

THOMASTOWN SEWERAGE
SCHEME (2002)

PLANNING & APPROVAL
FOR SCHEME

DOE APPROVAL

PART X DOCUMENTS

REPORT TO COUNCIL &
ADOPTION OF SCHEME

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THOMASTOWN SEWERAGE SCHEME (2002)

PLANNING & APPROVAL FOR SCHEME

DOE APPROVAL

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17 Deireadh Fómhair, 2001,



An Rúnaí,
Comhairle Chontae Chill Chainnigh,
Halla an Chontae,
Sráid Eoin,
Cill Chainnigh.



Thomastown Sewerage Scheme
Approval of Contract Documents

A Chara,

I am directed by Mr. Noel Dempsey, T.D., Minister for the Environment and Local Government to inform you that this Department has noted Kilkenny County Council's acceptance of the Ward/Burke Construction/Gannon Brothers Ltd. Civil Works tender in the sum of £960,221.03 and the EPS Pumping and Treatment Systems Ltd. Mechanical and Electrical Works tender in the sum of £428,580 for the Thomastown Sewerage Scheme. The Council should ensure that any necessary bond, insurance and tax clearance are in order.

Please note that in addition to the Consultant's recommendation, the award of contracts should be subject to the Local Authority being satisfied as to competency of the nominated appointees to discharge their responsibilities under the Safety, Health and Welfare at Work (Construction) Regulations, 1995 (SI No 138 of 1995).

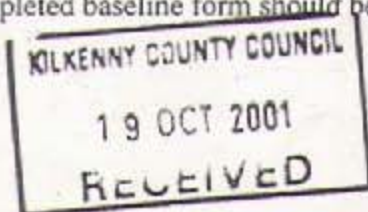
The Council is requested to take account of the following matters:

Contractors/Sureties

The Consulting Engineer should be satisfied as to the competence of the Contractors to implement the contract and the County Manager should be satisfied that the sureties offered are adequate for their due performance.

Contract Arrangements

The Council should make all necessary arrangements to facilitate signing of the contract at an early date. These arrangements should include regular updating of the project costs, if any, to reflect changes to the tender/contract prices. Full baseline figures for the estimated cost of the contract should be provided at this stage as set out in the enclosed forms. Estimates of PVC should cover the complete contract period. The completed baseline form should be returned to this Department immediately.



Monitoring/ Administrative Arrangements

Since this is a major contract it is essential that the following monitoring and administrative arrangements are fully complied with. In particular the Council should ensure:

- a) that regular monitoring reports detailing relevant financial and physical indicators are submitted to this Department (these reports should be consistent with the baseline data and any changes should be clearly identified) and
- b) clear accounting procedures are put in place to ensure that payments be made promptly and that the financial aspects of the project can be monitored.

Procedures for Dealing with Cost Variations

Estimates of, or actual increases in, costs on the contract should be notified immediately to this Department. The Council is also reminded of the need to ensure that Departmental approval is granted in advance of any additional works being undertaken, save where emergency and/or safety measures must be undertaken as a matter of urgency.

Costings should if necessary be adjusted regularly and notified to the Department in order that the grant approval position can be reviewed.

Funding/Polluter Pays Report

The Corporation will be aware that the Department awaits the Polluter Pays Principle report as referred to in my letter of 2 March, 2001. In this connection, attention is specifically drawn to the provisions of Circular L11/01 which stipulates that in the absence of the submission and acceptance of the Polluter Pays Report Department funding will be restricted to 60% of the tender cost.

Publicity

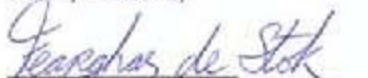
The Council is advised that in accordance with the guidelines contained in Circular IOP 1/2001, the National Development Plan logo should be displayed where appropriate.

Documentation required by the Department.

Kilkenny County Council should now submit the following to the Department as soon as possible:

- written confirmation of the start date of commencement of this contract;
- completed baseline costs forms;
- a report on the application of the Polluter Pays Principle as per circular letters L4/00 and L16/00;

Mise, le meas,



Fearghas de Stok

Water Services Section.

Tel.: (01) 888 2316.



THOMASTOWN SEWERAGE SCHEME (2002)

PLANNING & APPROVAL FOR SCHEME

ADOPTION OF SCHEME BY COUNCIL

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Ref: P.H. 43.

18th January, 2000.

Principal Officer,
Water Services Section,
Dept. of Environment & Local Government,
O'Connell Bridge House,
Dublin 2.

Re: Thomastown Sewerage Scheme.

A Chara,

I wish to confirm that the County Council at its January meeting held on 17th inst., granted approval to the above proposed scheme under Part X Planning & Development Regulations 1994.

During the meeting, considerable concern was expressed that the scheme may now be delayed should the D.O.E.L.G. insist that it be included in a joint Design/Build/Operate procurement proposal.

Having regard to the above, I should be grateful for the Department's approval to proceed to appoint a Consulting Engineer to prepare contract documentation for this scheme as a stand-alone project.

Mise, le meas,

J. McCormack,
Administrative Officer.
(Sanitary Services).

THOMASTOWN SEWERAGE
SCHEME (2002)

PLANNING & APPROVAL
FOR SCHEME

REPORT TO COUNCIL

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KILKENNY COUNTY COUNCIL

THOMASTOWN SEWERAGE SCHEME

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REPORT ON PROPOSED DEVELOPMENT



Ref: P.H. 43.

13th January, 2000.

Mr. D. O'Sullivan,
County Engineer,
County Hall.

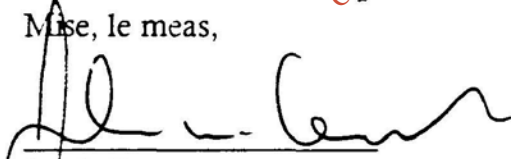
Re: THOMASTOWN SEWERAGE SCHEME

A Chara,

I attach herewith, report prepared in accordance with the requirements of Article 134 of the Local Government (Planning and Development) Regulations, 1994 and a letter from W. Mernagh, A/Senior Executive Engineer, Planning Section, confirming that the development does not conflict with the zoning in the County Development Plan.

I recommend that this matter be submitted to the Council for approval.

Mise, le meas,


J. McCormack,
Administrative Officer.
(Sanitary/Roads Section).

Encl.



Ref: P.H. 43.

13th January, 2000.

Mr. J. McCormack,
Administrative Officer,
(Roads/Sanitary Section),
County Hall.

Re: Thomastown Sewerage Scheme.

A Chara,

I refer to plans and specifications proposed for the above development.

I wish to confirm that the proposals do not contravene the objectives of the County Development Plan, 1994.

Mise, le meas,

W. Mernagh,
A/Senior Executive Engineer.
(Planning Section).

THOMASTOWN SEWERAGE SCHEME

REPORT ON PROPOSED DEVELOPMENT

(As required under Article 134 of the Local Government (Planning & Development Regulations 1994).

This report has been prepared for submission to the elected members of Kilkenny Co. Council and contains information regarding the proposed development and issues raised following the public notice of the proposed development and the display for public inspection of the plans and particulars as required under Section 78 (i) of the 1963 Planning & Development Act as amended by Section 3 of the 1993 Planning Act.

1. Description of Proposed Development:

The proposed development consists of:-

- Upgrading of the existing sewage treatment works
- Upgrading of the existing pumping station
- Construction of a new pumping station
- Construction of new pipelines
- Repairs to certain existing pipelines.

2. Implications for Proper Planning & Development.

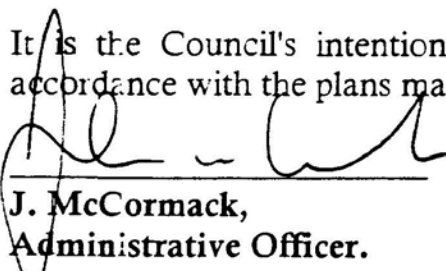
The proposed development would have no adverse implications for the proper planning and development of the area in which it would be located.

3. Submissions and Observations received:

No submissions or observations were received by the Council in respect of the development. The Southern Regional Fisheries Board did seek clarification on a number of matters and this has been issued to them.

4. Council's intention regarding proposed Development:

It is the Council's intention to proceed with the proposed development in accordance with the plans made available for public inspection.


J. McCormack,
Administrative Officer.

Dated: 12/1/2003

COMHAIRLE CHONTAE CHILL CHAINNING

KILKENNY COUNTY COUNCIL

**PART X, PLANNING AND DEVELOPMENT REGULATIONS 1994,
AT THOMASTOWN, CO. KILKENNY.**

Local Government (Planning & Development) Acts, 1963-93.

Local Government (Planning & Development) Regulations, 1994.

NOTICE OF PROPOSED DEVELOPMENT BY A LOCAL AUTHORITY

In accordance with Article 131 of the above Regulations, Kilkenny County Council hereby gives notice of its intention to carry out the following developments in connection with the Sewerage Scheme at Thomastown.

- Upgrading of the existing sewage treatment works
- Upgrading of the existing pumping station
- Construction of a new pumping station
- Construction of new pipelines
- Repairs to certain existing pipelines

Plans and particulars of the proposed development will be available for inspection at the offices of Kilkenny County Council in John St., Kilkenny, and at the Co. Council Offices in Thomastown from Friday, 12th November, 1999, until Friday, 17th December, 1999.

Submissions or observations on the proposed development, dealing with the proper planning development of the area in which it will be located, may be made to the Secretary, Kilkenny County Council not later than Friday, 7th January, 2000.

P. O'Neill,
County Secretary,
Kilkenny County Council,
County Hall,
John Street,
Kilkenny.

People
Kilkenny
W/E 19/11/99

KILKENNY COUNTY COUNCIL
LOCAL GOVERNMENT (PLANNING & DEVELOPEMNT)
REGULATIONS 1994

THOMASTOWN SEWERAGE IMPROVEMENT SCHEME
PLANS AND PARTICULARS OF PROPOSED DEVELOPMENT

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NOVEMBER 1999

THOMASTOWN SEWERAGE SCHEME

Description of Proposed Development

Kilkenny County Council proposes to carry out the following improvement work to the sewerage scheme at Thomastown:

- upgrading and reconstruction of the existing sewage treatment works at Grenan townland
- repairs to and upgrading of the existing pumping station behind Low Street
- construction of a new rising main from the existing pumping station to the treatment works
- construction of a new pumping station at the end of Mill Street
- construction of new sewers in the Mall and Mill Street
- repairs to and rehabilitation of certain existing sewers in the town.

The upgraded sewage treatment works will include full secondary treatment of the sewage by the extended aeration process which will provide treatment to the standard required by the relevant EU Directive. The treated effluent will discharge to the river through the existing outfall pipe. Both the type of treatment chosen and the location of the treatment works will reduce the chance of nuisance arising in the form of visual, noise or odour nuisance. Visual nuisance will be avoided because the treatment works will be located at the bottom of a steep slope and will not easily be visible from Castle Avenue housing development above it. Moreover, it will be screened by trees and shrubs and this screening will be augmented by further planting. Noise nuisance will be avoided by the use of an air diffusion aeration system in which the blowers will be enclosed in an acoustic enclosure housed within a building. Odour nuisance will be avoided by the use of the extended aeration treatment system which is an aerobic system and not prone to causing odour nuisance.

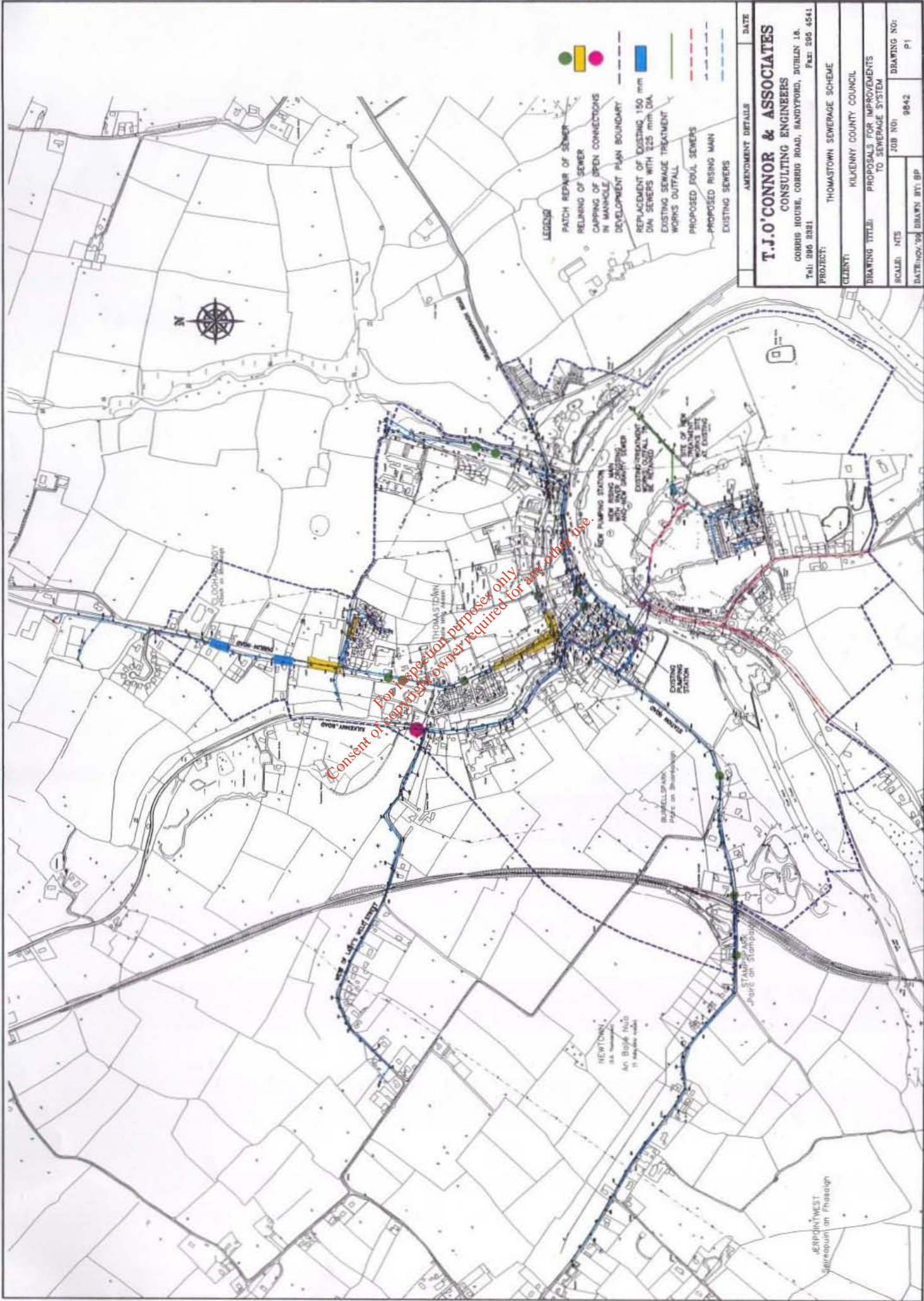
The existing pumping station behind Low Street will be upgraded to comply with modern safety and performance standards. The capacity of the pumps will be increased by over 500% which will rectify the existing problem of frequent direct local discharge to the river.

