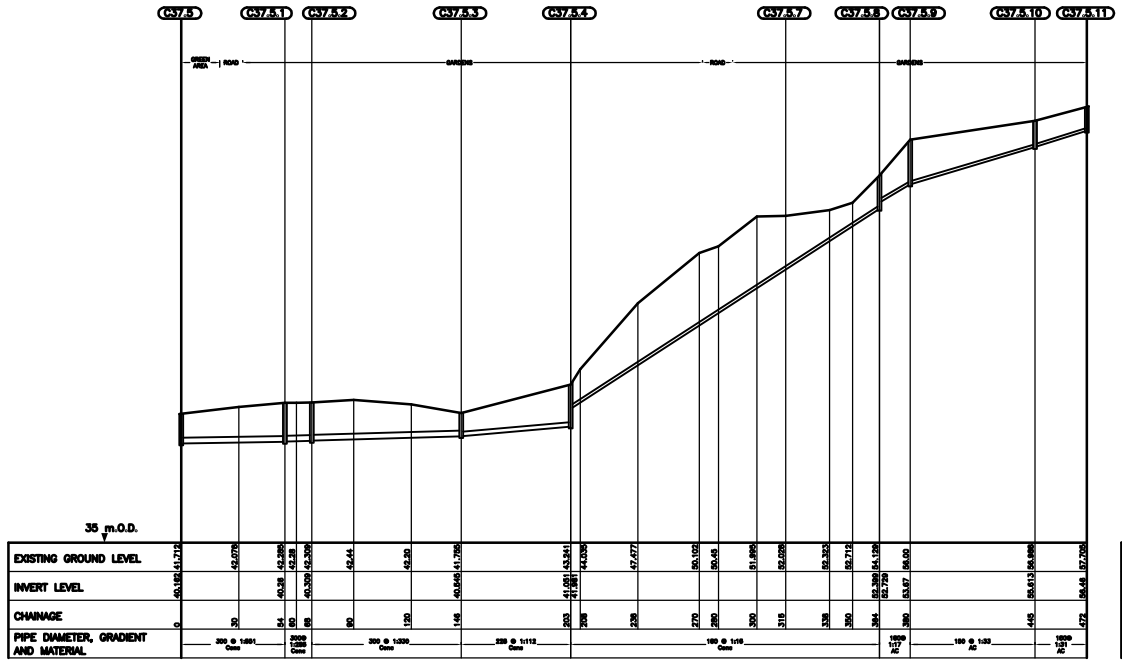
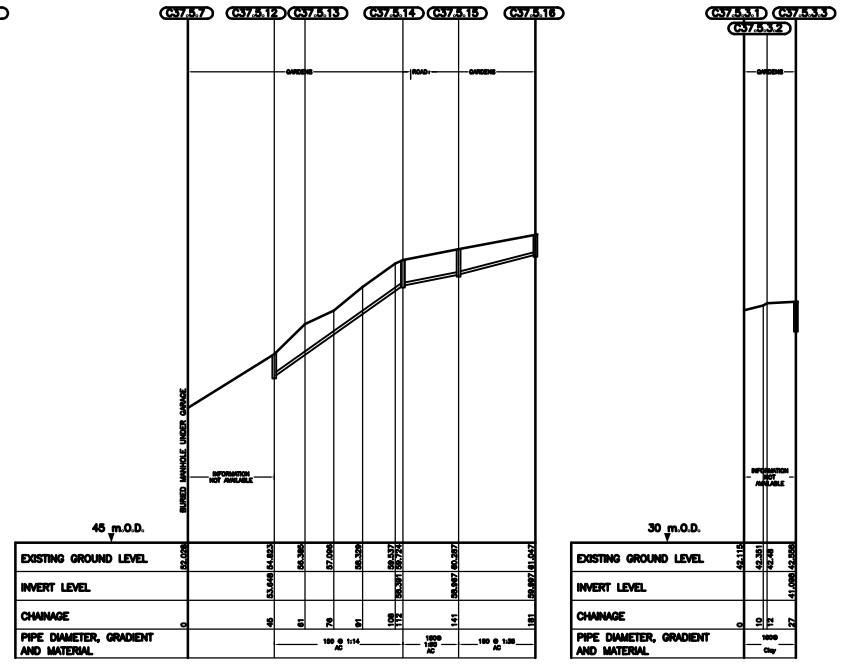
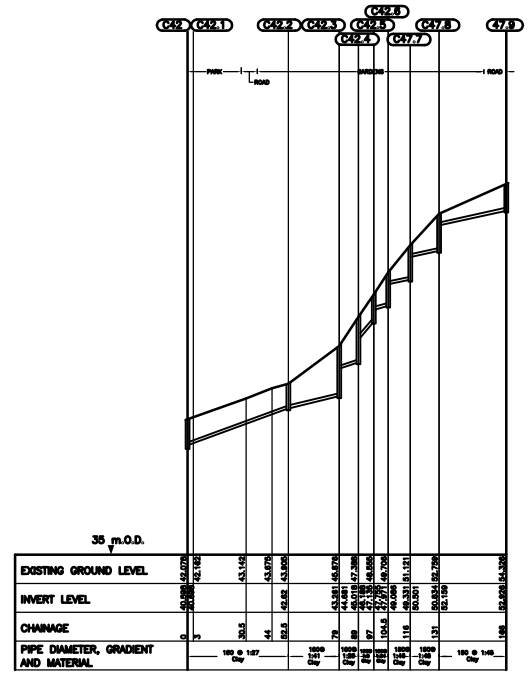
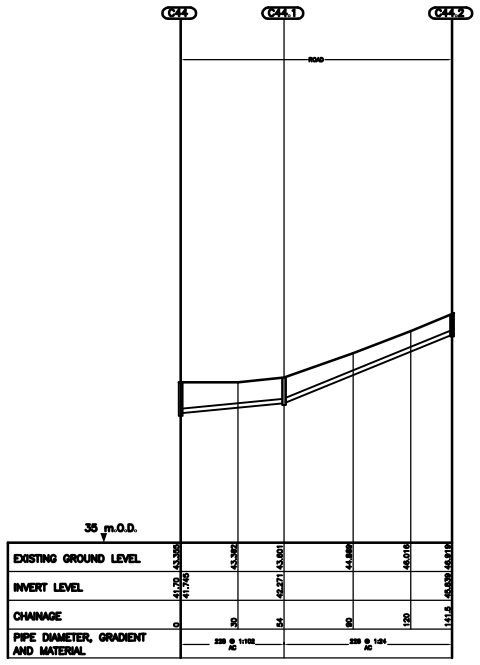
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO:	DRAWING NO:
DATE:DEC'07 DRAWN BY: GJD	1124	155





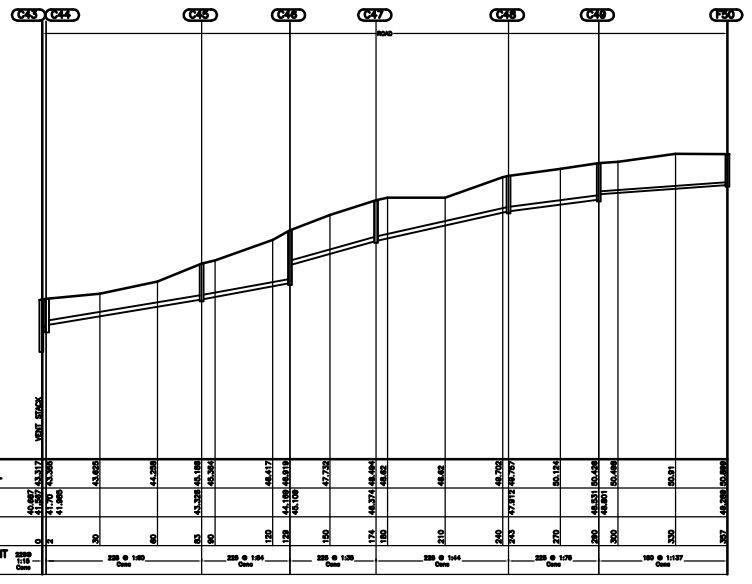


EXISTING COMBINED SEWER — CLOUGHVALLEY ESTATE

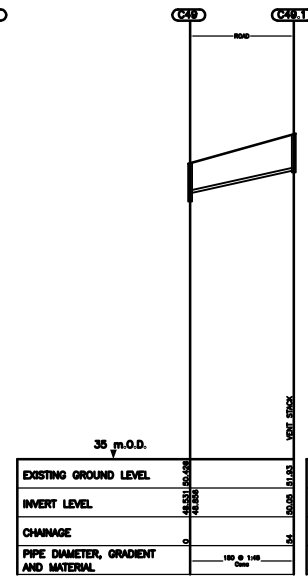


EXISTING COMBINED SEWER — CULLOVILLE ROAD

EXISTING COMBINED SEWER — ARDROS AVENUE TO CLOUGHVALLEY ESTATE

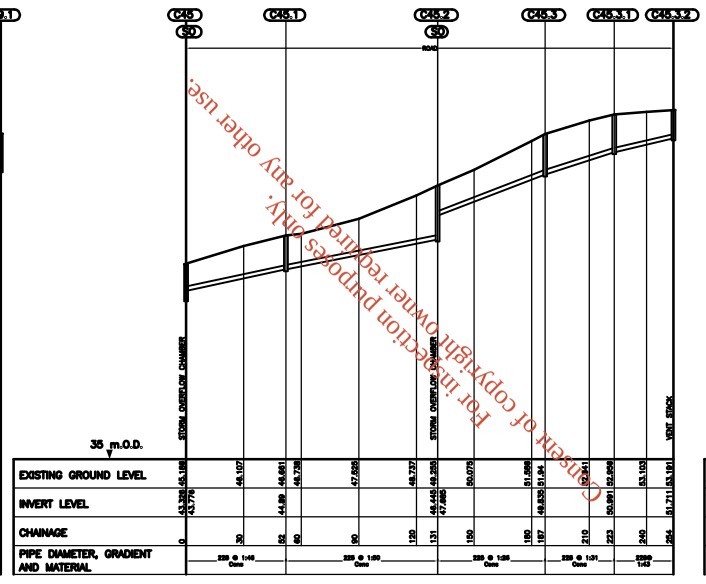


EXISTING COMBINED SEWER — O'NEILL STREET TO CULLOVILLE ROAD



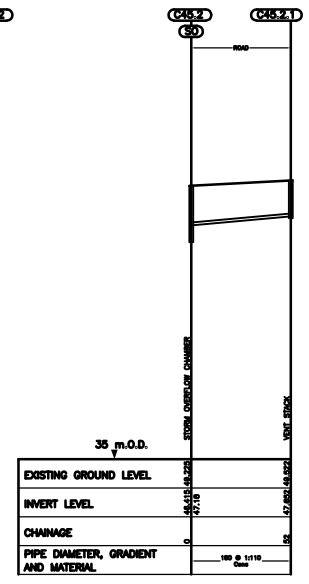
EXISTING COMBINED SEWER — CROSS STREET

EXISTING COMBINED SEWER — CLOUGHVALLEY ESTATE

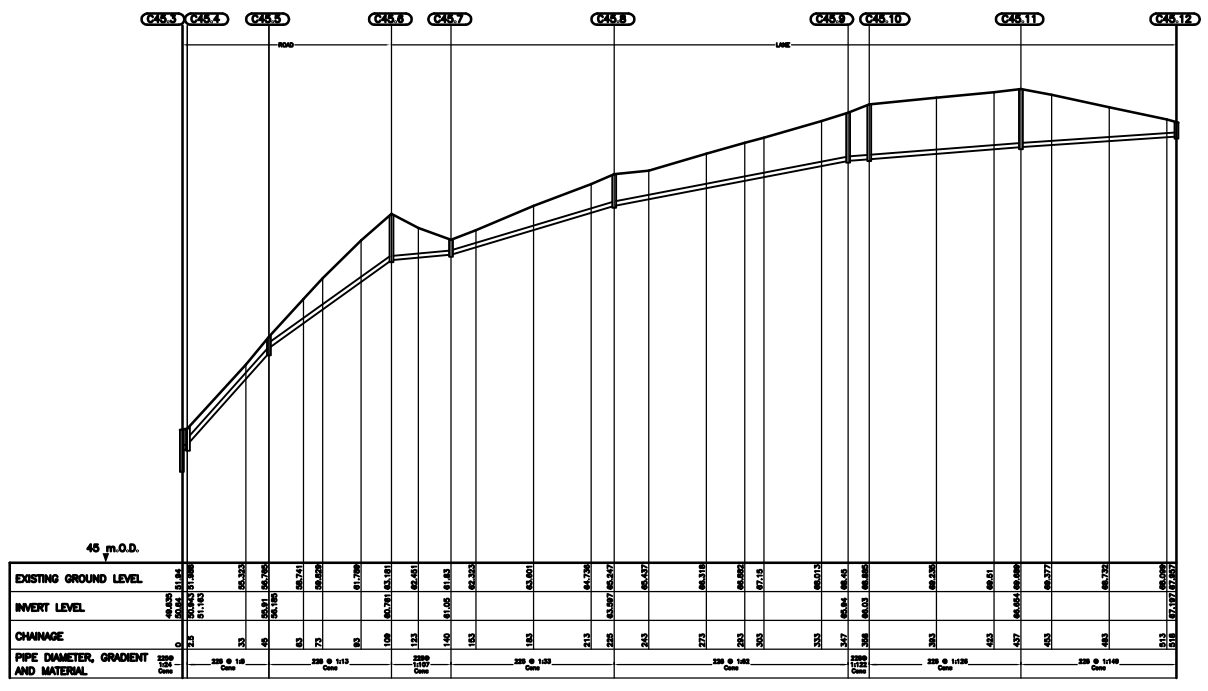


EXISTING COMBINED SEWER — FARNEY STREET

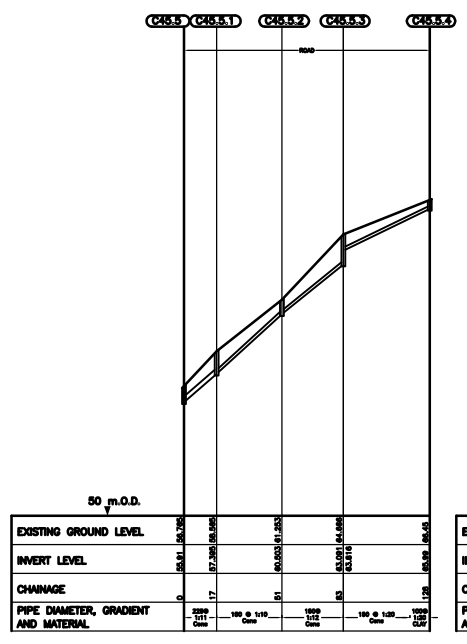
EXISTING COMBINED SEWER — CLOUGHVALLEY ESTATE



