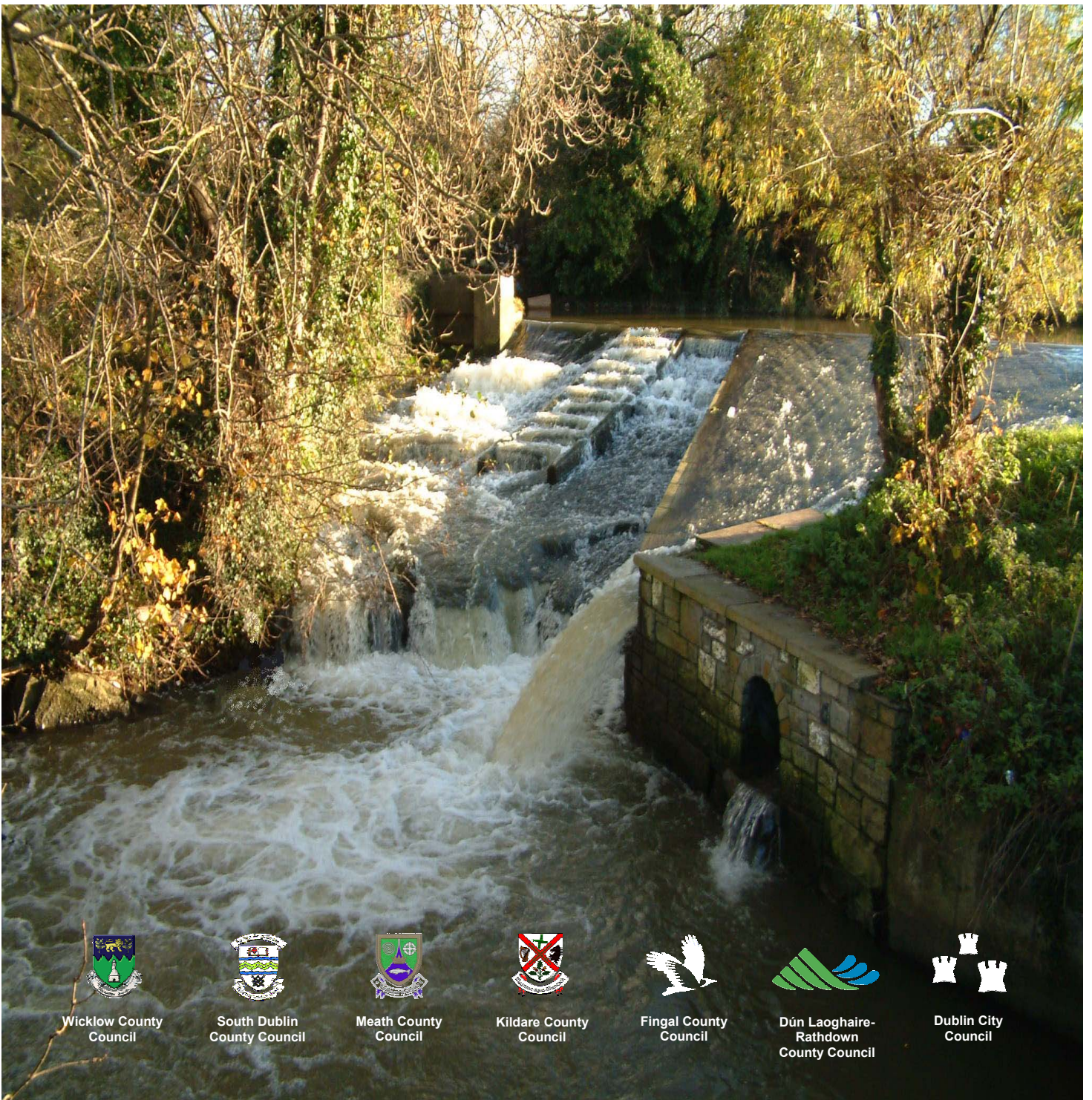


Greater Dublin Regional Code of Practice for Drainage Works

Cód Cleachtais Réigiúnach
Mhórcheantar Bhaile Átha Cliath
le haqhaidh Oibreacha Draenála

Version Draft 6.0



Wicklow County Council



South Dublin County Council



Meath County Council



Kildare County Council



Fingal County Council



Dún Laoghaire-Rathdown County Council



Dublin City Council

CONTENTS

1.	Introduction.....	3
2.	General Guidelines.....	5
3.	Drainage Requirements	7
	3.4. Flushing of Water Main Pipes:.....	8
	3.5. Trade Effluent Discharge:.....	8
	3.6. Ground Water: (Land Drains)	8
	3.7. Swimming Pools:	8
	3.8. Location of Sewers & Manholes to be Taken in Charge:	8
	3.9. Streams, Rivers etc:.....	9
	3.10. Outfalls to Rivers:.....	9
	3.11. Flooding:	9
	3.12. Climate Change:	10
	3.13. Utilities:	10
	3.14. Working in the Public Area:	10
	3.15. Soakaways:.....	10
	3.16. CCTV Survey:.....	10
	3.17. Occupancy:.....	11
	3.18. Basement Drainage:.....	11
4.	Guidelines for Planning and Construction	11
	4.1. Planning:.....	11
	4.2. Prior to Construction:	12
	4.3. During Construction:	12
	4.4. Post Construction:.....	12
	4.5. Getting a Connection:	12
5.	Taking in Charge/post Construction Certification	14
6.	Building Close to a Public Sewer.	15
7.	Sewer Diversions.....	15
8.	Private Drainage.	16
	8.8. Outfall Manholes.....	16
9.	Manholes	17
	9.5. Surface Water Manholes:	17
	9.6. Foul & Combined Manholes:	18
	9.8. Manhole Landings:.....	18
	9.9. Public Sewer Manhole Locations:.....	18
10.	Manhole Cover and Frames.....	19
11.	Pipelines.....	20
	11.3. Pipe Types:.....	20
	11.3.1. Concrete;.....	20
	11.3.2. Clayware;	20
	11.3.3. uPVC;.....	20
	11.3.4. Other;.....	20
	11.5. Pipe Design:.....	20
	11.6. Distance Between Manholes:	21
	11.7. Changes in Pipe Size:	21
	11.8. Bedding Haunching and Surround:.....	21
	11.9. Backfill:.....	21
	11.9.1. Roads;	21
	11.9.2. Landscaped areas;.....	21
12.	Cleansing & Testing Sewers	22
	12.3. Types of Test:	22
	12.3.1. Air Test;.....	22
	12.3.2. Water Test;.....	22
13.	Culverts	23
	13.8. Screens:.....	23
14.	Road Gullies.....	23
	14.2. Positioning of Gullies:	24
	14.3. Sealed Gullies: (Outlets to combined sewers).....	24
	14.4. Unsealed Gullies: (Outlets to surface water sewers).....	24

14.5.	Foundations Slabs:	24
14.6.	Gully Frame & Grating:	24
14.7.	Gully Connections:.....	25
15.	Pumping Stations & Rising Mains	25
15.1.	General	25
15.2.	The Control Room:.....	26
15.3.	Rising Mains:	27
15.4.	Standoff Manholes:	27
16.	Stormwater Management Policy for Developers.....	27
16.5.	SuDS Devices:.....	29
16.6.	Attenuation Tanks/Enlarged Pipes:	29
16.7.	Last Manhole:	30
17.	Guidelines for the Bunding of Overground Oil Storage Tanks	30
18.	Guidelines for the Installation of Grease Removal Systems and Food Macerators.....	31
19.	Contaminated Sites	32
20.	Petrol/Oil Separators & Silt Traps.....	32
21.	Discharging Polluted Rainwater	33
22.	Discharging of ground water.....	33
23.	On-Site wastewater Treatment Plants for Single Dwellings	34
24.	On-Site wastewater Treatment Plants for Other Developments.....	34
Appendix I		
Standard Manholes Detail.		
I.I.	Drawing Notes:	37
I.II.	Type A Manhole:.....	40
I.III.	Type B Manhole:.....	41
I.IV.	Type C Manhole:.....	42
I.V.	Type D Manhole:.....	43
I.VI.	Type E Manhole:.....	44
I.VII.	Type F Manhole (Ramp):.....	45
I.VIII.	Type G Manhole (Backdrop):.....	46
I.IX.	Type H Manhole:.....	47
I.X.	Type J Manhole (precast):	48
I.XI.	Type K Manhole (precast):	49
I.XII.	Type L Manhole (precast):.....	50
I.XV.	Standard Rung & Safety Chain Detail:	52
I.XVI.	Typical Screen Detail:.....	53
Appendix II		
Dublin City Council's Application Forms		
		55
Appendix III		
Dun Laoghaire-Rathdown County Council's Application Forms		
		71
Appendix IV		
Fingal County Council's Application Forms		
		87
Appendix V		
Kildare County Council's Application Forms.....		
		99
Appendix VI		
Meath County Council's Application Forms.....		
		115
Appendix VII		
South Dublin County Council's Application Forms.....		
		123
Appendix VIII		
Wicklow County Council's Application Forms.....		
		142
Appendix IX		
Relevant Standards.....		
		146

1. INTRODUCTION

The Greater Dublin Strategic Drainage Study examined the drainage needs of the Greater Dublin Area and published a final report in Spring 2005.

The report consisted of a Final Strategy Report and Regional Drainage Policies.

The five regional policies cover:

New Development; Environmental Management; Inflow, Infiltration and Exfiltration; Climate Change; Basement Drainage.

These policies are intended to bring a standardised approach to all aspects of drainage that will then be implemented in an integrated, coherent fashion. This will result in a consistent approach to drainage infrastructure planning, design, construction and operation throughout the region. Ultimately this will lead to greater awareness in both the construction industry and an improved customer service for the public. Where a Local Sanitary Authority has specific requirements, these requirements will be highlighted in a box with their name and Logo.

The region includes the local authorities of Dublin City, Dun Laoghaire-Rathdown, Fingal, Kildare, Meath, South Dublin, and Wicklow. These authorities are also the Sanitary Authorities for their respective areas.

The Regional Drainage Policies have been incorporated into the Development Plans for each of these authorities. As such they are to be implemented, through the planning process, for all new developments.

Objectives of Regional Code of Practice

This document, the Regional Code of Practice for Drainage Works, is based on Best Management Practice derived from international experience. The seven Dublin Region Local Authorities have agreed to implement the Greater Dublin Strategic Drainage Study. The Local Authorities' requirements for all new drainage works in the Dublin Region are contained in the GSDSDS Regional Drainage Policies - Technical Documents. Volume 2, New Development is particularly relevant to developers. While the GSDSDS policies remain the over riding documents, this Regional Code of Practice for Drainage Works sets out the requirements of the Local Authorities in a more concise format for day to day use. The implementation of the GSDSDS polices, through the Regional Code of Practice, will provide a sustainable integrated approach to drainage throughout the region.

The interconnected nature of both the foul and surface water network means that environmental impacts can occur far downstream as a result of a discharge in an upstream area.

Hence the need for the unified approach to the management of the entire drainage network.

The main objectives of the Code of Practice are:

- Compliance with best environmental practices and relevant environmental legislation such as the Water Framework Directive.
- To minimise the risk of flooding

- To minimise foul sewage spills to watercourses
- Provide a drainage platform for the sustainable development of the region in the future as required under the Planning and Development Act 2000
- Ensure that all drainage design and construction is consistent across the region, complies with relevant health and safety requirements and ensure compliance with regard to best practice in construction of drainage
- To standardise and codify the drainage requirements across the fields of planning, construction, connection to public drainage infrastructure and the taking in charge of pipelines by local authorities.




2. GENERAL GUIDELINES

Anyone seeking information on drainage issues in their area should contact the relevant environmental/drainage department of their local authority. The contact details are given below:

Access to public sewers is permissible only by prior arrangement with the relevant Sanitary Authority. All necessary Health and Safety requirements regarding access to confined spaces and hazardous areas must be strictly adhered to in entering public sewers.

For general and planning enquiries please contact the relevant head office as indicated below.

Dublin City Council		
<p><u>Head Office,</u> Drainage Reception, Drainage Division, Block 1, Floor 2, Civic Offices, Wood Quay, Dublin 8.</p> <p>Tel: 01 222 2155 Fax: 01 222 2300 Web: www.dublincity.ie</p>	<p><u>North Side Depot.</u> Main Drainage Depot, Bannow Road, Cabra, Dublin 7.</p> <p>Tel: 01 838 3870 Fax: 01 838 4988</p>	<p><u>South Side Depot.</u> Main Drainage Depot, Marrowbone Lane, Dublin 8.</p> <p>Tel: 01 453 1020 Fax: 01 454 7894</p>
Dun Laoghaire-Rathdown County Council		
<p><u>Head Office</u> Dun Laoghaire-Rathdown Environmental Services, Level 3, County Hall, Marine Road, Dun Laoghaire.</p> <p>Tel: 01 205 4700 Fax: 01 230 0125 E-Mail: environ@dlrcoco.ie</p>	<p><u>George's Place Drainage Depot,</u> Dun Laoghaire-Rathdown County Council, 9 George's Place, Dun Laoghaire.</p> <p>Tel: 01 2054831 Fax: 01 2804459 E-Mail: environ@dlrcoco.ie</p>	<p><u>Sandyford Drainage Depot,</u> Dun Laoghaire-Rathdown County Council, Sandyford Reservoir, Enniskerry Road, Sandyford, Co. Dublin.</p> <p>Tel: 01 2955087/2955063 Fax: 00 353 1 2959003 E-Mail: environ@dlrcoco.ie</p>

Fingal County Council 		
<p><u>Head Office,</u> Water Services Department, Fingal County Council, Grove Road, Blanchardstown, Fingal, Dublin 15.</p> <p>Tel: 01 890 5970 Fax: 01 890 5919 Email: waterservices@fingalcoco.ie Web: www.fingalcoco.ie</p>	<p><u>Water Services Depot - Ballycoolin,</u> Fingal County Council, IDA Business Park, Ballycoolin, Blanchardstown, Fingal, Dublin 15.</p> <p>Tel: 01 869 4900 Fax: 01 869 4934</p>	<p><u>Water Services Depot - Swords,</u> Fingal County Council, Castlefarm, Watery Lane, Swords, Fingal, Co. Dublin.</p> <p>Tel: 01 890 5963 Fax: 01 890 5758</p>
Kildare County Council 		
<p><u>Head Office</u> Water Services Section Kildare County Council Aras Chill Dara Naas Co Kildare</p> <p>Tel: 045 980362 Fax: 045 980359</p>	<p><u>Sewerage North</u> Area Engineer Sewerage North Osberstown Sewerage Treatment Works Naas Co. Kildare</p> <p>Tel: 045 880712 Fax: 045 880722</p>	<p><u>Sewerage South</u> Area Engineer Sewerage South Osberstown Treatment Works Naas Co. Kildare</p> <p>Tel: 045 880712</p>
Meath County Council 		
<p><u>Head Office</u> Infrastructural Project Office, Unit 41-42, Navan Enterprise Centre, Trim Road, Navan, Co. Meath</p> <p>Tel: 046 906 7455 Fax: 046 906 7454</p>	<p><u>Ashbourne</u> Ashbourne Civic Offices, 1-2 Killelland Square Upper, Killelland Street, Ashbourne</p> <p>Tel: 01 835 8000 Email: ashbourne@meathcoco.ie</p>	<p><u>Duleek</u> Duleek Civic Offices, Main Street, Duleek,</p> <p>Tel: 01 8358000 Email: duleekstaff@meathcoco.ie</p>

<p><u>Dunshaughlin</u> Dunshaughlin Civic Offices, Drumree Road, Dunshaughlin</p> <p>Tel: 01 801 1100 Fax: 01 825 8277 Email: dunshaugh@meathcoco.ie</p>	<p><u>Kells</u> Kells Civic Offices, Town Hall, Headfort Place, Kells</p> <p>Tel: 046 924 0076 Email: kells@meathcoco.ie</p>	<p><u>Trim</u> Trim Civic Offices, Mornington House, Summerhill Road, Trim</p> <p>Tel: 046 9431239 Email: trim@meathcoco.ie</p>
<p>South Dublin County Council</p> 		
<p><u>Head Office,</u> Environmental Services Department, County Hall, Town Centre, Tallaght, Dublin 24</p> <p>Tel: 01 414 9000 Fax: 01 414 9101 Email: drainageoperations@sdblincoco.ie</p>	<p><u>Depot</u> Drainage Operations, Deansrath House, New Nangor Road, Clondalkin, Dublin 22.</p> <p>Tel: 01 457 0784/5/6 Fax: 01 457 4878</p>	
<p>Wicklow County Council</p> 		
<p><u>Head Office,</u> Water Services Section, Wicklow Co. Council, County Buildings, Station Road, Wicklow.</p>	<p>Tel: 0404 20 100 Fax: 0404 67 792 Email: env@wicklowcoco.ie</p>	

3. DRAINAGE REQUIREMENTS

The Local Sanitary Authority is available to discuss development proposals at all stages and will provide assistance to ensure that all drainage requirements are dealt with in a satisfactory manner.

