NOTES

1. Do not scale, use figured dimensions only. If in doubt ask
2. All dimensions to be checked on site
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NORTH

LEGEND

- SPECIAL AREA CONSERVATION
- NATURAL HERITAGE AREA

No.	Date	Drwn	Chkd	Revision Description

Cork County Council, Western Division.

N.O'MAHONY,B.E.,
SENR.ENGR. (WATER SERVICES),
COURTHOUSE, SKIBBEREEN.

M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:
COURTMACSHERRY_WASTE_WATER DISCHARGE_LICENCE_APPLICATION

Drawing Title:
ATTACHMENT_F.1.3
ENVIRONMENTAL_IMPACT_AREAS

Prepared By:	Checked By:	Date:
J.CREAGH	D.GROARKE	FEB.2009

Drawing number:	Scales:	Rev:
COUR_F.1.3_01	1/50000	-

ATTACHMENT No G.1

COMPLIANCE WITH COUNCIL DIRECTIVES

APPLICATION FOR A WASTEWATER DISCHARGE LICENCE

COURTMACSHERRY

Attachment G.1 – Compliance with Council Directives

Capital Investment Programme

It is proposed to construct a new waste water treatment plant on a greenfield site 0.25 km to the west of the village and 0.5 km to the east of Ballynamona House. It is proposed that this plant will also serve the village of Timoleague. The waste water treatment plant will be phased to cater for a load from Courtmacsherry of 2,500 for the year 2015 (Phase 1) and 2,980 pe for horizon year 2030 (Phase 2) with sewer network designed for 3,746 pe for horizon year 2055.

The existing septic tank in Courtmacsherry shall be converted into a pumping station, referred to as Harbour PS, and will deliver flows to the WWTP, via a 1.0 km rising main.

The existing pumping station, referred to as Lodge PS at the Courtmacsherry Hotel will require upgrading to accommodate future development on the eastern side of the village and to limit overflow spill incidences to the Bay to a maximum of seven number per annum.

Strengthening and augmentation of the existing foul/combined system will be required to address lack of capacity (under future loading conditions) and isolated instances of poor sewer condition. It is recommended that the existing 300mm diameter sewer in Main Street, Courtmacsherry be upsized to 450mm diameter for a length of approximately 750 metres in Phase 1.

Foul sewers will be required to provide for future development areas in the villages and the environs. Storm sewers will be required to convey surface water run-off from future development areas. It is envisaged that these sewers will be undertaken in Phase 2.

Waste Water Treatment Plant

A preliminary report has been carried out for the joint upgrading of Courtmacsherry and Timoleague Sewerage Schemes and has received DOEHLG approval. It is proposed that the waste water treatment plant will be constructed as part of a DBO bundle of schemes. The chosen contractor will then design, build and operate the plant for a set period of years.

Under Phase 1 the proposed Waste Water Treatment Plant will be designed and constructed in a modular form for a population equivalent of 4,000 pe to cater for Courtmacsherry and Timoleague. The sewer network will be upgraded and expanded to service existing catchment area.

Phase 2 which is expected to be constructed by 2015 is to include for the modular expansion of the Waste Water Treatment Plant to serve the ultimate design population of 5,000 pe. The sewer network will then be expanded to service future development outside the existing catchment area.

It is considered that the appropriate treatment for the villages would be to adopt the treatment systems, which as a minimum result in compliance with the treatment standards outlined below.

The minimum treatment standards adopted as per the Second Schedule of the Urban Wastewater Treatment Directive for the village are as follows:

Biochemical Oxygen Demand (BOD)	**25 mg/l**
Chemical Oxygen Demand (COD)	**125 mg/l**
Total Suspended Solids (TSS)	**35 mg/l**

All wastewater treatment processes for use with municipal waste involve the use of biological processes to eliminate organic pollution in the receiving waters. The primary objective of biological wastewater treatment processes is the conversion of biodegradable organic materials into microbial biomass, which can be separated by appropriate solids/liquid separation processes, such as sedimentation, flotation etc.

A typical plant would consist in this case of screening, aeration, settlement with return of sludge and sludge treatment and removal. It is proposed that UV disinfection be installed at the WWTP due to the fact that Courtmacsherry Bay is used as an amenity area for fishing and water sports.

The WWTP will include storm water storage and will be designed so that the treated effluent can gravitate down to the existing septic tank and discharge through the existing outfall pipe.
The preferred option for the outfall is to be located at the existing outfall point.

The likely timeframe for the carrying out of these works is as follows:

1. **Preparation of Brief** for the Appointment of Consulting Engineer for Scheme to go forward as Design, Build, Operate (DBO) Scheme by **June 2009**
2. **Approval of Brief** by DOEHLG – **Jan 2010**
3. **Appoint Consultant** – **June 2010**
4. **Design period + Receipt of Tenders** – **December 2012**
5. **Start construction** – **June 2013**
6. **Completion of Works** – **June 2014**

ATTACHMENT No G.3

IMPACT MITIGATION

APPLICATION FOR A WASTEWATER DISCHARGE LICENCE

COURTMACSHERRY

Attachment G.3 – Impact Mitigation

Capital Investment Programme

It is proposed to construct a new waste water treatment plant on a greenfield site 0.25 km to the west of the village and 0.5 km to the east of Ballynamona House. It is proposed that this plant will also serve the village of Timoleague. The waste water treatment plant will be phased to cater for a load from Courtmacsherry of 2,500 for the year 2015 (Phase 1) and 2,980 pe for horizon year 2030 (Phase 2) with sewer network designed for 3,746 pe for horizon year 2055.