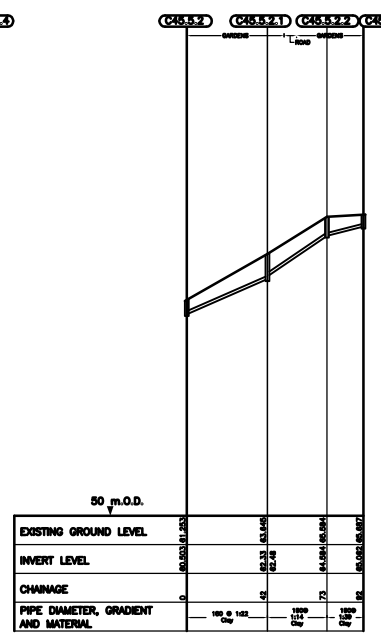
EXISTING COMBINED SEWER — ST JOSEPH'S TERRACE



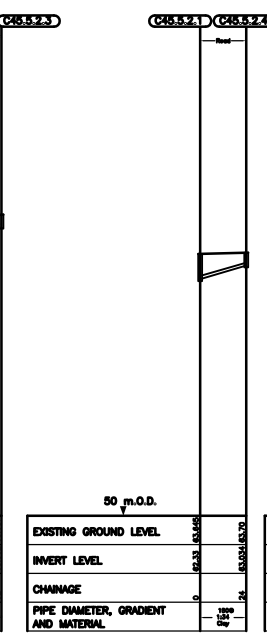
EXISTING COMBINED SEWER — HORSE HILL LANE TO FARNEY STREET



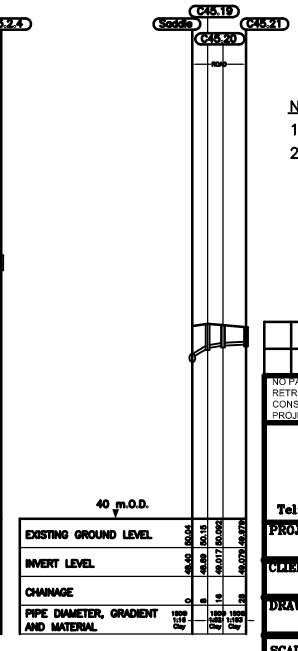
EXISTING COMBINED SEWER — EMMET ROAD TO EMMET STREET ESTATE



EXISTING COMBINED SEWER — EMMET STREET ESTATE



EXISTING COMBINED SEWER — EMMET STREET



EXISTING COMBINED SEWER — FARNEY STREET

NOTES

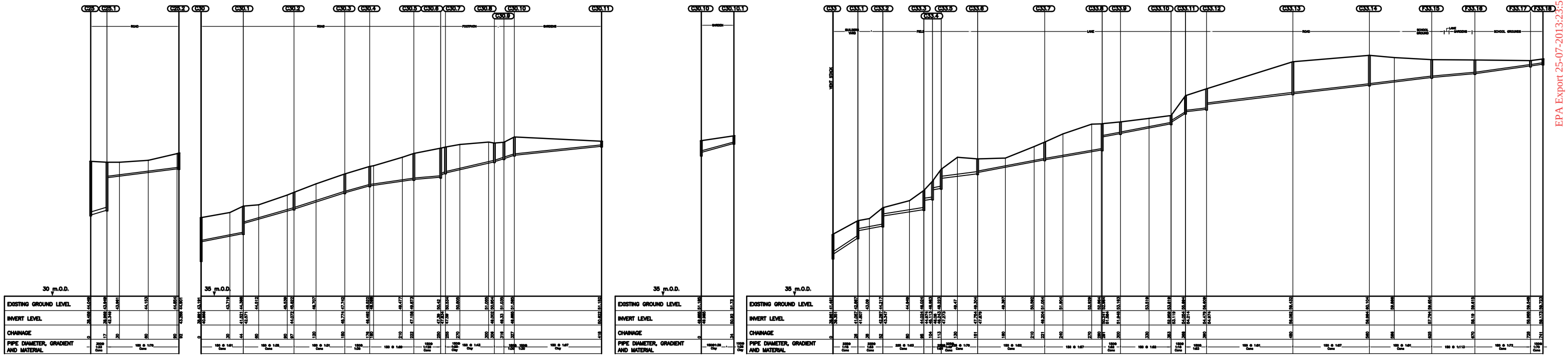
1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (S0) : DENOTES STORM OVERFLOW MANHOLE

THE INFORMATION CONTAINED ON THIS DRAWING IS ABSTRACTED FROM THE RYAN HANLEY PRELIMINARY REPORT BOOK OF DRAWINGS

	AMENDMENT DETAILS	DATE
	TENDER ISSUE	

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME — CONTRACT Nr. 1 — PIPELINES
CLIENT: CARRICKMACROSS TOWN COUNCIL
DRAWING TITLE: EXISTING COMBINED & FOUL SEWER SECTIONS — SHEET 5 OF 8
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000 | JOB NO: 1124 | DRAWING NO: 154
DATE: DEC'07 | DRAWN BY: GJD

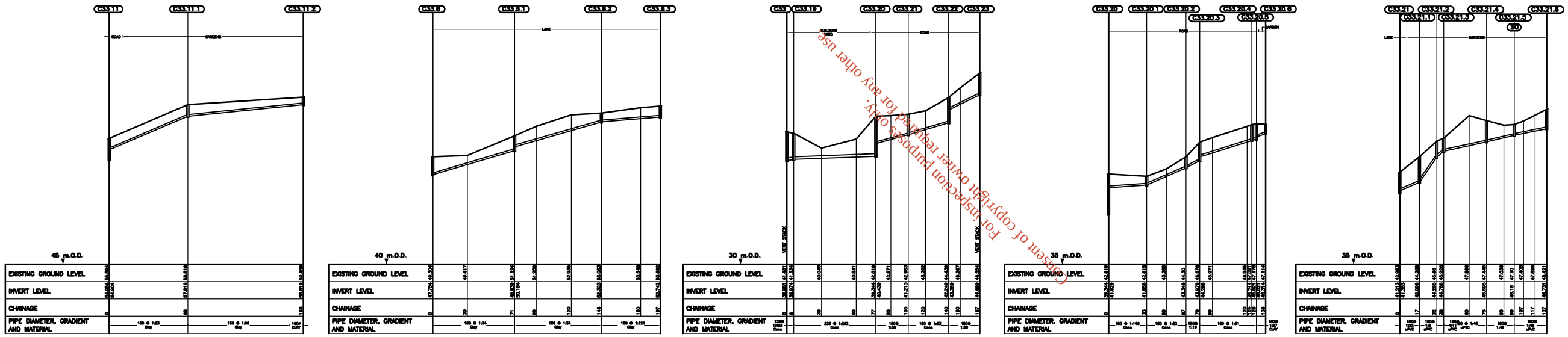


EXISTING COMBINED SEWER – BRIDEWELL LANE

EXISING COMBINED SEWER – MAIN STREET TO CASTLEBLANEY ROAD

REAR GARDENS

EXISTING COMBINED & FOUL SEWER – CASTLEBLANEY ROAD TO ARDROIS AVENUE TO LANDS OF MONAGHAN STREET



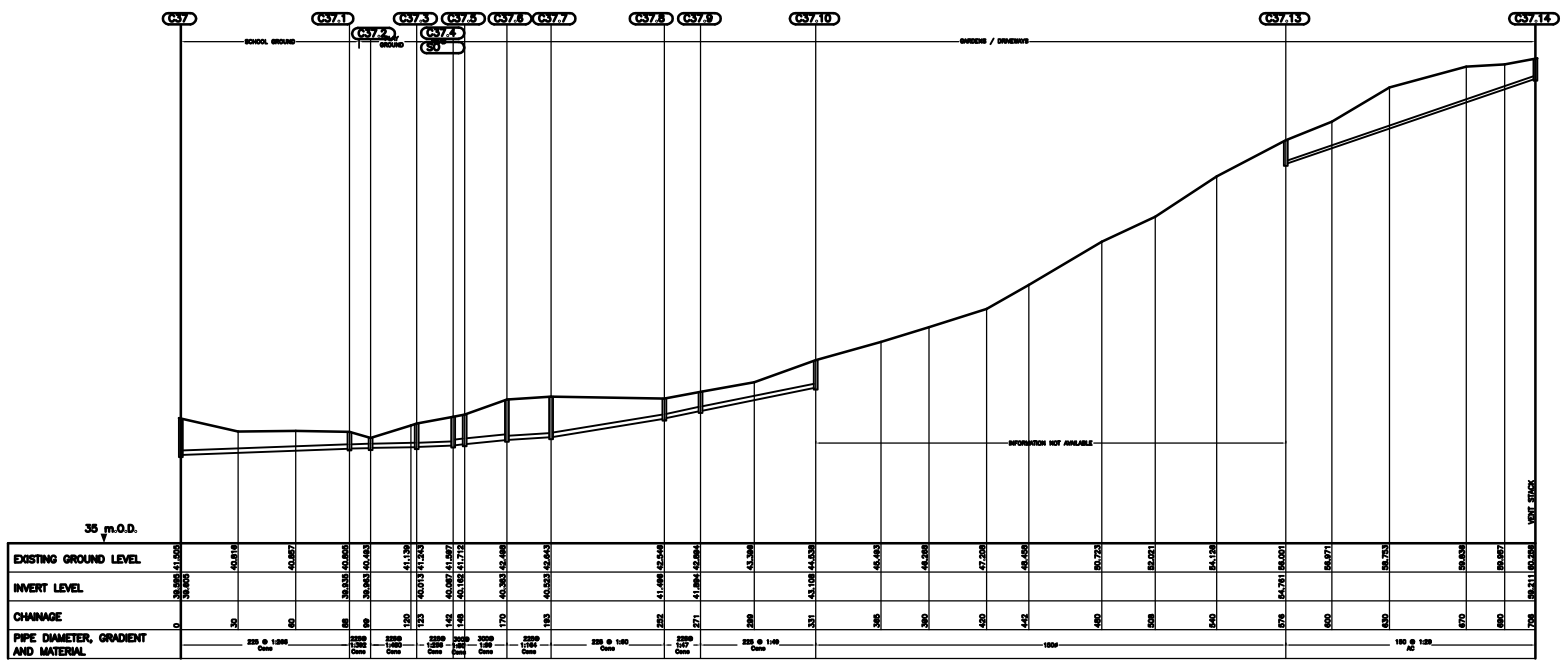
EXISTING COMBINED SEWER –
ROCKDANIEL ROAD TO REAR OF HOUSE ON CASTLEBLANEY ROAD

EXISTING COMBINED SEWER –
LANE TO REAR OF HOUSES ON CASTLEBLANEY ROAD

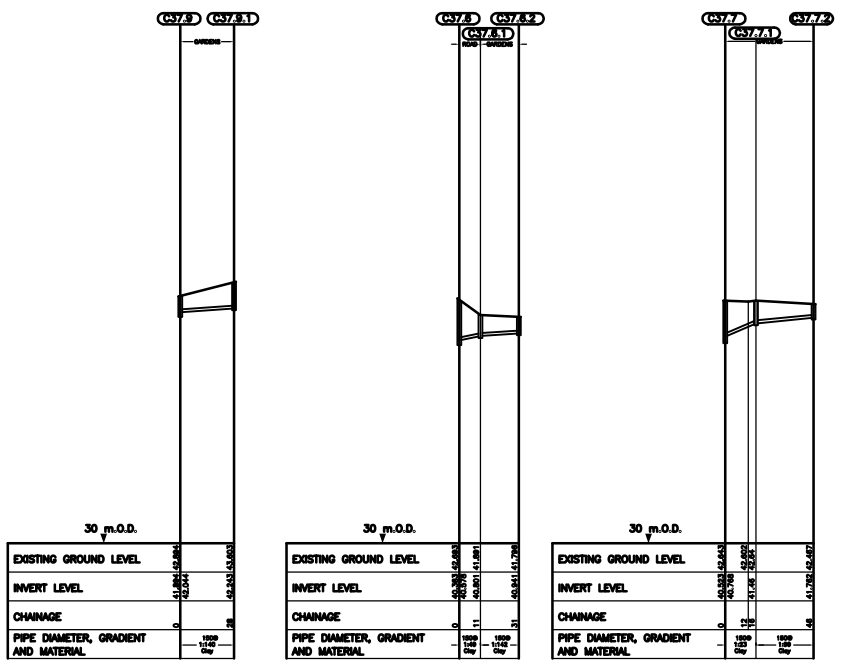
EXISTING COMBINED SEWER – CHAPEL LANE

EXISTING COMBINED SEWER –
CHAPEL LANE TO REAR OF HOUSES ON O'NEILL STREET

EXISTING COMBINED SEWER –
CHAPEL LANE TO REAR OF HOUSES ON O'NEILL STREET



EXISTING COMBINED SEWER –
ROCKDANIEL ROAD TO PARK TO ST. LOUIS NATIONAL SCHOOL GROUNDS



EXISTING COMBINED SEWER –
ROCKDANIEL ROAD

EXISTING COMBINED SEWER –
CLOUGHVALLEY ESTATE

EXISTING COMBINED SEWER –
CLOUGHVALLEY ESTATE

NOTES

1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (S0) : DENOTES STORM OVERFLOW MANHOLE

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	TENDER ISSUE	
	AMENDMENT DETAILS	DATE

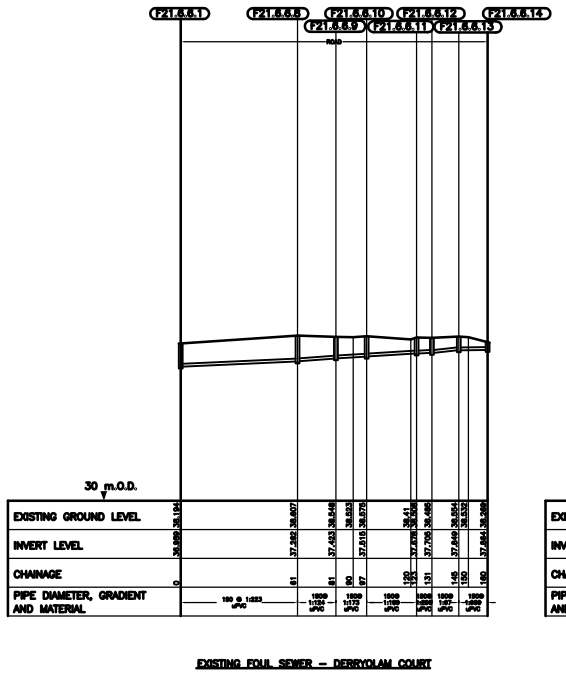
T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES

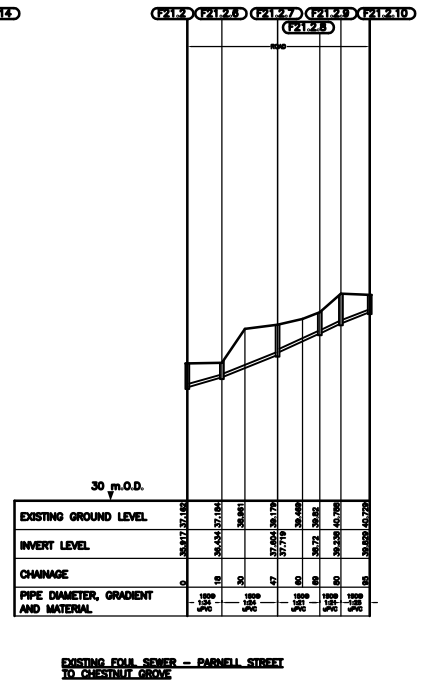
CLIENT: CARRICKMACROSS TOWN COUNCIL

DRAWING TITLE: EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 4 OF 8

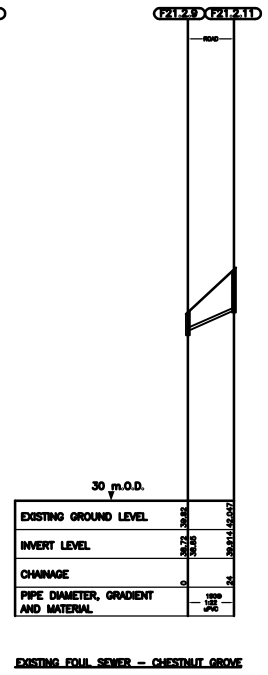
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO:	DRAWING NO:
DATE: DEC'01 DRAWN BY: GJD	1124	153



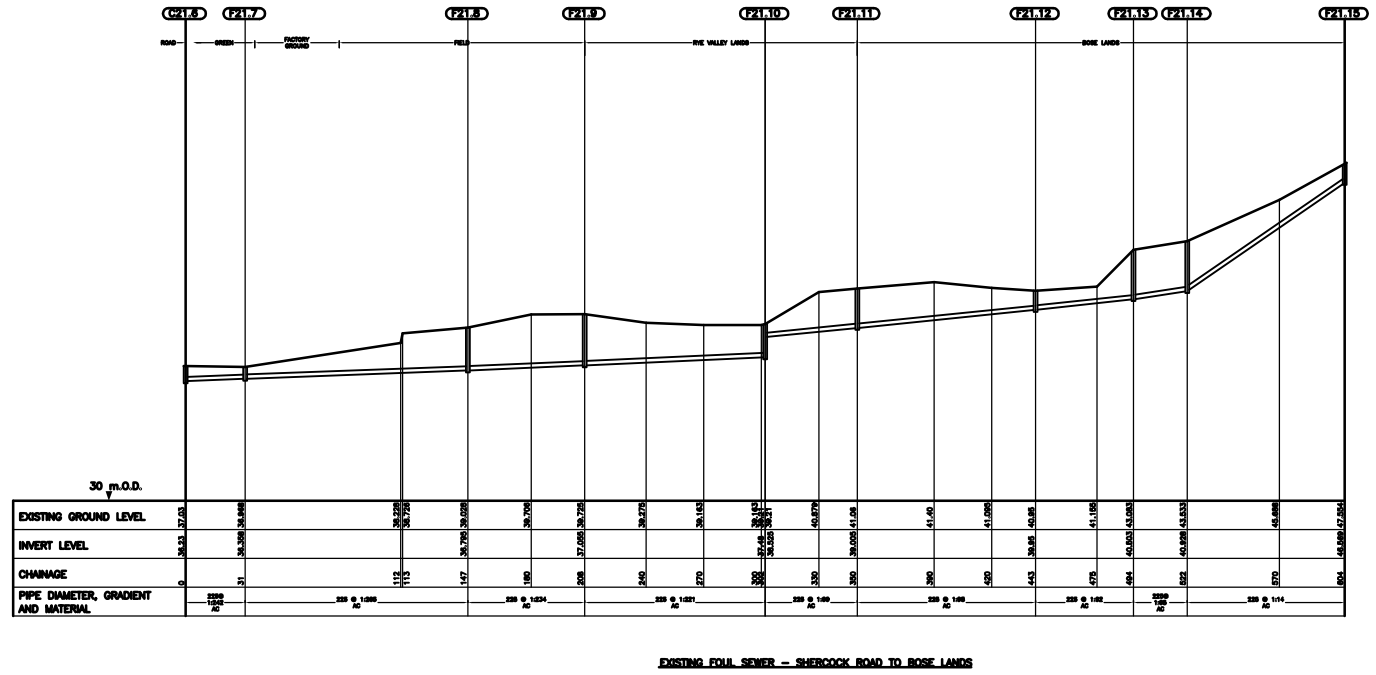
EXISTING FOUL SEWER – DERRYOLAM COURT



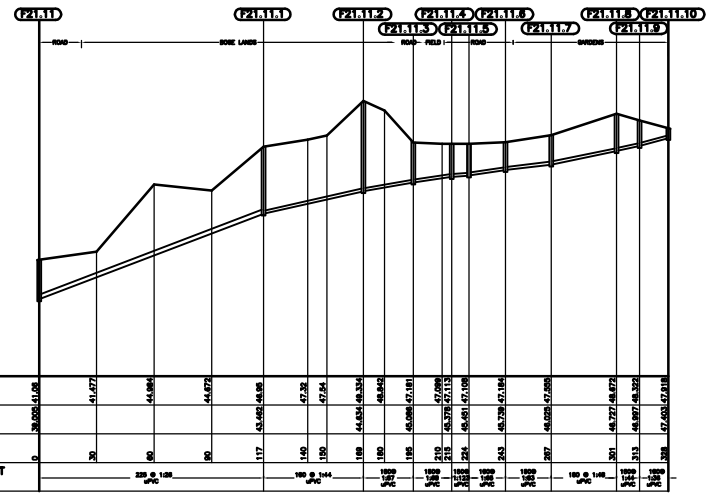
EXISTING FOUL SEWER – PARNELL STREET TO CHESTNUT GROVE



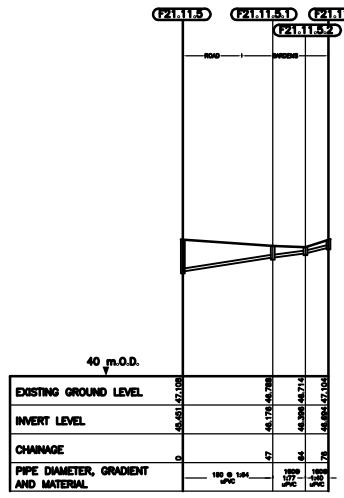
EXISTING FOUL SEWER – CHESTNUT GROVE



EXISTING FOUL SEWER – SHERCOCK ROAD TO ROSE LANDS



EXISTING FOUL SEWER – ROSE LANDS TO DRUMMOND ETRA



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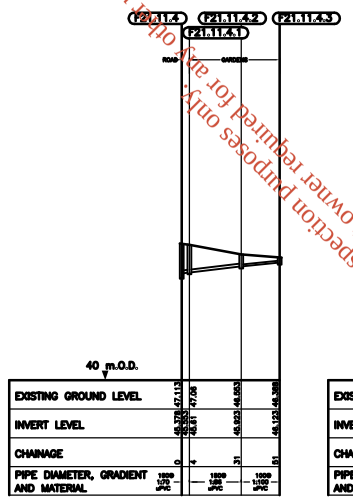

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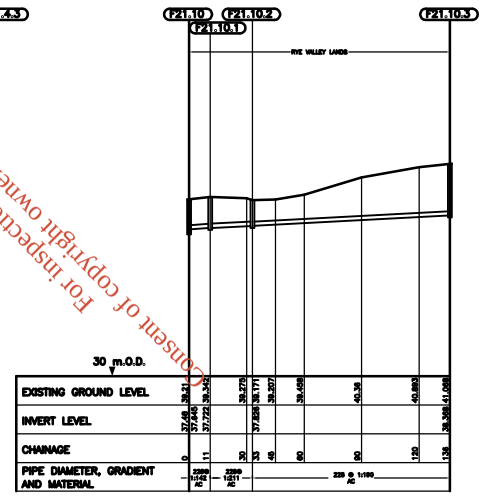
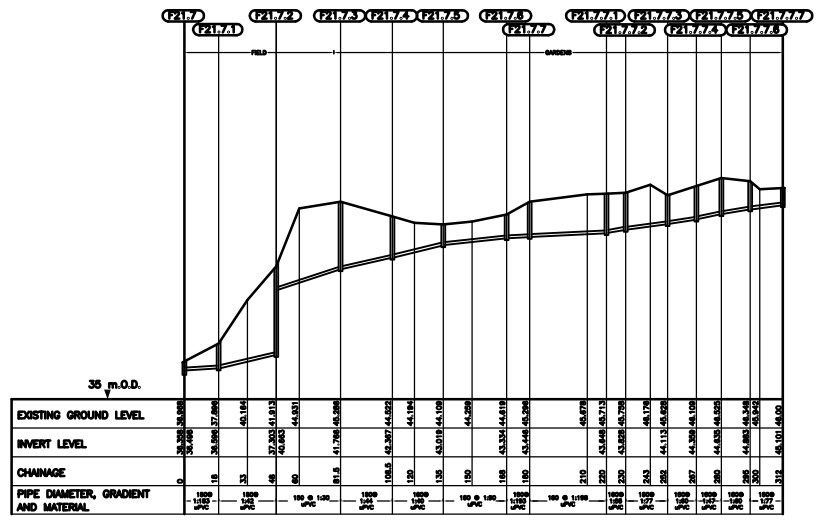
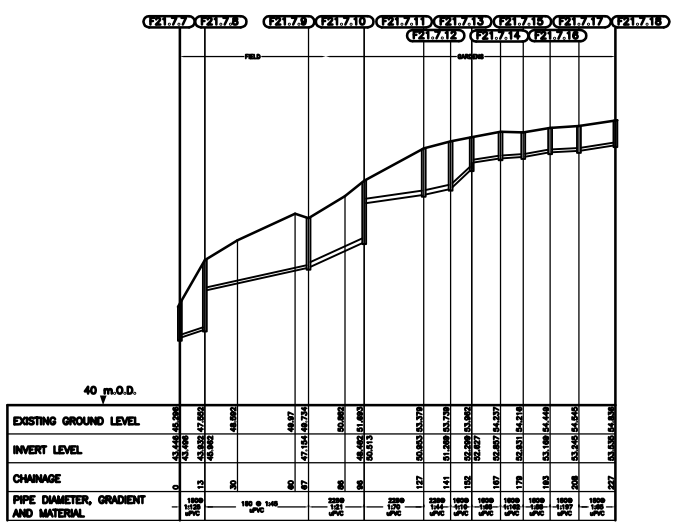


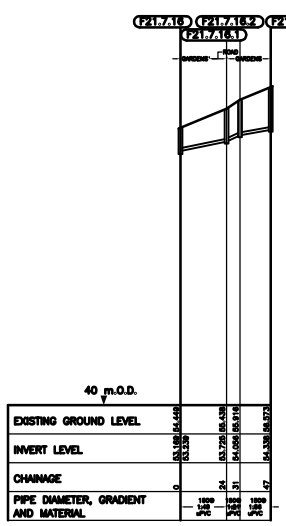
EXISTING FOUL SEWER – RYE VALLEY LANDS



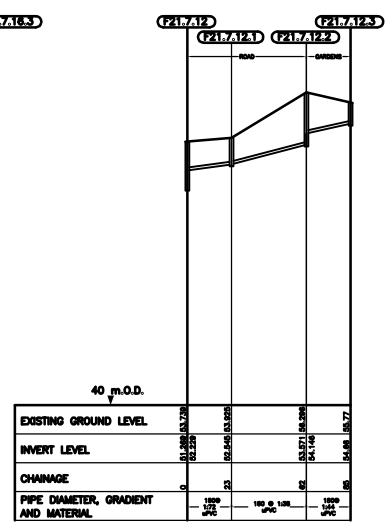
EXISTING FOUL SEWER – DRUMMOND ETRA



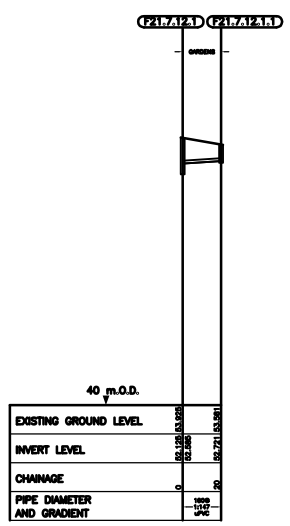
EXISTING FOUL SEWER – VALLEY CLOSE



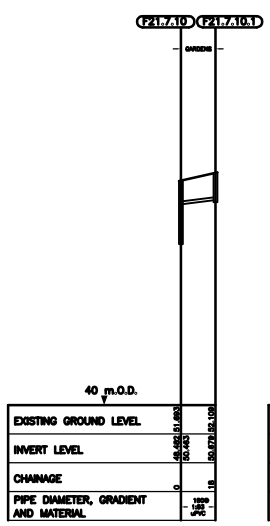
EXISTING FOUL SEWER – VALLEY CLOSE



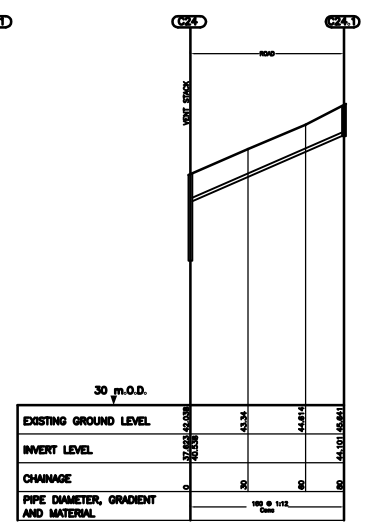
EXISTING FOUL SEWER – VALLEY CLOSE



EXISTING FOUL SEWER – VALLEY CLOSE



EXISTING FOUL SEWER – VALLEY CLOSE



EXISING COMBINED SEWER – PARNELL ST

NOTES

1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (S0) : DENOTES STORM OVERFLOW MANHOLE

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	AMENDMENT DETAILS	DATE
	TENDER ISSUE	