- 3.1. Pipeline material type, manhole, road drainage, gully details or any other drainage related detail must be in compliance with this Code of Practice.
- 3.2. The proposed development shall be drained on a completely separate system. All new developments must incorporate Sustainable Drainage Systems (SuDS). In the unlikely event of this not being feasible the Developer must provide alternative means of dealing with pollutants. Rainwater should be infiltrated to the ground and/or discharged via a SuDS system to a surface water drain or watercourse while all other effluent including wastewater from

washing machines, dishwashers and other sources shall discharge to the foul drainage systems. More information on SuDS is contained in the Greater Dublin Strategic Drainage Study (GSDSDS), Volume 2, Technical Document on New Development.

- 3.3.** The Developer shall take all necessary precautions to avoid causing any damage or interference with flow in existing public sewers and shall ensure that debris, silt, mud, grease, concrete, concrete wash, oil etc. does not enter the sewer. Any damage or interference with the public drainage system shall be rectified at the Developer's expense. This is especially important during the construction phase of the development.

Dublin City Council Development Plan States "It is the policy of Dublin City Council to require all significant developments to submit, prior to commencement of developments, details of a Sediment and Water Pollution Control Plan, for the agreement of the Drainage and Environmental Division."

3.4. Flushing of Water Main Pipes:

Chlorinated water used for flushing pipes should be discharged to the foul sewer and **not**, to the surface water system.

3.5. Trade Effluent Discharge:

- 3.5.1.** The pumping of any waters from a construction site, whether surface water or ground water may require a discharge licence to be issued in accordance with the Local Government (Water Pollution) Acts 1977 & 1990, as amended. The Sanitary Authority must be contacted by the developer, prior to commencement of works on site in order to discuss licence requirements and proposals for control of water pollution on site. Copies of application forms can be obtained from the appendices to this document or from the relevant Sanitary Authority.

- 3.5.2.** The discharge of any other trade effluent from a site may require a discharge licence to be issued in accordance with the Local Government (Water Pollution) Acts 1977 & 1990, as amended. The Sanitary Authority must be contacted by the developer, prior to commencement of works on site in order to discuss licence requirements. Copies of application forms can be obtained from the appendices to this document or from the relevant Sanitary Authority.

- 3.5.3.** The Developer shall take any additional measures required to ensure that no discharge from their site shall impair the quality of waters in the area.

3.6. Ground Water: (Land Drains)

It is not permitted to discharge ground water into the public foul/combined sewer system. All below ground structures, such as basements, etc. should be constructed so that no permanent discharge of groundwater is necessary.

3.7. Swimming Pools:

Limits for discharging into the public sewer system are to be agreed with the Local Sanitary Authority. These rates should include discharge limits from backwashing and discharge limits for emptying the pool. In general the discharge rate should not exceed 5 l/s for an agreed time period. All such discharges shall be into a foul or combined sewer.

3.8. Location of Sewers & Manholes to be Taken in Charge:

To allow for adequate access for maintenance the following must be complied with:

- 3.8.1. Sewers and manholes shall be located in public pavements, roads or in public open spaces.
- 3.8.2. A minimum clear distance of three metres between the outside diameter of the pipe and all structures shall be maintained to allow for future access and maintenance of the pipeline. Foundations and basements of adjacent buildings should be designed to ensure that no extra loads are transferred to the pipeline. Also see Section 6.
- 3.8.3. Vehicular access shall be maintained to all public manholes.

3.9. Streams, Rivers etc:

- 3.9.1. In general watercourses are not to be culverted or piped. They should remain open in their natural valley, which should be incorporated into the public open space. Culverting should be confined to road crossings and should be sufficiently large to prevent blockage, allow runoff from a one in a hundred rain event and to allow for man entry for maintenance purposes. Permission must be obtained from the OPW (under a section 50 licence) to construct any culvert or bridge.
- 3.9.2. All proposed structures must be set back from the edge of any watercourse to allow access for channel cleaning/maintenance. A 15 meters wide riparian buffer strip each side of the watercourse is required. However, in dense urban areas the width of the riparian buffer strip is to be agreed with the Local Sanitary Authority.

3.10. Outfalls to Rivers:

Surface water outfalls to streams, rivers, etc. should be unobtrusive and not cause erosion of the bed and banks. A suitable non-return device should be fitted on the outfall pipeline. The Local Sanitary Authority must approve all design details.

3.11. Flooding:

- 3.11.1. It is a policy to control development in the natural flood plain of a river and to develop guidelines, in co-operation with the Local Sanitary Authority, for permitted development in the different flood risk category areas.
- 3.11.2. The risk categories for future development are:
 - 3.11.2.1. Low Risk: No restrictions to development.
 - 3.11.2.2. Medium Risk: Development may be allowed following the recommendations of a flood impact assessment.
 - 3.11.2.3. High Risk: Limited development may be allowed subject to a flood impact assessment, flood defences and warning facilities been approved by the Local Sanitary Authority
 - 3.11.2.4. Known Areas of Flooding: As a rule development is not permitted in known a flood plain.

Where flood risk maps are not available the Developer will be required to carry out a flood risk assessment in accordance with the above requirements. Where the development has the potential to reduce flood plain storage and/or the potential to increase the flood risk in the relevant catchments the Developer must satisfy the Local Sanitary Authority that the appropriate risk reduction measures can be put in place to offset any increased risk of flooding. For further information see Section 2.6 of the GSDS New Development document.

3.12. Climate Change:

All new development must allow for climate change as set out in the GSDS Technical Document, Volume 5, Climate Change. The key points are listed in the following table.

Climate Change Category	Characteristics
River flows	20% increase in flows for all return periods up to 100 years
Sea level	450+mm rise (see Climate Change policy document for sea levels as a function of return period)
Rainfall	10% increase in depth (factor all intensities by 1.1)

3.13. Utilities:

For access and maintenance purposes, **no** ducts, pipelines and/or cables shall be laid within 1m of the outside of the sewer and 1.5m for sewers deeper than 2.0 meters. In no circumstances shall a utility provider install services through a manhole or sewer. Any utility crossing a sewer is to have a minimum clearance distance of 300mm from the outside of the sewer. Utility providers should contact the local drainage office to ascertain the location of all drainage assets.

3.14. Working in the Public Area:

Developers carrying out drainage work in the public area must have advance written permission from the Local Sanitary Authority, the relevant Roads Department/Traffic Authority and/or the Parks Authority. **Under no circumstances** is any work to commence without written permission from the above departments. All permits must be held on site and available for inspection at all times.

3.15. Soakaways:

Soakaways, filter drains and similar infiltration systems may be used for the disposal of surface water from buildings and paved areas and must comply with the relevant documents, including BRE Digest 365, CIRIA C522.

3.16. CCTV Survey:

- 3.16.1.** Where the Local Sanitary Authority has concerns about the condition of a pipeline the Developer may be asked to carry out a pre- and post-construction CCTV survey to ascertain the condition of the pipeline. The pre-construction survey is to be submitted to the Local Sanitary Authority prior to works commencing on site. Any necessary repair shall be carried out on the direction of the Local Sanitary Authority. The post-construction survey is to be submitted to the Local Sanitary Authority and any damage caused to the pipeline as a result of construction shall be rectified at the Developer's expense.
- 3.16.2.** Should the Developer request the Local Sanitary Authority to "take in charge" any drainage infrastructure a post-construction CCTV Survey (by an approved Contractor) and as Constructed Drawings of all main pipelines must be submitted to Local Sanitary Authority (refers to section 5) in a format and to a standard specified by the Local Sanitary Authority. This must be submitted no later than the completion of each phase of the development works on site.

3.17. Occupancy:

No dwelling unit may be occupied before its drainage is connected to the public sewerage system in the approved manner.

3.18. Basement Drainage:

All drainage from basement areas shall be pumped to ground level prior to discharging by gravity to the public drainage system. Basement car parks must be discharged to the foul system via a petrol/oil interceptor. Access to basement car parks should be designed such that surface water run-off from the surrounding paved areas cannot flow down the ramp. Further information is available in the GSDSDS Technical Document, Volume 6, Basements.

4. GUIDELINES FOR PLANNING AND CONSTRUCTION

This section gives an outline of the main steps in the planning/development process and is intended to act as a guide for developers.

All applications for connections either directly to the public sewer or into a private system discharging to the public system must be submitted to the relevant Local Sanitary Authority for written approval.

4.1. Planning:

4.1.1. The Developer must consult with the Local Sanitary Authority as early as possible prior to submission of any planning application, in order to obtain relevant drainage information and to ascertain drainage requirements.

4.1.2. Full drainage details, including calculations, must be submitted with the planning application.

4.1.3. The Developer shall be responsible for locating, providing for and if necessary, protecting all existing pipelines on site.

4.1.4. The Developer shall limit storm water discharge from the proposed development in accordance with the GSDSDS Technical Documents, Volume 2, New Development Policy. The key criteria are as follows but readers should consult the above document.

- 4.1.4.1. River Water Quality Protection,
- 4.1.4.2. River Regime Protection,
- 4.1.4.3. Flooding (of site),
- 4.1.4.4. Flooding (of river)

These criteria are further detailed in section 16 of this document.

4.1.5. All new developments must allow for Climate Change as set out in the GSDSDS Technical Documents, Volume 5, Climate Change.

4.1.6. The lines of all private drainage crossing the site must be established and incorporated in the proposed scheme with the owner's permission.

4.1.7. All drainage works are to be constructed to the standard of this Code of Practice.

4.1.8. The Developer is responsible for establishing the adequacy of any existing private drainage to which they propose to connect their development. The Developers attention is drawn to the fact that it is their responsibility to obtain all necessary permission from the owners of the private drainage system to which it is intended to connect to.

4.1.9. The landscaping design must take cognisance of the drainage layout in order to protect the structural integrity of the drainage pipes from damage from plant roots.

4.2. Prior to Construction:

- 4.2.1. When required, the Developer must submit detailed drainage drawings to the Local Sanitary Authority for approval. To avoid delays in commencement of construction of a development, drawings should be submitted a minimum of four weeks in advance of any onsite work commencing.
- 4.2.2. If there is to be any pumping of groundwater or discharge of any other trade effluent, under the relevant Water Pollution Acts, the Developer is obliged to apply for a licence from the Local Sanitary Authority.
- 4.2.3. The Local Sanitary Authority must be notified at least 10 days in advance of the commencement of any proposed drainage works.

4.3. During Construction:

- 4.3.1. The Local Sanitary Authority reserves the right to inspect drainage works on site to ensure compliance with both this Code of Practice and the relevant grant of planning permission.
- 4.3.2. The Local Sanitary Authority should approve any changes to the agreed drainage drawings.
- 4.3.3. Pipelines and manholes are to be inspected and tested as required by the Local Sanitary Authority. The Local Sanitary Authority shall be afforded the opportunity to attend the pipe line testing and should be given three working days notice of same. A connection to the public system will not be granted until evidence of the pipeline/s having passed the relevant test is submitted.
- 4.3.4. Where work is to be carried out in the public roadway, consent must be obtained from the Local Sanitary Authority, the relevant Roads Department/Traffic Authority and any other relevant body.

4.4. Post Construction:

- 4.4.1. On completion of construction works, all sewers shall be thoroughly cleansed to ensure that no construction material enters the public sewer system.
- 4.4.2. The Local Sanitary Authority may require a condition survey to be carried out on all main pipelines, this is to include both a CCTV survey and a written report.
- 4.4.3. For taking in charge procedures please see Section 12, Cleansing and Testing Sewers.

4.5. Getting a Connection:

Please see the Appendices for the relevant application forms for each Local Sanitary Authority. All applications for connections either directly to the public sewer or into a private system discharging to the public system must be submitted to the relevant Local Sanitary Authority for written approval.

- 4.5.1. **The Local Sanitary Authority will only grant a connection to the public drainage system or to a private drainage system discharging to a public sewer when construction of the on-site drainage, including outfall manholes, is completed to their satisfaction.**
- 4.5.2. A connection to the public sewer system must be applied for as early as possible to avoid delay.
- 4.5.3. When the Local Sanitary Authority carries out or supervises connections to the public sewers, they do this at the Developer's expense.

- 4.5.4. The Local Sanitary Authority is responsible for granting all new connections to the public drainage system. Please contact your Local Sanitary Authority for details and application form or see appendices.
- 4.5.5. No connections are permitted to the public drainage network without the express permission of the Local Sanitary Authority. Unauthorised connections will be removed and all associated costs incurred by the Local Sanitary Authority will be recovered from the Developer.
- 4.5.6. The connection pipe should be kept as high as possible leaving the site, avoiding any service utility, etc. in its path, to ensure the connection enters the public sewer as high as possible as shown below.

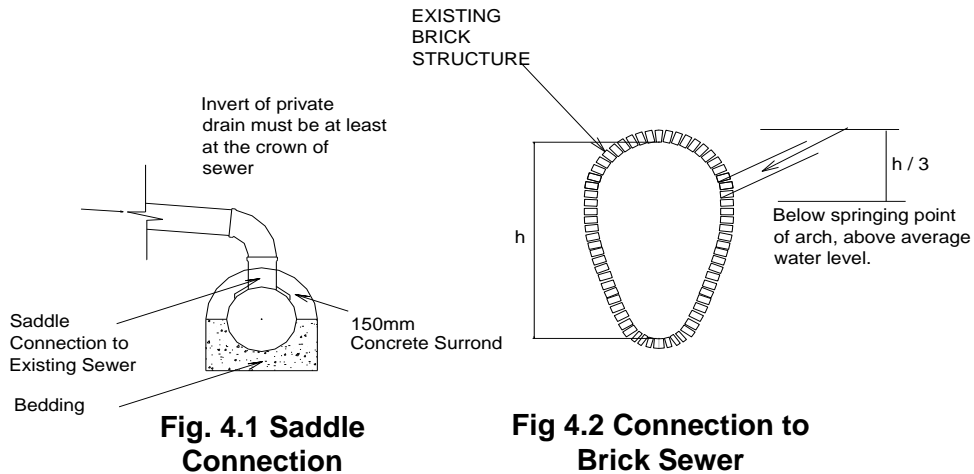
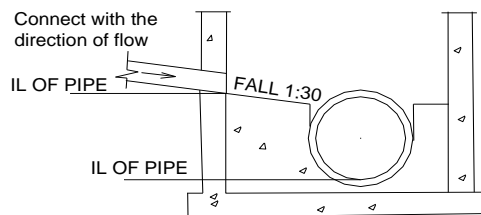


Fig. 4.1 Saddle Connection


Fig 4.2 Connection to Brick Sewer



4.3 Fig. Connection to Manhole

- 4.5.7. Connections to the public drainage system must be made with the direction of flow.
- 4.5.8. Before any connection will be granted to the public drainage system the Developer must provide full drainage details as itemised in section 4.
- 4.5.9. Outfall manholes are to be constructed to the requirement of the Local Sanitary Authority.