Due to the increased capacity of the pumps a new larger rising main will be required and this main will be laid under the bed of the river on route to the treatment works site. This pipeline will be laid across the Waterford road resulting in some traffic disruption during construction.

The new pumping station will be constructed on the south side of the river near the bridge and will collect sewage from the Mall and Mill Street. This will be pumped to the treatment works site through the existing rising main. Apart from a kiosk to house electrical controls the new pumping station will be below ground level and will not be visually intrusive.

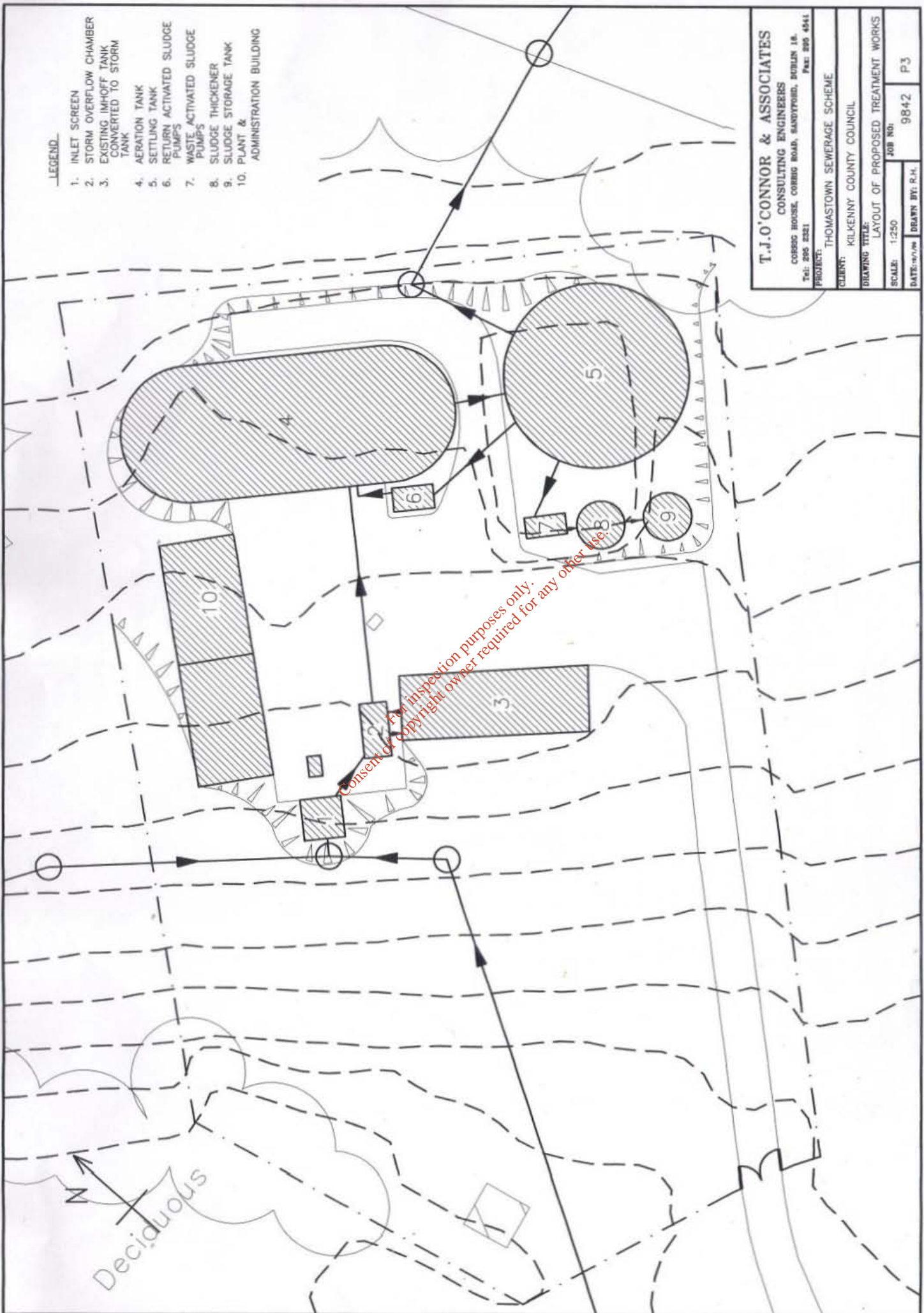
New sewers in the Mall and Mill Street will be constructed along the public road which will result in some traffic disruption during construction.

Repairs will be carried out to the existing sewage collection system at various locations throughout the town. Where possible repairs will be carried out by relining methods which will reduce, but will not eliminate, traffic disruption during construction.



LEGEND

1. INLET SCREEN
2. STORM OVERFLOW CHAMBER
3. EXISTING IMHOFF TANK CONVERTED TO STORM TANK
4. AERATION TANK
5. SETTLING TANK
6. RETURN ACTIVATED SLUDGE PUMPS
7. WASTE ACTIVATED SLUDGE PUMPS
8. SLUDGE THICKENER
9. SLUDGE STORAGE TANK
10. PLANT & ADMINISTRATION BUILDING



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T.J.O'CONNOR & ASSOCIATES	
CONSULTING ENGINEERS	
CORBEG HOUSE, CORBEG ROAD, SANDYFORD, DUBLIN 18.	
Tel: 206 2221 Fax: 206 4641	
PROJECT: THOMASTOWN SEWERAGE SCHEME	
CLIENT: KILKENNY COUNTY COUNCIL	
DRAWING TITLE: LAYOUT OF PROPOSED TREATMENT WORKS	
SCALE: 1:250	JOB NO: 9842
DATE: 10/7/96	DRAWN BY: R.H. P3

N
Deciduous

An Bord Iascaigh Réigiúnach an Deiscirt

THE SOUTHERN REGIONAL FISHERIES BOARD

Tag.
Ref.

Sraid Anglesea, Cluain Meala, Contae Tiobraid Arann.

Teileafon
(052) 80055
Telephone

Do Thag.
Your Ref.

Anglesea Street, Clonmel, Co. Tipperary.

Fax No.
(052) 23971

6 December, 1999

Mr. Philip O' Neill,
County Secretary,
Kilkenny County Council,
Sanitary Services Section,
County Hall,
John Street,
Kilkenny.

John Mc Cormack ada. O'Neil



**Thomastown Sewerage Scheme Your Ref P.H.43
Local Government (Planning and Development) Regulations, 1994**

Dear Mr. O' Neill,

Thank you for your Council's letter dated 18th ult giving notice of your intention to carry out extensions and improvements to the treatment plant, and to carry out other associated works at Thomastown. On behalf of the Commission, I very much welcome this development.

Noting the information which you forwarded contains little in the way of technical detail, and assuming that engineering consultants appointed to prepare the necessary reports and planning documents for the scheme have completed their work, to enable the Commission to make submissions or observations dealing with their proper planning and development of the area, I would be obliged if you would facilitate us by forwarding the following details and information:

1. The organic and hydraulic capacity of the proposed new treatment plant;
2. Details of the extent to which existing untreated and partially treated discharges to the Nore will be intercepted and directed to the proposed new treatment plant;
3. Details of any proposed arrangements whereby sewage arising at and from the entirety of the Mount Juliet estate including the golf course, hotel and housing development will be routed to and treated in the proposed new treatment plant;
4. Details of the extent to which the new treatment plant will have capacity for further development at Thomastown including possible discharges of industrial or trade effluents;
5. Details as to whether the treatment system will contain a tertiary treatment component for the removal of nutrients;
6. Confirmation that the new collection system will be a separated one.

I would also be obliged to know when tendering for the scheme is due to take place, and when construction work will commence.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Patrick Kilfeather'.

Patrick Kilfeather,
Senior Fisheries Environmental Officer.



Sanitary Services Section,
County Hall,
John Street,
Kilkenny.
13th January, 2000.

TG/KO'C

Mr. Philip O'Neill,
County Secretary,
County Hall.

re: THOMASTOWN SEWERAGE SCHEME.

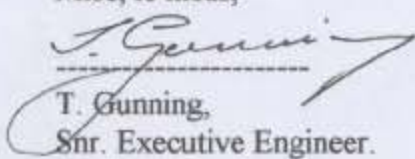
A Chara,

I refer to the letter of 6th December, 1999 from Mr. P. Kilfeather responding to our proposals for the upgrading of Thomastown Sewerage Scheme. While he welcomes the proposals in principle he has sought clarification on a number of issues. I set down below a draft response to the individual items:-

1. The plant is designed for a population equivalent of 3,000.
2. All known discharges to the river are being collected and treated.
3. The proposal makes allowance for the effluent arising from the Mount Juliet development. Sewage from Mount Juliet which is treated within the estate at the present time can be pumped to Jerpoint West and continue by gravity to Thomastown. An allowance of 490 population equivalent is included in the design.
4. The existing population of Thomastown is 1656. The design p.e. of 3,000 contains adequate provision for expansion.
5. Secondary treatment only is provided. However this provides full nitrification and partial nutrient removal. It should be noted that the requirement to provide the treatment works arises from the need to meet the E.U Directive and not from water quality considerations.
6. Some of the existing sewers are combined and will continue to function as such. All new developments will be required to separate foul and surface waters.

I trust the foregoing is an adequate response to Mr. Kilfeather's queries.

Mise, le meas,


T. Gunning,
Snr. Executive Engineer.
(Sanitary Services).

Ref: P.H. 43.

17th January, 2000.

Mr. Patrick Kilfeather,
Southern Regional Fisheries Board,
Anglesea St.,
Clonmel,
Co. Tipperary.

Re: Thomastown Sewerage Scheme.

A Chara,

Your letter of 6th December last regarding the above refers.

The following are the Council's replies to the questions raised:

1. The plant is designed for a population equivalent of 3,000.
2. All known discharges to the river are being collected and treated.
3. The proposal makes allowance for the effluent arising from the Mount Juliet development. Sewage from Mount Juliet which is treated within the estate at the present time can be pumped to Jerpoint West and continue by gravity to Thomastown. An allowance of 490 population equivalent is included in the design.
4. The existing population of Thomastown is 1656. The design p.e. of 3,000 contains adequate provision for expansion.
5. Secondary treatment only is provided. However, this provides full nitrification and partial nutrient removal. It should be noted that the requirement to provide the treatment works arises from the need to meet the E.U. Directive and not from water quality considerations.
6. Some of the existing sewers are combined and will continue to function as such. All new developments will be required to separate foul and surface waters.

I trust the above clarifies the issues raised for you.

Mise, le meas,

J. McCormack,
Administrative Officer.

THOMASTOWN WWTW
UPGRADING 2008

PLANNING & APPROVAL
FOR SCHEME

DOE APPROVAL

PART 8 DOCUMENTS

REPORT TO COUNCIL &
ADOPTION OF SCHEME

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20th July 2007

Dermot Druhan,
Senior Executive Engineer,
Kilkenny County Council,
County Hall,
John Street
Kilkenny

Re: Thomastown Wastewater Treatment Works Upgrade – Serviced Land Initiative

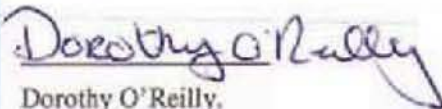
A Chara

I refer to your letter dated 9th July 2007 with regard to the Thomastown Sewerage Scheme SLI scheme proposal.

The Department has examined the scheme proposal and I am to convey to you that the Serviced Land Initiative application as contained in your submission is in accordance with the requirements of Circular L1/07 and that approval is given for the scheme budget of €2,061,444.00 (€824,578.00 exchequer funding) and the proposed construction of the scheme during 2008. In accordance with Circular L1/07 this approval will be valid for two years.

If you have any queries with the aforementioned please contact the undersigned at 01 8882161.

Mise le meas,



Dorothy O'Reilly,
Water Services Section,
Water and Natural Heritage Division



AN ROINN COMHSHAOIL

OIÐHREACHTA AGUS

BIALTAIS ÁITIÚIL

DEPARTMENT OF

THE ENVIRONMENT, HERITAGE

AND LOCAL GOVERNMENT

BLOC 1, URLÁIN 2

FÓIRGNIMH IRISH LIFE

SA HA MAINISTREACH IÓCHT

BALÉ ÁTHA CLATH 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



THOMASTOWN WWTW UPGRADING 2008

PLANNING & APPROVAL FOR SCHEME

FUNDING & OUTLINE PROGRAMME FOR WORKS

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Appendix 1

WATER SERVICES SECTION
Serviced Land Initiative
Application Form for Funding Approval



COUNTY: KILKENNY **LOCAL AUTHORITY:** KILKENNY COUNTY COUNCIL

Name of Scheme: THOMASTOWN SEWERAGE SCHEME TREATMENT WORKS UPGRADING 2007

DEPARTMENT
 Reference: _____
 Date Received: _____
 Checked by: _____

NOTE: Attach A4 or A3 drawing showing plan of overall project and interface with existing system. Drawing should show planning status and area to be served by the project. Map should be sufficient to allow referencing to Ordinance Survey maps

Short Description of Proposal:
 Thomastown Co Kilkenny is located 16 km east of Kilkenny City, on National Primary Route N9 (Dublin to Waterford) and Regional Route R700 (Kilkenny to New Ross)
 The Wastewater Treatment Plant in Thomastown was commissioned in 2002 and is a modern Extended Aeration/Activated Sludge treatment system which includes a sludge handling facility. Treated effluent discharges to the adjacent River Nore.
 The population of Thomastown is approximately 1,960 (2007), almost all connected to the Thomastown Sewerage Scheme.
 The plant has serious inadequacies:
 1. It was designed in 1999 for a population of 3,000 PE
 2. The current average Biological Load at the inlet to the Treatment Works is 4,400 PE;
 3. There is a considerable demand for new development in the town which cannot be accommodated in the present Treatment Plant.
 Kilkenny County Council proposes upgrading the Wastewater Treatment Plant using the Sequencing Batch Reactor plant design to provide an additional Population Equivalent capacity of 5,000, with a 40% capital grant and 60% from current and future development contributions. A Report on the design criteria for the upgrading, setting out the basis for the proposed upgraded capacity, is appended.