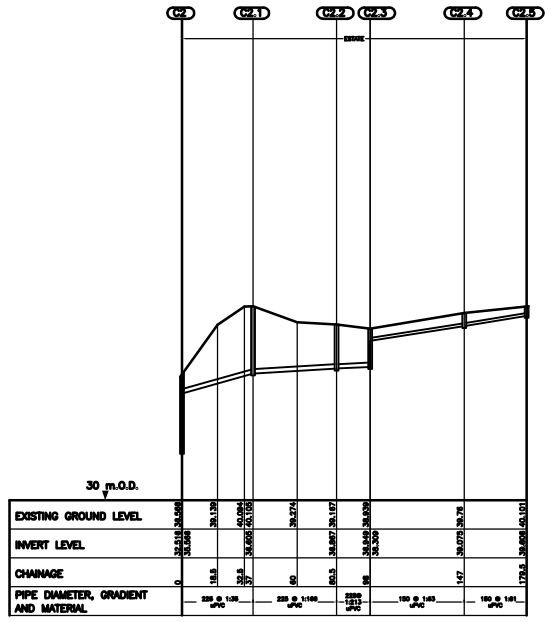
T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES

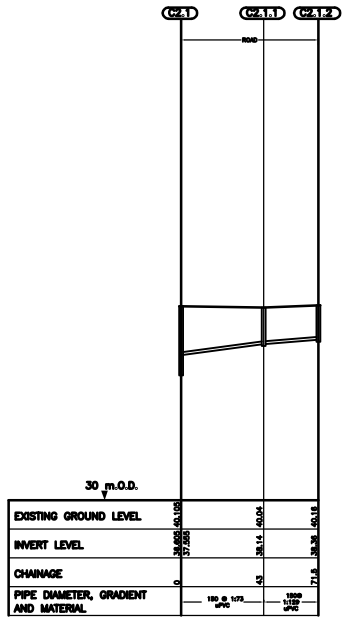
CLIENT: CARRICKMACROSS TOWN COUNCIL

DRAWING TITLE: EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 3 OF 8

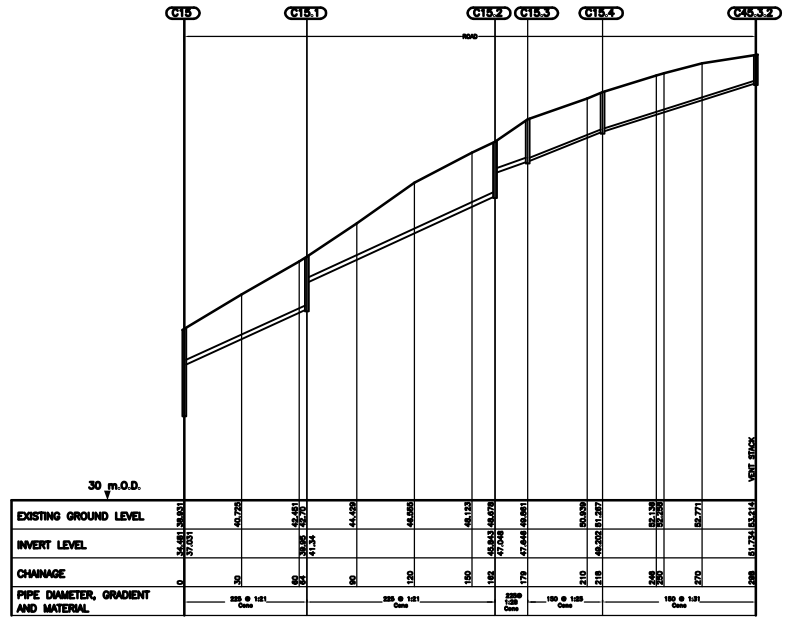
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO: 1124	DRAWING NO: 152
DATE: DEC'O	DRAWN BY: GJD	



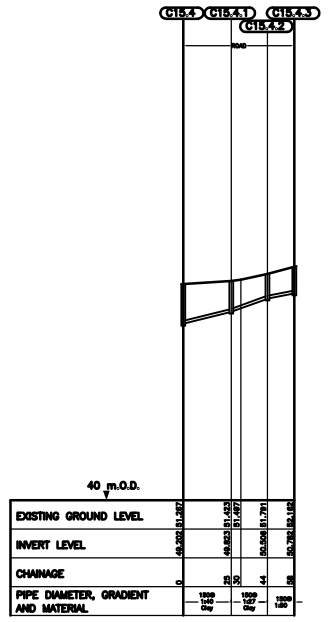
EXISTING COMBINED SEWER – HIGHFIELD ESTATE



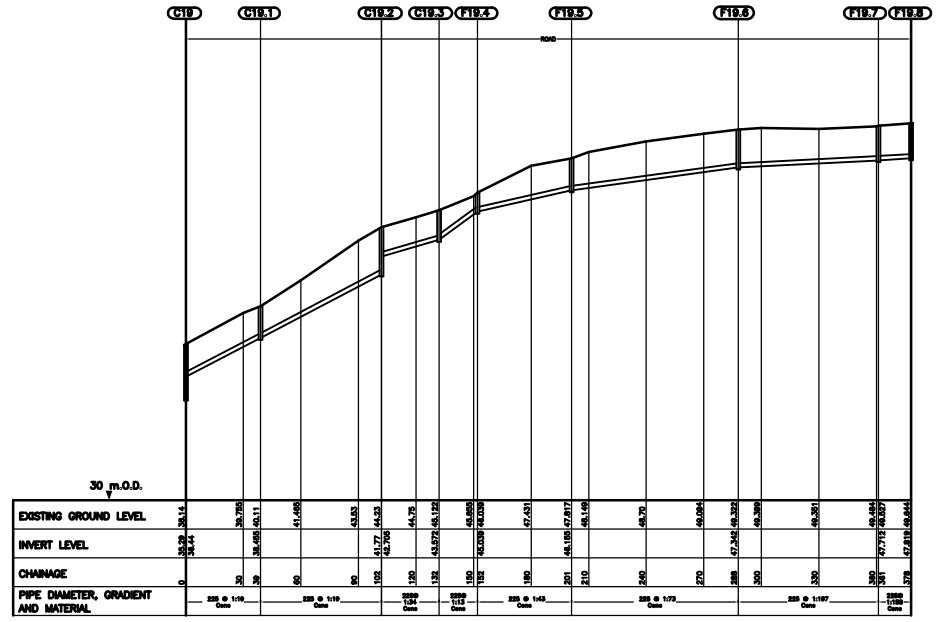
EXISTING COMBINED SEWER – HIGHFIELD ESTATE



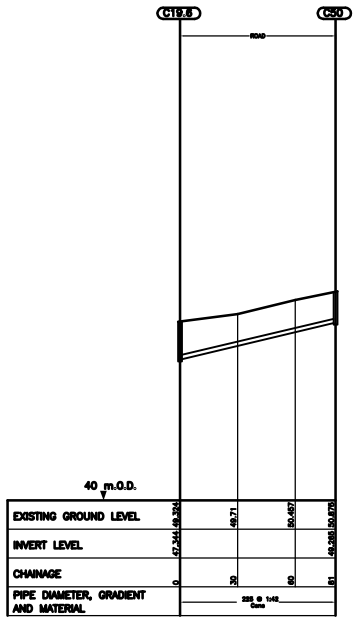
EXISTING COMBINED SEWERS – CASTLE ST. TO FARNEY ST.



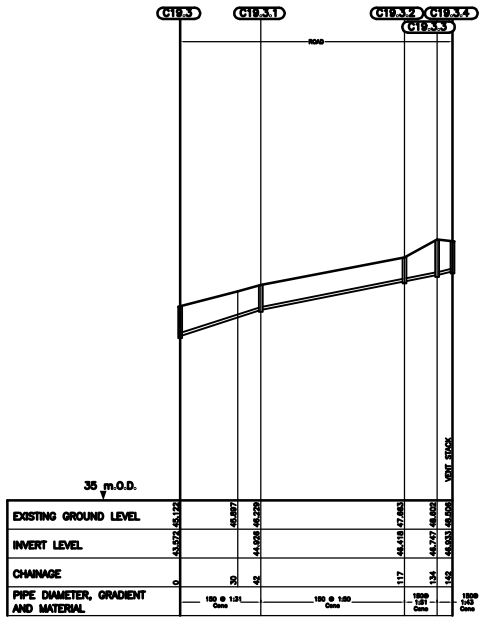
EXISTING COMBINED SEWER – FARNEY STREET TO DISTILLERY LANE



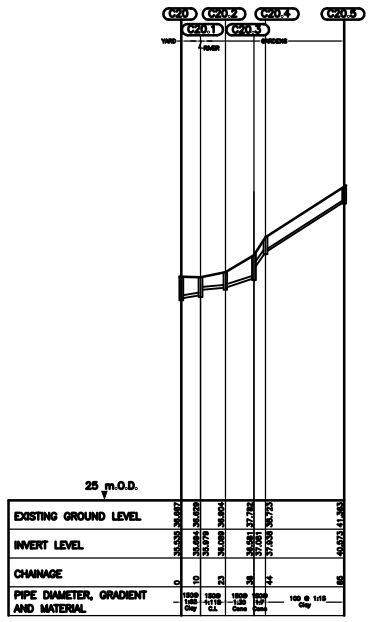
EXISTING COMBINED SEWER – SHIRLEY HOUSE LANE TO MAIN STREET



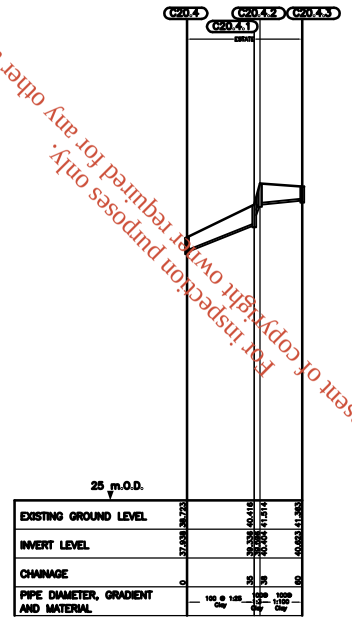
EXISTING COMBINED SEWER – O'NEILL STREET



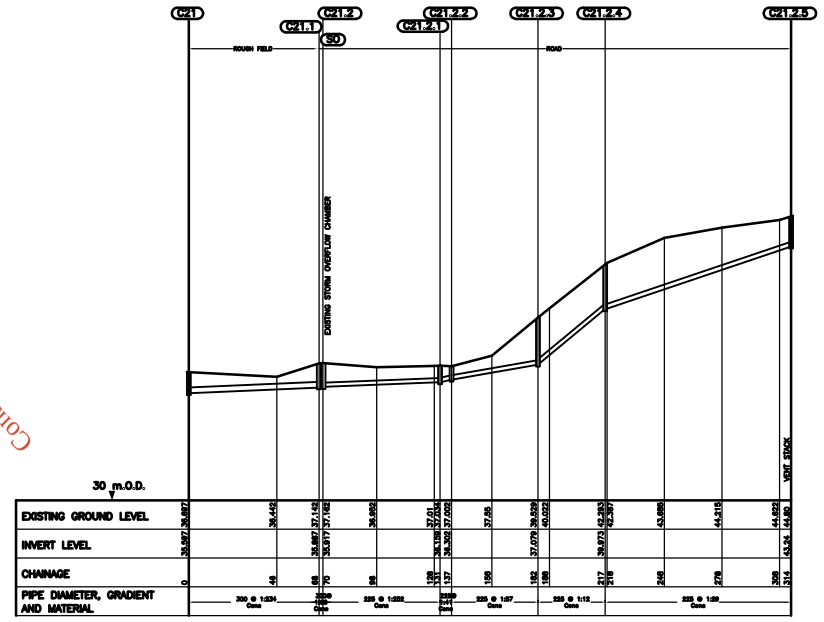
EXISTING COMBINED SEWER – SHIRLEY HOUSE LANE TO REAR OF MAIN STREET



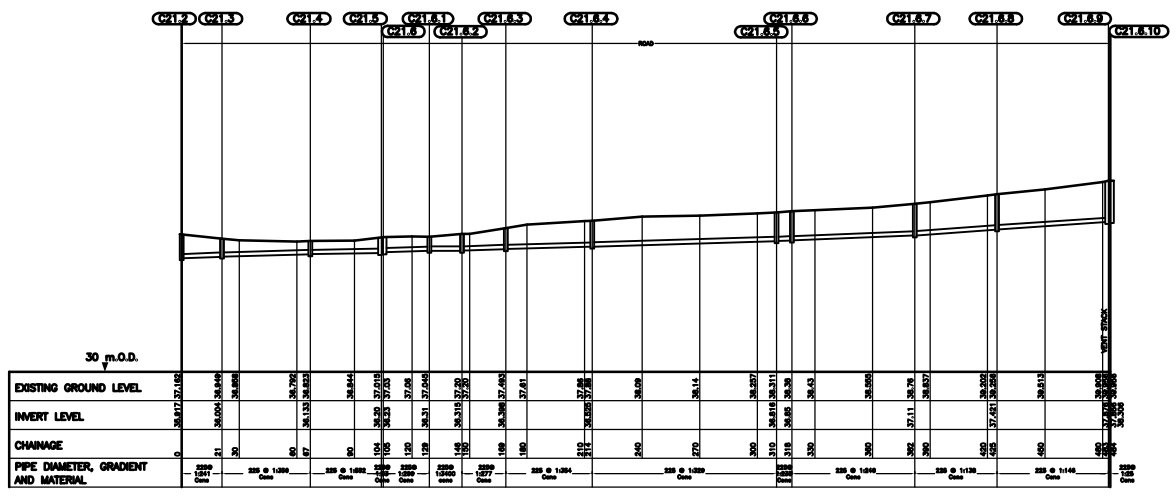
EXISTING COMBINED SEWER – CUIL FEARNA



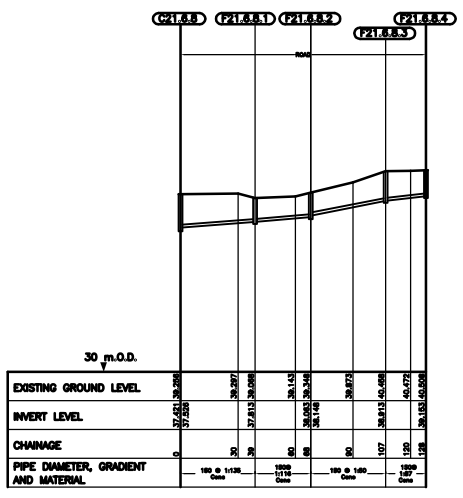
EXISTING COMBINED SEWER – CUIL FEARNA



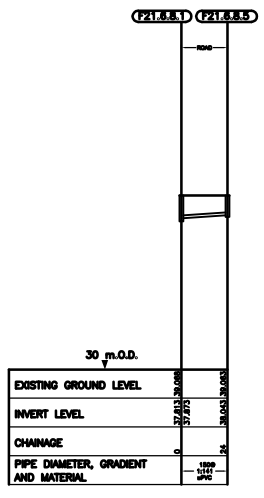
EXISTING COMBINED SEWER – MULLANARY STREET