DCC Area Only

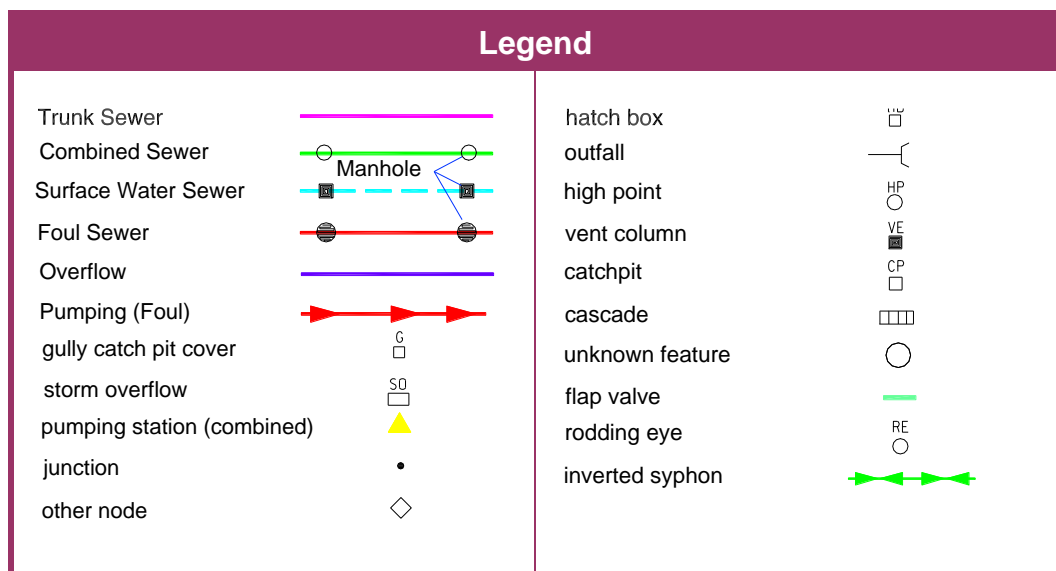


4.5.10. In the Dublin City Council area attention is drawn to the detail for connection to a combined sewer, see fig. I.IX in appendix I.

5. TAKING IN CHARGE/POST CONSTRUCTION CERTIFICATION

The Local Sanitary Authority will only “take in charge” drainage infrastructure which has been constructed to the required standard. All defects identified during post construction surveys will have to be rectified at the Developers expense before the Local Sanitary Authority will take the infrastructure “in charge”.

- 5.1. All drainage works are to be constructed to the requirements of this Code of Practice and any additional requirements of the Local Sanitary Authority.
- 5.2. On completion of construction works, all sewers shall be thoroughly cleansed, ensuring that no construction material reaches the public sewerage system. They shall be maintained in a clean and serviceable condition, prior to them being taken in charge.
- 5.3. A condition survey shall be carried out, at the Developer’s expense, on all main pipelines to the requirement of the Local Sanitary Authority. This is to include a CCTV survey and a written report as specified in the latest edition of the WRC (Water Research Council) Sewerage Rehabilitation Manual.



- 5.4. Detailed “as-constructed” drainage layouts, both hard copy and soft copy, in an approved format, are to be submitted by the Developer to the Local Sanitary Authority for written approval. The as constructed package must include the following;
 - 5.4.1. Manhole’s Easting and Northing co-ordinates, cover and invert level, upstream and downstream pipe diameter, material and direction of flow.
 - 5.4.2. The layout should be accurately positioned (+/- 300mm relative to local detail) on the latest published version of the ordnance survey 1:1000 series.
 - 5.4.3. All dimensions shall be metric.
 - 5.4.4. All levels must be related to Ordnance Survey Datum, Malin Head, to an accuracy of +/- 25mm and stating which benchmark was used.
 - 5.4.5. A list of the National Grid Co-ordinates (accurate to +/- 300mm) for the manholes should be supplied.
- 5.5. Drawings shall be prepared to the format shown above and this legend shall be included on the drawing.

- 5.6. The Local Sanitary Authority may require quality control checks to be carried out on site, to verify the “as-constructed” package, under the supervision of the Local Sanitary Authority.

6. **BUILDING CLOSE TO A PUBLIC SEWER.**

In order to protect the public drainage infrastructure on or adjacent to a site, the following conditions will apply:

- 6.1. No building may be constructed over the line of a public sewer; as per the Public Health Act 1878. The Local Sanitary Authority requires a **minimum** clear distance of three metres to be maintained between sewers and all structures on site, including basement and foundations. Details of overhanging structures such as balconies must be agreed with the Local Sanitary Authority. This minimum clear distance will be increased if the sewer is greater than 3m deep or is greater than 375mm in diameter. See GDSDS Technical Documents on New Developments for more information.
- 6.2. Foundation layout shall be submitted for the written approval of the Local Sanitary Authority, to show that no extra building load will be placed on the sewer.
- 6.3. A sewer condition survey (CCTV) of the sewer shall be carried out at the Developer's expense both before and after construction, to the requirements of the Local Sanitary Authority. Any damage to the sewer shall be notified to the Local Sanitary Authority and rectified at the Developer's expense.

For further information and guidance see the Greater Dublin Strategic Drainage Study, Volume 2, New Development Policy.

7. **SEWER DIVERSIONS.**

- 7.1. No sewer shall be diverted, re-laid or altered without the express written permission of the Local Sanitary Authority. Proposal for sewer diversions including all necessary future wayleaves should be submitted to the Local Sanitary Authority for written approval. Any diversion shall not adversely affect the hydraulic capacity or maintenance of the sewer.
- 7.2. The Developer shall arrange at their own expense to have a sewer condition survey (CCTV) carried out on the sewer that is to be diverted, to the requirements of Local Sanitary Authority. Any connections live or currently unused must be accommodated within the development and then re-connected to the active diverted sewer.
- 7.3. Abandoned sewers must be grubbed up or filled with concrete and disused connections properly sealed to the approval of the Local Sanitary Authority.
- 7.4. Ownership of newly diverted sewers and associated wayleaves must be transferred to the Local Sanitary Authority upon satisfactory completion of construction.

8. PRIVATE DRAINAGE.

- 8.1.** It is the responsibility of the Developer to ensure that all private drainage complies with the current Building Regulations and are constructed to the requirements of this Code of Practice.
- 8.2.** All private drains, down pipes, gullies, manholes, Armstrong Junctions and similar private fittings are to be located within the final site boundary, i.e. on private property, with the exception of the private drain connection to the public sewer.
- 8.3.** All drainage from basement level shall be pumped to ground level to a standoff manhole (see Fig 15.2) before falling by gravity to the public foul sewer. Direct pumped connections to the public sewer are **not** permitted.
- 8.4.** The Developer is responsible for establishing the adequacy of any existing private drainage to which they propose to connect their development and must obtain all necessary permission from the owners of the private drainage system.
- 8.5.** Private drainage should not pass through property it does not serve.
- 8.6.** A Grease Recovery Unit (GRU) must be fitted on the outlet from all kitchen sinks within Food Services Establishments (FSE) and apartment buildings subject to the requirements of the Local Sanitary Authority. They must also be fitted on any commercial scale food preparation locations.
- 8.6.1.** In general the use of degreasing agents and enzymes for the breakdown of grease is not permitted. However, the Local Sanitary Authority, in certain circumstances, may approve them for limited use.
- 8.7.** The use of under sink macerators/food grinders for processing and discharging waste food to the drainage system is not permitted.
- 8.8. Outfall Manholes**
- 8.8.1.** All outfall manholes must be kept structurally independent of each other.
- 8.8.2.** They must be kept within the final site boundary.
- 8.8.3.** In general they shall be 1.2 metres to 1.5 metres deep.
- 8.8.4.** Outfall manholes constructed in the basement shall be accessed from ground floor level.

DCC Area Only



- 8.9.** In the Dublin City Council area private foul drains shall be fitted with an approved intercepting trap. This is to be fitted in the final outfall manhole which is to be located within private property.
- 8.10.** All apartment complexes must have separate interceptor tap servicing the individually blocks.

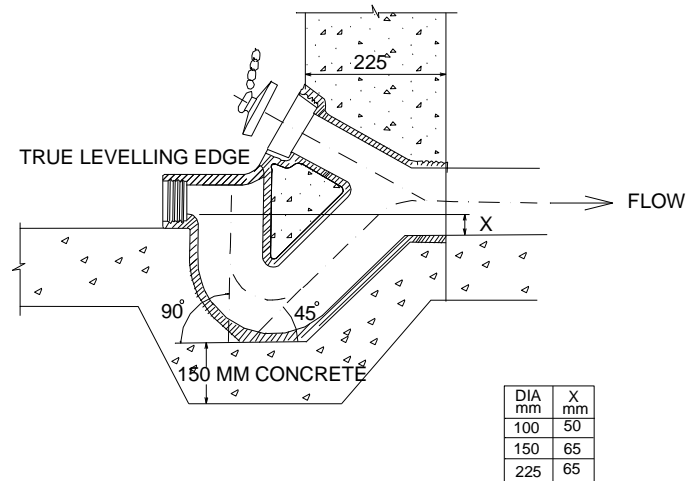


Fig 8.1 Detail of Interceptor Trap in Manhole

8.11. For estates and apartment complex a spine sewer must be laid down all main roads and the individual apartment blocks and/or blocks of houses must connect to this through an outfall manhole complete with interceptor trap. These spine sewers are to be built as per this code of practice.

9. MANHOLES

All manholes shall be constructed in accordance with the Local Sanitary Authority requirements (see appendix I for details). Copies are freely available on request from your Local Sanitary Authority who can be contacted at the address on the back cover.

- 9.1. Manholes shall be watertight and not liable to infiltration
- 9.2. Construction of all foul manholes must be such as to withstand sulphate attack.
- 9.3. The open channel shall extend across the full width of the manhole.
- 9.4. A safety chain must be fitted on the down stream pipe where the pipe diameter exceeds 450mm.
- 9.5. **Surface Water Manholes:**
 These manholes shall be constructed in either;
 - High Density Block
High Density block work, flush pointed and **not** plastered, in accordance with IS 20, designation S10 or equivalent.
 - Or
 - Cast in situ
In-Situ Concrete, Class 30N/20mm.
The minimum wall thickness is to be 225mm. Higher thicknesses may be required under main roads.
 - Or
 - Pre-Cast Manholes
Pre-cast concrete manhole units shall comply with the relevant B.S. standard or equivalent and with the requirements of the Local Sanitary Authority,

which in general requires the manhole to be surrounded with concrete class B, to a minimum thickness of 150mm.

An internal diameter of 1200mm minimum is required for manhole shafts not greater than 3.0m in depth on pipe sizes not greater than 750mm nominal diameter. Joints shall be sealed with an approved preformed jointing strip applied strictly in accordance with the manufacturer's instructions. Lifting holes in precast units shall be cleaned and filled with cement mortar. Thereafter design to be agreed with the Sanitary Authority.

9.6. Foul & Combined Manholes:

These manholes shall be constructed of either;

High Density Block

Block work is to be flush pointed and **not** plastered, in accordance with IS 20, designation S10, or equivalent, and lined internally with solid engineering brick to IS 91 or equivalent, to a height of 1 metre above benching. Brick to be bonded to the block work using English Garden Wall Bond.

Or

Cast in situ

In situ concrete, Class 30N/20mm.

The minimum wall thickness is to be 225mm. Higher thicknesses may be required under main roads.

Or

Pre-Cast Manholes

Pre-cast concrete manhole units shall comply with B.S. 591 1 and with the requirements of the Local Sanitary Authority, which in general requires the manhole to be surrounded with concrete class B, to a minimum thickness of 150mm.

An internal diameter of 1200mm minimum is required for manhole shafts not greater than 3.0m in depth on pipe sizes not greater than 750mm nominal diameter. Joints shall be sealed with an approved preformed jointing strip applied strictly in accordance with the manufacturer's instructions. Lifting holes in pre-cast units shall be cleaned and filled with cement mortar. Thereafter design to be agreed with the Sanitary Authority.

DCC Area Only



9.7. Dublin City Council will not approve the use of pre-cast concrete manholes.

9.8. Manhole Landings:

For deep manholes, greater than 6 metres, intermediate platforms must be installed as required. Manhole landings and the fitting of safety chains/rails in manholes shall be designed to allow for safe access and egress within the chamber, these details are to be agreed with the Local Sanitary Authority.

9.9. Public Sewer Manhole Locations:

To allow for adequate access for maintenance the following must be complied with:

- 9.9.1. Sewers and manholes shall be located in public pavements, roads or in public open spaces.
- 9.9.2. A minimum clear distance of three metres shall be maintained between a manhole and any adjacent structures.
- 9.9.3. Vehicular access shall be maintained to all public manholes.
- 9.9.4. Where manholes are located in a car park they shall not be under a designated parking space.
- 9.9.5. Manholes should not be located in areas where they may be covered by attenuated floodwater ie. manholes cannot be placed in swales, ponds, etc.

10. MANHOLE COVER AND FRAMES

- 10.1. All Manhole covers and frames shall comply with IS/EN 124, Class D400 (or E600 for heavily trafficked main roads).
- 10.2. Each cover and frame shall have clearly marked thereon:
 - 10.2.1. I.S./EN 124:1994 – class D400 or E600.
 - 10.2.2. The name and/or identification mark of the manufacturer and the place of manufacture.
 - 10.2.3. The year of manufacture.
 - 10.2.4. Mark of the certification body.
- 10.3. Manhole covers with paving brick inserts are not accepted on the public drainage system.
- 10.4. Specific details for covers shall be agreed with the Local Sanitary Authority. Generally frames shall be square, with a circular insert with a minimum diameter of 600mm and a minimum depth of 100mm. Heavily trafficked roads will require a 150mm deep frame. All covers must be of a non-rock design.

DCC Area Only



- 10.4.1. For the Dublin City Council area, two closed keyways shall be provided in each cover. Double triangular covers shall have a closed keyway in each half cover, which shall be bolted together so that complete covers cannot fall through into manhole shafts.

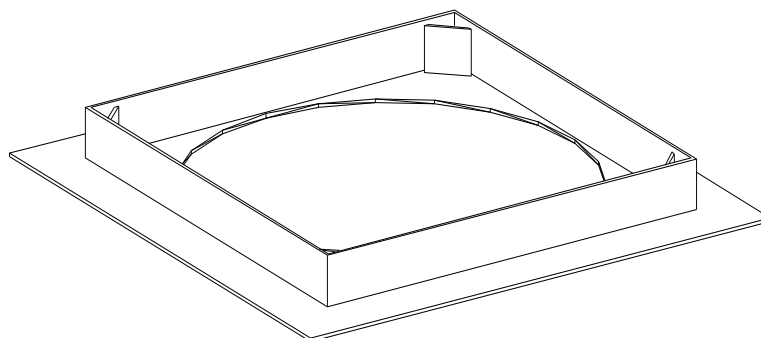


Fig. 10.1 Manhole frame with Circular Insert

- 10.5.** Covers shall be set in position flush with the finished ground level whether roads, pavements or open ground.

11. PIPELINES.

- 11.1.** All Pipelines are to be constructed in accordance with the requirements of both this Code of Practice and the Local Sanitary Authority.