Recommendation:

Reason:

Estimated Cost: € 2,061,444 (Contract and Non-Contract)

Area to be Serviced:

Purpose for which area served is zoned in Development Plan: Housing

No. of acres to be opened up: 161

Cost per Acre (Project Cost / No. of Acres): €12,804

No. of Housing Units: 1,620

Cost per Housing Unit (Project Cost / No. of Units): €1,272

Planning Permissions granted on land in question: Yes/No Yes

Granted: 03/491, 04/1381, 04/1470, 04/2074 Pending:

Approved:

Yes No

Signed: _____

Date: _____

GENERAL

Existing undeveloped serviced land within area to be served by scheme:

Housing (acres)	Other (acres)
161	42.3

Existing capacity adequate (treatment, storage, pumping, etc.):

Yes No

If "No" (a) does project as proposed address these inadequacies ?:

Yes No

(b) is a separate scheme proposed to address capacity constraint?. If so, name of scheme: _____

Assessment of demand for serviced land: (e.g. planning applications increase in house prices, population growth and projections, etc.)

2046 Planning Applications were processed in County Kilkenny in 2005. To 1st October in 2006, 1433 Planning Applications were processed. At this rate there will be a 20% increase in applications over a full year. A majority of applications are for housing.
 The average house price in County Kilkenny in July 2006 was €262,000 approximately, up 15.7% on the same period in 2005 (Housing Section, KCC).
 Thomastown is a Scheduled Town under the 2006 Kilkenny County Development Plan. The Zoning Objectives Map shows a total of 50.46 ha of undeveloped land available for housing development within the Plan area.
 The proximity of Thomastown to the selected route of the Kilcullen-Waterford motorway will result in increased demand for housing and services in the Town (see map appended). Moreover, there are plans to decentralise the Health & Safety Authority headquarters to Thomastown.
 Development in Thomastown will however be retarded by limitations in public services particularly the sewerage system. The proposed upgrading will result in the lands identified becoming available for development within a short time-frame.

Other Impacts of Scheme (Environmental, Economic)

The increase in population in the Town arising from the proposed developments will result in an increased downstream demand for services, which will be accommodated in a future extension to the upgraded Plant; these will be funded from future Development Contributions.
 The proposed upgrading will result in an improved quality of treated effluent discharged to the adjoining River Nore.

Status of Scheme (Contract Documents, Tender, etc.):

Sanitary Services Section Report completed; Part 8 completed; Consultants Report completed; Process Design completed; Tender Documents being prepared.

Earliest Date Construction Could Start:

1 May 2007

Estimated Contract Duration:

9 months

Expenditure Profiles €m

2007 €m	2008 €m	2009 €m	Total €m
0	2.06		
0	0.825		

Total Expenditure:

Exchequer element only:

Project Costs:

Estimated Project Costs	€
Contract Costs (for each contract)	
Mechanical & Electrical	938,883
Civil	1,122,561
Direct Labour Costs (if any)	None
Survey, Site Investigation, etc.	Included
Consultants Fees* (Design & Supervision)	none
Site Supervision	Included
Miscellaneous Costs** (Electricity, Communications)	0
Total	€2,061,444

* Local Authorities may allow 7% of costs where design/planning is carried out in-house and Consultants' Fees are not being claimed

** General administration costs should not be included nor any apportionment of salaries of local authority staff

I enclose the following documentation:

- (a) **Outline Drawing for the Scheme (A3 or A4)**
- (b) **Programme for Delivery**
- (c) **(Where the Project involves refurbishment of a Treatment Works or an increase in treatment capacity), details of the size, condition and state of repair of the existing Works and details of the proposed upgrading and/or uprating of the Works envisaged**
- (d) **Statement from the Council's Planning Department confirming the zoning of the land, and that development enabled through the Scheme will conform with the current Development Plan for the area, any Regional Planning Guidelines in force and the National Spatial Strategy.¹**

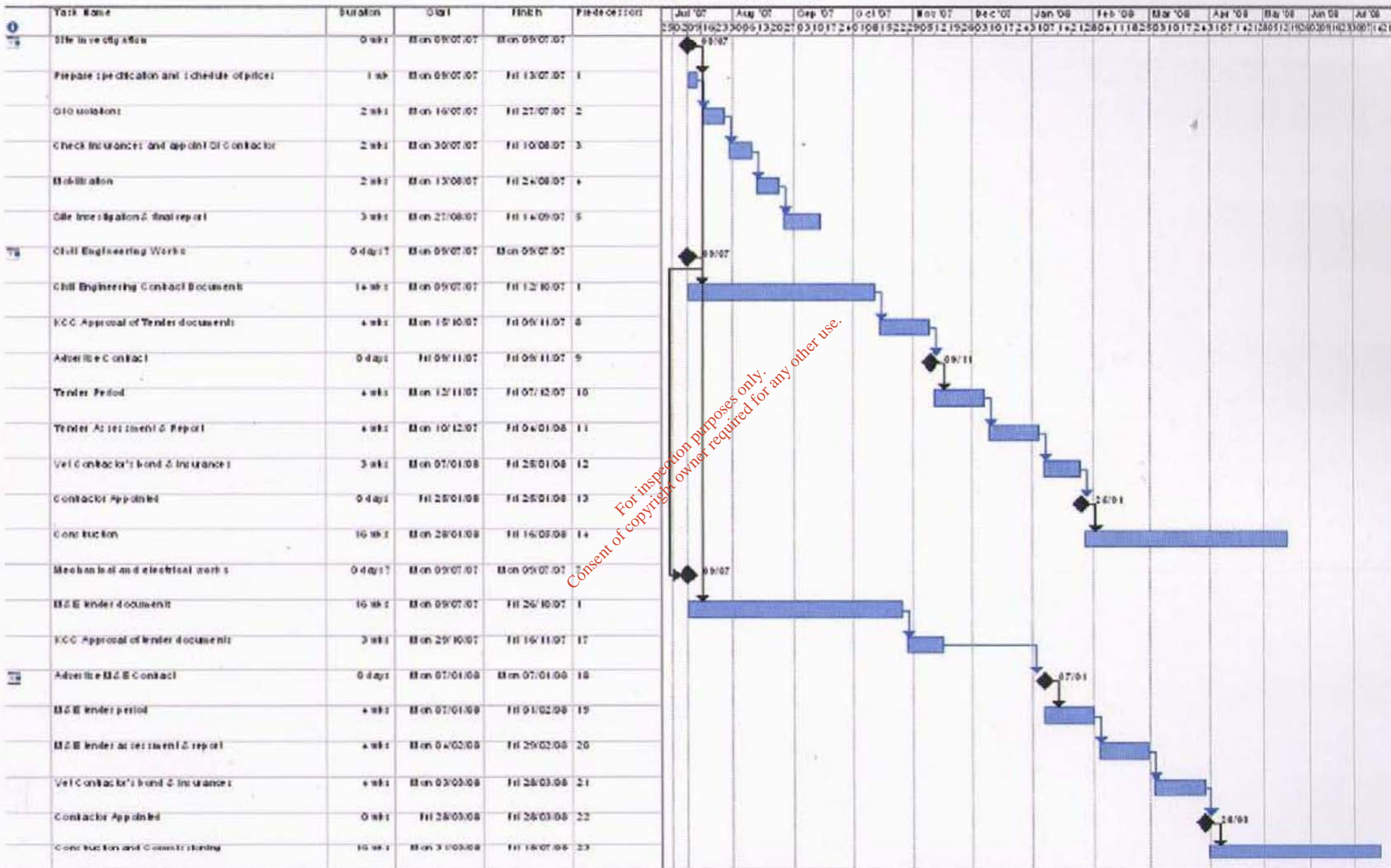
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Signed: _____ Director of Services	Date: _____
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This form should be sent direct to: The Secretary, Water Services Investment Programme, Department of the Environment Heritage and Local Government, Floor 2 Block 1, Irish Life Centre, Lr Abbey Street, Dublin 1.

¹ Planning Authorities are advised to consult with the Department's Spatial Policy Section, where necessary, in addressing issue (d) above

THOMASTOWN WASTEWATER TREATMENT PLANT UPGRADING 2007 PRELIMINARY PROGRAMME



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Expansion of Thomastown WWT
n 09/07/07

Task	Progress	Summary	External Task	Deadline
Open	■	■	■	■
Open	◆	◆	◆	◆

THOMASTOWN WWTW UPGRADING 2008

PLANNING -

PART 8 DOCUMENTS

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THOMASTOWN WWTW UPGRADING 2008

PART 8 DOCUMENTS

REPORT TO COUNCIL & ADOPTION OF SCHEME

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COMHAIRLE CHONTAE CHILL CHAINNIGH
KILKENNY COUNTY COUNCIL

MEETING HELD: 16th July 2007
PROPOSED BY: Mr. D. Doyle
SECONDED BY: Mr. T. Brennan

**Re: UPGRADING OF THOMASTOWN WASTEWATER
TREATMENT PLANT TO CATER FOR A POPULATION
EQUVALENT OF 800**

“Part 8, Local Government (Planning & Development), Regulations 1994 - Kilkenny County Council Planning Report – Thomastown Sewerage Scheme – Upgrading of Thomastown WasteWater Treatment Plant to Cater for a Population Equivalent of 800 is hereby approved”.

Thomas Nestor
CATHAOIRLEACH

16.7.07
DATE



UPGRADING OF THOMASTOWN WASTEWATER TREATMENT PLANT TO CATER FOR A POPULATION EQUIVALENT OF 8000



**PART V111 PLANNING REPORT TO MEMBERS OF
KILKENNY CONTY COUNCIL**

JULY 2007

UPGRADING OF THOMASTOWN WASTEWATER TREATMENT PLANT TO CATER FOR A POPULATION EQUIVALENT OF 8000

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PART 8, LOCAL GOVERNMENT (PLANNING & DEVELOPMENT), REGULATIONS 1994



**KILKENNY COUNTY COUNCIL
Comhairle Chontae Chill Chainnigh**

PLANNING REPORT



THOMASTOWN SEWERAGE SCHEME

**UPGRADING OF THOMASTOWN WASTEWATER
TREATMENT WORKS 2007**

Kilkenny County Council,
County Hall,
John St,
Kilkenny

May, 2007

**THOMASTOWN SEWERAGE SCHEME
UPGRADING OF THOMASTOWN WASTEWATER TREATMENT
WORKS 2007**

1.0 INTRODUCTION:

- 1.1.** This report has been prepared for submission to Kilkenny County Council in order to comply with Part 8 of the Local Government (Planning and Development) Regulations, 2001 and Section 179 (3) of the Local Government (Planning and Development) Acts 2000 - 2002
- 1.2.** This Scheme proposes the upgrading of the capacity of the existing Wastewater Treatment Works in Thomastown, County Kilkenny, in two stages.

2.0 BRIEF DESCRIPTION OF THE PROPOSED WORKS:

2.1. The Works comprise:

- Inlet works: Screening and Grit Removal;
- Ferric Dosing (if required);
- Flow Balancing Tanks;
- Forward Feed Pumping;
- Aeration-Settlement (Sequencing Batch Reactors);
- Sludge Treatment and Storage;
- Site Works

2.2. A more detailed Description of the Scheme and the necessity for it is appended hereto.

2.3. Relevant Maps and Plans are attached:

- Site Location Map
- Proposed Site Layout and Site Cross-Section

DETAILED DESCRIPTION OF SCHEME

1.0 EXISTING POPULATION DATA:

The population of Thomastown in the 2002 Census was 1,600, and in the 2006 Census, 1,837. The overall increase in the population 2002-2006 was thus 14.8%, and the actual equivalent Annual Percentage Increase was 3.514%.

Using that percentage as a working assumption of population trend, the present 2007 population would then be 1,902. The numbers in the 2007 Electoral Register however suggests a population of about **1,960**.

2.0 FUTURE DEVELOPMENT AND POPULATION ESTIMATE:

Thomastown has its own Town Development Plan set out in Volume 2 of the current County Development Plan (2003-2008).

Current permitted housing developments will provide an additional 120 houses, which equate to an additional 340 population approximately at current occupancy rates.

There are currently (2007) more than fifty hectares (125 acres) of land which is zoned for residential development within the Thomastown Development Boundary but which is not yet developed. If fully developed, this would add about 1,200 dwelling units to the town, which equates to an additional **3,500** population approximately.

The Total Population estimate for the Plan Area on this basis would therefore be 1,960 (existing) + 340 (permitted developments) + 3,300 (future developments) = **5,600** (total). To this must be added the current natural increase in population. This rate is currently 1.3%, but is expected to decline. The long-term population could, if this rate of population growth continues, result in a population of 6,000 to 6,500 in the town by the year 2020.

However, the 2020 estimate may be affected by the construction of the Dublin-Waterford dual carriageway, and improvements in public transport, which will both provide rapid access to the Dublin area.

As with all predictions of population change, these latter figures need to be considered as speculative.

3.0 EXISTING WASTEWATER TREATMENT FACILITIES:

The existing Treatment Plant is designed for a wastewater load equivalent to that which would arise from a population of 3,000 persons. The present load, which includes not only domestic sewage but also non-domestic wastewater, varies from a population equivalent (PE) of **4,000 to 4,500 PE**, and has been as high as (and somewhat in excess of) **5,000 PE** on a number of occasions in the recent past.