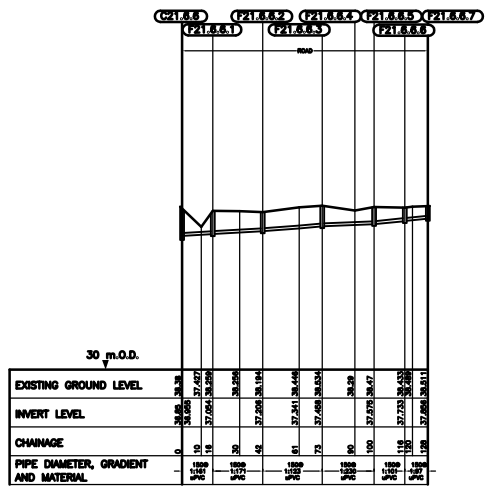
EXISTING COMBINED SEWER – MULLANARRY STREET TO SHERCOCK ROAD



EXISTING FOUL SEWER – SHERCOCK ROAD TO DERRYOLAM COURT



EXISTING FOUL SEWER – DERRYOLAM COURT



EXISTING FOUL SEWER – SHERCOCK ROAD TO DERRYOLAM COURT

NOTES

1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (SO) : DENOTES STORM OVERFLOW MANHOLE

THE INFORMATION CONTAINED ON THIS DRAWING IS ABSTRACTED FROM THE RYAN HANLEY PRELIMINARY REPORT BOOK OF DRAWINGS

	AMENDMENT DETAILS	DATE
	TENDER ISSUE	

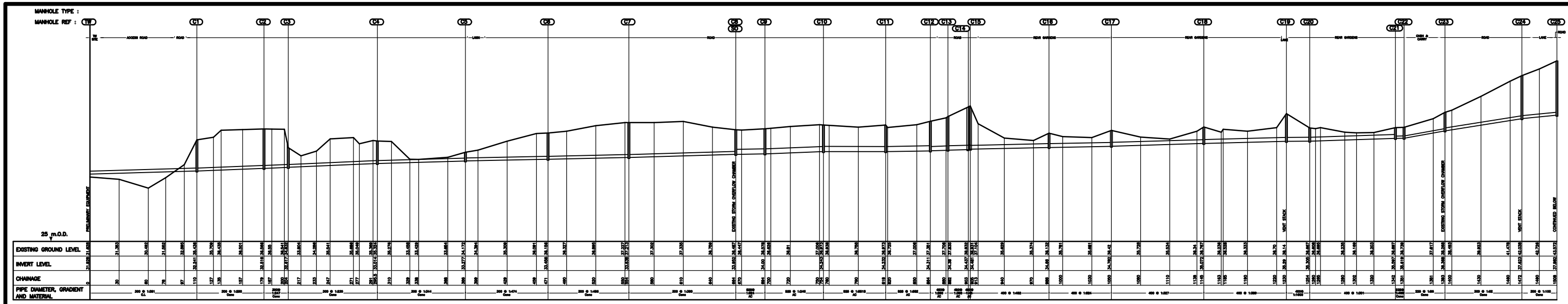
T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES

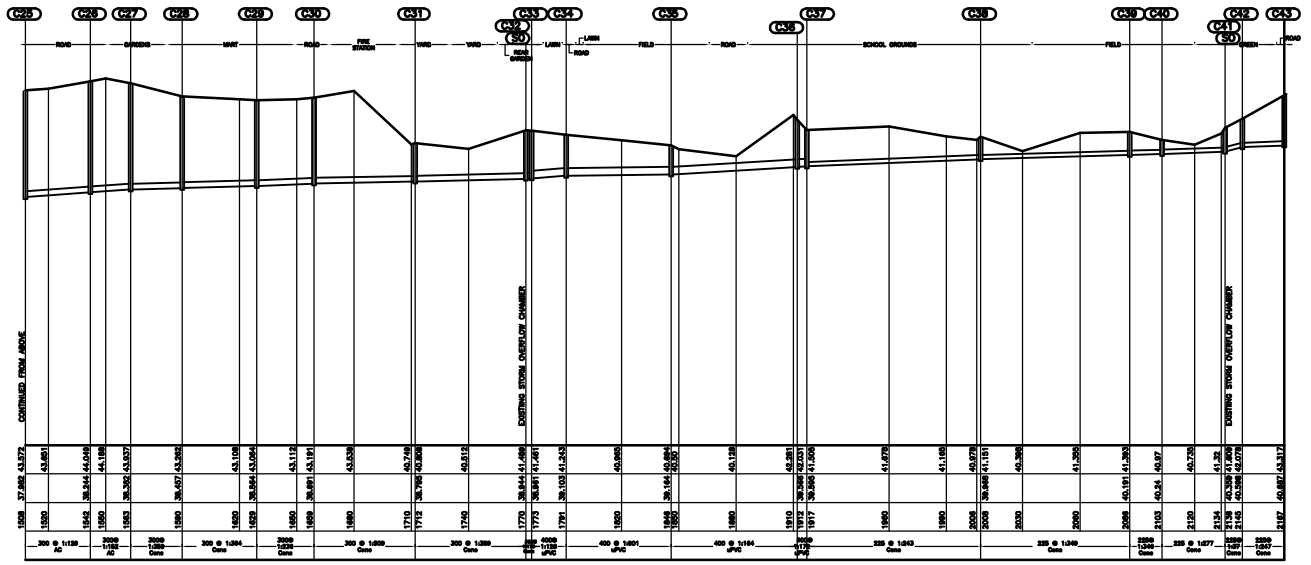
CLIENT: CARRICKMACROSS TOWN COUNCIL

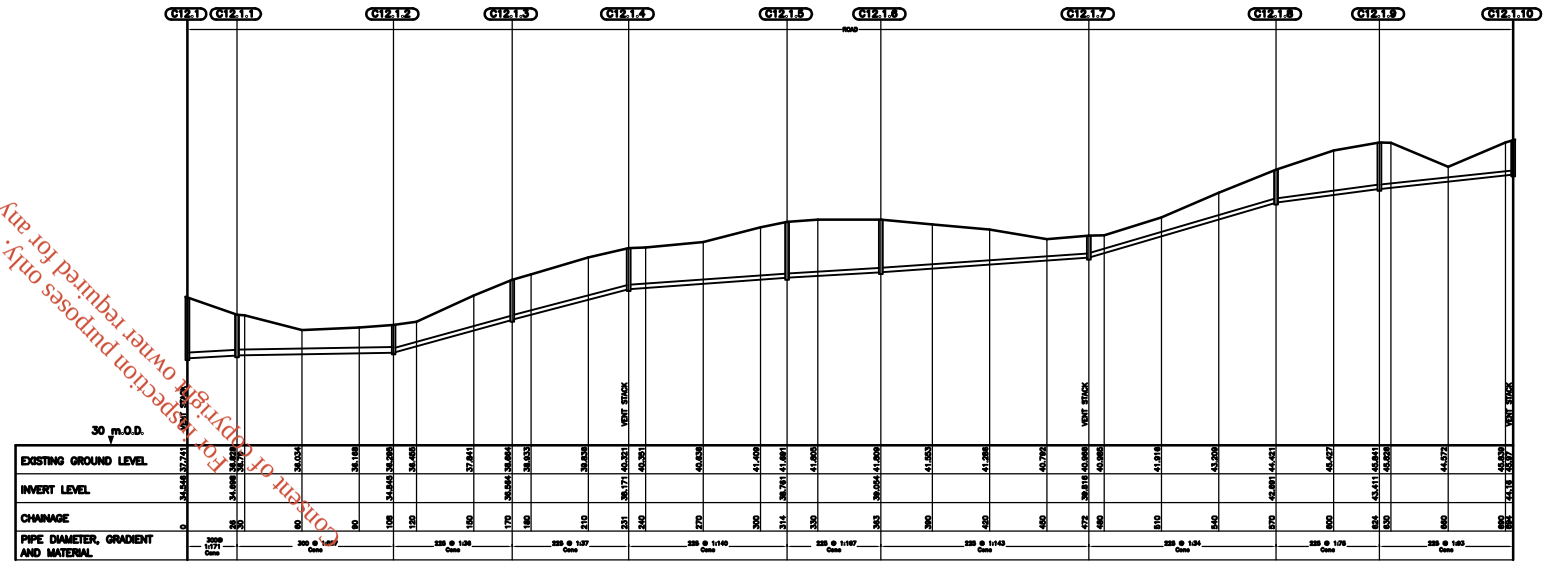
DRAWING TITLE: EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 2 OF 8

SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO:	DRAWING NO:
DATE: DEC'07 DRAWN BY: GJD	1124	151

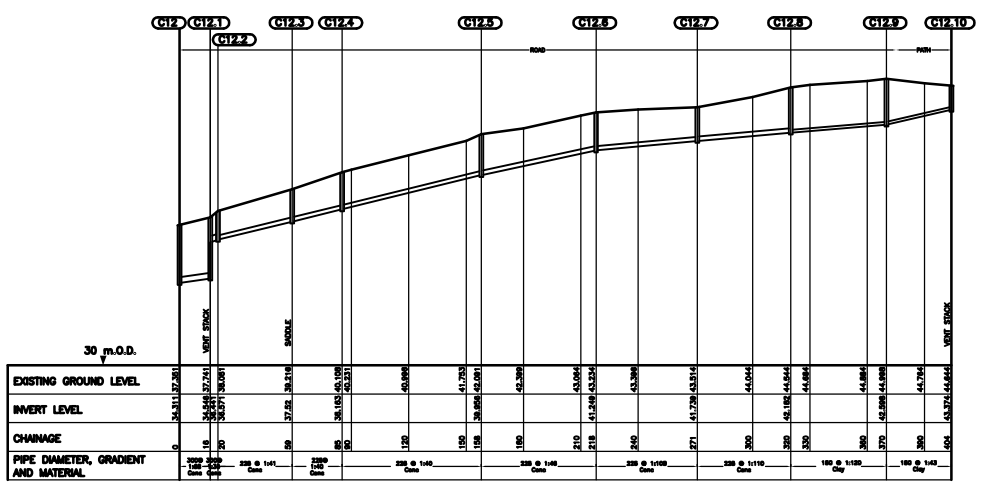


EXISTING COMBINED SEWER – CULLOVILLE ROAD TO SEWERAGE TREATMENT WORKS

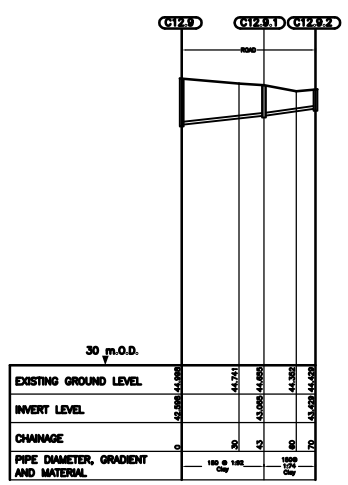




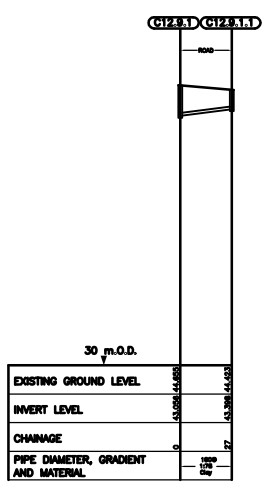
EXISTING COMBINED SEWER – MULLANARRY ROAD



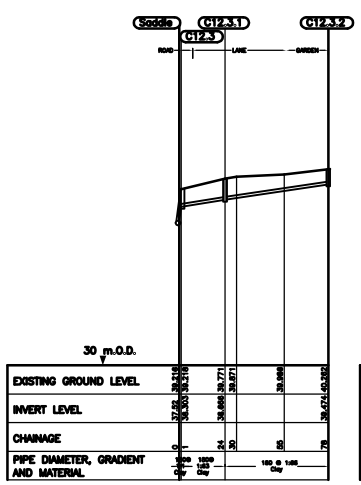
EXISTING COMBINED SEWER – KINGSCOURT ROAD / MAGHEROSS ROAD



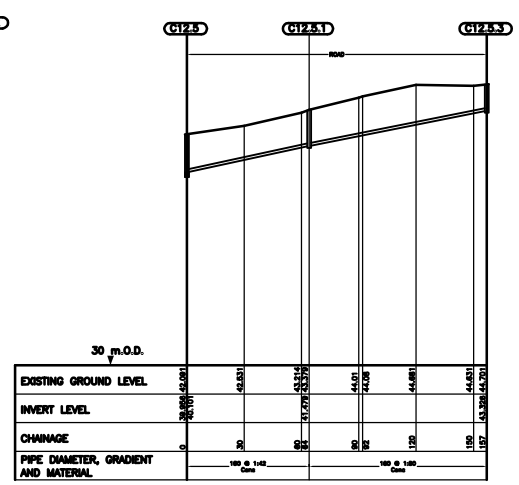
EXISTING COMBINED SEWER – MAGHEROSS ROAD/ WOODLANDS ESTATE



EXISTING COMBINED SEWER – WOODLANDS ESTATE



EXISTING COMBINED SEWER – KINGCOURT ROAD



EXISTING COMBINED SEWER – KINGSCOURT ROAD

NOTES

1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (SO) : DENOTES STORM OVERFLOW MANHOLE

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	AMENDMENT DETAILS	DATE

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CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT:	CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES
CLIENT:	CARRICKMACROSS TOWN COUNCIL
DRAWING TITLE:	EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 1 OF 8
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000	JOB NO: 1124
DATE: DEC'07 DRAWN BY: GJD	DRAWING NO: 150

THE INFORMATION CONTAINED ON THIS DRAWING IS ABSTRACTED FROM THE RYAN HANLEY PRELIMINARY REPORT BOOK OF DRAWINGS

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AMENDMENT DETAILS	DATE

T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES

CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: LAYOUT MAP OF EXISTING SEWERS – SHEET 2 OF 2

SCALE: 1: 2000 | JOB NO: 1124 | DRAWING NO: 149

DATE: JAN '04 | DRAWN BY: GJD

LEGEND
- EXISTING COMBINED SEWER
- EXISTING STORM SEWER
- EXISTING FOUL SEWER
- EXISTING CULVERTS

Drawing name: A0 – D:\Drawings\contract#1\pipelines base.dwg 2003-11-19 Date: 13/2007 10:09:19