- 11.2.** All sewerage systems should be designed to minimise the production of Hydrogen Sulphide and that Sulphate Resistant Concrete should be used in any case where H₂S production may occur.

11.3. Pipe Types:

The following must be used in the construction of main pipelines or connections from gullies or private drains. The List below applies to all the Local Sanitary Authorities apart from Dublin City Council who do not approve the use of uPVC pipes in the public area.

11.3.1. Concrete;

Concrete sewer pipes with spigot and socket joints and rubber rings fittings to comply with IS EN 1916 and IS 6 2004 or equivalent standard. Class M or class H.

11.3.2. Clayware;

Vitrified clay pipes and fittings must comply with the requirements of I.S./EN 295-1/2/3:1992 or equivalent standard. Class 160 or 200.

11.3.3. uPVC;

Unplasticised P.V.C. pipes must comply with the "Provisional Specification for Soil Pipes, Drains, Sewers and Fittings made of unplasticised P.V.C." issued by the Department of the Environment.

B.S. 8005: Part 1 – Sewerage or equivalent;

B.S. 8010: Part 2 - Pipelines on land or equivalent: design, construction and installation;

B.S. 5955: Part 6 Code of Practice for the Installation of unplasticised P.V.C. Pipework for Gravity Drains and Sewers or equivalent

EN1401 – Unplasticised P.V.C. sewer pipe specification

B.S.4514 – Unplasticised P.V.C. soil pipe specification

DoEHLG 'Site Development Works' and Section H of the Building Regulations

11.3.4. Other;

The use of alternative pipe types requires the prior express written approval of the Local Sanitary Authority.

- 11.3.5.** Pipe material should not change between manholes.

- 11.3.6.** The installation of sewers by pipejacking/drilling should have the prior written approval of the Local Sanitary Authority.

- 11.3.7.** The Developer must obtain written permission from the Local Sanitary Authority when pipes are to be laid in landfill, contaminated sites or on poor ground.

11.4. Minimum Pipe Size:

The minimum recommended diameter of pipe acceptable for a public sewer is 225mm.

11.5. Pipe Design:

Pipelines should be designed to achieve self-cleansing velocity and designed so that they are capable of discharging the relevant design flows without causing surcharging in the system.

11.6. Distance Between Manholes:

The length of pipe-work from manhole to manhole should not exceed 90 metres.

11.7. Changes in Pipe Size:

Changes in pipe size should only occur at manholes. Different pipe sizes should meet soffit to soffit.

11.8. Bedding Haunching and Surround:

11.8.1. All main pipelines shall be bedded, haunched and surrounded to the requirements of the Local Sanitary Authority.

11.8.2. The recommended minimum depth of cover over a main pipeline is 1.2m. If that cannot be achieved, the pipes shall be fully surrounded in 150mm thick concrete with an absolute minimum depth of cover of 750mm, see fig 11.1 and 11.2. This applies to both roadways and footpaths.

11.8.3. Where concrete bedding is used it must be a minimum of 150mm thick in-situ concrete, class 20N/20mm, and haunched half way up the barrel of the pipe.

11.8.4. No pipelines shall be laid until the bed is inspected and approved by the relevant Local Sanitary Authority.

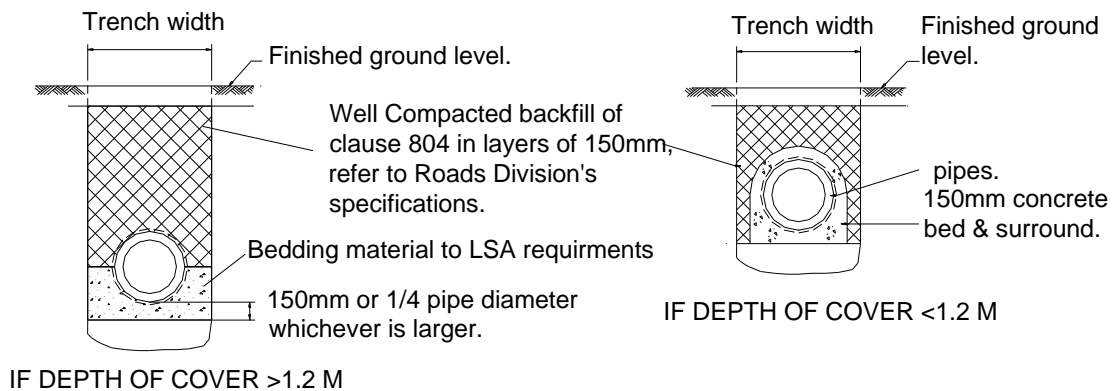


Fig. 11.1 & 11.2 Pipe Bedding

11.9. Backfill:

11.9.1. Roads;

Backfill shall be to the requirements of the DOEHLG, Guidelines for opening, Backfilling and Reinstatement of Trenches in Public Roads. Normally Clause 804 material compacted in 150mm layers is acceptable but this may need to be to the specifications of the Local Roads Authority.

11.9.2. Landscaped areas;

In areas of soft landscaping or parks the backfill shall be to the satisfaction of the Local Parks Division.

DCC Area Only



11.9.2.1. In the Dublin City Council area, clause 804 material compacted in 150mm layers up to 300mm above the crown of the pipe. Subsequent backfilling should be well-compacted selected material to the satisfaction of the Parks Division of Dublin City Council. It is normal that a minimum of 450mm depth of good quality topsoil shall be placed over the backfill in accordance with their requirements.

12. CLEANSING & TESTING SEWERS

- 12.1.** Main pipelines shall be air or water tested and conform to the requirements of the latest version of B.S. 8005 Part 1 or equivalent.
- 12.2.** On completion of construction works, all pipelines intended for taking in charge shall be thoroughly cleansed and all deleterious matter removed. The Developer shall maintain them in a clean and serviceable condition until Local Sanitary Authority takes them in charge.
- 12.3. Types of Test:**
The Developer in the presence of the Local Sanitary Authority shall test all main pipelines after they are jointed and before any concreting or backfilling commences. Pipelines shall be tested by means of an air or water test, refer to the latest version of B.S. 8005 or equivalent. A further test may be required after the backfill is complete.
- 12.3.1. Air Test;**
Pipes are to be tested to 100mm of air pressure for 5 minutes duration. A max drop of 25mm is allowed.
- 12.3.2. Water Test;**
Pipes and manholes are to be filled to 1.2 metres above the crown at the high end of the line. The rate of loss of water should not be greater than 1 litre per hour, per metre diameter, per metre of pipe run.
- 12.4.** Manholes shall be tested on completion of construction by means of a water test. In all cases manholes must be watertight. Groundwater infiltration into pipelines or manholes is unacceptable. Any pipelines or manholes that are defective will have to be rectified by the Developer at their own expense and the survey will then have to be repeated to the satisfaction of the Local Sanitary Authority.
- 12.5.** Where required by the Local Sanitary Authority, the Developer will, at their own expense, have a sewer condition survey (CCTV inspection complete with written report in Examiner type format or similar) carried out on all drainage works. This should be submitted in digital format where possible and the report should outline any remedial work that is to be carried out. This is required to verify that the sewer conforms to the standards and requirements of the Local Sanitary Authority.

13. CULVERTS

- 13.1.** In general streams and/or watercourses are not to be culverted or piped. They shall remain open in their natural valley, which shall be incorporated into the public open space. Culverting should be confined to road crossings and should be sufficiently large to prevent blockage, maintain a minimum of a one in one hundred year water flow and to allow for man entry for maintenance purposes.
- 13.2.** For design purposes the Developer shall have regard to the New Dublin Growth Curve given in the report by UCD entitled “An Investigation of the Flood Studies Report – Ungauged Catchment method for Mid-Eastern Ireland and Dublin”. This report may be downloaded from the Dublin City Council website at www.dublincity.ie
- 13.3.** Culverts shall be designed and constructed to comply with both the BD 37/88 (British Department of Transport Standard for Buried Concrete Box Type Structures) and CIRIA Guide Line Report 1997.
- 13.4.** Details including structural and hydraulic calculations shall be submitted and approved by the Local Sanitary Authority before any works commence. These details shall include details of bedding, sealing of joints etc.
- 13.5.** The Developer shall apply to the OPW to obtain permission under Section 50, Arterial Drainage Act 1945, for culverting of any watercourse. An application form can be downloaded from the following web address, http://www.opw.ie/services/eng_ser/Application_FormAF50.doc
- 13.6.** All efforts must be made to ensure that no polluting matter enters the watercourse during culverting.
- 13.7.** The Developer shall contact the Department of Fisheries to seek consent and any design criteria required for culverting rivers, which support fish life.
- 13.8. Screens:**
Culverts must be fitted with protective screens where necessary to prevent blockages and for the safety of the public. The design must incorporate adequate access for maintenance and all details must be agreed with the Local Sanitary Authority. Screens will only be permitted upstream of culverts and must be designed not to block and it is recommended that Screens are set at a 70° angle, see fig I.X in appendix 1.

14. ROAD GULLIES

- 14.1.** Road gullies, gratings and frames shall conform to EN 124, Class D400 or equivalent. The spacing of road gullies must suit the requirements of the specific road layout. However, in general one gully pot must be provided for every 200m² of paved area but low points on a roadway will require additional gullies. The use of SuDS may eliminate the requirement for any road gullies.

14.2. Positioning of Gullies:

Gullies must be hinged at right angles to the kerb line, so that they close with the direction of traffic and slots must be at right angles or diagonal to the kerb.

14.3. Sealed Gullies: (Outlets to combined sewers).

14.3.1. Sealed Gullies are to have bottom outlets, see fig 14.1.

14.3.2. Surface water discharging from roadways to a combined sewer shall drain through a sealed gully. The gully unit shall be to the Local Sanitary Authority standard in ductile iron with a cleaning eye and a bottom outlet.

14.4. Unsealed Gullies: (Outlets to surface water sewers).

14.4.1. Unsealed Gullies are to have side outlets, see fig 14.2.

14.5. Foundations Slabs:

Foundation slabs for gully pits shall be a minimum thickness of 150mm and built in class 20N/mm² in situ concrete.

14.6. Gully Frame & Grating:

Each grating and frame shall have clearly marked thereon:

14.6.1. I.S./EN 124:1994 – Class D400.

14.6.2. The name and/or identification mark of the manufacturer and the place of manufacture.

14.6.3. The year of manufacture.

14.6.4. Mark of the certification body.

14.6.5. Lockable frames and gratings are **not** permitted.

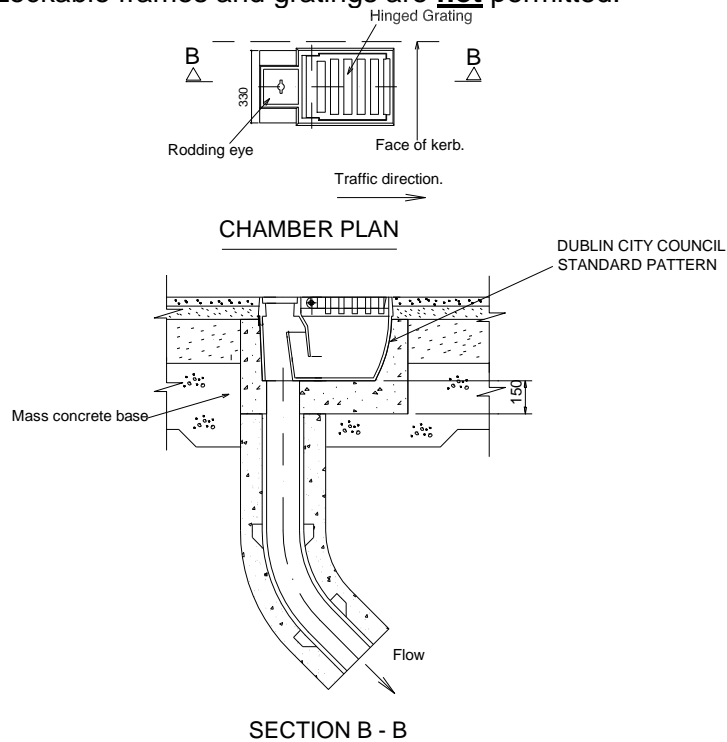


Fig. 14.1 Sealed Gully Connection to Combined Sewer (Bottom Outlet)

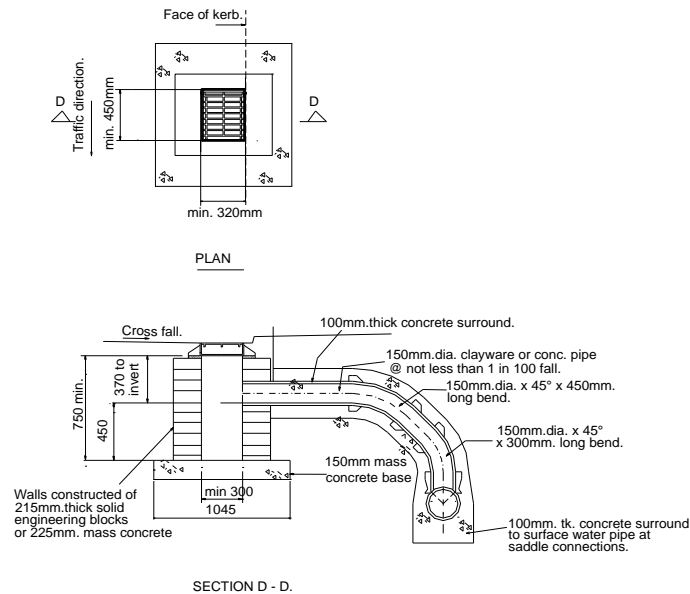


Fig. 14.2 Unsealed Gully Connection to Surface Water System (DCC Area)

14.7. Gully Connections:

- 14.7.1. Each gully shall have a separate 150mm connection surrounded with 150mm class 20N/20mm concrete. Gullies shall **not** be interconnected.
- 14.7.2. When connecting to public sewers, bends from 7° up to 45° should be used as required and a saddle junction fitted to make the connection to the sewer. Long radius bends are preferred.
- 14.7.3. Gully connections should not, if possible exceed 10 metres in length and connect to the sewer in the direction of the flow.
- 14.7.4. Gully connections greater than 30m long will require an additional manhole on them.
- 14.7.5. In unsealed gullies the outlet pipe shall be 450mm above the floor of the gully pit.
- 14.7.6. Where gullies are connected to manholes, they shall be connected at the benching level or a maximum of 500mm above invert of main pipe.
- 14.7.7. Connections shall be turned with the direction of flow.
- 14.7.8. For pipe specifications see section 11.

DCC Area Only

14.8. Pre-cast concrete gully pots are **not** acceptable.

15. PUMPING STATIONS & RISING MAINS

Due to the wide variation in both geographic location and capacity of pumping stations, this section covers the main requirements for their installation. However, the Developer must contact the Local Sanitary Authority to ensure compliance with their detailed requirements.

15.1. General

- 15.1.1. The Local Sanitary Authority must give written approval to the location and design of any proposed pumping station.

- 15.1.2.** In general pumping stations should be of the Wet Well/Dry Well design. However, in the case of very small installations, a combined design may be acceptable to the Local Sanitary Authority.
- 15.1.3.** Access to the pumping station should be via a paved roadway to allow for future maintenance of the station.
- 15.1.4.** Detailed design should include hazard zoning, pump selection, pipe network, alarms, ancillary buildings, standby generators, odour control, telemetry requirements, etc. in accordance with the Local Sanitary Authority's requirements.
- 15.1.5.** The pumping station must be fully commissioned and made operational, by the Developer, to the specific requirements of the Local Sanitary Authority, prior to it being considered for "taking in charge".