The plant currently is able to treat this load to a satisfactory standard, but is operating well above its design loading and this has led to problems, both in operating the plant and with maintaining satisfactory quality in the treated effluent discharged to the River Nore, a salmonid river.

4.0 OUTLINE OF PROPOSED WASTEWATER TREATMENT FACILITIES:

The Treatment System upgrade now proposed is for a full Secondary Wastewater Treatment Process capable of treating wastewater from a population equivalent to **7,500 to 8,000**, made up of domestic sewage from a population up to 4,500, plus non-domestic wastewater from a population equivalent of approximately 3,000 to 3,500, giving a total plant capacity of up to 8,000 population equivalent.

This proposed design system will be such that can be readily further upgraded in future if necessary by the addition of future treatment units.

5.0 DETAILED DESCRIPTION OF PROPOSED PLANT

5.1. Brief outline of Process & Works proposed

The following facilities will be provided all within the existing site area:

Inlet works: New inlet channel with automatic self-cleaning fine screen and by-pass coarse screen

Stormwater & Forward Feed: Inlet Flow Balancing facilities and Forward Feed Pumps will be provided.

Aeration-Settlement: The main treatment stage will be carried out in additional twin fully automatic and programmable Sequencing Batch Reactor (SBR) Tanks, which incorporate aeration and settlement in a single vessel

Sludge Storage and removal: Settled sludge from the SBR Tanks will be discharged automatically to an upgraded Sludge Holding Tank. Sludge will be concentrated in an upgraded sludge conditioning unit for removal for further

treatment and ultimate disposal in accordance with the Council's Sludge Management Plan.

Metering and Control Systems: Inlet and Outlet Flow Measuring and Sampling will be provided.

Site Services: All interconnecting site pipework and cables, a hardcored on-site roadway, site lighting, new fencing, gates etc will be provided. A permanent three-phase electricity supply and a service water supply will also be provided

5.2. Reasons for selection of proposed System:

The most appropriate treatment system is batch treatment in Sequencing Batch Reactors, for the following reasons:

- This type of reactor removes the necessity for separate Aeration and Settlement stages; this is important in view of restrictions imposed by the size of the site.
- This type of reactor inherently provides good nitrate removal, and this is important for the quality of the final effluent discharged to the River Nore.

5.3. Impacts:

Visual: The site is well screened from adjoining properties, and this will be strengthened and augmented if necessary. The separation of any treatment process unit will be greater than the minimum

Air Quality: This type of plant employs an aerobic treatment process which is inherently odour-free and does not include any unit processes which might reduce air quality. Sludge storage and treatment will be carried out in enclosed units, thus minimising any possibility of affecting air quality.

Noise: The Screening and the Aeration equipment are the only parts of the system in continuous operation and these produce little or no background noise.

Traffic: Traffic into the works will comprise regular visits from a sludge collection tanker, most probably once a month or thereabouts, and occasional visits by maintenance staff.

River Water Quality: In order to meet the requirements of (a) Urban Wastewater Treatment, (b) Phosphorus, and (c) Salmonid Waters Regulations, the upgraded plant will be designed to discharge treated effluent to the River

Nore to a standard of **25 milligrams per litre of BOD** and **35 milligrams per litre of Suspended Solids**.

Existing Quality of the River Nore at Thomastown: The **Environmental Protection Agency (EPA)** carries out regular and frequent chemical, bacteriological and other analyses on water in rivers. Based on these analyses, they publish an Annual Report on the biological quality of the water in Irish rivers. In these Reports, water quality is expressed in terms of its **Q-Value**, as shown in the following Table 1, which is contained in the Phosphorus Regulations. The Table states the **target Q-index** value to be achieved for a river which is at present at a particular Rating, and also shows the corresponding Phosphate Concentration, expressed as "Molybdate-Reactive Phosphate" (MRP), which must not be exceeded in the river.

Table 1 - Quality standards for Rivers (Third Schedule of Phosphorus Regulations)

Existing Biological Quality		Minimum Target Biological Quality Q index	Molybdate-Reactive Phosphate (MRP) median concentration (micrograms per litre)
Rating	Q index		
Unpolluted	5	5	15
	4 - 5	4	20
	4	4	30
Slightly Polluted	3 - 4	4	<50
Moderately Polluted	3	3 - 4	>50
	2 - 3	3	< 70
Seriously Polluted	2	3	>70

The baseline quality index, as specified in the Regulations, is **Q3**, established 1 km downstream of Thomastown Bridge in 1995. Accordingly the median MRP level must be maintained below **50** micrograms per litre, as per Table 1 above.

Based on the population projections outlined in Section 2 above, the proposed design Population Equivalents and loadings for the treatment works are tabulated below in Table 2.

Table 2 - Design PE and Wastewater Load for Treatment Works

Design PE	Biological Load (kg BOD ₅ /day)	Suspended Solids (kg/day)	Nitrogen (kg N _{kj} /day)	Phosphorus Kg/day
7,500	450	525	82.5	22.5

MAP & DRAWING

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THOMASTOWN

SEWAGE TREATMENT PLANT SITE



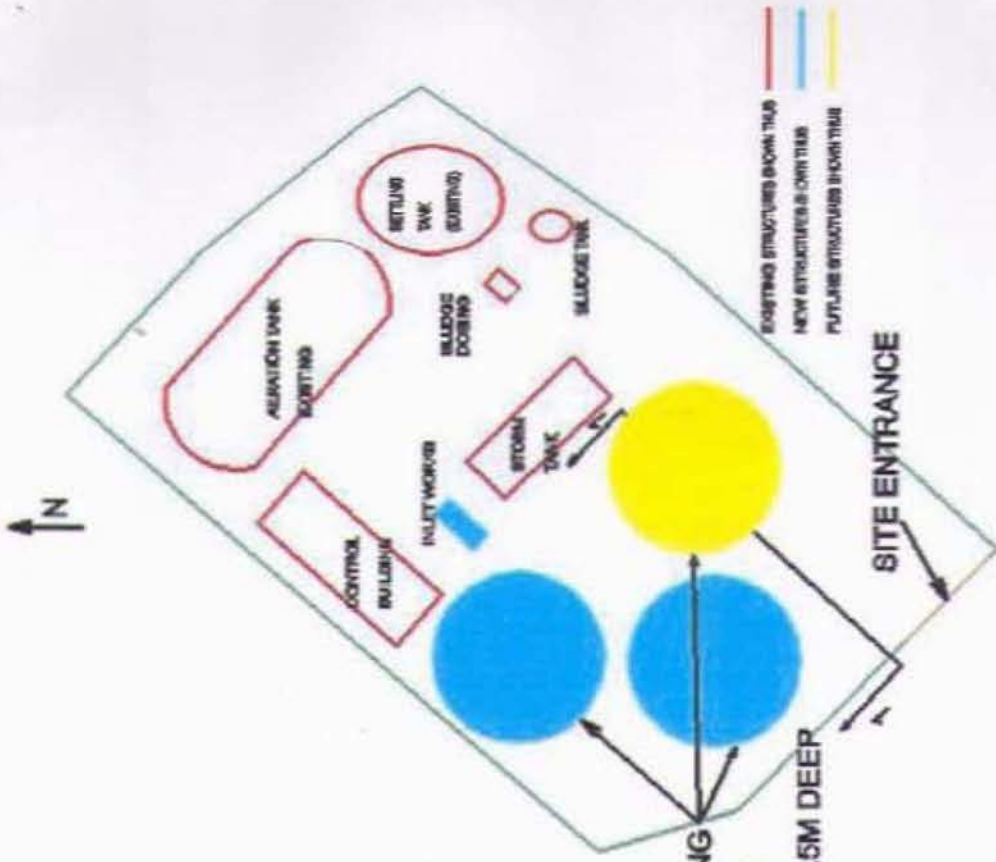
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KILKENNY



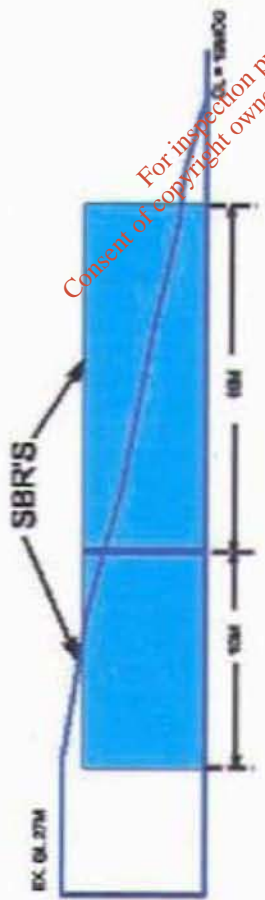
BURRELLSPARK
P. I.R.C AN BHOIR ALAIBH

BASED ON ORDNANCE SURVEY OF IRELAND MAP
LICENSE NO. KILKENNY/0004480/07



SITE PLAN

SCALE 1:500



SECTION 1-1

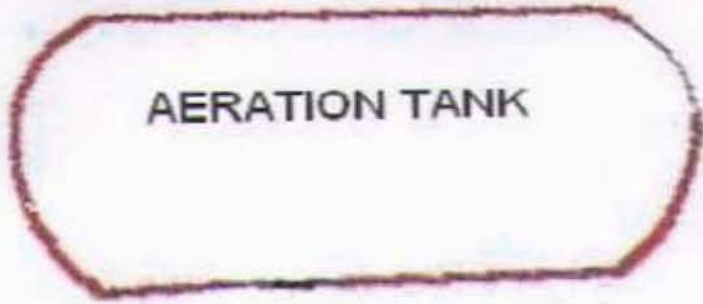
SCALE 1:250

**3 NO SEQUENCING
BATCH REACTORS
16M DIAMETER*5.5M DEEP**

TREATMENT PLANT TO GIVE 25:35 MG/L BOD:SS

EACH SBR TO CATER FOR P.E. OF 3500

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AERATION TANK



SETTLING TANK



CONTROL BUILDING



SLUDGE TREATMENT



STORM TANK



SBR 1



SBR3
(Future)

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SBR 2

PART 8, LOCAL GOVERNMENT (PLANNING &
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KILKENNY COUNTY COUNCIL
Comhairle Chontae Chill Chainnigh



**UPGRADING OF THOMASTOWN WASTEWATER
TREATMENT WORKS 2007**

**ASSESSMENT OF THE IMPACT OF THE UPGRADING ON THE
RIVER NORE**

Report prepared by TJ O'Connor & Associates, Consulting Engineers

Kilkenny County Council,
County Hall,
John St,
Kilkenny

May, 2007

1.0 Discharge Standards

1.1 General

The standard of treatment provided for an upgraded wastewater treatment plant at Thomastown must have regard to relevant legislation concerning urban wastewater treatment and to the available dilution in the receiving water. The following describes the main factors influencing the choice of wastewater treatment system for Thomastown having regard to the above and the proposed wastewater load of 7,500 PE, as required by Kilkenny County Council.

1.2 Wastewater Treatment Load

Based on the population projections provided by KCC, the proposed design population equivalents and loadings for the treatment works are tabulated below in Table 1.1.

Table 1.1 Design PE and Wastewater load for Treatment Works

Design PE	COD Kg/Day	BOD ₅ Kg/Day	S.S Kg/day	N _{kj} Kg/day	P Kg/day
7,500	1,125	450	525	82.5	22.5

1.3 Discharge Standards

The Urban Wastewater Treatment Regulations, 2001 set out specific requirements for treated effluent quality from wastewater treatment works which vary according to the plant load, expressed as Population Equivalent (PE) and the status of the receiving water. For urban wastewater from agglomerations of more than 2,000 PE as at Thomastown, the regulations specify minimum standards for a number of water quality parameters which must be achieved based on a specified annual sampling programme. These regulations along with other relevant regulations are reviewed below and these provide the basis for establishing the appropriate standard for the WWTW at Thomastown.

1.3.1 Receiving Water Quality and Quantity

1.3.1.1 Receiving Water Quantity

The Office of Public Works operates a permanent flow gauging station on the River Nore at Mount Juliet, which is just upstream of the treatment works at Thomastown. The published data for this gauging station is summarised in table 1.2 below. The 95th percentile flow (Q₉₅) given for the Nore at Mount Juliet is given as 5.51 m³/s.

Table 1.2: Characteristics of the Catchment Area

River Quantity		
Catchment	Nore	
Area	2,315.5	km ²
Rainfall (average annual)	974	mm
Average annual losses	483	mm
Runoff (average annual)	491	mm
Mean flow (Based on average runoff)	36.1	m ³ /s
Q ₉₅	5.51	m ³ /s

1.3.1.2 Receiving Water Quality

The EPA undertakes routine sampling of the river water from the Nore at several stations along its length. These stations include one at Thomastown Bridge and another at Brownsbarn Bridge approximately 1km downstream of the town. This reach would encompass the outfall from the existing WWTW at Thomastown with the former station upstream of the works and the latter downstream. Tables 1.3 and 1.4 below show a summary of the results of water quality analyses undertaken over the period between January 2001 and May 2007. These tables show results for the main parameters that would be of concern in considering the impact of treated wastewater discharges.

Table 1.3 – Water Quality sampling results for the Nore at Thomastown Bridge

River Quality	NH3 mg/l-NH ₃	NH4 mg/l-N	BOD mg/l	NO ₂ -N mg/l	Ortho-P mg/l	Temp °C	pH
Number of samples	58	57	61	63	60	63	63
Minimum value	0.0003	0.0*	0.40	0.011	0.0*	3.6	7.9
Median value	0.0016	0.0410	1.30	0.022	0.040	12.1	8.25
Maximum value	0.0183	0.7200	5.80	0.059	0.270	20.4	8.6

*below the level of detection used

**Table 1.4 – Water Quality sampling results for the Nore at Brownsbarn Bridge
some 1km downstream of Thomastown WWTW outfall**

River Quality	NH3 mg/l-NH ₃	NH4 mg/l-N	BOD mg/l	NO ₂ -N mg/l	Ortho-P mg/l	Temp °C	pH
Number of samples	57	56	62	63	60	63	63
Minimum value	0.0003	0.0*	0.50	0.011	0.0*	3.7	7.9
Median value	0.0014	0.0291	1.4	0.020	0.043	12.3	8.3
Maximum value	0.0108	0.1200	6.20	0.059	0.008	21.2	8.7

1.3.2 Urban Wastewater Treatment Regulations

For wastewater treatment plants of more than 2,000 PE, the urban wastewater treatment regulations set out minimum standards of treatment that must be achieved depending on the total PE and the sensitivity of the receiving waters. The minimum standard required is the so-called 25/35 standard. Treated effluent from the Thomastown plant must (as a minimum) comply with a standard of 25 mg/l BOD and 35mg/l suspended solids in accordance with the second schedule of the wastewater treatment regulations.