THE INFORMATION CONTAINED ON THIS DRAWING IS ABSTRACTED FROM THE RYAN HANLEY PRELIMINARY REPORT BOOK OF DRAWINGS

LEGEND
EXISTING COMBINED SEWER
EXISTING STORM SEWER
EXISTING FOUL SEWER
EXISTING CULVERTS

CARRICKMACROSS

Pumping Station (Carrickmacross UDC)
Tobernashellita
Tanks
Blind Well
Derryolam Park
Derryolam Court
Tanks
Rye Valley
c&m coldstores
bose
Tennis Courts
School
Factory
Hotel
Church (Catholic)
Church (Methodist)
Graveyard
Cemetery
Pitch and Putt Course
Shopping Centre
Car Park
Playground
Bank
Garda Station
Courthouse
Fire Station
Ambulance Station
Tank
Ramp
Statue
Fountain
Pond
Bridge
Weir
Culvert
Manhole
Lamp Post
Flow Direction
Ditch
Hedge
Wall
Fence
Trees
Contours
UND
UD Bdy
CF
10Kv
ESB
GPO
Gas Line
Water Line
Foul Sewer
Storm Sewer
Combined Sewer
Culvert
Invert Level
Cover Level
Ground Level
Pipe Size
Pipe Material
Gradient
Chainage
Manhole Number
Catchment Area
Population
Flow
Velocity
Capacity
Design Period
Design Storm
Rainfall
Runoff
Infiltration
Surcharge
Flooding
Overflow
Outfall
Inlet
Gully
Catchpit
Soakaway
Attenuation
Pumping Station
Rising Main
Gravity Main
Force Main
Siphon
Weir
Orifice
Valve
Penstock
Screen
Grit Trap
Oil Trap
Separator
Storage
Treatment
Discharge
Receiving Water
Bathing Water
Shellfish Water
Nutrient Sensitive Area
Designated Area
Protected Area
Natural Heritage Area
Special Area of Conservation
Special Protection Area
Ramsar Site
Nature Reserve
Wildlife Sanctuary
Bird Sanctuary
Fish Sanctuary
Shellfish Sanctuary
Bathing Area
Amenity Area
Recreational Area
Sports Ground
Golf Course
Park
Garden
Cemetery
Graveyard
Church
Chapel
Monastery
Convent
Abbey
Priory
Friary
Castle
Fort
Battery
Martello Tower
Lighthouse
Harbour
Pier
Quay
Jetty
Slipway
Boat Ramp
Marina
Yacht Club
Sailing Club
Rowing Club
Canoe Club
Swimming Pool
Leisure Centre
Sports Hall
Gymnasium
Tennis Court
Basketball Court
Football Pitch
Rugby Pitch
Cricket Pitch
Hockey Pitch
Athletics Track
Running Track
Cycle Track
Bridle Path
Footpath
Walkway
Boardwalk
Steps
Ramp
Handrail
Kerb
Footway
Carriageway
Road
Street
Lane
Avenue
Boulevard
Crescent
Close
Drive
Terrace
Square
Roundabout
Junction
Traffic Lights
Pedestrian Crossing
Zebra Crossing
Pelican Crossing
Toucan Crossing
Puffin Crossing
Speed Limit
One Way
No Entry
Bus Lane
Cycle Lane
Taxi Rank
Bus Stop
Bus Shelter
Bus Station
Train Station
Tram Stop
Tram Station
Underground Station
Airport
Heliport
Helipad
Runway
Taxiway
Apron
Hangar
Control Tower
Terminal
Car Park
Multi-Storey Car Park
Underground Car Park
Park and Ride
Park and Ride Bus Stop
Park and Ride Car Park
Park and Ride Train Station
Park and Ride Tram Stop
Park and Ride Underground Station
Park and Ride Airport
Park and Ride Heliport
Park and Ride Helipad
Park and Ride Runway
Park and Ride Taxiway
Park and Ride Apron
Park and Ride Hangar
Park and Ride Control Tower
Park and Ride Terminal

For Purposes only

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T.J.O'CONNOR & ASSOCIATES
CONSULTING ENGINEERS
CORRIG HOUSE, CORRIG ROAD, SANDYFORD, DUBLIN 18.
Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES

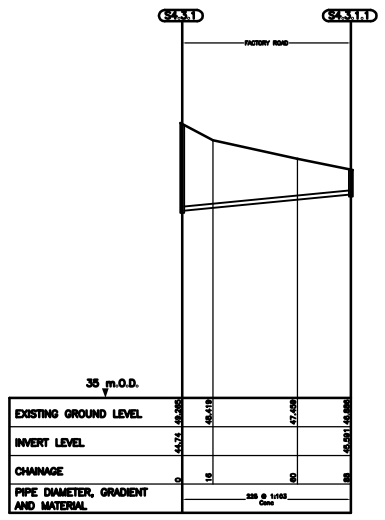
CLIENT: MONAGHAN COUNTY COUNCIL

DRAWING TITLE: LAYOUT MAP OF EXISTING SEWERS – SHEET 1 OF 2

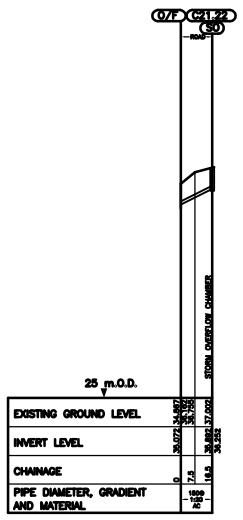
SCALE: 1: 2000 | JOB NO: 1124 | DRAWING NO: 148

DATE: JAN '04 | DRAWN BY: GJD

LEGEND
EXISTING COMBINED SEWER
EXISTING STORM SEWER
EXISTING FOUL SEWER
EXISTING CULVERTS



EXISTING SURFACE WATER SEWER – FACTORY LANDS



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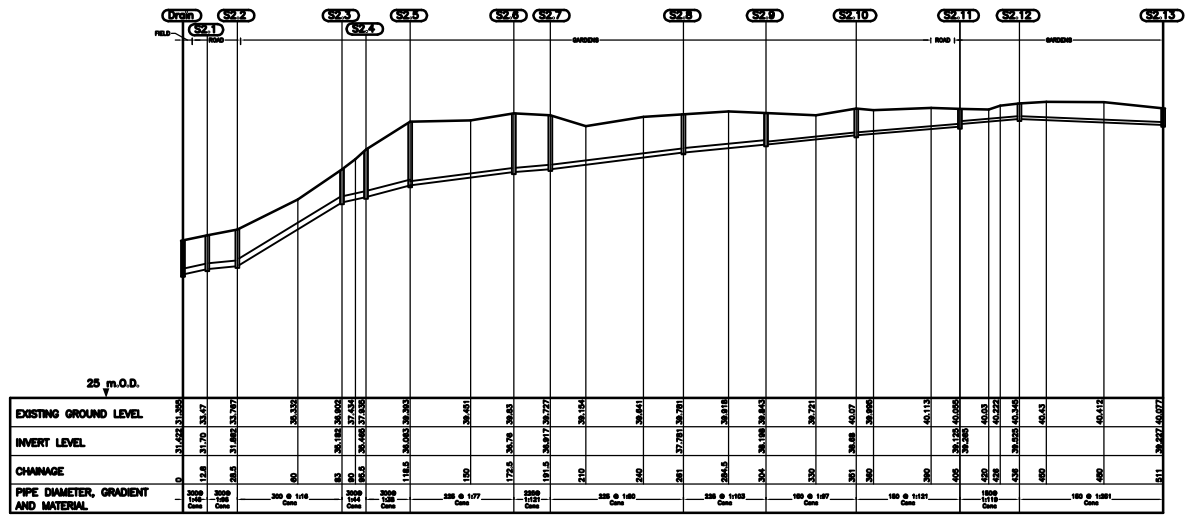
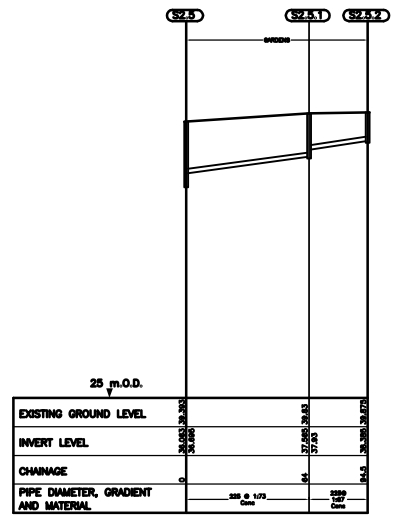
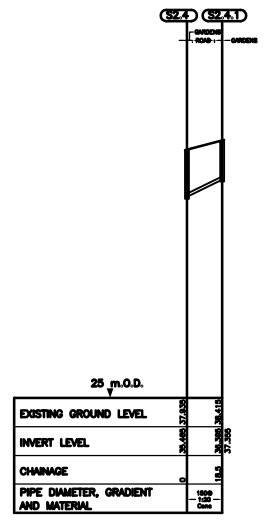


EXISTING SURFACE WATER SEWER – HIGHFIELD ESTATE TO ARDEE ROAD



EXISTING SURFACE WATER SEWER – HIGHFIELD ESTATE



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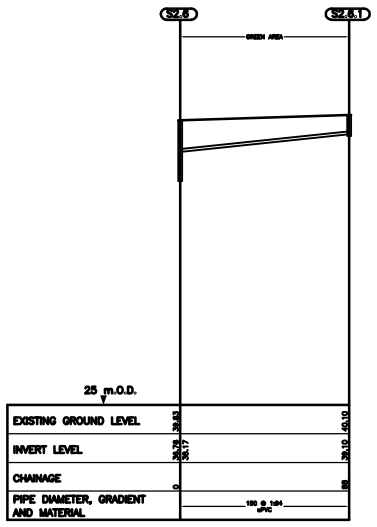
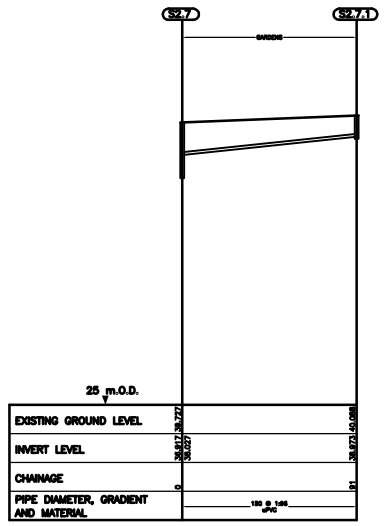
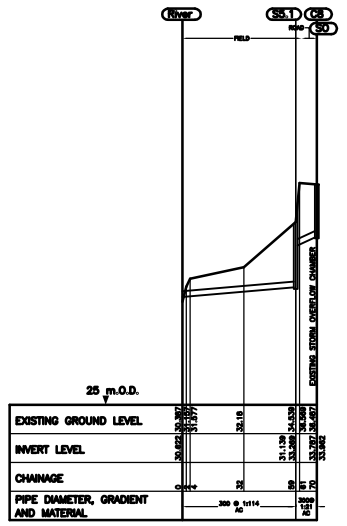


EXISTING SURFACE WATER SEWER – HIGHFIELD ESTATE



EXISTING SURFACE WATER SEWER – HIGHFIELD ESTATE



EXISTING SURFACE WATER SEWER – ARDEE ROAD TO RIVER

NOTES
1. ALL LEVELS ARE IN METRES O.D.MALIN HEAD
2. (S0) : DENOTES STORM OVERFLOW MANHOLE

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Tel: 295 2321 Fax: 295 4541

PROJECT: CARRICKMACROSS SEWERAGE SCHEME – CONTRACT Nr. 1 – PIPELINES
CLIENT: CARRICKMACROSS TOWN COUNCIL
DRAWING TITLE: EXISTING COMBINED & FOUL SEWER SECTIONS – SHEET 8 OF 8
SCALE: VERTICAL 1:200 HORIZONTAL 1:2000
JOB NO: 1124
DRAWING NO: 157
DATE: DEC'01 DRAWN BY: GJD

Section D

Discharges to the Aquatic Environment

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

Advice on completing this section is provided in the accompanying Guidance Note.

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such emissions are made or are to be made.

The applicant should address in particular all discharge points where the substances outlined in Tables D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 are emitted.

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme) the applicant shall screen the discharge for the relevant substance.

D.1 Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied. Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) of Annex 1 should be completed for **each** secondary discharge point, where relevant. Table D.1(iii)(a) should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Supporting information should form **Attachment D.1**

Attachment included	Yes	No
	✓	

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

Attachment No. D.1

Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration

TABLE D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Primary Discharge Point)

Discharge Point Code: SW1

Source of Emission:	Treated Effluent
Location:	Carrickmacross WWTW, Magheross, Carrickmacross
Grid Ref. (12 digit, 6E, 6N):	E: 284624 N: 302833
Name of receiving waters:	River Proules
River Basin District:	Neagh Bann
Designation of receiving waters:	Sensitive (UWWTR)
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted 709,378 m^3/year

Normal/day	1,943 m^3	Maximum/day	3,675 m^3
Maximum rate/hour	187 m^3	Period of emission (avg)	_____min/hr _____hr/day 365 day/yr
Dry Weather Flow	m^3/sec		

TABLE D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (Primary Discharge Point)

Discharge Point Code: SW1

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.6	
2	Temperature	-	
3	Electrical Conductivity(@25°C)	-	
		Max. daily average (mg/l)	**kg/day**
4	Suspended Solids	11	21.4
5	Ammonia (as N)	0.34	0.7
6	Biochemical Oxygen Demand	5.7	11.1
7	Chemical Oxygen Demand	41.0	79.7
8	Total Nitrogen (as N)	-	-
9	Nitrite (as N)	-	-
10	Nitrate (as N)	5.2	10.0
11	Total Phosphorus (as P)	0.43	0.8
12	Orthophosphate (as P)[Note 1]		-
13	Sulphate (SO_4)	-	-
14	Phenols (sum) [Note 2] (ug/l)	-	-

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Primary Discharge Point - Characteristics of the emission

Discharge Point Code: SW1

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine			
2	Dichloromethane			
3	Simazine			
4	Toluene			
5	Tributyltin			
6	Xylenes			
7	Arsenic			
8	Chromium			
9	Copper			
10	Cyanide			
11	Fluoride			
12	Lead			
13	Nickel			
14	Zinc			
15	Boron			
16	Cadmium			
17	Mercury			
18	Selenium			
19	Barium			

TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)

Discharge Point Code: SW2

Source of Emission:	Settled, mixed storm water and sewage (emergency overflow)
Location:	Carrickmacross WWTW, Magheross, Carrickmacross
Grid Ref. (12 digit, 6E, 6N):	E: 284588 N: 302860
Name of receiving waters:	River Proules
River Basin District:	Neagh Bann
Designation of receiving waters:	Sensitive (UWWTR)
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr
Dry Weather Flow	m^3/sec		

TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)