15.2. The Control Room:

Where a control room is required the following must be adhered to:

- 15.2.1.1.** The building should not be less than 3m square and be of solid vandal-proof construction with a concrete roof and a steel double-door with a Council approved locking system. The type of external finish should be sympathetic to the adjacent buildings and agreed in advance with the Local Sanitary Authority.

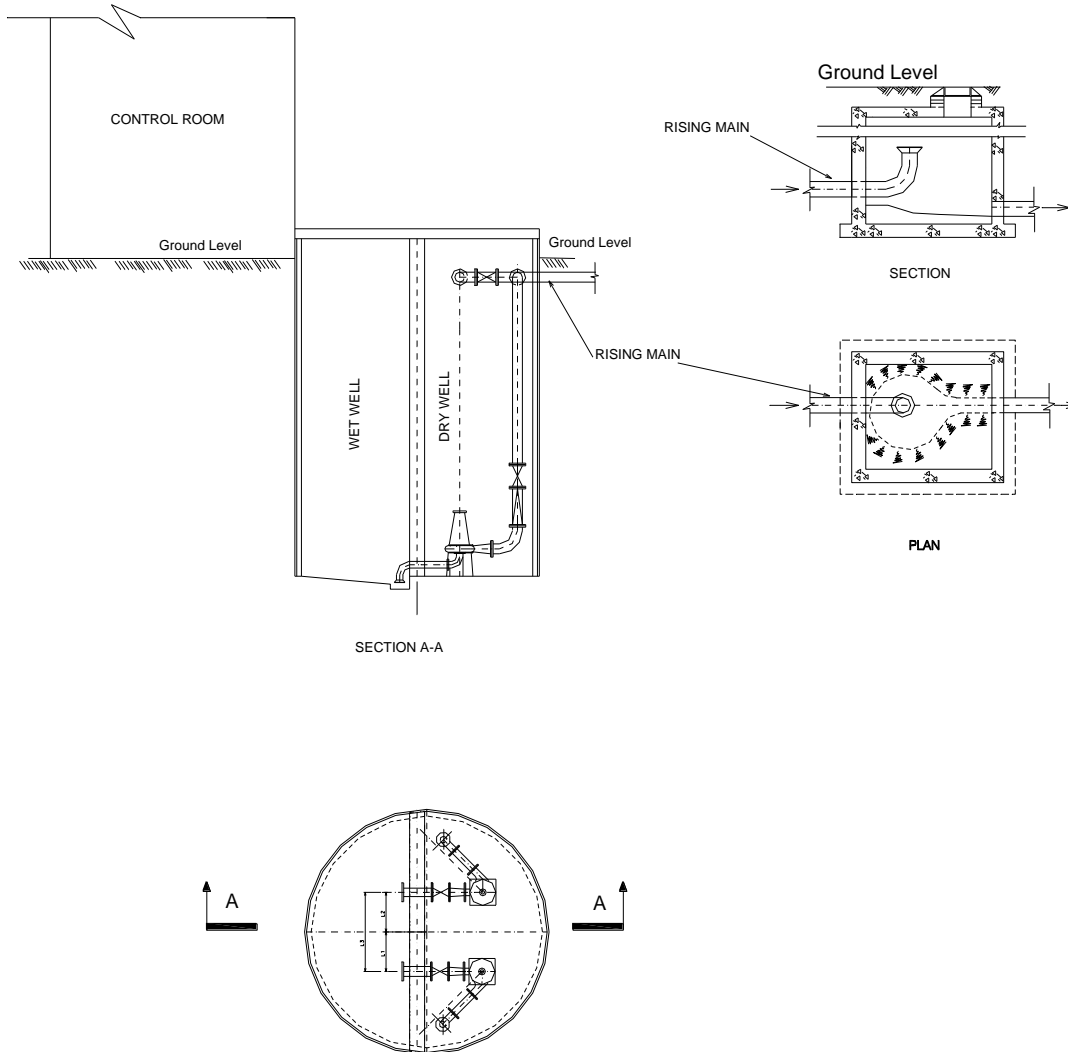


Fig.15.1 Typical Schematic Layout of Wet Well/Dry Well Pumping Station

Fig 15.2 Stand-off Manhole

15.2.2. The control room should also contain the following:

15.2.2.1. Wash-hand basin with water heater

15.2.2.2. Lights and power sockets

15.2.2.3. ESB meters

15.2.2.4. Control Panel

Telemetry requirements

15.2.3. Details and specifications of all electrical equipment, including the control panels and standby generators should be submitted to the Local Sanitary Authority for written approval.

15.2.4. The control panel must have at least 1.2m (4ft) of clear space in front of the panel doors.

15.2.5. A telephone line must be laid into the control room.

15.2.6. Passive through ventilation must be provided (e.g. a low level and high level vent).

All connections/ducts from the pump sump to the control room must be well sealed to prevent any gases entering the control room.

15.3. Rising Mains:

15.3.1. The Local Sanitary Authority shall approve the pipe material and the rising main configuration.

15.3.2. A surge analysis is to be carried out and if necessary surge vessels or other pressure release devices must be used if required.

15.3.3. Testing shall be in accordance with the Local Sanitary Authority requirements.

15.3.4. An approved flow meter must be installed on the rising main.

15.4. Standoff Manholes:

A pressure main may **not** discharge directly to a public sewer, but must terminate in a stand-off manhole, prior to gravity discharge to the public sewer, see fig. 15.2.

16. STORMWATER MANAGEMENT POLICY FOR DEVELOPERS

In line with international best practice it is the policy of each Local Sanitary Authority to limit and manage the permitted stormwater run-off from all new developments. The maximum permitted surface water outflow from any new development is to be restricted to that of a Greenfield site before any development took place.

In general all new developments must incorporate Sustainable Drainage Systems (SuDS).

16.1. The Developer shall comply with the Greater Dublin Strategic Drainage Study, Volume 2, New Development Policy.

16.2. For design of culverts the Developer must take into account the New Dublin Growth Curve as outlined in the report by UCD entitled "An Investigation of the Flood Studies Report – Ungauged Catchment Method for Mid-Eastern Ireland and Dublin". This report can be obtained from your Local Sanitary Authority or from the www.dublincity.ie. The Dublin Region Local Authorities will accept Greenfield runoff calculations based on the new curve in most cases, but designers should note that, in a small number of cases, this may lead to underestimation of the runoff. The use of river gauge data may be more appropriate where adequate data exists.

16.3. The key design criteria are as follows but readers are advised to consult the technical document mentioned in 16.1 for more information.

Criteria	Sub-criterion	Return Period (Years)	Design Objective
Criterion 1 River water quality protection	1.1	<1	Interception storage of at least 5mm, and preferably 10mm, of rainfall where runoff to the receiving water can be prevented.
	1.2	<1	Where initial runoff from at least 5mm of rainfall cannot be intercepted, treatment of runoff (treatment volume) is required. Retention pond (if used) is to have minimum pool volume equivalent to 15mm rainfall.
Criterion 2 River regime protection	2.1	1	Discharge rate equal to 1-year greenfield site peak runoff rate or 2l/s/ha, whichever is the greater. Site critical duration storm to be used to assess attenuation storage volume.
	2.2	100	Discharge rate equal to 1 in 100 year greenfield site peak runoff rate. Site critical duration storm to be used to assess attenuation storage volume.
Criterion 3 Level of service (flooding) for the site.	3.1	30	No flooding on site except where specifically planned flooding is approved. Summer design storm of 15 or 30 minutes are normally critical.
	3.2	100	No internal property flooding. Planned flood routing and temporary flood storage accommodated on site for short high intensity storms. Site critical duration events.
	3.3	100	No internal property flooding. Floor levels at least 500mm above maximum river level and adjacent on-site storage retention.
	3.4	100	No flooding of adjacent urban areas. Overland flooding managed within the development.

Criterion 4 River flood protection (Criterion 4.1, or 4.2 or 4.3 to be applied)	4.1	100	“Long-term” floodwater accommodated on site for development runoff volume which is in excess of the greenfield runoff volume. Temporary flood storage drained by infiltration on a designated flooding area brought into operation by extreme events only. 100 year, 6 hour duration storm to be used for assessment of the additional volume of runoff.
	4.2	100	Infiltration storage provided equal in volume to “long term” storage. Usually designed to operate for all events. 100year, 6-hour duration storm to be used for assessment of the additional volume of runoff.
	4.3	100	Maximum discharge rate of QBAR or 2 l/s/ha, whichever is the greater, for all attenuation storage where separate “long term” storage cannot be provided.

16.4. All new development must allow for climate change, see 3.12

16.5. SuDS Devices:

SuDS are a mandatory requirement of each Local Sanitary Authority. SuDS are a method of replicating the natural characteristics of rainfall runoff from any site. They provide hydraulic, water quality and environmental benefits. Some form of infiltration or retention/storage normally achieves this.

16.5.1. Sustainable Drainage Systems include devices such as:

Swales, Permeable Pavements, Filter Drains, Storage Ponds, Constructed Wetlands, Roof Gardens, Soakaways, etc.

16.5.2. Further guidance on the use of SuDS is given in the GSDSDS Technical Documents Vol. 2 and Vol. 3 and in the Design and Best Practice manuals produced by CIRIA in the UK.

16.5.3. SuDS devices such as permeable paving or swales/ ponds etc. may require the approval of other Local Authority Departments such as Roads or Parks.

16.5.4. In some exceptional cases it may not be feasible to use the above devices and at the discretion of the Local Sanitary Authority, approval may be given to install underground attenuation tanks or enlarged pipes in conjunction with other devices to achieve the required water quality.

16.6. Attenuation Tanks/Enlarged Pipes:

These are not true SuDS devices and should only be considered as a last resort where it can be shown that SuDS measures are not achievable

16.6.1. Attenuation tanks shall normally be located in green areas; any other location requires the approval of the Local Sanitary Authority.

16.6.2. Where a tank is to be constructed in a trafficked area, a standard minimum depth of cover from road level to top of the roof of the tank should be 1.2m.

- 16.6.3. Lockable manhole covers shall be installed at either end of the tank and should allow for safe access and egress via step irons, see section 10. Larger tanks may require more access points.
- 16.6.4. All enlarged pipes and associated manholes must comply with this document.

16.7. Last Manhole:

- 16.7.1. In order to isolate and carry out maintenance of the flow control device a penstock valve (or similar approved) shall be installed within the outfall manhole, on the upstream end of the manhole.
- 16.7.2. For gravity systems a Hydrobrake (or similar approved flow control device) shall be installed in the last manhole.
- 16.7.3. The opening to be large enough to facilitate the extraction of the flow control device.
- 16.7.4. An overflow from the flow control manhole to the public drainage network is not allowed.

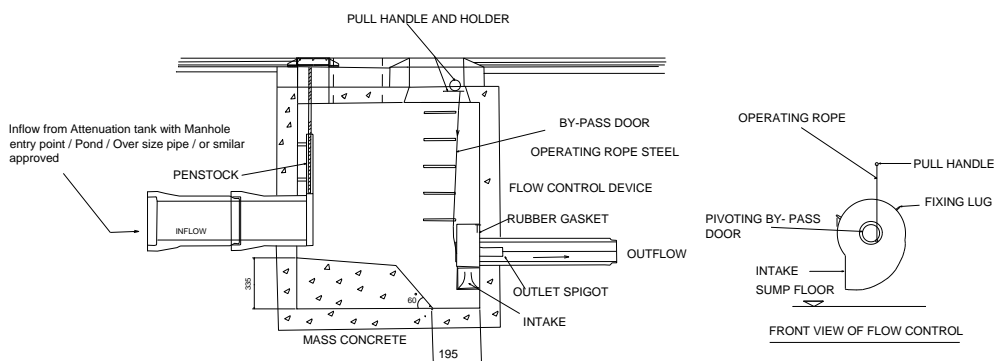


Fig. 16.1 Section Through Final Storm Water Manhole



Fig 16.2 Picture of a Flow Control Device

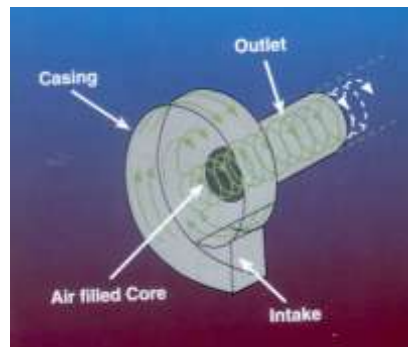


Fig 16.3 Schematics of a Flow Control Device

17. GUIDELINES FOR THE BUNDING OF OVERGROUND OIL STORAGE TANKS

As a pollution prevention measure, under the Local Government (Water Pollution) Acts, the Local Sanitary Authorities require that all tanks for the storage of oil or other polluting liquids shall have an **impermeable** surround (bund). This is to be designed such that in the event of a leak from the tank itself or a spillage during filling/emptying of the tank the stored liquid is completely retained within the bund structure. In the event of a spillage, the person responsible is required to immediately notify the Local Sanitary Authority. Simultaneously all required pollution prevention measures should be put in place on site to prevent any pollutants gaining access to drains, waterways or

ground water. This shall apply to all storage tanks including domestic and non domestic. For further details on the design of bundings see CIRIA Report 163.

Where the polluting matter is corrosive, special treatment of the bund walls may be required.

17.1. General Requirements for Bunding of Storage Tanks:

17.1.1. The bund structure shall be constructed in a manner and with materials such that it is totally impervious and shall be capable of holding the volume of the oil tank contained therein, plus an additional 200mm depth to allow for rainwater.

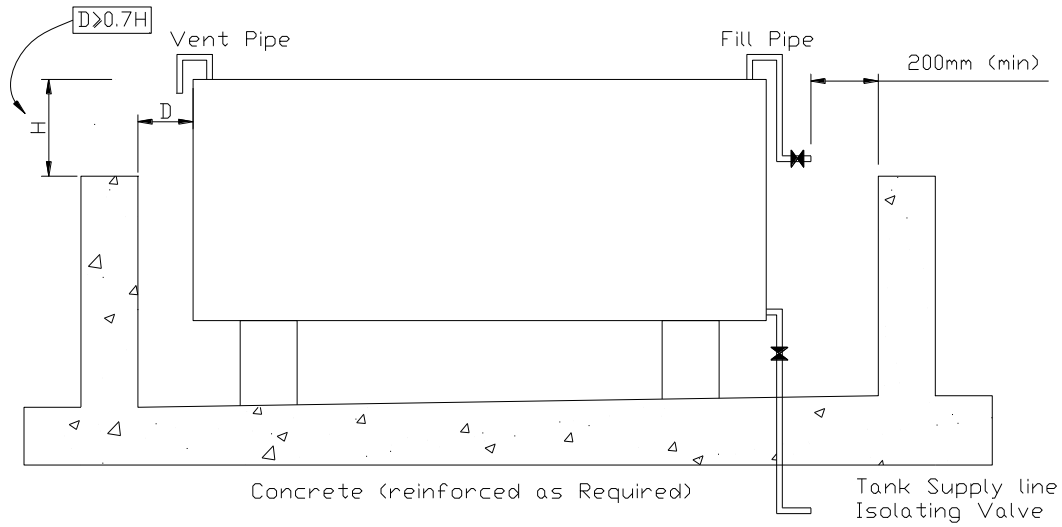


Fig 17.1 Typical Bund

17.1.2. If there are a number of oil tanks the bund shall be designed to hold a 110% of the total volume contained in the tanks. This increase in depth is an allowance for rainwater. This requirement may be amended if the tanks are not interconnected in which case the bund shall be designed to hold the total volume of the largest tank plus 200mm or 25% of the total volume of all tanks plus 200mm, if greater.

17.1.3. The bund structure shall be free standing and the walls of any building etc. may not form part of the bund. Planning and Fire Officer approval shall be obtained for any installation where appropriate.