Statutory Instrument No. 254 of 2001 designated some 30 inland water bodies as being 'sensitive' for the purposes of the wastewater treatment regulations. These water bodies include the River Nore between 'Kilkenny sewage outfall' and Inistioge Bridge. This would obviously include the Nore at Thomastown which is between these points. In accordance with the regulations, phosphorus removal from wastewater discharges is a statutory requirement for treatment plants having a capacity of 10,000 PE or greater. As the design PE for the proposed WWTW at Thomastown is 7,500, phosphorus removal is not a statutory requirement under the regulations.

1.3.3 Phosphorous Regulations

The phosphorus Regulations (S.I. No. 258 of 1998) set target standards for phosphorus levels in rivers and lakes, which are to be achieved by local authorities over a ten-year period which began in 1997. The regulations concern levels of Molybdate Reactive Phosphate (MRP) in the water with different classifications of water quality determined from bands of varying concentration expressed as the median annual MRP level. The regulations require local authorities to maintain or improve existing water quality classifications where these are satisfactory and to bring unsatisfactory (polluted) waters into a satisfactory category by no later than 31 December 2007. Baseline water quality classifications have been assigned to each major river and lake in the country by the Environmental Protection Agency based on results from sampling and analysis

undertaken in the years 1995 to 1997. Table 1.5 below shows the classification system for rivers taken from the third schedule of regulations (S.I. No. 258 of 1998).

Table 1.5 - Quality standards for Rivers from 3rd schedule of Phosphorus Regulations

Existing Biological Quality (Q) Rating/Q index		Minimum Target Biological Quality (Q) /Rating/Q index	Molybdate Reactive Phosphate Median Concentration (µg/l)
Unpolluted	5	5	15
	4 – 5	4 – 5	20
	4	4	30
Slightly Polluted	3 – 4	4	<50
Moderately Polluted	3	3 – 4	>50
	2 – 3	3	< 70
Seriously Polluted	≤ 2	3	>70

The baseline biological quality rating for the River Nore at Thomastown Bridge for the purposes of the regulations is Q3 and accordingly the median MRP level must be maintained below 50µg/l as per table 1.5 above. From table 1.3 above, the median orthophosphate level measured in the river at Thomastown Bridge (upstream of works outfall pipe) was 40 µg/l over the 5 year period. In accordance with the regulations the amount of additional P added to the river by the treated wastewater from the Thomastown WWTW should not result in **median** P levels exceeding 50 µg/l.

Based on the above it can be demonstrated that where no P removal is proposed, the P level in the river (at mean river flows) would rise to no more than 48 µg/l at the design load (7,500 PE) proposed for the Thomastown plant. This incorporates two conservative assumptions; firstly that all P in the treated effluent will appear as MRP and secondly that the full P load in the influent will appear in the effluent. In reality some of this P would be settled out in the sludge.

Table 1.6 - Derivation of the final effluent standard for phosphorus for maintenance of 50 µg/l P below the final effluent outfall

Final Effluent Standard			
C _{EFF}	P Concentration of the treated effluent	15.0	mg/l
C _{BACK}	Background P level in the receiving water	0.040	mg/l
C _{FM}	Concentration of P in the fully mixed final effluent/receiving water	0.048	mg/l
Q _{BACK}	Mean flow in the river	3,119,040	m ³ /day
Q _{EFF}	Effluent flowrate	1,690	m ³ /day

where

$$C_{FM} = \frac{(C_{EFF} * Q_{EFF}) + (Q_{BACK} * C_{BACK})}{(Q_{EFF} + Q_{BACK})}$$

In accordance with the above there is no specific requirement to remove phosphorus from the effluent from the Thomastown plant. However if the plant ultimately expands to 10,000 PE, phosphorus removal will become mandatory under the Urban Waste Water Treatment Regulations. In the circumstances it is suggested that provision should be made for incorporating P removal into the plant layout so that this can be conveniently provided should it become necessary at some point in the future.

1.3.4 Waste Assimilative Capacity of Receiving Rivers

For the purposes of estimating the required effluent discharge standards the flows in the receiving waters are of particular importance. These are used for calculations of dilution, fully mixed contaminant concentrations and when combined with background water quality measurements; they provide an accepted basis for determining appropriate effluent discharge standards.

A widely accepted characterisation of low flows in rivers is the ninety-fifth percentile flow. This represents the value at which, statistically, flow in the river will be higher for 95% of the time. For the River Nore at Thomastown (Mount Juliet) this value is estimated at 5.51 m³/s or 476,064 m³/day by the Office of Public Works.

Based on the water quality sampling for the Nore river at Thomastown Bridge, the BOD levels in the river upstream of the proposed outfall average 1.30mg/l. For a 25/35 final effluent discharge standard as proposed, the BOD of the fully mixed final effluent/receiving water combination at the 95th percentile flow immediately downstream of the final effluent outfall would be raised by less than 0.1mg/l to 1.4 mg/l. This is well

below the 4 mg/l standard which is commonly used as the limiting value of assimilative capacity.

Table 1.5: Final BOD concentration in the fully mixed final effluent/ receiving water

Final Effluent Standard			
C_{EFF}	BOD Concentration of the treated effluent	25	mg/l
C_{BACK}	Background BOD level in the receiving water	1.30	mg/l
C_{FM}	Concentration of BOD in the fully mixed final effluent/receiving water	1.40	mg/l
Q_{BACK}	Background flow in the stream as 95 percentile	476,064	m ³ /day
Q_{EFF}	Effluent flowrate	1,690	m ³ /day

where

$$C_{FM} = \frac{(C_{EFF} * Q_{EFF}) + (Q_{BACK} * C_{BACK})}{(Q_{EFF} + Q_{BACK})}$$

1.3.4 Quality of Salmonid Water Directive

Regulations made pursuant to the directive (S.I. No. 293 of 1988) provide for the maintenance of minimum water quality standards in certain designated rivers. Maximum concentrations are specified for a number of parameters, including BOD, suspended solids, ammonia, ammonium, copper, zinc, dissolved oxygen, nitrites and water temperature. The main channel of the River Nore is listed in schedule 2 of S.I. No. 293 and accordingly Kilkenny County Council has a statutory duty to ensure compliance with the standards. The standard of effluent from the expanded plant at Thomastown WWTW should, insofar as possible, ensure that the salmonid standards are not breached as a result of the discharge of treated effluent. The salmonid standard in respect of BOD is 5 mg/l and in accordance with 1.3.4 above the 25 mg/l final effluent standard proposed would ensure compliance with this standard. The other water quality parameters that are usually of concern in respect of discharges from WWTW are ammonia (in both forms) and nitrite.

Most WWTWs achieve some degree of nitrification of the wastewater and ammonia levels in the treated effluent are often below those of the influent. If it is assumed that the Thomastown works will not nitrify the effluent and that the ammonia concentration is the same as the influent (typically 35 mg/l), then the ammonia concentration below the

outfall at the ninety fifth percentile flow would be increased to 0.16 mg/l-N. This is based on a background ammonia concentration take as the mean ammonia concentration (0.041 mg/l) from the results for the Thomastown Bridge sampling station. The salmonid standard for total ammonia is 95% of samples below 1.0 mg/l (as NH₄) so that the predicted level below the Thomastown outfall would be well within acceptable limits.

The un-ionised form of ammonia is particularly toxic to fish and its concentration is strictly regulated under the salmonid standards. The amount of ammonia appearing in the un-ionised (NH₃) form is dependent on the temperature and pH of the water as shown in the table 1.6 below.

Table 1.6 – Relationship between temperature, pH and un-ionised ammonia concentration

TEMP C: TEMP F:	10° 50.0°	12° 53.6°	14° 57.2°	16° 60.8°	18° 64.4°	20° 68.0°	21° 69.8°	22° 71.0°	23° 73.4°	24° 75.2°	25° 77.0°	
pH	6.5	.0006	.0007	.0008	.0009	.0010	.0012	.0013	.0014	.0016	.0017	.0018
	6.6	.0007	.0009	.0010	.0012	.0013	.0016	.0017	.0018	.0020	.0021	.0022
	6.7	.0009	.0011	.0013	.0015	.0017	.0020	.0021	.0023	.0025	.0026	.0028
	6.8	.0012	.0014	.0016	.0019	.0021	.0025	.0027	.0029	.0031	.0033	.0035
	6.9	.0015	.0017	.0020	.0023	.0027	.0032	.0034	.0036	.0039	.0042	.0044
	7.0	.0019	.0021	.0025	.0029	.0034	.0040	.0042	.0045	.0049	.0052	.0055
	7.1	.0023	.0027	.0032	.0037	.0042	.0050	.0053	.0057	.0062	.0066	.0070
	7.2	.0029	.0034	.0040	.0046	.0053	.0063	.0067	.0071	.0077	.0083	.0088
	7.3	.0037	.0043	.0051	.0058	.0067	.0079	.0084	.0090	.0097	.0104	.0110
	7.4	.0047	.0054	.0064	.0073	.0084	.0099	.0105	.0113	.0122	.0130	.0138
	7.5	.0059	.0068	.0080	.0092	.0106	.0124	.0132	.0142	.0153	.0163	.0173
	7.6	.0074	.0085	.0100	.0116	.0133	.0156	.0166	.0178	.0192	.0205	.0217
	7.7	.0092	.0107	.0126	.0145	.0167	.0196	.0208	.0223	.0241	.0257	.0272
	7.8	.0116	.0135	.0158	.0182	.0209	.0245	.0261	.0279	.0301	.0339	.0329
	7.9	.0146	.0169	.0198	.0229	.0262	.0306	.0326	.0348	.0376	.0401	.0424
	8.0	.0183	.0212	.0248	.0286	.0328	.0383	.0407	.0435	.0469	.0499	.0528
	8.1	.0229	.0265	.0311	.0358	.0409	.0477	.0507	.0541	.0583	.0621	.0655
	8.2	.0286	.0332	.0388	.0446	.0510	.0594	.0630	.0672	.0723	.0769	.0711
8.3	.0358	.0414	.0484	.0555	.0633	.0736	.0780	.0831	.0894	.0949	.1000	
8.4	.0446	.0515	.0601	.0689	.0784	.0909	.0962	.1024	.1099	.1166	.1227	
8.5	.0555	.0640	.0745	.0852	.0966	.1118	.1182	.1256	.1345	.1425	.1497	

From the EPA sampling referred to previously, water pH at Thomastown Bridge is relatively stable with an average value of 8.3. From table 1.6 for a typical summertime water temperature of (say) 15°C, the ratio of un-ionised to total ammonia would be approximately 0.0520. From above, the total ammonia level at Thomastown Bridge is 0.16 mg/l as N or 0.206 mg/l as NH₄. Thus the unionised ammonia concentration for the temperature and pH suggested above would be 0.0107 mg/l. This compares with a

salmonid standard of 0.02 mg/l NH₃. Thus nitrification of the final effluent from the Thomastown plant would not be required.

Where no nitrification of the effluent is proposed as above, nitrate concentrations in the treated effluent would be the same as those of the influent. For untreated domestic sewage, nitrite would not normally be present at all. Accordingly the treatment proposed at Thomastown will not have any impact on nitrite levels or the attainment of the salmonid water quality standard for this parameter. This would be confirmed with reference to tables 1.3 and 1.4 which actually show a reduction in median nitrite levels between the two stations despite the presence of the existing Thomastown WWTW in between.

The EPA results for the Nore at Thomastown do not include suspended solids. However it is expected that the 35mg/l standard proposed for the treated effluent would easily meet the salmonid standard of 25 mg/l given the very high levels of dilution available.

1.4 Drinking water Abstractions

There are no abstractions for drinking water from the Nore downstream of the Thomastown WWTW.

1.5 Discharge Specification

Based on the foregoing, the following final effluent discharge standard proposed is as follows.

Parameter	Concentration	Unit
BOD	25	mg/l
Suspended Solids	35	mg/l

The plant layout should include provision for the addition of phosphorous removal equipment as part of a further expansion of the works in the future.



**LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACT 2000
PLANNING AND DEVELOPMENTS REGULATIONS 2001**

Notice of Proposed Development by a Local Authority at Grenan, Thomastown

**THOMASTOWN WASTEWATER TREATMENT PLANT UPGRADING 2007, CO.
KILKENNY**

In accordance with Article 179 of the Local Government (Planning and Development) Act 2000 and Part V111 of the Planning and Development Regulations 2001 and any amendments thereof, Kilkenny County Council hereby gives notice of its intention to carry out the following development:

It is proposed to upgrade the existing Wastewater Treatment Plant at Thomastown to cater for twice its present loading, with facilities for further upgrading thereafter if required.

The development will include:

- (a) Screening and Grit Removal**
- (b) Ferric dosing**
- (c) Automated Pumping Equipment**
- (d) Balancing and Mixing Tank**
- (e) Sequencing Batch Reactor Tanks**
- (f) Sludge Holding Tank**

Plans and Particulars of the proposed Development will be available for inspection in the Water Services Office of Kilkenny County Council, County Hall, John St, Kilkenny and the Thomastown Area Engineering Office, Thomastown from **18th May 2007 until 15th June 2007** between the hours of 9.00am to 5.00pm, Monday to Friday (excluding Bank Holidays).

Submissions or observations with respect to the proposed Development may be made in writing to:

**Philip O'Neill
Director of Services
Water Services and Environment
Kilkenny County Council
County Hall
John St, Kilkenny**

not later than **29th June 2007**.

**Philip O'Neill
Director of Services
Kilkenny County Council**



Southern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Deiscirt



Fisheries Ireland
Our Natural Heritage

Registered Post

*B. By Merrif
Dunst Dublin
Cavan Water.*

28 June 2007

Mr. Philip O'Neill,
Director of Services,
Water Services and Environment,
Kilkenny County Council,
County Hall,
Johns, Street,
Kilkenny.