The existing septic tank in Courtmacsherry shall be converted into a pumping station, referred to as Harbour PS, and will deliver flows to the WWTP, via a 1.0 km rising main.

The existing pumping station, referred to as Lodge PS at the Courtmacsherry Hotel will require upgrading to accommodate future development on the eastern side of the village and to limit overflow spill incidences to the Bay to a maximum of seven number per annum.

Strengthening and augmentation of the existing foul/combined system will be required to address lack of capacity (under future loading conditions) and isolated instances of poor sewer condition. It is recommended that the existing 300mm diameter sewer in Main Street, Courtmacsherry be upsized to 450mm diameter for a length of approximately 750 metres in Phase 1.

Foul sewers will be required to provide for future development areas in the villages and the environs. Storm sewers will be required to convey surface water run-off from future development areas. It is envisaged that these sewers will be undertaken in Phase 2.

Waste Water Treatment Plant

A preliminary report has been carried out for the joint upgrading of Courtmacsherry and Timoleague Sewerage Schemes and has received DOEHLG approval. It is proposed that the waste water treatment plant will be constructed as part of a DBO bundle of schemes. The chosen contractor will then design, build and operate the plant for a set period of years.

Under Phase 1 the proposed Waste Water Treatment Plant will be designed and constructed in a modular form for a population equivalent of 4,000 pe to cater for Courtmacsherry and Timoleague. The sewer network will be upgraded and expanded to service existing catchment area.

Phase 2 which is expected to be constructed by 2015 is to include for the modular expansion of the Waste Water Treatment Plant to serve the ultimate design population of 5,000 pe. The sewer network will then be expanded to service future development outside the existing catchment area.

It is considered that the appropriate treatment for the villages would be to adopt the treatment systems, which as a minimum result in compliance with the treatment standards outlined below.

The minimum treatment standards adopted as per the Second Schedule of the Urban Wastewater Treatment Directive for the village are as follows:

Biochemical Oxygen Demand (BOD)	**25 mg/l**
Chemical Oxygen Demand (COD)	**125 mg/l**
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All wastewater treatment processes for use with municipal waste involve the use of biological processes to eliminate organic pollution in the receiving waters. The primary objective of biological wastewater treatment processes is the conversion of biodegradable organic materials into microbial biomass, which can be separated by appropriate solids/liquid separation processes, such as sedimentation, flotation etc.

A typical plant would consist in this case of screening, aeration, settlement with return of sludge and sludge treatment and removal. It is proposed that UV disinfection be installed at the WWTP due to the fact that Courtmacsherry Bay is used as an amenity area for fishing and water sports.

The WWTP will include storm water storage and will be designed so that the treated effluent can gravitate down to the existing septic tank and discharge through the existing outfall pipe.
The preferred option for the outfall is to be located at the existing outfall point.

The likely timeframe for the carrying out of these works is as follows:

7. **Preparation of Brief** for the Appointment of Consulting Engineer for Scheme to go forward as Design, Build, Operate (DBO) Scheme by **June 2009**
8. **Approval of Brief** by DOEHLG – **Jan 2010**
9. **Appoint Consultant** – **June 2010**
10. **Design period + Receipt of Tenders** – **December 2012**
11. **Start construction** – **June 2013**
12. **Completion of Works** – **June 2014**

ATTACHMENT No G.4

STORM WATER OVERFLOW

APPLICATION FOR A WASTEWATER DISCHARGE LICENCE

COURTMACSHERRY

Attachment G.4 – Storm Water Overflow

Capital Investment Programme

The following is an extract from the Preliminary Report carried out by J. B. Barry & Partners Consulting Engineers for the proposed Courtmacsherry & Timoleague Sewerage Schemes on this directive:

"This report recommends the construction of one new pumping station in Courtmacsherry (on the site of the existing Septic Tank) and upgrading of the existing pumping station, 'Lodge PS', near Courtmacsherry Hotel as part of the proposed sewerage scheme. These pumping stations will receive combined flows. Emergency storm water overflow facilities will therefore have to be designed as part of these new pumping stations. These new pumping stations will be required to take into account all the relevant guidelines and legislation pertinent at the time of construction.

In the context of Courtmacsherry Sewerage Scheme, the current relevant standards were applied to the overflows from the pumping stations and these were then input to the hydraulic model. Using the model it was decided to limit storm overflows from the pumping stations to Courtmacsherry Bay to 7 (seven) spills per bathing season or flows in excess of Formula A, whichever is more stringent. Storm tanks will be required at the WWTP. The overall installation will comply fully with the criteria and guidelines discussed above.
It is also proposed to screen to 6mm and separate gross solids from the incoming flows.
The design capacity adopted for Courtmacsherry PS is 70 l/s, which is the Formula A flow. The hydraulic model demonstrated that with pump capacity of 70 l/s, the 7 times a year spill regime was not exceeded. The model demonstrates that overflow incidences at the Harbour PS should only occur under the 1 in 5 Year storm.

The existing pumping station referred to as Lodge PS at the Courtmacsherry Hotel will require upgrading to accommodate future development on the eastern side of the village and to limit overflow spill incidences to the Bay to a maximum of seven number per annum."

The likely timeframe for the carrying out of these works is as follows:

13. **Preparation of Brief** for the Appointment of Consulting Engineer for Scheme to go forward as Design, Build, Operate (DBO) Scheme by **June 2009**
14. **Approval of Brief** by DOEHLG – **Jan 2010**
15. **Appoint Consultant** – **June 2010**
16. **Design period + Receipt of Tenders** – **December 2012**
17. **Start construction** – **June 2013**
18. **Completion of Works** – **June 2014**