17.1.4. Rainwater may only be removed from a bund by means of manual removal or a non-automatic pumping arrangement. For non-domestic situations the rainwater must discharge to the foul sewer via an oil / petrol interceptor of adequate size.

17.1.5. Where a header tank, secondary tank or generator tank is supplied from a main oil storage tank, the bunding requirements for the additional tanks shall be such that in the event of a spillage the spilled liquid shall be totally retained within the bunded area.

18. GUIDELINES FOR THE INSTALLATION OF GREASE REMOVAL SYSTEMS AND FOOD MACERATORS

18.1. A Grease Recovery Unit (GRU) must be fitted on the outlet from all kitchen sinks within Food Services Establishments (FSE) and apartment buildings

subject to the requirements of the Local Sanitary Authority. They must also be fitted on any commercial scale food preparation locations.

- 18.1.1.** In general the use of degreasing agents and enzymes for the breakdown of grease is not permitted. However, the Local Sanitary Authority, in certain circumstances, may approve them for limited use.
- 18.2.** Grease Traps should comply with the latest editions of the following:
 - 18.2.1.** pr EN 1825-1 : 1995 or equivalent
Principles of design, performance, testing, working and quality control.
 - 18.2.2.** I.S. En 1825-2 : 2002 or equivalent
Selection of nominal sizes, installation, operation and maintenance of grease traps.
- 18.3.** The Local Sanitary Authority encourages the use of appropriate grease removal systems on the waste discharge from kitchen waste outlets in domestic dwellings. This is to prevent Fats Oils and Grease, FOG, from entering the public drainage system.
- 18.4.** The use of, under sink food macerators/food grinders for processing and discharging waste food to the drainage system are prohibited.

19. CONTAMINATED SITES

Under the Local Government (Water Pollution) Acts, the Local Authority is empowered to require measures to be taken to prevent water pollution.

- 19.1.** Where a site is known, or suspected, to be contaminated, a detailed report should be submitted with any application for Planning Permission together with detailed recommendations for the remediation or disposal of contaminated material so as to prevent any polluting material from entering the drainage system or any water courses.
- 19.2.** Where applicable, the Developer should engage a qualified and experienced Hydrogeologist or equivalent person, to undertake a comprehensive soil and ground water survey.
- 19.3.** A waste licence or permit under the Waste Management Act 1996 may be required. The Developer should liaise with the Environmental Protection Agency (EPA) in order to determine if a Waste Licence or permit are required.

20. PETROL/OIL SEPARATORS & SILT TRAPS

SuDS should, wherever practical, be incorporated into the surface water drainage systems. In certain circumstances, with the approval of the Local Sanitary Authority, this may remove the requirement for petrol/oil interceptors and/or silt traps.

Where SuDS cannot be utilised or in areas where there is a risk of pollution by petrol, oil, silt or other suspended materials appropriate interceptors must be installed. These must be designed and constructed in accordance with the relevant standards.

Where petrol or oil are stored in bulk on a site, eg. petrol stations, specific requirements for full retention separators apply. Please contact the Local Sanitary Authority for details.

- 20.1.** All surface car parks with the provision for 10 spaces or more must be fitted with a **Class I** Light Liquid Separator, in accordance with the latest version of European Standards prEN 858: Parts 1 & 2, and shall be installed at suitable location on the private drainage system before discharging to the **surface water drainage** system
- 20.2.** All underground car parks irrespective of size must be fitted with a **Class II** Light Liquid Separator, in accordance with the latest version of European Standards prEN 858: Parts 1 & 2, shall be installed at suitable location on the private drainage system before discharging to the **foul sewer** system.

Class 1 Separators, which are designed to achieve a concentration of less than 5mg/l of oil, should be installed in surface water drainage systems serving areas liable to be contaminated by petrol/oil such as car parks.

Class 2 Separators, which are designed to achieve a concentration of less than 100mg/l of oil, should be installed in the foul sewer systems before discharging to the foul sewerage system.

Both Classes 1 and 2 are available as 'full retention' or 'by-pass' separators.

Full Retention Separators: They treat the full design flow that can be delivered by the drainage system, which is normally equivalent to the flow generated by a rainfall intensity of 50mm/hr.

By-pass Separators: They fully treat all flows generated by rainfall rates up to 5mm/hr. This covers over 99% of all rainfall events.

21. DISCHARGING POLLUTED RAINWATER

In areas where material is stored; such as bins, waste compactors, etc. that can cause pollution; the immediate area must be contained, covered and drained to the foul sewer.

22. DISCHARGING OF GROUND WATER

- 22.1.** There shall be no permanent discharge of ground water to the drainage system.
- 22.2.** All underground structures must be designed to avoid the requirement for any permanent draining down of ground water.
- 22.3.** During construction of basements or similar, a licence may be granted under the Local Government (Water Pollution) Acts, to allow limited discharge of groundwater to facilitate construction. Contact your Local Sanitary Authority for further details. Application forms are in the appendix or may be downloaded from the Local Sanitary Authority web site.

23. ON-SITE WASTEWATER TREATMENT PLANTS FOR SINGLE DWELLINGS

New developments are required to connect to the public sewerage system where options to do so exist. Where this is not an option, the use of onsite treatment plants for single rural dwellings may be permitted, provided they satisfy the criteria of the Local Sanitary Authority. All such systems require an annual certificate of compliance, which must be submitted to the Local Sanitary Authority.

23.1. Septic Tanks

23.1.1. Conventional septic tanks drainage system shall be provided in accordance with the standard set out in SR6 and the Waste Treatment Manual "Treatment Systems for Single Houses" published by the EPA.

23.1.2. A suitably qualified and competent person must furnish a site characteristic form to the relevant Local Sanitary Authority. Notwithstanding this the Local Sanitary Authority may require additional tests to be carried under their supervision.

23.1.3. A maintenance agreement or similar, must be entered into between the applicant and a maintenance company, in order to have the systems inspect and service as required. A copy of this must be submitted to the Local Sanitary Authority.

23.2. Proprietary Treatment Plants

23.2.1. A proprietary treatment plant and polishing filter/percolation area shall satisfy the criteria set out in the Waste Treatment Manual "Treatment Systems for Single Houses" published by the EPA.

23.2.2. A suitably qualified and competent person must furnish a site characteristic form to the relevant Local Sanitary Authority. Notwithstanding this the Local Sanitary Authority may require additional tests to be carried under their supervision.

23.2.3. A maintenance agreement or similar, must be entered into between the applicant and a maintenance company, in order to have the systems inspect and service as required. A copy of this must be submitted to the Local Sanitary Authority.

24. ON-SITE WASTEWATER TREATMENT PLANTS FOR OTHER DEVELOPMENTS

New developments are required to connect to the public sewerage system where options to do so exist. Where this is not an option, the Developer is to contact their relevant Local Sanitary Authority.

APPENDIX I

STANDARD MANHOLES DETAIL.

I.I. Drawing Notes:

- 1) 225mm thick Cl. 20N/20mm Mass Concrete Foundations.
- 2) Preformed half circle channel pipes. The pipeline may, where practicable, be laid through the manhole and the crown cut out to half diameter, provided flexible joints are situated on each side no further than 600mm from the inner face of manhole wall.
- 3) Manhole construction.
 - For Surface Water Manholes high-density blocks to Cl.S10 of IS.20 Part 1:1987 or Cl. 30N/20mm insitu concrete.
 - Block work shall be bedded and jointed using mortar to IS406. Beds and vertical joints shall be completely filled with mortar as the blocks are laid.
 - Joints shall be flush pointed as the work proceeds.
 - All Foul Manholes must be faced in solid Engineering Brick (min. class A or B), or insitu concrete for 1 metre above Benching Level.
 - Brick to be bonded to block work using English Garden Wall Bond.
- 4) Relieving arch formed by 215x103x65 solid engineering brick Class A or B as per drawing.
Relieving arches used in brick or block work manholes extend over full thickness of wall.
A Double Arch is to be formed for pipe diameters greater than 600mm.
- 5) Benching and pipe channel pipe surround – Cl. 20/20 concrete.
- 6) Benching finished in 2:1 sand-cement mortar with a smooth trowel finish, at 1 in 30 slope towards channel.
- 7) Standard rungs at 300c/c vertically and galvanized to the latest version of B.S. 729 or equivalent. Note: Steps Irons are **not** acceptable.
- 8) 600mm square ope in roof slab.
- 9) Precast R.C. Roof Slab shall be 200mm thick in Class 30N/20mm, with 40mm cover to steel.
- 10) 1 to 2 courses of solid engineering bricks Cl.B to I.S.91:1983 set in 1:3 (cement and mortar).
- 11) Class D400 or E600 manhole cover and frame to IS/EN 124. 150mm deep frame for roads and 100mm deep for footpaths and green areas. Non-rock design, closed keyways, manufactured from spheroidal graphite cast iron (ductile cast iron), 600 x 600 (600diam.) clear opening, cover and frame coated in bitumen or other approved material, cover to have a minimum mass of 140kg/m², frame bearing area shall be 80,000mm² min, frames shall be designed to prevent covers falling into manhole. Frames shall be bedded on approved mortar to manufactures instructions.
- 12) Short length pipe and pipe joint external to manhole shall not exceed 600mm from the inner face of manhole wall.

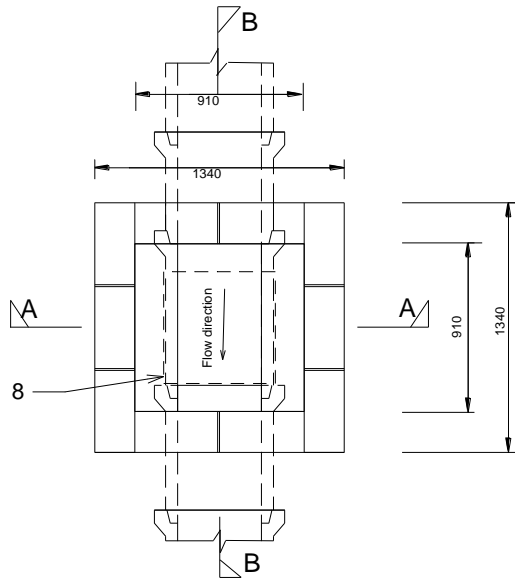
- 13) Toe holes of 230mm minimum depth and galvanized steel safety railings to be provided in benching of sewers greater than 525mm diameter and depth to invert >3m for access to invert.
- 14) A safety chain is to be provided on pipes that exceed 450mm in diameter. Mild safety chain shall be 10mm nominal size grade M(H) non-calibrated chain, type 1, complying with B.S.4942 Part 2 or equivalent.
- 15) When depth of manholes to invert is greater than 3.0m ladders shall be used instead of rungs to B.S.4211 or equivalent except that stringers should be not less than 65 x 12mm in section and rungs 25mm in diameter.
Fixed ladders should meet the dimensional requirements of B.S.4211 or equivalent.
- 16) Ladder stringers should be adequately supported from the manhole wall at intervals of not more than 2.0m stringers should be bolted to cleats to facilitate renewal.
- 17) All ladders, rungs, handrails, safety chains etc shall be hot dip galvanized to B.S.729 or equivalent.
- 18) Pipe should be cut flush with the inside surface of the manhole wall so that the channel extends the full length of the manhole (except for pre-cast manholes).
- 19) Position of 910 square ope in intermediate roof slab.
 - All manholes shall be watertight to the satisfaction of the Engineer.
 - Formwork to Reinforced Concrete and Mass Concrete shall comply with Class 2, Section 6.2.7, B.S.8110: Part 1: 1997.
 - Finish to the top of slabs shall comply with Type A, Section 6.2.7, B.S.8110: Part 1: 1997.
 - Plan dimensions of manholes are based on block work having a co-ordinating size of 450 x 225 x 100.
 - Manholes are designed to B.S.8005 and wall thickness to LS.325 block work design code taking granular fill pressure and H.B. surcharge.
 - Reinforcement to slabs to Engineers details.
- 20) For manholes >3m depth to invert use 30N/20mm insitu concrete. Reinforcing mesh ref. A393 @ 6.16kg/m to be fixed at mid point of wall. Additional reinforcement to be supplied over pipe crown.
- 21) For Pre cast Manholes, Chamber walls and cover slab to be constructed to IS EN 1917 and IS 420 2004
- 22) Manhole Openings to be situated furthest from the nearest Carriageway. Manhole steps / access to be positioned to allow viewing of oncoming traffic.
- 23) For bedding and sealing of Chamber rings, the top ring (to Pre cast cover slab) and bottom ring to be bedded with cement mortar. For intermediate rings, joints to be sealed with approved pre-formed jointing strip.

- 24) Pre cast Manholes to be surrounded with a minimum of 150mm thick Grade C20/40 concrete

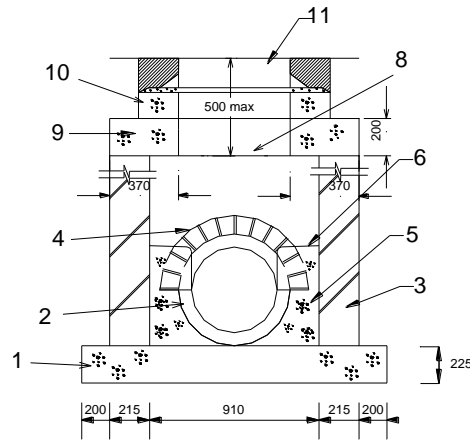
General Notes

- i) All brick to be Solid Engineering Brick Class A or B.
- ii) For pipe diameter >750mm use manhole with internal diameter size = pipe size + 1metre + 300mm.
- iii) Distance from the top rung of the ladder to ground level must be a maximum of 500mm.