Kilkenny Co. Council
29 JUN 2007
RECEIVED

THOMASTOWN WASTEWATER TREATMENT PLANT PROPOSED UPGRADING TO SERVE A POPULATION EQUIVELANT OF 7,500

Dear Sir,

Thank you for your Councils' letter dated 6th inst. and enclosures, inviting the submission of observations in relation to the above proposed development.

At the outset, on behalf of the Board, I welcome the proposed upsizing and upgrading of treatment plant. However, I am bound respectfully to note that your Council's consultants appear to have made a number of significant errors in their estimation of assimilative capacity. I refer in particular to their usage of a 95% ile flow value of 5.51 m³/s for the River Nore at Mount Juliet. The use of this figure seriously overstates assimilative capacity, and the Board is bound respectfully to advise that the appropriate 95% ile value for this location is in fact 4.0 m³/s. In this regard, you may wish to seek independent confirmation of the value we quote, and we refer you to the EPA's Hydrometric Section, who we are satisfied will provide confirmation that the value of 4.0 m³/s is the appropriate figure to use.

It follows from the foregoing, particularly in the case of orthophosphate, that your consultants have significantly overestimated assimilative capacity, and the guidance provided by them cannot we submit be accepted. It would appear from their document, that they estimate that a P level of 15mg/l may be discharged, without exceeding what they interpret as the relevant downstream conditions. In fact, in such circumstances, and using the correct 95% ile flow, a discharge of such concentration (15 mg/l P) at the flow rate proposed would

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result in the River Nore being classified as seriously polluted based on orthophosphate concentration. It should also be noted that your consultant's calculations in relation to P utilized the average or mean river flow value, which value is incorrect, and which value in any event is inappropriate for use in assimilative capacity calculations.

Your consultants make no reference to Ireland's obligations as a Member State to comply in full with the terms and conditions of the Water Framework Directive. They fail to recognise the binding obligation to meet what is defined as good status, and in this regard, the requirement to meet a receiving a water quality standard of 0.03mg/l expressed as P in the case of orthophosphate.

Having regard to the foregoing, your Council are requested to re-examine the position, taking account of the need to use the appropriate value for 95% ile flow, and having regard to your obligations under the Water Framework Directive. We would recommend also, that specific numeric values for final effluent quality be prescribed, in addition to BOD and SS, for total phosphorus, orthophosphate and nitrate.

In the circumstance, in accordance with the precautionary principle, the Board is bound to object to the development proceeding in the form proposed.

I would be obliged for your Councils response in this matter.

Yours faithfully,

Patrick Kilfeather
Senior Fisheries Environmental Officer

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THOMASTOWN WASTEWATER TREATMENT PLANT UPGRADE 2007

REPORT IN RELATION TO SUBMISSION FROM SOUTHERN FISHERIES BOARD

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JULY 2007

REPORT ON UPGRADING OF THOMASTOWN WASTEWATER TREATMENT PLANT TO SERVE A POPULATION EQUIVALENT OF 8000

The existing Wastewater Treatment Plant at Thomastown is designed for a population equivalent of 3000 PE and has been treating at this capacity or in excess of this capacity for a number of years. It is proposed to upgrade the wastewater treatment plant to cater for a population equivalent of 8000.

The 95% flow value for the Nore at Brownsbarn Bridge, 1km downstream of Thomastown WWTP outfall, is $4\text{m}^3/\text{sec}$. as per EPA data in 2007. A figure of $5.51\text{m}^3/\text{s}$ was taken from OPW data between 1945 and 2005 on a permanent gauging station on the River Nore at Mount Juliet upstream of the treatment works. (See attached) In theory, the 95% flow downstream at Brownsbarn Bridge should be greater than this. However, for the purpose of determining the assimilative capacity of the receiving waters, we will use the figure of $4\text{m}^3/\text{s}$

The relevant regulations in determining the standard of treatment required and the assimilative capacity are as follows;

Urban Waste Water Treatment Regulations 2001, SI No. 254 of 2001

Local Government (Water Pollution) Act 1977, Water Quality Standards for Phosphorus Regulations 1998, SI No. 258 of 1998

European Communities (Quality of Surface Water) Regulations 1998, SI No. 293 of 1988

The standards of treatment are first assessed in relation to the **Urban Waste Water Treatment Regulations 2001, SI No. 254 of 2001**

In accordance with the Urban Waste Water Treatment Regulations 2001, minimum standards of treatment are set out for agglomerations of more than 2000 population equivalent. These standards are as follows.

BOD5:	25mg/l
Suspended Solids:	35mg/l
COD:	125mg/l

Additional standards are set for agglomerations with a population equivalent of more than 10,000 discharging into sensitive areas. These standards do not apply to this treatment plant as the population equivalent is 8000. Nevertheless, **it is proposed to provide an effluent standard of 2mg/l of Total Phosphorus and 15mg/l Total Nitrogen.**

Receiving Water Quantity

The Office of Public Works operates a permanent flow gauging station on the River Nore at Mount Juliet, which is just upstream of the treatment works at Thomastown. The published data for this gauging station is summarised in table 1 below. The 95th percentile flow (Q₉₅) for the Nore at Mount Juliet is now taken as 4.0 m³/s

Table 1 Characteristics of the Catchment Area

River Quantity		
Catchment	Nore	
Area	2,315.5	km ²
Rainfall (average annual)	974	mm
Average annual losses	483	mm
Runoff (average annual)	491	mm
Mean flow (Based on average runoff)	36.1	m ³ /s
Q ₉₅	4.0	m ³ /s

Receiving Water Quality

The EPA undertakes routine sampling of the river water from the Nore at several stations along its length. These stations include one at Thomastown Bridge and another at Brownsbarn Bridge approximately 1km downstream of the town. This reach would encompass the outfall from the existing WWTW at Thomastown with the former station upstream of the works and the latter downstream. Tables 2 and 3 below show a summary of the results of water quality analyses undertaken over the period between January 2001 and May 2007. These tables show results for the main parameters that would be of concern in considering the impact of treated wastewater discharges.

Table 2 – Water Quality sampling results for the Nore at Thomastown Bridge

River Quality	NH3 mg/l-NH ₃	NH4 mg/l-N	BOD mg/l	NO ₂ -N mg/l	Ortho-P mg/l	Temp °C	pH
Number of samples	58	57	61	63	60	63	63
Minimum value	0.0003	0.0*	0.40	0.011	0.0*	3.6	7.9
Median value	0.0016	0.0410	1.30	0.022	0.040	12.1	8.25
Maximum value	0.0183	0.7200	5.80	0.059	0.270	20.4	8.6

*below the level of detection used

Table 3 – Water Quality sampling results for the Nore at Brownsbarn Bridge some 1km downstream of Thomastown WWTW outfall

River Quality	NH3 mg/l-NH ₃	NH4 mg/l-N	BOD mg/l	NO ₂ -N mg/l	Ortho-P mg/l	Temp °C	pH
Number of samples	57	56	62	63	60	63	63
Minimum value	0.0003	0.0*	0.50	0.011	0.0*	3.7	7.9
Median value	0.0014	0.0291	1.4	0.020	0.043	12.3	8.3
Maximum value	0.0108	0.1200	6.20	0.059	0.008	21.2	8.7

The assimilative capacity of the receiving waters is now assessed in relation to the **Local Government (Water Pollution) Act 1977, Water Quality Standards for Phosphorus Regulations 1998, SI No. 258 of 1998**

This states that the ‘existing biological quality rating’ for any part of a river must be maintained or improved in accordance with Table 4 shown below

or

The median concentration for molybdate-reactive phosphate shall not exceed the concentration applicable to the 'existing biological quality' rating for that section of river.

The 'existing biological quality rating' means the rating for that part of river given by EPA based on monitoring carried out during the period commencing on the 1st day of 1995 and ending on the last day of 1997 or the first rating given by EPA after 1997 to those sections of river not rated before 1997. Rivers, streams etc. were rated from Q1 to Q5, very badly polluted to good

The 'existing biological quality rating' for any part for a river must be maintained for waters graded 4, 4-5 and 5. Others shall be improved as shown below in Table 4.

Table 4 - Quality standards for Rivers from 3rd schedule of Phosphorus Regulations

Existing Biological Quality (Q) Rating/Q index	Minimum Target Biological Quality (Q) /Rating/Q index	Molybdate Reactive Phosphate Median Concentration (µg/l)
Unpolluted	5	15
	4 – 5	20
	4	30
Slightly Polluted	3 – 4	30
Moderately Polluted	3	50
	2 – 3	70
Seriously Polluted	≤ 2	70

In 1995, the EPA assigned an 'existing biological quality rating' of 3 to the River Nore at its Station 1km downstream of Thomastown Bridge. In accordance with this, the Minimum Target Biological Q rating should be 3-4

Based on this, the maximum BOD₅ level can be occasionally elevated. However, in this design, the Q4 level of 3mg/l is targeted for BOD₅. In addition the max permissible increase for waters with a BOD₅ level less than 2mg/l is one mg/l. As the background concentration is 1.3 mg/l, the maximum permissible concentration of BOD₅ is 2.3mg

The assimilative capacity for BOD₅ is calculated using the formula $[(C_{max} - C_{back}) \times F_{95} \times 86.4]$ kg/day

Where

C_{max} = maximum permissible concentration BOD₅ mg/l

C_{back} = background concentration BOD₅ mg/l in the receiving waters

F_{95} = the 95 percentile flow in the river m³/sec

The assimilative capacity of the Nore is $(2.3-1.3) \times 4 \times 86.4$ kg/day = **345.6 kg BOD/day**

The daily flow through an 8000 p.e. plant is 8000 x 200 litres = 1,600,000 litres. A 25mg/l BOD₅ Treatment Plant would produce a loading of 40,000,000 or **40 kg BOD per day**. This would result in the BOD₅ level being raised from 1.3mg/l to 1.41mg/l.

A treatment plant with a BOD Standard of 25mg/l is satisfactory

Molybdate Reactive Phosphate Median Concentration ($\mu\text{g/l}$)

As per Table 4, the target Molybdate Reactive Phosphate Median Concentration target for a Q3-4 Standard receiving water is $50 \mu\text{g/l}$. This means that the 183rd lowest or 183rd highest level in the river on an annual basis over a number of years should not be in excess of $50 \mu\text{g/l}$. As the Molybdate Reactive Phosphate levels coming from a plant are generally consistent, the concentration is dependent on the flow in the river. Clearly, the relevant flow data used should be the median or mean flow in the river and not the 95% flow in the river – which would typically be equivalent to the 18th lowest flow day in a year. The 95% flow is used in determining concentrations for all other parameter except median concentrations.

The assimilative capacity for MRP is calculated using the formula $[(C_{\text{max}} - C_{\text{back}}) \times F_{\text{mean}} \times 86.4]$ kg/day

Where

C_{max} = maximum median concentration MRP mg/l

C_{back} = background median concentration MRP mg/l in the receiving waters

F_{mean} = the mean flow in the river m^3/sec

The assimilative capacity is $[(0.05-0.04) \times 36.1 \times 86.4] = 31.09\text{kg/day}$

The daily flow through an 8000 p.e. plant is 8000×200 litres = 1,600,000 litres.

A 15mg/l level of discharge of Orthophosphate from the plant would give a daily loading of 24,000,000mg or 24kg of orthophosphate giving median orthophosphate levels in the river of 0.0477mg/l

European Communities (Quality of Salmonid Water) Regulations 1998

These Regulations set standards for maximum concentrations for a number of other parameters.

Assimilative Capacity of Receiving Waters for Ammonium NH_4

The assimilative capacity for Total Ammonium is calculated using the formula $[(C_{\text{max}} - C_{\text{back}}) \times F_{95} \times 86.4]$ kg/day

Where

C_{max} = maximum permissible concentration ammonium mg/l

C_{back} = median background concentration ammonium mg/l in the receiving waters

F_{95} = the 95 percentile flow in the river m^3/sec

In accordance with the European Communities (Quality of Salmonid Water) Regulations 1998, the maximum permissible concentration of Total Ammonium is 1mg/l . The EPA results from show the median background concentration of Total Ammonia in the Little Arrigle river is 0.041mg/l N ($= 0.053\text{mg/l NH}_4$) and the 95 percentile flow, F_{95} , is $4\text{m}^3/\text{s}$

The assimilative capacity for Total Ammonium NH_4 is $[(1-0.053) \times 4 \times 86.4]$ kg/day = 327 kg/day

Setting a 50mg/l discharge standard, the loading from an 8000 p.e. Treatment Plant would be 8000×200 per day $\times 50\text{mg/l} = 80,000,000\text{mg/l}$ per day = 80kg/day . This would give a Total

Ammonium level of 0.3mg/l in the receiving waters, which is well below the 1mg/l level in the Regulations

Un-ionised Ammonia

The amount of ammonia appearing as un-ionised ammonia is related to the temperature and pH and the Total Ammonia level. This is established using Table 5