Discharge Point Code: Not Applicable

Number	Substance	As discharged	
		Max. daily average	
1	pH		
2	Temperature		
3	Electrical Conductivity (@25°C)		
		Max. daily average (mg/l)	**kg/day**
4	Suspended Solids		
5	Ammonia (as N)		
6	Biochemical Oxygen Demand		
7	Chemical Oxygen Demand		
8	Total Nitrogen (as N)		
9	Nitrite (as N)		
10	Nitrate (as N)		
11	Total Phosphorus (as P) Note 1		
12	Orthophosphate (as P)		
13	Sulphate (SO_4)		
14	Phenols (sum) Note 2 (ug/l)		

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: Not Applicable

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine			
2	Dichloromethane			
3	Simazine			
4	Toluene			
5	Tributyltin			
6	Xylenes			
7	Arsenic			
8	Chromium			
9	Copper			
10	Cyanide			
11	Fluoride			
12	Lead			
13	Nickel			
14	Zinc			
15	Boron			
16	Cadmium			
17	Mercury			
18	Selenium			
19	Barium			

TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)

Discharge Point Code: SW3

Source of Emission:	Combined Sewer Overflow
Location:	Farney Street
Grid Ref. (12 digit, 6E, 6N):	E: 284333 N: 303692
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW4

Source of Emission:	Combined Sewer Overflow
Location:	Farney Street
Grid Ref. (12 digit, 6E, 6N):	E: 284439 N: 303760
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW5

Source of Emission:	Combined Sewer Overflow
Location:	School Lands
Grid Ref. (12 digit, 6E, 6N):	E: 284500 N: 303500
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW6

Source of Emission:	Combined Sewer Overflow
Location:	Rockdaniel Road
Grid Ref. (12 digit, 6E, 6N):	E: 284520 N: 304051
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____$m^3.sec^{-1}$ Dry Weather Flow _____$m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW7

Source of Emission:	Combined Sewer Overflow
Location:	Cloughvalley
Grid Ref. (12 digit, 6E, 6N):	E: 284422 N: 304002
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW8

Source of Emission:	Combined Sewer Overflow
Location:	Rear of Main Street
Grid Ref. (12 digit, 6E, 6N):	E: 284149 N: 303741
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW9

Source of Emission:	Combined Sewer Overflow
Location:	Lands off Chapel Lane
Grid Ref. (12 digit, 6E, 6N):	E: 284172 N: 303899
Name of receiving waters:	Lisanisk Lake
River Basin District:	Neagh Bann
Designation of receiving waters:	not known
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW10

Source of Emission:	Combined Sewer Overflow
Location:	Parnell Street
Grid Ref. (12 digit, 6E, 6N):	E: 283901 N: 303769
Name of receiving waters:	Proules River
River Basin District:	Neagh Bann
Designation of receiving waters:	Sensitive (UWWTR)
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW11

Source of Emission:	Combine Sewer Overflow
Location:	Mullanarry Street
Grid Ref. (12 digit, 6E, 6N):	E: 283773 N: 303833
Name of receiving waters:	Proules River
River Basin District:	Neagh Bann
Designation of receiving waters:	Sensitive (UWWTR)
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Discharge Point Code: SW12

Source of Emission:	Combined Sewer Overflow
Location:	Ardee Road
Grid Ref. (12 digit, 6E, 6N):	E: 284198 N: 303176
Name of receiving waters:	Proules River
River Basin District:	Neagh Bann
Designation of receiving waters:	Sensitive (UWWTR)
Flow rate in receiving waters:	_____$m^3.sec^{-1}$ Dry Weather Flow _____$m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted			
Normal/day	m^3	Maximum/day	m^3
Maximum rate/hour	m^3	Period of emission (avg)	_____min/hr _____hr/day _____day/yr

Attachment No. D.2

Tabular Data on Discharge Points

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)		
SW1	Primary Discharge	Monaghan County Council	River	Proules River	Sensitive (UWWTR)	284608	302843
SW2	Secondary Discharge	Monaghan County Council	River	Proules River	Sensitive (UWWTR)	284608	302843
SW3	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284333	303692
SW4	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284439	303760
SW5	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284500	303500
SW6	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284520	304051
SW7	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284422	304002
SW8	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284149	303741
SW9	Combined Sewer Overflow	Monaghan County Council	Lake	Lisanisk Lake	not known	284172	303899
SW10	Combined Sewer Overflow	Monaghan County Council	River	Proules River	Sensitive (UWWTR)	283901	303769
SW11	Combined Sewer Overflow	Monaghan County Council	River	Proules River	Sensitive (UWWTR)	283773	303833
SW12	Combined Sewer Overflow	Monaghan County Council	River	Proules River	Sensitive (UWWTR)	284198	303176

Section E

Monitoring

SECTION E MONITORING

Advice on completing this section is provided in the accompanying Guidance Note.

E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) of the Annex. The primary discharge shall be annotated with a **(P)**.

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table E.1(ii) of the Annex.

E.2. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the emission and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included.

Attachment E.2 should contain any supporting information.

Attachment included	Yes	No
	✓	

E.3. Tabular data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

An individual record (i.e., row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

E.4 Sampling Data

Regulation 16(1)(h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 16(1)(l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	**Yes**	**No**
	✓	

Attachment No. E1

Waste Water Discharge Frequency and Quantities
Primary and Secondary Discharge Points

TABLE E.1(i): WASTE WATER FREQUENY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)
SW1 (P)	365	709,378
SW2	assumed 6 times	not known

TABLE E.1(ii): WASTE WATER FREQUENY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)	Complies with Definition of Storm Water Overflow
SW3	not known	not known	Yes
SW4	not known	not known	Yes
SW5	not known	not known	Yes
SW6	not known	not known	Yes
SW7	not known	not known	Yes
SW8	not known	not known	Yes
SW9	not known	not known	Yes
SW10	not known	not known	Yes
SW11	not known	not known	Yes
SW12	not known	not known	Yes

Attachment No. E2

Monitoring and Sampling Points
Programmes for environmental monitoring

SAMPLING PROCEDURES

Revision History	
Rev. No.	**Reason for Revision**
00	Initial Release

Circulation List		
Name	**Signature**	**Date**

1. SAFETY PRECAUTIONS

The following safety precautions shall be followed at all times:

1. 1. Sampling using Boats

Always wear a lifejacket while boating on waters of any kind.
Always wear non-slip footwear (studded waders should not be worn).
Always have more than one person on board. At least one person must be fully familiar with boating techniques and competent to handle the boat.

1. 2. Sampling in Water

Operations requiring personnel to enter water that is more than knee deep or where the water velocity is sufficiently fast (e.g. flood conditions) or where the substratum is slippery or unstable notwithstanding the depth of water, should be carried out by a team of two or more people. Biological sampling should never be carried out under flood conditions.

1. 3. Sampling from Road Bridges

Always exercise care when taking water samples from road bridges irrespective of width and ensure vehicles are parked in suitable parking spaces. Reflective clothing should be worn even in full daylight.

1. 4. Sampling after Dark

If taking samples during the hours of darkness, this should always be done by a team of two people, properly equipped with reflective clothing and adequate lighting for samples from road bridges and further equipped with lifejackets if sampling from river banks. If sampling in a river, one person should remain on shore adjacent to the sampler and in a position to offer immediate assistance if required. The use of a lifeline is recommended.

1. 5. Sampling of effluents/polluted waters

When sampling domestic, agricultural, industrial or sewage discharges or when taking samples from suspect or polluted rivers protective gloves should be worn. All cuts/abrasions should be covered and antiseptic wipes should be used to clean exposed parts of the skin after sampling.

2. 1. Sampling devices

Any sampling devices used e.g. buckets, depth samplers, telescopic samplers etc. must be clean before use and should if possible be rinsed with an aliquot of the material to be sampled before the final sample is taken.

2. 2. Sample Containers

The appropriate container must be used for each type of analysis required. Sample containers must be chemically clean or sterile as required and should be filled as follows:

General chemical parameters: 1 or 2 litre plastic bottle – rinse bottle and cap with sample.

Coliforms, Total Counts, Faecal Streptococci : Sterile 300ml glass bottle containing sodium thiosulphate - DO NOT RINSE

Oil/Diesel (DRO's, TPH's): 1 litre glass bottle – DO NOT RINSE

Volatile Organic Compounds: 40ml amber bottle with added ascorbic acid - DO NOT RINSE and fill to overflowing with no air space

Pesticides & other organics: 2 x 1 litre amber glass bottles - DO NOT RINSE

If Phenols or cyanides are required the sample must be returned to the lab within 4 hours of sampling in order to properly preserve the sample.

3. 1. Sampling from Rivers/streams following a pollution incident

If a probable source of the pollution has been ascertained, the river samples should be taken in the following order:- downstream sample, upstream sample and discharge. The downstream sample should be taken at the end of the mixing zone (where the pollution stream is fully mixed with the main body of the water). This can be easy to see if the discharge is very discoloured but can be difficult to establish for clearer discharges. DO measurements taken across the width of the stream/river can help map the presence of the plug of pollution. If necessary more than one downstream sample should be taken. Every effort should be made to ensure no mud/bottom debris is taken up with the water sample as this can affect the analytical results. The sampling container should be rinsed with an aliquot of sample which is then discarded. Take care when discarding this initial sample not to disturb the bottom sediment. Refill the sampling container, rinse the sample bottle if specified above and then fill with sample. DO and temperature should be measured if required either in the stream itself or in the sampling container (bucket) and the details recorded. The sample bottle should be unambiguously marked with the sample location details and a record kept of the date and time of sampling. If a microbiological sample is required, immerse the bottle under the surface of the water before removing the cap and re-stopper under water. If the discharge is from a point source e.g. pipe, manhole, it is possible to estimate a rough flow rate/volume by timing how long it takes to fill the bucket/sample container. If the sample is taken from a specific premises with an unambiguously polluting discharge and a prosecution is envisaged, a duplicate sample should be offered to the polluter for private analysis.

3. 2. Sampling Drinking Water

It is usual to take drinking water samples from taps in private houses/public buildings etc. at various locations along a distribution system and not directly at the water treatment plant. It is important to ensure that the water sampled is coming directly from the mains supply and not from a holding tank/hot water tank. Samples should not be taken from mixer taps as there is a possibility of cross contamination from the hot water system. The tap should be thoroughly sterilised using either a flame or sterile wipes/spray and then left to run for

3. 2. Sampling Drinking Water - continued

several minutes to ensure a fresh sample. Usually a microbiological sample and a chemical sample are taken for analysis. A sterile sampling bottle must be used for the microbiological sample and care should be taken when sampling to ensure that the sample is taken aseptically. Do not rinse the sterile bottle as it contains a chemical to destroy any chlorine present in the water. The chemical sample bottle may be rinsed with the sample and then filled. Both bottles should be clearly and unambiguously marked.

4.1. Laboratory Requirements

The laboratory should be notified in advance that it is planned to take samples especially if it is necessary that the samples be analysed on the day taken (e.g. Friday). If the laboratory has been notified and subsequently no samples are taken, it is also important that the laboratory be informed, otherwise they may be holding up some analyses to wait for the samples to arrive. If it will not be possible to deliver the samples within normal working hours (9.15 – 17.15), the laboratory must be contacted and an arrangement made to deliver the samples out of hours. All samples arriving at the laboratory must be accompanied by a chain of custody sheet signed both by the sampler and the laboratory staff member receiving the samples. This sheet should have full details of all the samples taken, location/unique identifying details, date and time of sampling etc. so that no uncertainty can arise in the event of prosecution.

Sampling Schedule Wastewater Monaghan County Council

ID	Plant_Name	Design PE	Min No of Samples	Raw Influent	Final Effluent	River Up Stream	River Down Stream	TOTAL		Parameters				
1	Monaghan	43833	12	12	12	12	12	48		BOD	COD	SS	Total N	Total P
2	Castleblayney	12960	12	12	12	12	12	48						
3	Carrickmacross	12150	12	12	12	12	12	48						
4	Ballybay	7283	8	8	8	8	8	32						
5	Clones	4500	8	8	8	8	8	32						
6	Knockaconny	3000	8	8	8	8	8	32						
7	Smithborough	750	6	6	6	6	6	24						
8	Emyvale	650	6	6	6	6	6	24						
9	Scotstown	620	6	6	6	6	6	24						
10	Knockatallon	620	6	6	6	6	6	24						
11	Scotshouse	600	6	6	6	6	6	24						
12	Newbliss	500	6	6	6	6	6	24						
13	Rockcorry	500	6	6	6	6	6	24						
14	Inniskeen	450	6	6	6	6	6	24						
15	Ballinode	440	6	6	6	6	6	24						
16	Tydavnet	300	6	6	6	6	6	24						
17	Glaslough	260	6	6	6	6	6	24						
18	Threemilehouse	250	6	6	6	6	6	24						
19	Tyholland	150	6	6	6	6	6	24						
20	Clontibret	150	6	6	6	6	6	24						
21	Drum	150	6	6	6	6	6	24						
22	Carrickroe	150	6	6	6	6	6	24						
23	Oram	150	6	6	6	6	6	24						
24	Magheracloone	72	6	6	6	6	6	24						
25	Scotshouse		6	6	6	6	6	24						
26	Doohamlet		6	6	6	6	6	24						
27	Annayalla		6	6	6	6	6	24						
				186	168	168	168	744						

Attachment No. E3

Tabular Data on Monitoring and Sampling Points

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used
SW1	Primary Discharge	M	284608	302843	N
aSW1u	Primary Discharge	M			N
aSW1d	Primary Discharge	M			N

Attachment No. E4

Sampling Data

The sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application

Effluent Quality Carrickmacross Wastewater Treatment Plant

Date		13/11/2006	12/12/2006	19/01/2007	25/02/2007	21/03/2007	23/04/2007
Ammonia	mg/l	0.21	0.23	0.04	0.05	0.06	0.12
BOD	mg/l	4.6	3.5	2.5	1.9	5.7	3.23
COD	mg/l	37	28	20	39	34	29
Nitrate	mg/l	2.78	2.56	2.35	1.08	2.67	1.57
Total Phosphate	mg/l	0.127	0.231	0.171	0.038	0.155	0.121
Suspended soilds	mg/l	6	8	<5	<5	<5	7
PH	-	7.5	7.5	7.5	7.5	7.4	7.6

Date		23/05/2007	27/06/2007	19/07/2007	30/08/2007	29/09/2007	26/10/2007
Ammonia	mg/l	0.21	1.76	0.34	0.21	0.28	0.31
BOD	mg/l	<3.0	5.7	4.7	<2	<2	<2
COD	mg/l	41	31	35	19	24	23
Nitrate	mg/l	5.17	3.58	4.67	4.71	3.38	3.79
Total Phosphate	mg/l	0.03	0.06	0.32	5.703	0.425	0.426
Suspended soilds	mg/l	10	11	7	<3	4	9
PH	-	7.6	7.5	7.4	7.5	7.6	7.6

Section F

Existing Environment & Impact of the Discharge(s)

SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Advice on completing this section is provided in the accompanying Guidance Note.