TABLE 5

pH	Temperature													
	42.0 (°F)	46.4	50.0	53.6	57.2	60.8	64.4	68.0	71.6	75.2	78.8	82.4	86.0	89.6
	6 (°C)	8	10	12	14	16	18	20	22	24	26	28	30	32
7.0	.0013	.0016	.0018	.0022	.0025	.0029	.0034	.0039	.0046	.0052	.0060	.0069	.0080	.0093
7.2	.0021	.0025	.0029	.0034	.0040	.0046	.0054	.0062	.0072	.0083	.0096	.0110	.0126	.0150
7.4	.0034	.0040	.0046	.0054	.0063	.0073	.0085	.0098	.0114	.0131	.0150	.0173	.0198	.0236
7.6	.0053	.0063	.0073	.0086	.0100	.0116	.0134	.0155	.0179	.0206	.0236	.0271	.0310	.0369
7.8	.0084	.0099	.0116	.0135	.0157	.0182	.0211	.0244	.0281	.0322	.0370	.0423	.0482	.0572
8.0	.0133	.0156	.0182	.0212	.0247	.0286	.0330	.0381	.0438	.0502	.0574	.0654	.0743	.0877
8.2	.0210	.0245	.0286	.0332	.0385	.0445	.0514	.0590	.0676	.0772	.0880	.0998	.1129	.1322
8.4	.0328	.0383	.0445	.0517	.0597	.0688	.0790	.0904	.1031	.1171	.1326	.1495	.1678	.1948
8.6	.0510	.0593	.0688	.0795	.0914	.1048	.1197	.1361	.1541	.1737	.1950	.2178	.2422	.2768
8.8	.0785	.0909	.1048	.1204	.1376	.1566	.1773	.1998	.2241	.2500	.2774	.3062	.3362	.3776
9.0	.1190	.1368	.1565	.1782	.2018	.2273	.2546	.2836	.3140	.3456	.3783	.4116	.4453	.4902
9.2	.1763	.2008	.2273	.2558	.2861	.3180	.3512	.3855	.4204	.4557	.4909	.5258	.5599	.6038
9.4	.2533	.2847	.3180	.3526	.3884	.4249	.4618	.4985	.5348	.5702	.6045	.6373	.6685	.7072
9.6	.3496	.3868	.4249	.4633	.5016	.5394	.5762	.6117	.6456	.6777	.7078	.7358	.7617	.7929
9.8	.4600	.5000	.5394	.5778	.6147	.6499	.6831	.7140	.7428	.7692	.7933	.8153	.8351	.8585
10.0	.5745	.6131	.6498	.6844	.7166	.7463	.7735	.7983	.8207	.8408	.8588	.8749	.8892	.9058
10.2	.6815	.7152	.7463	.7746	.8003	.8234	.8441	.8625	.8788	.8933	.9060	.9173	.9271	.9389

The average pH in the Little Arrigle River based on EPA results is 8.25 with a typical summer water temperature of 12 °C. This gives a ratio of un-ionised ammonia to total ammonia of 0.0135. From above the Total Ammonium level after assimilation is 0.298mg/l NH₄ which gives an un-ionized ammonia level of 0.3 x 0.0135 = 0.004mg/l Ionised Ammonia NH₃ which is below the Salmonid standard of 0.02mg/l NH₃

Assimilative Capacity of Receiving Waters for Nitrite

The assimilative capacity for Nitrite as NO₃ is calculated using the formula [(C_{max} - C_{back}) x F₉₅ X 86.4] kg/day

Where

C_{max} = maximum permissible concentration Nitrite mg/l

C_{back} = median background concentration Nitrite mg/l in the receiving waters

F₉₅ = the 95 percentile flow in the river m³/sec

In accordance with the European Communities (Quality of Salmonid Water) Regulations 1998, the maximum permissible concentration of Nitrite is 0.05mg/l. The EPA results from show the median background concentration of Nitrite in the river is 0.022 and the 95 percentile flow, F₉₅, is 4m³/s

The assimilative capacity for Nitrite is $[(0.05-0.022) \times 4 \times 86.4] \text{ kg/day} = 9.68 \text{ kg/day}$

The flow through an 8000 p.e. Treatment Plant would be $8000 \times 200 \text{ litres per day} = 1,600,000 \text{ litres}$. A 5mg/l discharge standard would produce 8,000,000mg or 8kg/day. This is below the assimilative capacity of the river.

In summary therefore, the proposed effluent standards are as follows:

BOD5	SS	ORTHOPHOSPHATES	NITROGEN-N
25mg/l	35mg/l	15mg/l	15mg/l

COD	TOTAL PHOSPHORUS	TOTAL AMMONIUM NH4	NITRITE NO3
125mg/l	2mg/l	50mg/l	5mg/l

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 [Annual Maxima Data](#)

GENERAL STATION DETAILS			
Station Name: Mount Juliet	Station No: 15011	Watercourse: Nore	NGR: S 550 424
Catchment Area (km ²): 2315.5	Catchment: Nore	Gauge Type: L/AR	Datum: Poolbeg

SUMMARY HYDROMETRIC STATISTICS
Annual Average Rainfall (mm) ¹ : 974
Est'd Annual Losses (mm) ¹ : 483
Mean Annual Flow (m ³ /s): 37.327 (Data derived for the period 1945 to 2005)

STATION HISTORY
Period of Continuous Hardcopy Records: 1945 to 2005
Period of Digitised Record: 1945 to 2005

Note 1 : Data extracted from the Environmental Protection Agency publication 'Hydrological Data', July 1997

DURATION PERCENTILES							
Flows equalled or exceeded for the given percentage of time (m ³ /s) (Data derived for the period 1945 to 2005)							
1%	5%	10%	50%	80%	90%	95%	99%
176	113	86.5	24.6	9.70	7.04	5.51	3.21
Levels equalled or exceeded for the given percentage of time (mAOD Poolbeg) (Data derived for the period 1945 to 2005)							
1%	5%	10%	50%	80%	90%	95%	99%
23.29	22.72	22.43	21.63	21.36	21.30	21.26	21.15

COMMENTS / NOTES
No flood flow gaugings



4th July 2007

Mr Denis Malone
Senior Executive Planner
Kilkenny County Council

Re: NOTICE OF A PROPOSED DEVELOPMENT BY A LOCAL AUTHORITY
PROPOSED UPGRADE OF WASTEWATER TREATMENT PLANT AT
GRENAN, THOMASTOWN

A Chara

Kilkenny County Council proposes to upgrade its existing Wastewater Treatment Plant at Grenan, Thomastown to serve a population equivalent of 8000. Please find attached reports on the scheme. A Part V111 Notice was placed on the Kilkenny People in 18th May 2007 inviting submissions or observations in relation to the scheme. Drawings and reports in relation to the scheme were put on display in Thomastown Area Office and County Hall, Kilkenny. One submission was received from the Southern Fisheries Board. Their observations are dealt with in an attached report. I would appreciate your report in relation the proposed development

Mise le meas

Eamon Mahon
Executive Engineer
Water Services

Attachments: Part V111 Notice, Plans and Particulars of Scheme, reports on scheme, submission from Southern Fisheries Board

**LOCAL GOVERNMENT (PLANNING &
DEVELOPMENT), ACT 2000**
PLANNING & DEVELOPMENT Regulations 2001

KILKENNY COUNTY COUNCIL

**WasteWater Treatment Plant at Grenan, Thomastown Co.
Kilkenny**

PLANNING REPORT

**Kilkenny County Council,
County Hall,
John Street,
Kilkenny.**

July 2007

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PLANNING REPORT

Wastewater Treatment Plant at Grenan, Thomastown, Co. Kilkenny.

1. INTRODUCTION

1.1 This report has been prepared for submission to Kilkenny County Council in order to comply with Local Government (Planning and Development) Acts 2000 - 2004, and deals with the proposed upgrading of the Wastewater Treatment Plant at Grenan, Thomastown

1.2 The development will include:-

A 25:35 BOD: SS treatment plant to cater for a population equivalent of 8000 incorporating
Screening and Grit Removal
Ferric Dosing
Automated Pumping Equipment
Balancing and Mixing Tanks
Sequencing Batch Reactors
Sludge Holding Tank

1.3 The scheme was advertised in the "Kilkenny People" and was available for public inspection from the 18th May 2007 until 15th June 2007.

2.1. **Kilkenny County Development Plan.**

Thomastown is one of the scheduled towns of County Kilkenny.

In Volume 1, Section 4.5.2 of the Kilkenny County Development Plan, the upgrade of Thomastown Sewerage scheme is identified as an objective as follows "**Thomastown Sewerage Scheme: Upgrade treatment works, improve and provide new pipe network.**"

Again in Volume 2 of the plan, Section 12 of the Thomastown Development Plan it states that "It will be the policy of the Council to:

2. *Ensure that Thomastown is provided with an adequate foul drainage system, which will comply with all relevant environmental standards.*"

One of the "Sanitary Services Objectives" outlined in Section 12.1 of the Thomastown Plan is "3. *To upgrade treatment works, improve and provide new pipe network for Thomastown Sewerage Scheme.*

To provide conditions in Thomastown which allow it to sustain and strengthen its role as a population centre within County Kilkenny."

3. **SUBMISSION AND OBSERVATIONS RECEIVED AND RESPONSES THERETO**

One submission was received within the official time period from the Southern Fisheries Board. As a result of their submission, alterations have been made to the Discharge Standards. A report has been compiled in relation to this submission and this has been attached to this report.

4. **RECOMENDATION**

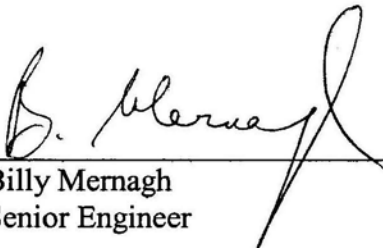
I consider therefore that the proposed scheme to be in compliance with the provisions of the County Development Plan, and to be in accordance with the proper planning and sustainable development of the area.



Denis Malone,
Senior Planner.

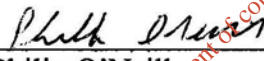
COUNCIL'S INTENTION REGARDING PROPOSED DEVELOPMENT

I recommend that the County Council proceed with the proposed development in accordance with the plans made available for public inspection and taking into account the recommendations made by the Planning and other Service Departments.

SIGNED: 
Billy Mernagh
Senior Engineer

DATE: 09/07/07

I recommend that the County Council proceed with the proposed development in accordance with the plans made available for public inspection, and taking into account the recommendations made by the Planning and other Service Departments.

SIGNED: 
Philip O'Neill
Director of Services

DATE: 9/7/07

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THOMASTOWN

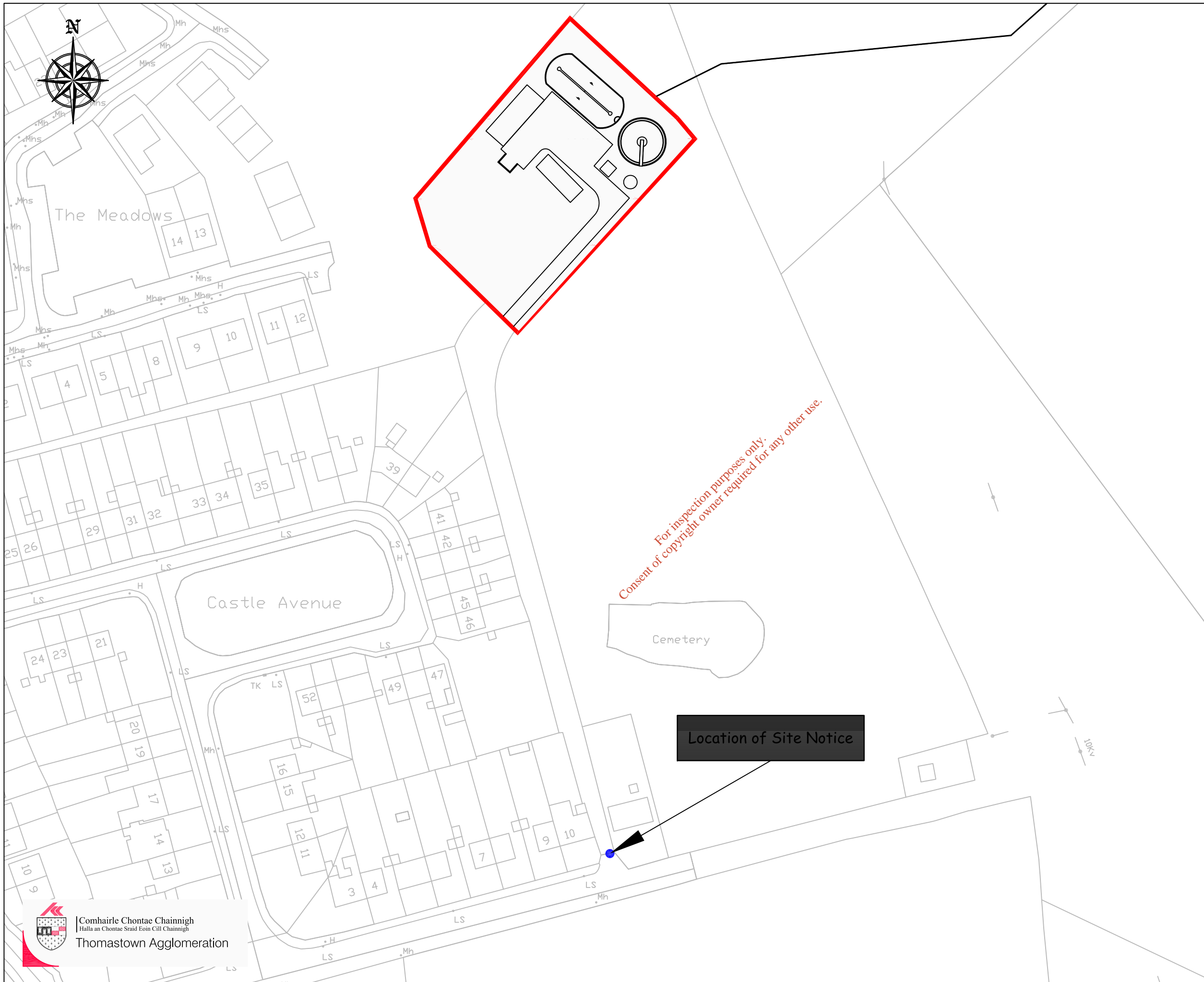
SEWERAGE TREATMENT PLANT SITE

BURRELLSPARK
P·T·R·C AN BHOIR·ALAI·O·M

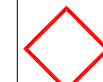

DANGAN
AN DAINGEAN

BASED ON ORDINANCE SURVEY OF IRELAND MAP
LICENSE NO. KILKENNY/CDMA/0007

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Legend:

-  Thomastown WWTP Site Boundary
-  Location of Site Notice

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Location of Site Notice

ALL ORDANCE SURVEY DATA BASED ON ORDANCE SURVEY OF IRELAND MAP LICENCE NUMBER *KILKENNY CCMA 08/12*

REV.	DESCRIPTION	DATE

PROGRESS DESIGN PLANNING TENDER CONSTRUCTION

PROJECT: Thomastown Agglomeration Waste Water Discharge Licence

DRAWING: Thomastown - Location of Site Notice

DRAWN BY: Vincent Gallagher SCALE: 1:1,000

CHECKED BY: DATE: August 2008

FILE NO. DRAWING NO. KK-WWDL-212-B.8.1

Water Services Department

Kilkenny County Council
County Hall John Street Kilkenny
Tel: 056 7794000
Fax: 056 7794004
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Serving People - Preserving Heritage

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B.8.2 Copy of Site Notice

Kilkenny County Council

Waste Water Discharge (Authorisation) Regulations, 2007. (S.I. 684 of 2007).