Detailed information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s).

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

F.1. Assessment of Impact on Receiving Surface or Ground 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.

- 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.

- 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.

- 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.

- 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.

- 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.

- 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.

- 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)

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

- 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.**

Attachment included	Yes	No
	✓	

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m^3/day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

Note: Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and E.3.

Attachment F.2 should contain any supporting information.

Attachment No. F.1

Assessment of Impact on Receiving Surface or Ground Water

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: ***SW1***

MONITORING POINT CODE: ***River Pooles Upstream***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
pH	7.6				Grab	<0.01 pH Units	Electrometry
Temperature	11.3°C						
Electrical Conductivity (@25°C)	715 µscm				Grab	<0.6	Electrometry
Suspended Solids	12 mg/l				Grab	<3 mg/l	Filtration/Drying @ 104
Ammonia (as N)	2.33 mg/l				Grab	<0.09 Mg/l as N	Colorimetry
Biochemical Oxygen Demand	<2 mg/l				Grab	<2 mg/l	Electrometry
Chemical Oxygen Demand	22 mg/l				Grab	<5 mg/l	Colorimetry
Dissolved Oxygen	-				Grab	0 mg/l	DO Meter
Hardness (as $CaCo_3$)	-				Grab	<2.58 mg/l CaCO3	Colorimetry
Total Nitrogen (as N)	6.62 mg/l				Grab	<1 mg/l as N	Calculation
Nitrite (as N)	0.017 mg/l				Grab	<0.003 mg/l	Colorimetry
Nitrate (as N)	2.12 mg/l				Grab	<0.09 mg/l	Colorimetry
Total Phosphorus (as P)	0.227 mg/l				Grab	<0.006 mg/l as P	Digestion/Colorimetry
Orthophosphate (as P) - unfiltered	0.136 mg/l				Grab	<0.005 mg/l	Colorimetry
Sulphate (SO_4)	42 mg/l				Grab	<2.11 mg/l as SO4	Colorimetry
Phenols (sum) [Note 2] (ug/l)	< 0.10 µg/l				Grab	<0.1 ug/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: ***SW1***

MONITORING POINT CODE: ***Pooles River Upstream***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
Atrazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Dichloromethane	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Simazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Toluene	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Tributyltin	< 0.05 µg/l				Grab	<0.05ug/l as Sn	GC-MS 1
Xylenes	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Arsenic	1 µg/l				Grab	<10 ug/l	ICPMS
Chromium	6 µg/l				Grab	<10 ug/l	ICPMS
Copper	10 µg/l				Grab	<10 ug/l	ICPMS
Cyanide	9 µg/l				Grab	<5.0 ug/l	Colorimetry
Fluoride	< 0.09 mg/l				Grab	<0.09 mg/l	Colorimetry
Lead	4 µg/l				Grab	<10 ug/l	ICPMS
Nickel	5 µg/l				Grab	<10 ug/l	ICPMS
Zinc	23.4 µg/l				Grab	<10 ug/l	ICPMS
Boron	232 µg/l				Grab	<10 ug/l	Electrometry
Cadmium	< 0.09 µg/l				Grab	<10 ug/l	ICPMS
Mercury	< 0.2 µg/l				Grab	<2.5 ug/l	ICPMS
Selenium	1 µg/l				Grab	<10 ug/l	ICPMS
Barium	58 µg/l				Grab	<10 ug/l	HPLC

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: ***SW1***

MONITORING POINT CODE: ***River Pooles Downstream***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
pH	7.6				Grab	<0.01 pH Units	Electrometry
Temperature	11.3°C						
Electrical Conductivity (@25°C)	697 µscm				Grab	<0.6	Electrometry
Suspended Solids	11 mg/l				Grab	<3 mg/l	Filtration/Drying @ 104
Ammonia (as N)	1.95 mg/l				Grab	<0.09 Mg/l as N	Colorimetry
Biochemical Oxygen Demand	3 mg/l				Grab	<2 mg/l	Electrometry
Chemical Oxygen Demand	7 mg/l				Grab	<5 mg/l	Colorimetry
Dissolved Oxygen	-				Grab	0 mg/l	DO Meter
Hardness (as $CaCo_3$)	-				Grab	<2.58 mg/l CaCO3	Colorimetry
Total Nitrogen (as N)	6.75 mg/l				Grab	<1 mg/l as N	Calculation
Nitrite (as N)	0.018 mg/l				Grab	<0.003 mg/l	Colorimetry
Nitrate (as N)	2.25 mg/l				Grab	<0.09 mg/l	Colorimetry
Total Phosphorus (as P)	0.190 mg/l				Grab	<0.006 mg/l as P	Digestion/Colorimetry
Orthophosphate (as P) - unfiltered	0.089 mg/l				Grab	<0.005 mg/l	Colorimetry
Sulphate (SO_4)	42 mg/l				Grab	<2.11 mg/l as SO4	Colorimetry
Phenols (sum) [Note 2] (ug/l)	< 0.10 µg/l				Grab	<0.1 ug/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW1

MONITORING POINT CODE: *Pooles River Downstream*

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
Atrazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Dichloromethane	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Simazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Toluene	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Tributyltin	< 0.05 µg/l				Grab	<0.05ug/l as Sn	GC-MS 1
Xylenes	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Arsenic	1 µg/l				Grab	<10 ug/l	ICPMS
Chromium	2 µg/l				Grab	<10 ug/l	ICPMS
Copper	7 µg/l				Grab	<10 ug/l	ICPMS
Cyanide	8 µg/l				Grab	<5.0 ug/l	Colorimetry
Fluoride	< 0.09 mg/l				Grab	<0.09 mg/l	Colorimetry
Lead	3 µg/l				Grab	<10 ug/l	ICPMS
Nickel	2 µg/l				Grab	<10 ug/l	ICPMS
Zinc	18.2 µg/l				Grab	<10 ug/l	ICPMS
Boron	193 µg/l				Grab	<10 ug/l	Electrometry
Cadmium	< 0.09 µg/l				Grab	<10 ug/l	ICPMS
Mercury	< 3.2 µg/l				Grab	<2.5 ug/l	ICPMS
Selenium	1 µg/l				Grab	<10 ug/l	ICPMS
Barium	53 µg/l				Grab	<10 ug/l	HPLC

TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)

Discharge Point Code: ***SW2***

MONITORING POINT CODE: ***River Pooles Upstream***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
pH	7.6				Grab	<0.01 pH Units	Electrometry
Temperature	11.3°C						
Electrical Conductivity (@25°C)	715 µscm				Grab	<0.6	Electrometry
Suspended Solids	12 mg/l				Grab	<3 mg/l	Filtration/Drying @ 104
Ammonia (as N)	2.33 mg/l				Grab	<0.09 Mg/l as N	Colorimetry
Biochemical Oxygen Demand	<2 mg/l				Grab	<2 mg/l	Electrometry
Chemical Oxygen Demand	22 mg/l				Grab	<5 mg/l	Colorimetry
Dissolved Oxygen	-				Grab	0 mg/l	DO Meter
Hardness (as $CaCo_3$)	-				Grab	<2.58 mg/l CaCO3	Colorimetry
Total Nitrogen (as N)	6.62 mg/l				Grab	<1 mg/l as N	Calculation
Nitrite (as N)	0.017 mg/l				Grab	<0.003 mg/l	Colorimetry
Nitrate (as N)	2.12 mg/l				Grab	<0.09 mg/l	Colorimetry
Total Phosphorus (as P)	0.227 mg/l				Grab	<0.006 mg/l as P	Digestion/Colorimetry
Orthophosphate (as P) - unfiltered	0.136 mg/l				Grab	<0.005 mg/l	Colorimetry
Sulphate (SO_4)	42 mg/l				Grab	<2.11 mg/l as SO4	Colorimetry
Phenols (sum) [Note 2] (ug/l)	< 0.10 µg/l				Grab	<0.1 ug/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)

Discharge Point Code: ***SW2***

MONITORING POINT CODE: ***River Pooles Upstream***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
Atrazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Dichloromethane	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Simazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Toluene	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Tributyltin	< 0.05 µg/l				Grab	<0.05ug/l as Sn	GC-MS 1
Xylenes	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Arsenic	1 µg/l				Grab	<10 ug/l	ICPMS
Chromium	6 µg/l				Grab	<10 ug/l	ICPMS
Copper	10 µg/l				Grab	<10 ug/l	ICPMS
Cyanide	9 µg/l				Grab	<5.0 ug/l	Colorimetry
Fluoride	< 0.09 mg/l				Grab	<0.09 mg/l	Colorimetry
Lead	4 µg/l				Grab	<10 ug/l	ICPMS
Nickel	5 µg/l				Grab	<10 ug/l	ICPMS
Zinc	23.4 µg/l				Grab	<10 ug/l	ICPMS
Boron	232 µg/l				Grab	<10 ug/l	Electrometry
Cadmium	< 0.09 µg/l				Grab	<10 ug/l	ICPMS
Mercury	< 0.2 µg/l				Grab	<2.5 ug/l	ICPMS
Selenium	1 µg/l				Grab	<10 ug/l	ICPMS
Barium	58 µg/l				Grab	<10 ug/l	HPLC

TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)

Discharge Point Code: ***SW2***

MONITORING POINT CODE: ***River Pooles Downstream***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
pH	7.6				Grab	<0.01 pH Units	Electrometry
Temperature	11.3°C						
Electrical Conductivity (@25°C)	697 µscm				Grab	<0.6	Electrometry
Suspended Solids	11 mg/l				Grab	<3 mg/l	Filtration/Drying @ 104
Ammonia (as N)	1.95 mg/l				Grab	<0.09 Mg/l as N	Colorimetry
Biochemical Oxygen Demand	3 mg/l				Grab	<2 mg/l	Electrometry
Chemical Oxygen Demand	7 mg/l				Grab	<5 mg/l	Colorimetry
Dissolved Oxygen	-				Grab	0 mg/l	DO Meter
Hardness (as $CaCo_3$)	-				Grab	<2.58 mg/l CaCO3	Colorimetry
Total Nitrogen (as N)	6.75 mg/l				Grab	<1 mg/l as N	Calculation
Nitrite (as N)	0.018 mg/l				Grab	<0.003 mg/l	Colorimetry
Nitrate (as N)	2.25 mg/l				Grab	<0.09 mg/l	Colorimetry
Total Phosphorus (as P)	0.190 mg/l				Grab	<0.006 mg/l as P	Digestion/Colorimetry
Orthophosphate (as P) - unfiltered	0.089 mg/l				Grab	<0.005 mg/l	Colorimetry
Sulphate (SO_4)	42 mg/l				Grab	<2.11 mg/l as SO4	Colorimetry
Phenols (sum) [Note 2] (ug/l)	< 0.10 µg/l				Grab	<0.1 ug/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations) (Secondary Discharge Point)

Discharge Point Code: ***SW2***

MONITORING POINT CODE: ***River Pooles Downstream***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	06/12/07	Date	Date	Date			
Atrazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Dichloromethane	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Simazine	< 0.01 µg/l				Grab	<0.01ug/l	HPLC
Toluene	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Tributyltin	< 0.05 µg/l				Grab	<0.05ug/l as Sn	GC-MS 1
Xylenes	< 1 µg/l				Grab	<1.0 ug/l	GC-MS 1
Arsenic	1 µg/l				Grab	<10 ug/l	ICPMS
Chromium	2 µg/l				Grab	<10 ug/l	ICPMS
Copper	7 µg/l				Grab	<10 ug/l	ICPMS
Cyanide	8 µg/l				Grab	<5.0 ug/l	Colorimetry
Fluoride	< 0.09 mg/l				Grab	<0.09 mg/l	Colorimetry
Lead	3 µg/l				Grab	<10 ug/l	ICPMS
Nickel	2 µg/l				Grab	<10 ug/l	ICPMS
Zinc	18.2 µg/l				Grab	<10 ug/l	ICPMS
Boron	193 µg/l				Grab	<10 ug/l	Electrometry
Cadmium	< 0.09 µg/l				Grab	<10 ug/l	ICPMS
Mercury	< 3.2 µg/l				Grab	<2.5 ug/l	ICPMS
Selenium	1 µg/l				Grab	<10 ug/l	ICPMS
Barium	53 µg/l				Grab	<10 ug/l	HPLC

Attachment No. F.2

Drinking water abstraction point(s)

Not Applicable

Section G

Programmes of Improvements

SECTION G: PROGRAMMES OF IMPROVEMENTS

Advice on completing this section is provided in the accompanying Guidance Note.

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of; the Dangerous Substances Directive 2006/11/EC, the Water Framework Directive 2000/60/EC, the Birds Directive 79/409/EEC, the Groundwater Directives 80/68/EEC & 2006/118/EC, the Drinking Water Directives 80/778/EEC, the Urban Waste Water Treatment Directive 91/271/EEC, the Habitats Directive 92/43/EEC, the Environmental Liabilities Directive 2004/35/EC and the Bathing Water Directive 76/160/EEC.

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

G.2 Compliance with Water Quality Standards for Phosphorus Regulations (S.I. No. 258 of 1998).

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the Water Quality Standards for Phosphorous Regulations (S.I. No. 258 of 1998) are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been identified as the principal sources of pollution under the P regulations.

Attachment G.2 should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

Attachment included	Yes	No
	✓	

G.3 Impact Mitigation

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

Attachment G.3 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	**Yes**	**No**
	✓	

G.4 Storm Water Overflow

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	**Yes**	**No**
	✓	

Attachment No. G.1

Compliance with Council Directives

Please refer to Attachment B.6
The most recent planning permission, including a copy of all conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS.

Please refer to Attachment B.10
Development programme including copies of approved funding and timeframes for completion.

Attachment No. G.2

Compliance with Water Quality Standards for Phosphorus Regulations (S.I. No. 258 of 1998).

Please refer to Attachment B.6
The most recent planning permission, including a copy of all conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS.

Please refer to Attachment B.10
Development programme including copies of approved funding and timeframes for completion.

Attachment No. G.3

Impact Mitigation

Please refer to Attachment B.6
The most recent planning permission, including a copy of all conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS.

Please refer to Attachment B.10
Development programme including copies of approved funding and timeframes for completion.

Attachment No. G.4

Storm Water Overflow

Please refer to Attachment B.6
The most recent planning permission, including a copy of all conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS.

Please refer to Attachment B.10
Development programme including copies of approved funding and timeframes for completion.

Under the proposed upgrade of the sewage network in Carrickmacross, all Combined Sewer Overflows will be eliminated.

Section H

Declaration

SECTION H: DECLARATION

Declaration

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by : David Fallon **Date :** 11/12/07
(on behalf of the organisation)

Print signature name: DAVID FALLON

Position in organisation: Director of Services

Section I

Joint Declaration

Not Applicable