Application to the Environmental Protection Agency for a Waste Water Discharge Licence

In accordance with the requirements of Sections 9 and 11 of the above Regulations Kilkenny County Council hereby gives notice of the Council's intention to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice and not later than 22nd September 2008.

The Discharge Licence application relates to the discharge from the Thomastown Agglomeration which is served by Thomastown Waste Water Treatment Plant (258906E, 141647N), Grenan, Thomastown, Co. Kilkenny. The sole discharge point (259151E, 141790N) from the Plant discharges directly to the River Nore at Grenan, Thomastown.

Thomastown Waste Water Treatment Plant treats wastewater influents from Thomastown Agglomeration, all such waste waters supplied to the plant from two main pumping stations located at Mill Street and at The Bridge. The sewer network feeding these pump stations includes 5 storm water overflows discharging to the River Nore.

A copy of the application, together with such further information relating to the application as may be furnished to the Agency, shall be made available, as soon as is reasonably practicable post receipt, for public inspection or purchase at the Agency's headquarters, Johnstown Castle Estate, County Wexford.

A copy of the application shall also be available for public inspection or purchase at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008.

A person may make submissions to the Environmental Protection Agency with respect to this application, all such submissions addressed to;

Environmental Protection Agency,
PO Box 3000,
Johnstown Castle Estate,
County Wexford.

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

B.8.3 Photograph KK-WWDL-212- Site Notice In Place



Photo KK-WWDL-212-B.8.3.1 Site Notice Erected



Photo KK-WWDL-212-B.8.3.2 Close up of Site Notice Erected



Mooncoin Regional Water Supply Scheme

Upgrade Works 2008

Due to ongoing works on the upgrading of the Mooncoin Regional Water Supply Scheme, water rationing will continue.

The general areas now affected are: **Kilmacow Village, Dangan, Narrabane, Ullid, Dunkitt, Mooncoin Village, Doornane, Rathkieran, Ballinaboley, Aglish, Green Oaks, Castle Oaks and The Fairway Estates on the Rockshire Road.**

Water will be off from 9pm each evening until 7am each morning commencing Monday evening 15th September 2008 until Saturday morning 20th September 2008.

As a result of low water levels in the Rockshire reservoir, the water tanker will remain in place in the Green Oaks Estate on the Rockshire Road.

Please contact the Water Services Section on 056 – 779 4050 if you need any more information. Updates will be available on www.kilkennycoco.ie and local radio.

Kilkenny County Council apologises for any inconvenience caused.

Kilkenny County Council
Water Services Section
12th September 2008



CALL FOR EXPRESSION OF INTEREST

“Drum” Kilkenny Youth Facility

Kilkenny County Council and the Health Service Executive are jointly promoting the development of “Drum” a new Youth Facility for Kilkenny County. This new facility will be located in the Mc Donagh shopping complex in Kilkenny city and is expected to be opened in early 2009.

The promoters are now requesting expressions of interest from youth service providers to manage and operate a full range of youth services from this new facility.

Individual agencies or organisations experienced in the delivery and provision of youth services on a county wide basis are encouraged to apply. A proven track record of youth service delivery is essential. Joint applications providing expertise in the core disciplines of operating this new facility are also welcomed.

A briefing pack is available from the Community & Enterprise Office at Kilkenny County Hall for interested parties. Formal expressions of interest should be submitted to Director of Services, Housing & Community, County Hall, John Street, Kilkenny before **5pm on Friday 26th September 2008**. All expressions should be marked “Drum” Kilkenny Youth facility.

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Graiguenamanagh-Tinnahinch Agglomeration which is served by Graiguenamanagh Waste Water Treatment Plant (270803E, 142799N), Brandondale, Graiguenamanagh, Co. Kilkenny. The sole discharge point (270837E, 142807N) from the Plant discharges directly to the River Barrow at Brandondale, Graiguenamanagh.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Piltown Agglomeration which is served by Piltown Waste Water Treatment Plant (246085E, 121801N) Ardclone, Piltown, Co. Kilkenny. The sole discharge point (246059E, 121854N) from the Plant discharges directly to the Pil River at Ardclone, Piltown.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Mooncoin Agglomeration which is served by Mooncoin Waste Water Treatment Plant (250405E, 114585N), Doornan, Mooncoin, Co. Kilkenny. The sole discharge point (249835E, 114312N) from the Plant discharges directly to the River Suir Estuary at Doornan, Mooncoin.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Castlecomer Agglomeration which is served by Castlecomer Waste Water Treatment Plant (253556E, 171810N), Smithstown, Castlecomer, Co. Kilkenny. The sole discharge point (253593E, 171608N) from the Plant discharges directly to the Deen River at Smithstown, Castlecomer.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Thomastown Agglomeration which is served by Thomastown Waste Water Treatment Plant (258906E, 141647N), Grenan, Thomastown, Co. Kilkenny. The sole discharge point (259151E, 141790N) from the Plant discharges directly to the River Nore at Grenan, Thomastown.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

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

WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007.

In accordance with the requirements of Section 10 of the above Regulations Kilkenny County Council hereby publishes notice of the Council's intent to make an application to the Environmental Protection Agency for a Discharge Licence. The application shall be made within a period of two weeks from the date of publication of this notice.

The Discharge Licence application relates to the discharge from the Callan Agglomeration which is served by Callan Waste Water Treatment Plant (242012E, 143524N), Drimeen, Callan, Co. Kilkenny. The sole discharge point (242039E, 143535N) from the Plant discharges directly to the River King's River at Drimeen, Callan.

A copy of the Discharge Licence application shall be available for public inspection at the offices of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford and at the offices of Kilkenny County Council, County Hall, John Street, Kilkenny from 22nd September 2008 during normal office hours.

A person may make written submissions to the Agency with respect to this application to be addressed to;
*Environmental Protection Agency,
PO Box 3000, Johnstown Castle Estate,
County Wexford.*

**Michael Arthurs,
Senior Executive Officer,
Water Services,
Kilkenny County Council.**

services for the older person . Under the leadership of Philip O'Reilly (Age Action Advocacy Officer in the South-East) a local committee incorporating reps from Active Retirement Groups, Nursing Homes, the HSE, Social Services and Citizens Information in addition to library staff have been meeting regularly in Loughboy library over the summer months planning an action packed programme for Positive Ageing Week. On the official launch day of Positive Ageing Week: Tues Sept 30th in Springhill Hotel there will be a library stand outlining the many services the library has to offer to the older person and the community at large. All who visit our stand will be entered into a FREE draw for a goodie bag!

The “Over to You”! Programme on KCLR on Wed. Sept. 24th. At 9pm will showcase all of the events taking place in Kilkenny during Positive Ageing Week.

LIBRARY EVENTS “Computers for the Terrified”

Wednesday Oct 1st - 10.30am-1pm (a taster class- an introduction to computers). We will have 2 tutors and 4 computers available for the morning to show you how to turn on your computer, use the mouse, set up e-mail accounts, do simple internet search tips and anything else you want to know but were too terrified to ask up to now! This class is supported and funded by the VEC and is on a drop-in basis so there is no need to book. Details of follow-up classes run by the Social Services will be available on the day.

“Launch of our autumn series of Art and Craft classes”

Thursday Oct 2nd at 11am - Classes which will run for 6 consecutive weeks. Again funded by the VEC and interest is already very strong. There may be some availability left-please check with staff on 77 94176 or email loughboy@kilkennylibrary.ie

CASTLECOMER LIBRARY

Exhibition of Photographs on display in the library from Oct.1st.-4th by Castlecomer Active Retirement Group. Full details of Kilkenny events for Positive Ageing Week are available from Loughboy library, the local newspapers or by logging on to www.ageaction.ie.

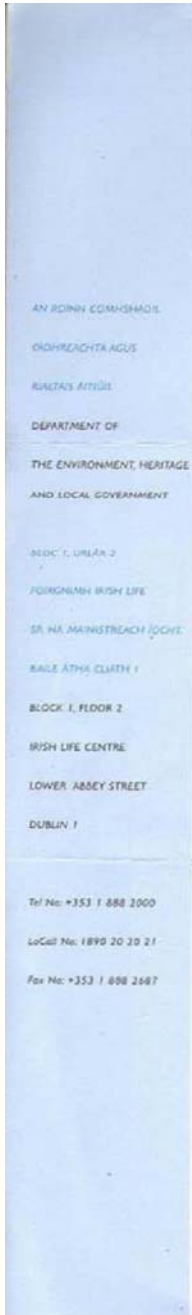
B.9 (ii) Pending Development

Where planning permission has been granted for development(s), but development has not been commenced or completed to date, within the boundary of the agglomeration and this development is being, or is to be, served by the waste water works provide the following information;

- information on the calculated population equivalent (p.e.) to be contributed to the waste water works as a result of those planning permissions granted,
 - 789 PE – potential contributing PE from planning permissions granted but not yet developed
 - 3,925 PE – potential contributing PE from zoned lands in LAP with no planning applications
- the percentage of the projected p.e. to be contributed by the non-domestic activities, and
 - 2% of projected PE to be contributed by non-domestic
- the ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving water habitat.
 - Existing treatment plant has capacity to accommodate this potential extra loading

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B.10 Capital Investment Programme



20th July 2007

Dermot Druhan,
Senior Executive Engineer,
Kilkenny County Council,
County Hall,
John Street
Kilkenny

Re: Thomastown Wastewater Treatment Works Upgrade – Serviced Land Initiative

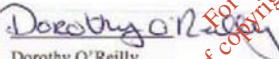
A Chara

I refer to your letter dated 9th July 2007 with regard to the Thomastown Sewerage Scheme SLI scheme proposal.

The Department has examined the scheme proposal and I am to convey to you that the Serviced Land Initiative application as contained in your submission is in accordance with the requirements of Circular LI/07 and that approval is given for the scheme budget of €2,061,444.00 (€824,578.00 exchequer funding) and the proposed construction of the scheme during 2008. In accordance with Circular LI/07 this approval will be valid for two years.

If you have any queries with the aforementioned please contact the undersigned at 01 8882161.

Mise le meas,


Dorothy O'Reilly,
Water Services Section,
Water and Natural Heritage Division



17 Deireadh Fómhair, 2001.



An Rúnai,
Comhairle Chontae Chill Chainnigh,
Halla an Chontae,
Sráid Eoin,
Cill Chainnigh.



Thomastown Sewerage Scheme
Approval of Contract Documents

A Chara,

I am directed by Mr. Noel Dempsey, T.D., Minister for the Environment and Local Government to inform you that this Department has noted Kilkenny County Council's acceptance of the Ward/Burke Construction/Gannon Brothers Ltd. Civil Works tender in the sum of £960,221.03 and the EPS Pumping and Treatment Systems Ltd. Mechanical and Electrical Works tender in the sum of £428,580 for the Thomastown Sewerage Scheme. The Council should ensure that any necessary bond, insurance and tax clearance are in order.

Please note that in addition to the Consultant's recommendation, the award of contracts should be subject to the Local Authority being satisfied as to competency of the nominated appointees to discharge their responsibilities under the Safety, Health and Welfare at Work (Construction) Regulations, 1995 (SI No 138 of 1995).

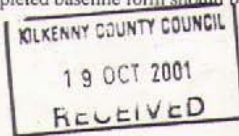
The Council is requested to take account of the following matters:

Contractors/Sureties

The Consulting Engineer should be satisfied as to the competence of the Contractors to implement the contract and the County Manager should be satisfied that the sureties offered are adequate for their due performance.

Contract Arrangements

The Council should make all necessary arrangements to facilitate signing of the contract at an early date. These arrangements should include regular updating of the project costs, if any, to reflect changes to the tender/contract prices. Full baseline figures for the estimated cost of the contract should be provided at this stage as set out in the enclosed forms. Estimates of PVC should cover the complete contract period. The completed baseline form should be returned to this Department immediately.



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AGUS RIALTAIS ÁRTHUI
DEPARTMENT OF
THE ENVIRONMENT AND
LOCAL GOVERNMENT

BLOC 1, URLÁR 2

FOIRGNIMH IRISH LIFE

SR. NA MAINISTREACH IOCHT.

BAILE ÁTHA CLUATH 1

BLOCK 1, FLOOR 2

IRISH LIFE CENTRE

LOWER ABBEY STREET

DUBLIN 1

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LoCall No: 1890 20 20 21

Fax No: +353 1 888 2687

Monitoring/ Administrative Arrangements

Since this is a major contract it is essential that the following monitoring and administrative arrangements are fully complied with. In particular the Council should ensure:

- a) that regular monitoring reports detailing relevant financial and physical indicators are submitted to this Department (these reports should be consistent with the baseline data and any changes should be clearly identified) and
- b) clear accounting procedures are put in place to ensure that payments be made promptly and that the financial aspects of the project can be monitored.

Procedures for Dealing with Cost Variations

Estimates of, or actual increases in, costs on the contract should be notified immediately to this Department. The Council is also reminded of the need to ensure that Departmental approval is granted in advance of any additional works being undertaken, save where emergency and/or safety measures must be undertaken as a matter of urgency.

Costings should if necessary be adjusted regularly and notified to the Department in order that the grant approval position can be reviewed.

Funding/Polluter Pays Report

The Corporation will be aware that the Department awaits the Polluter Pays Principle report as referred to in my letter of 2 March, 2001. In this connection, attention is specifically drawn to the provisions of Circular L11/01 which stipulates that in the absence of the submission and acceptance of the Polluter Pays Report Department funding will be restricted to 60% of the tender cost.

Publicity

The Council is advised that, in accordance with the guidelines contained in Circular IOP 1/2001, the National Development Plan logo should be displayed where appropriate.

Documentation required by the Department.

Kilkenny County Council should now submit the following to the Department as soon as possible:

- written confirmation of the start date of commencement of this contract;
- completed baseline costs forms;
- a report on the application of the Polluter Pays Principle as per circular letters L4/00 and L16/00.

Mise, le meas,

Joseph de Stok
Fearghas de Stok
Water Services Section.
Tel.: (01) 888 2316.