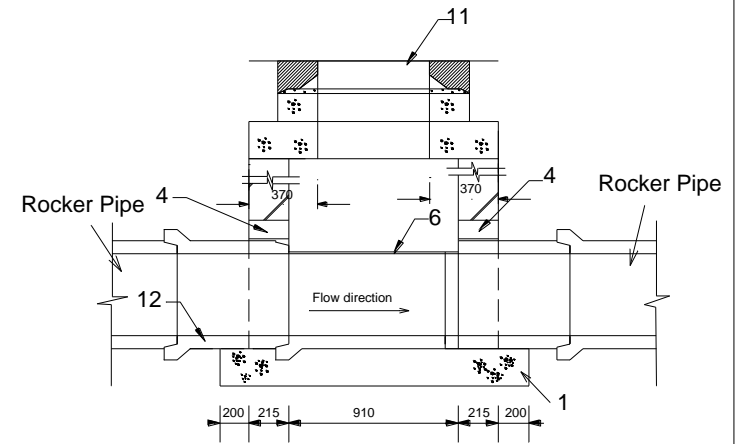
I.II. Type A Manhole:



Plan Below Roof Slab



Section A-A

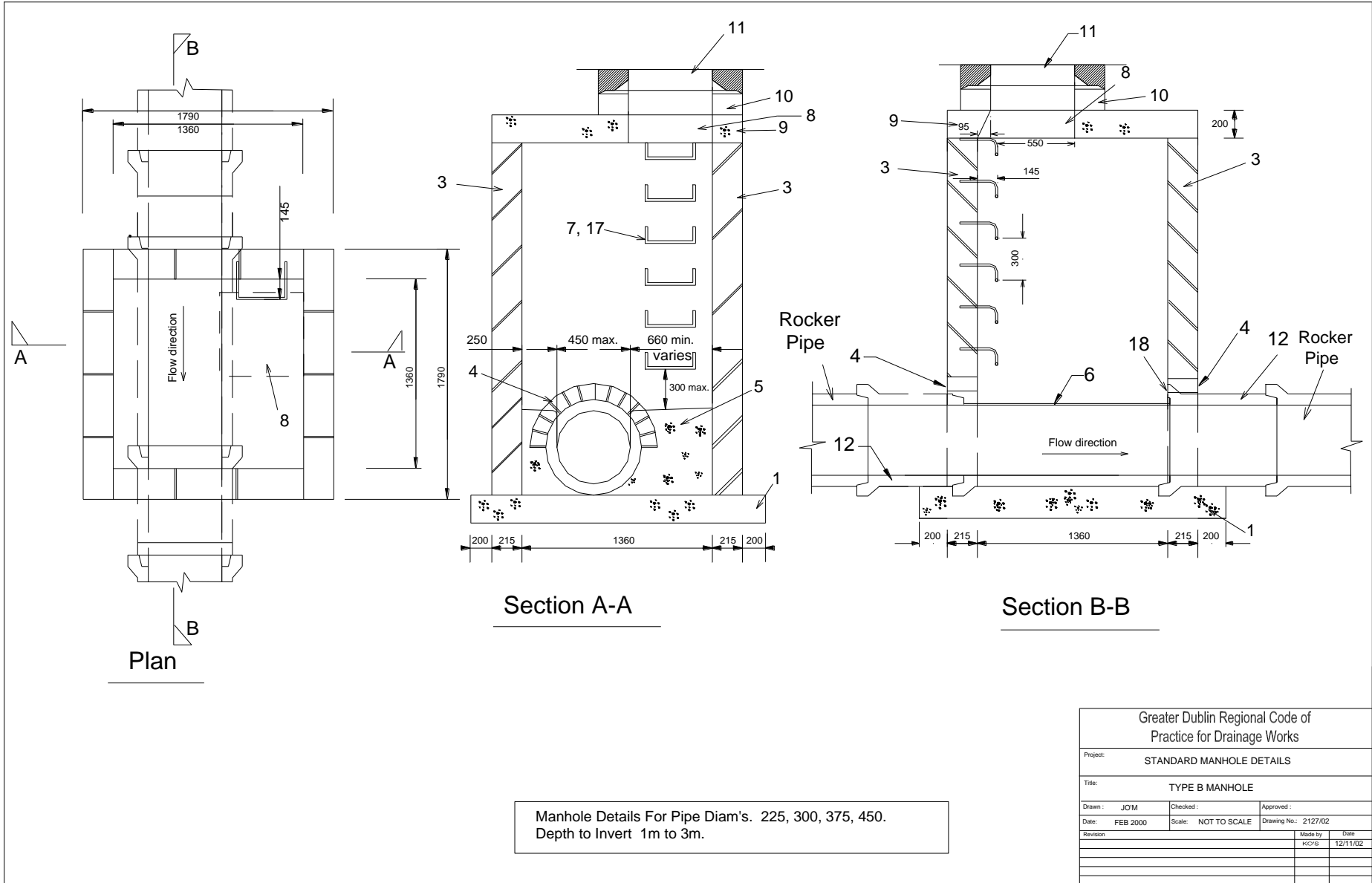


Section B-B

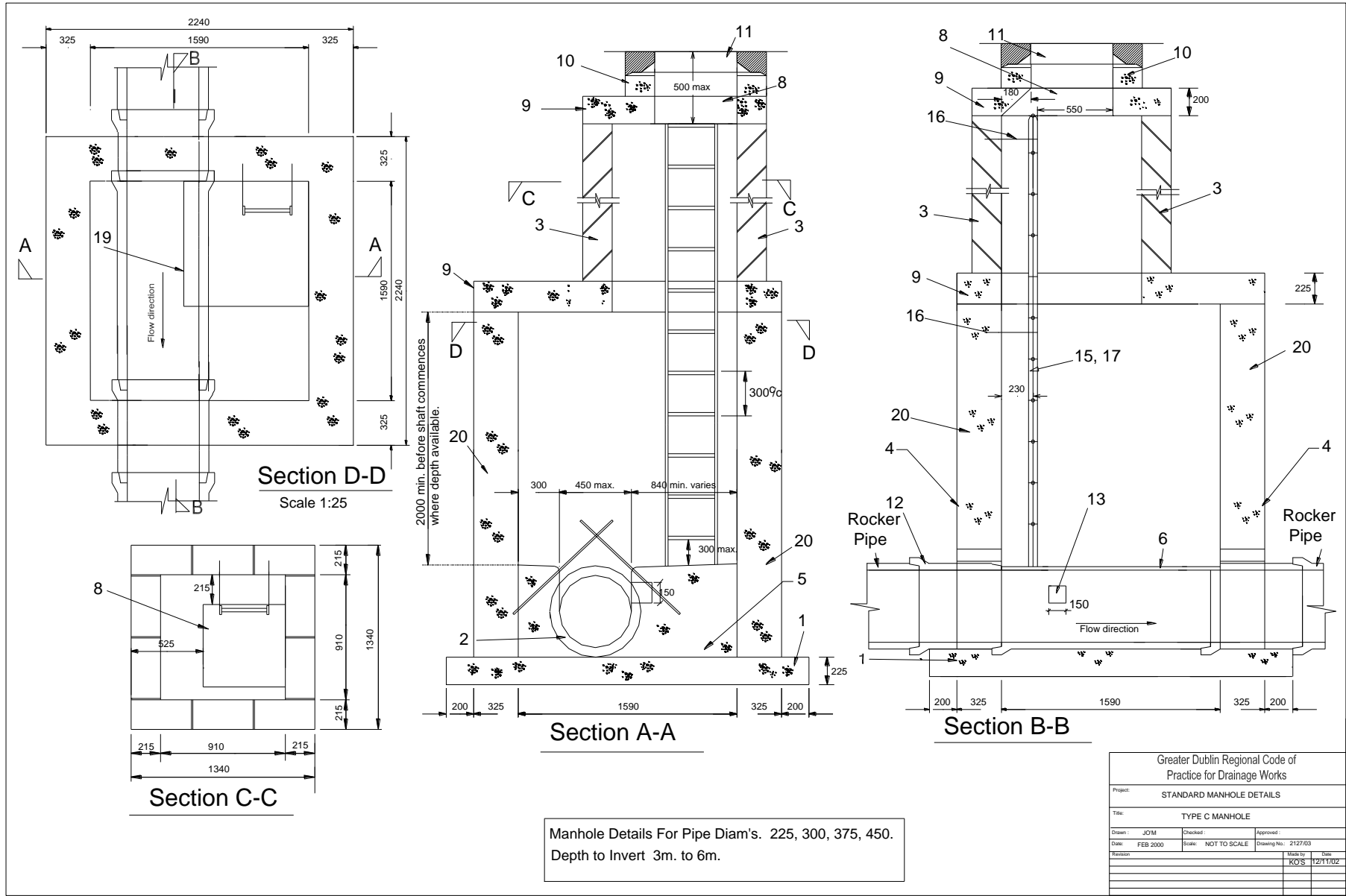
Manhole Details For Pipe Diam's. 150, 225, 300, 375, 450 .
Depth to Invert Less than 1.0m.

Greater Dublin Regional Code of Practice for Drainage Works			
Project: STANDARD MANHOLE DETAILS			
Title: TYPE A MANHOLE			
Drawn: JOM	Checked:	Approved:	
Date: FEB 2000	Scale: NOT TO SCALE	Drawing No.: 2127/01	
Revision	Made by	Date	
	KO'S	11/11/02	

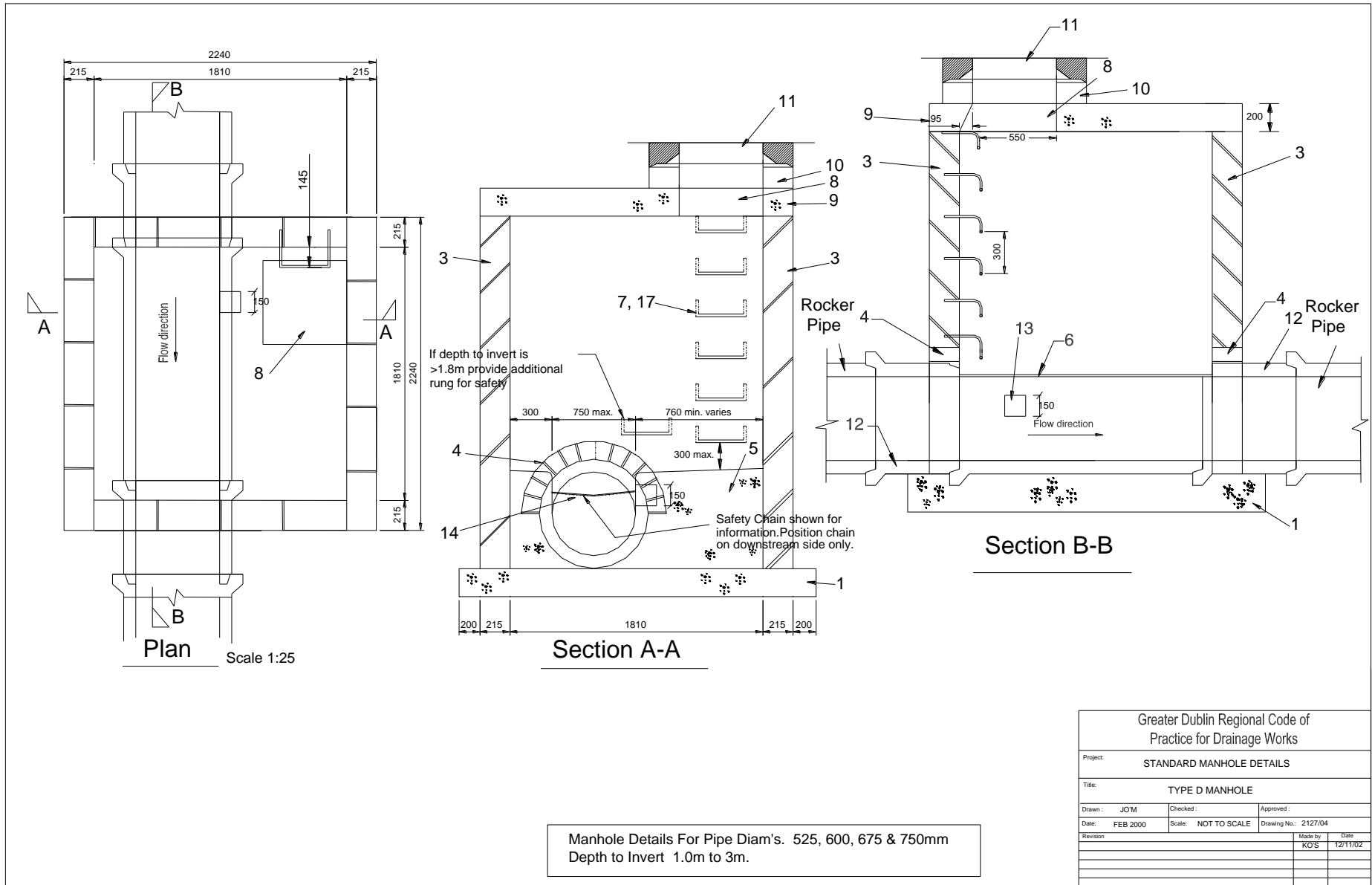
I.III. Type B Manhole:



I.IV. Type C Manhole:

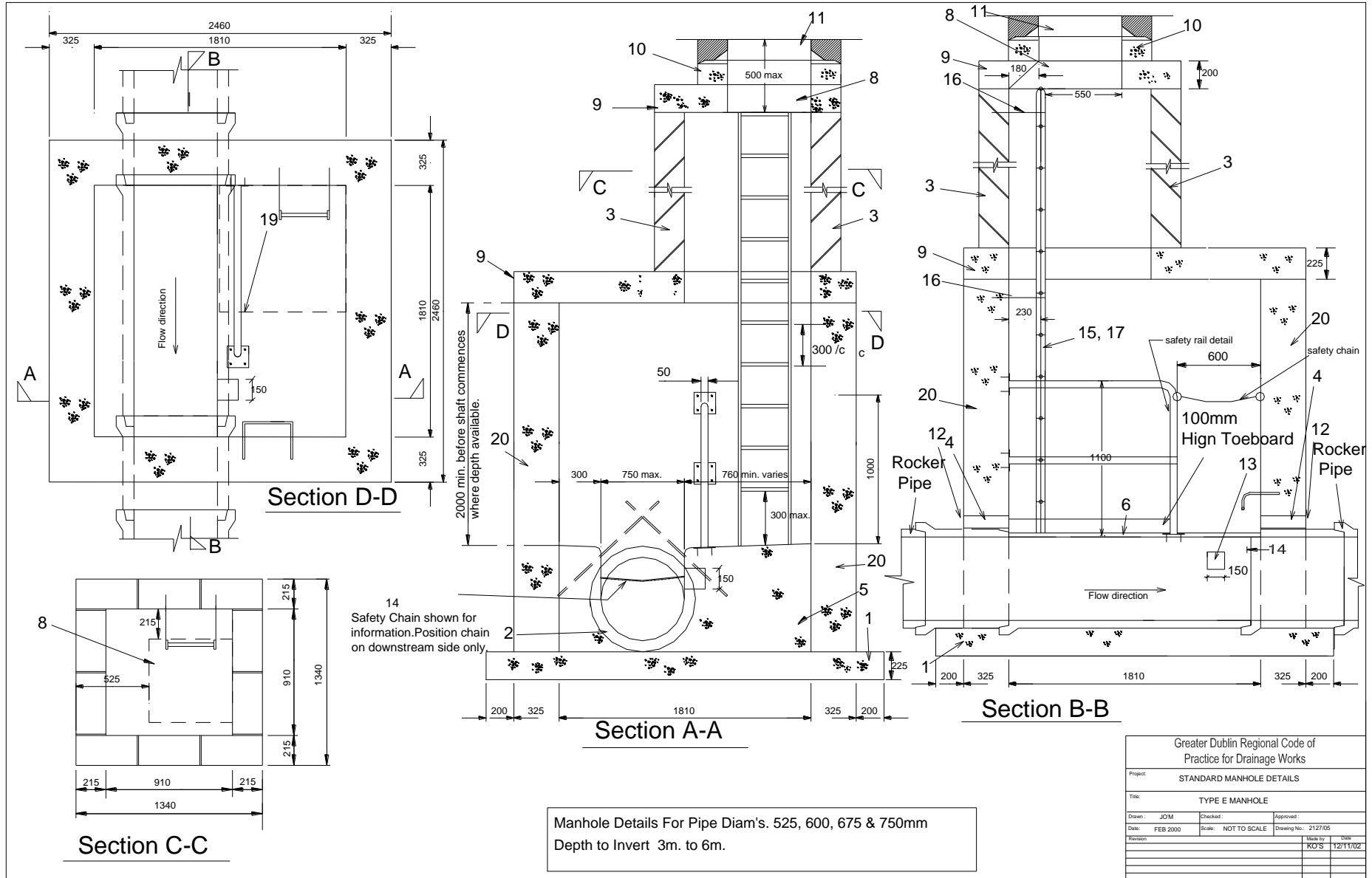


I.V. Type D Manhole:

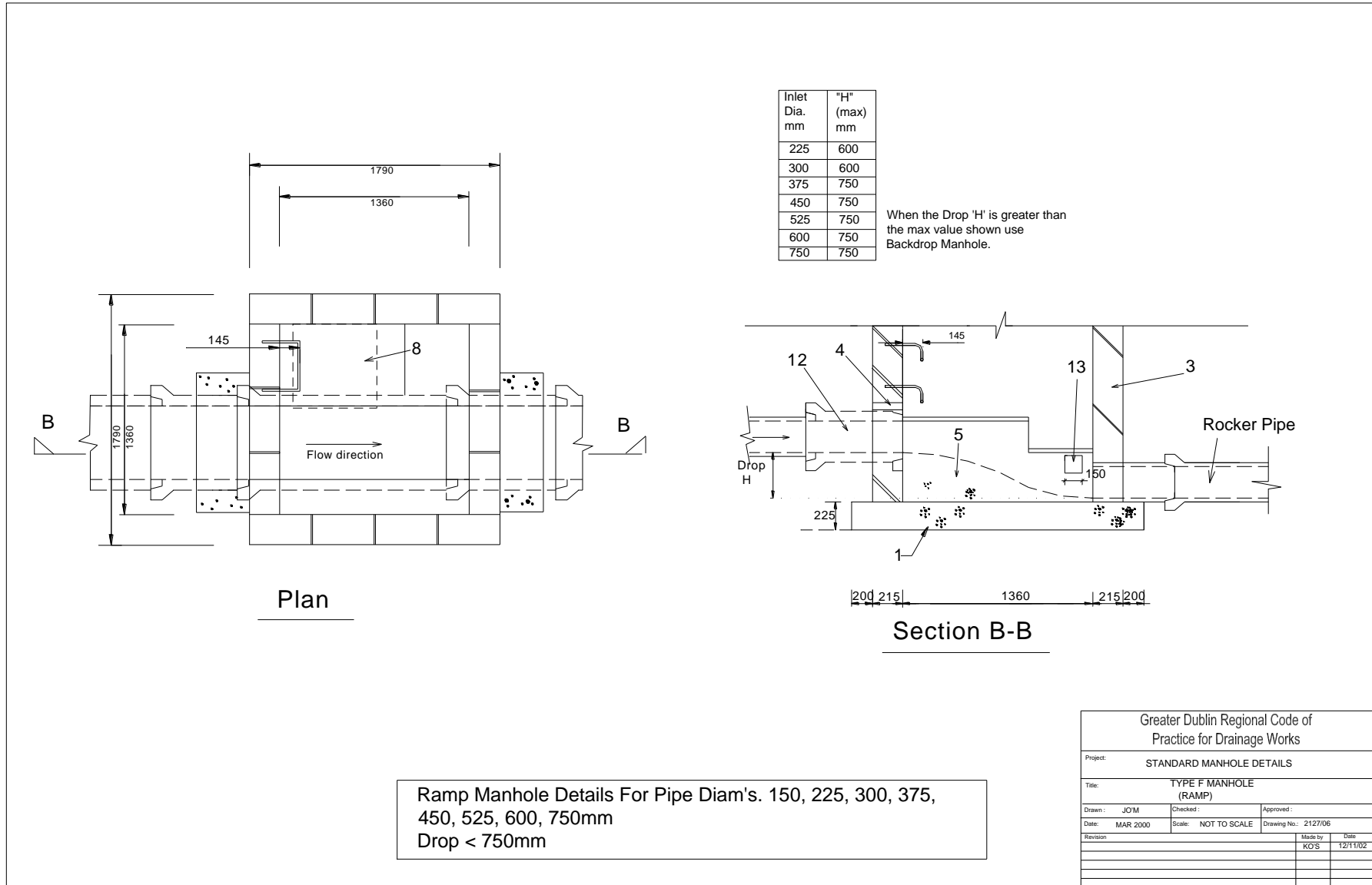


Greater Dublin Regional Code of Practice for Drainage Works			
Project: STANDARD MANHOLE DETAILS			
Title: TYPE D MANHOLE			
Drawn: JOM	Checked:	Approved:	
Date: FEB 2000	Scale: NOT TO SCALE	Drawing No: 2127/04	
Revision		Made by KO'S	Date 12/11/02

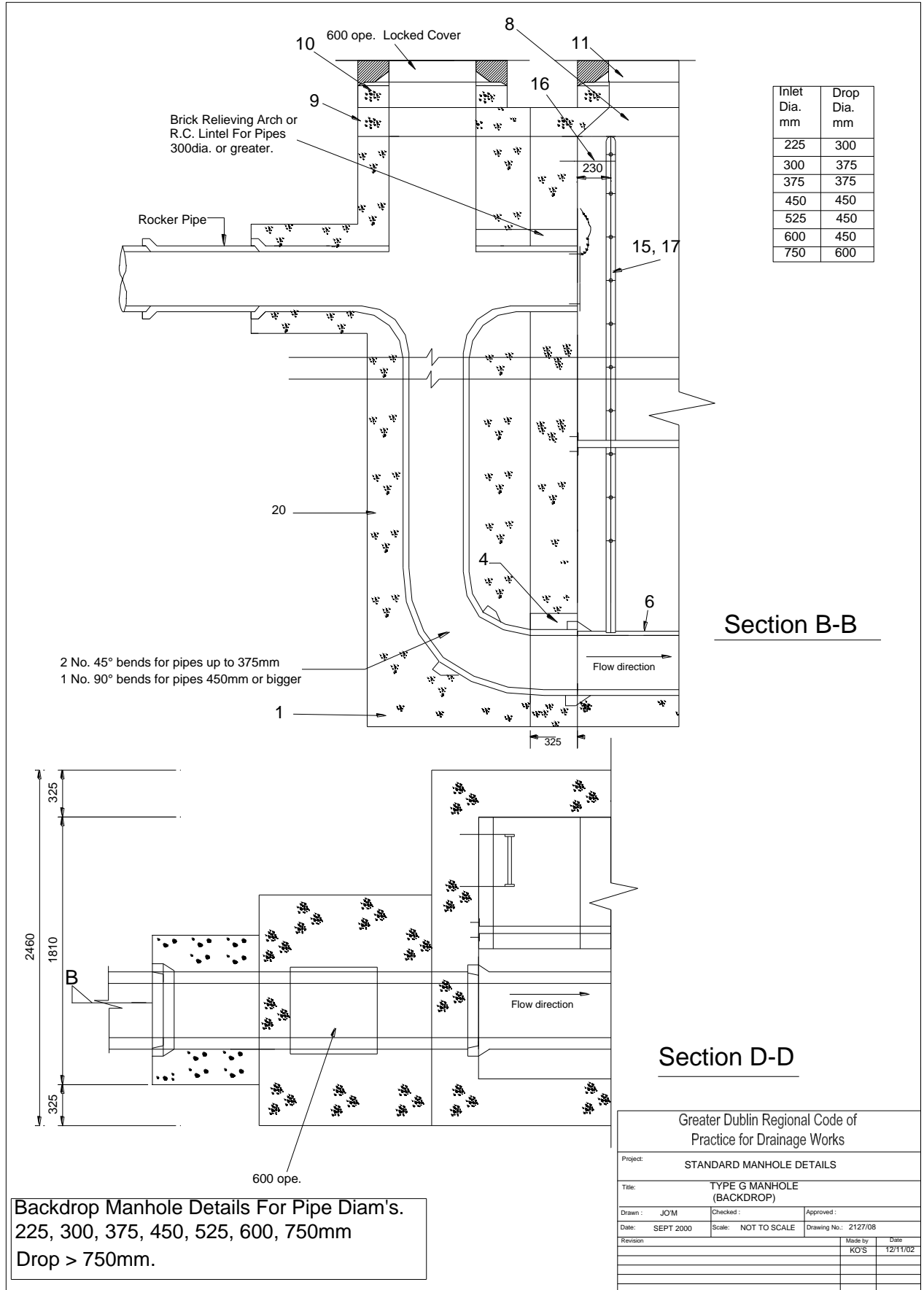
I.VI. Type E Manhole:



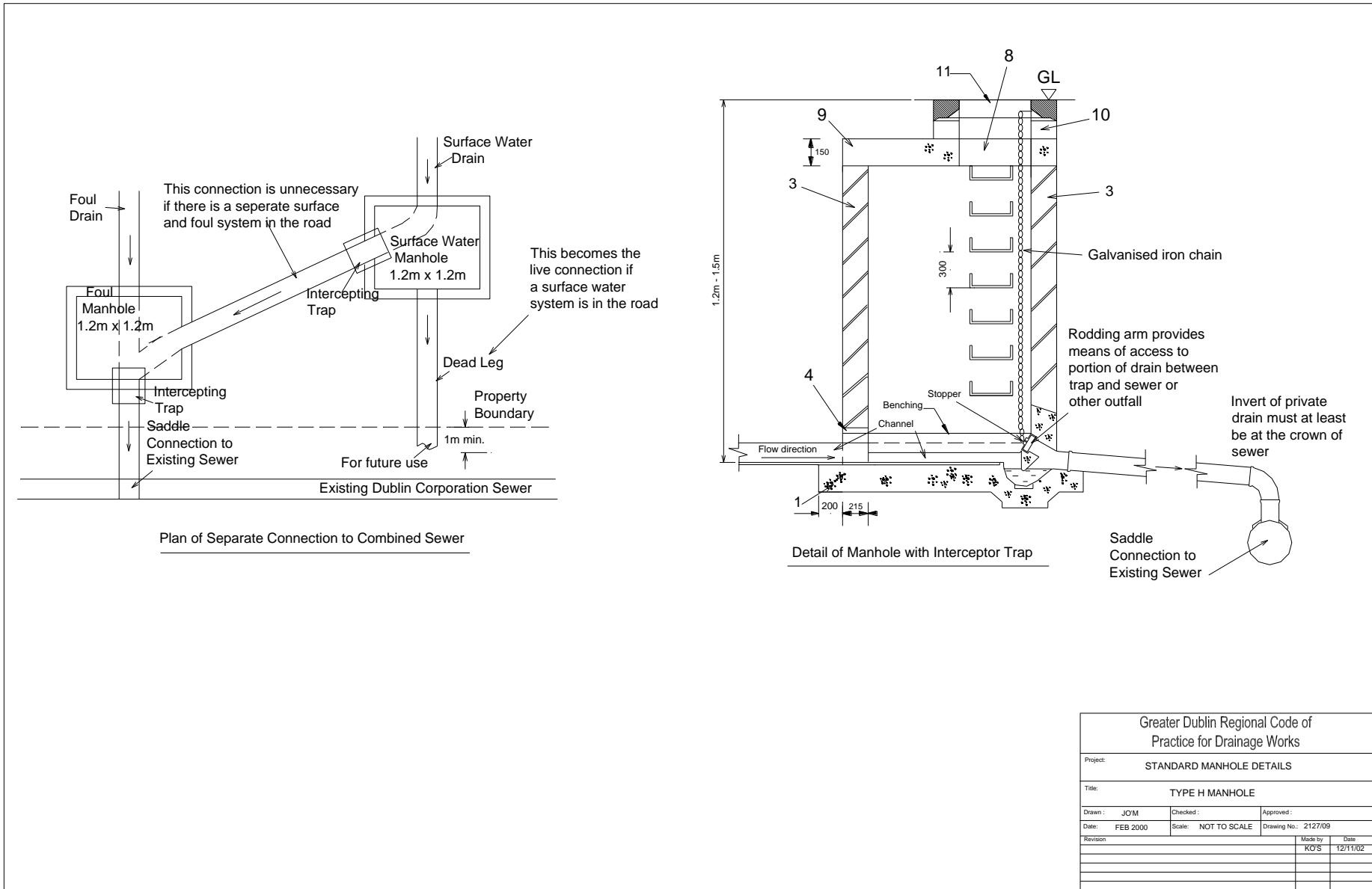
I.VII. Type F Manhole (Ramp):



I.VIII. Type G Manhole (Backdrop):

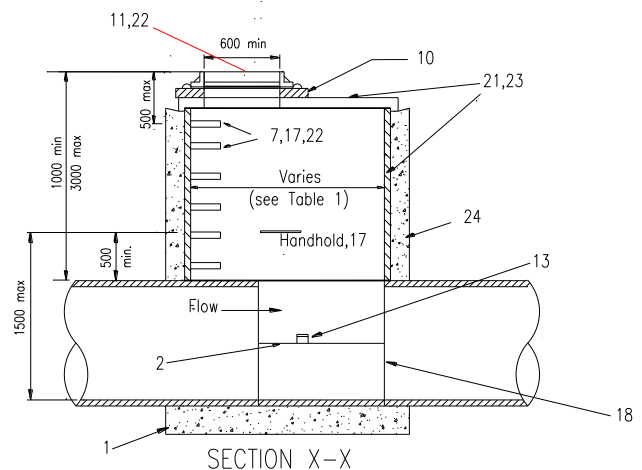
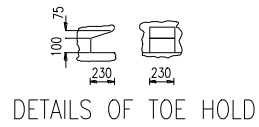


I.IX. Type H Manhole:

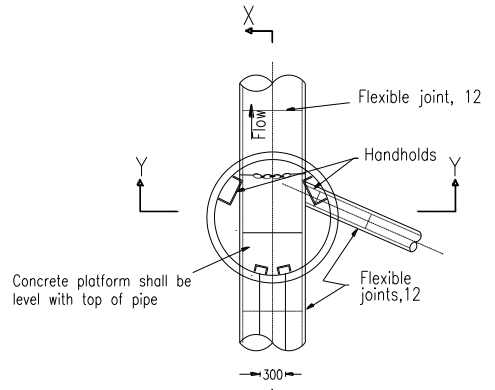


I.X. Type J Manhole (precast):

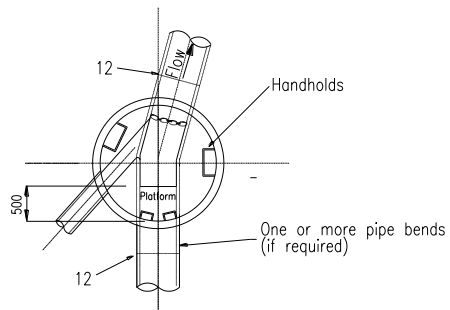
NOT Permitted in DCC Area



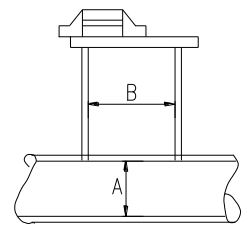
Integral in-situ 20N/20mm concrete base walls, benching and base slab with precast channel as shown or in-situ formed invert as alternative. Walls to extend 150mm beyond outer faces of chamber ring. Alternatively precast concrete chamber rings may be bedded in mortar or on in-situ 20N/20mm concrete base slab 300mm greater in diameter than chamber rings.



PLAN ON STRAIGHT INVERT (without cover slab)

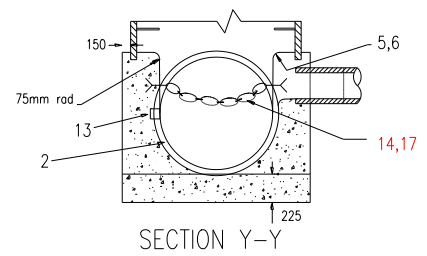


PLAN ON CURVED INVERT (without cover slab)



MAXIMUM PIPE DIAMETER A	CHAMBER INTERNAL DIAMETER B
225	1200
300	1200
375	1200
450	1200
525	1200
600	1200
675	1350
750	1350
900	1500
1050	2100
1200	2100

TABLE 1:

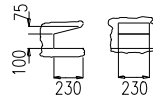


SECTION Y-Y

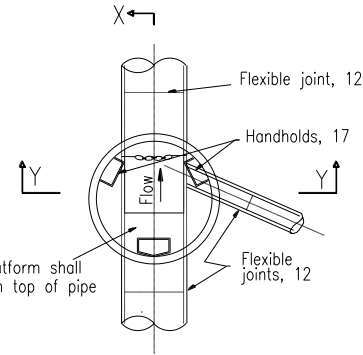
Greater Dublin Regional Code of Practice for Drainage Works			
Project: STANDARD MANHOLE DETAILS			
Title: TYPE J MANHOLE (precast)			
Drawn: JOM	Checked:	Approved:	
Date: May 2006	Scale: NOT TO SCALE	Drawing No.: 2127/12	
Revision		Made by	Date

I.XI. Type K Manhole (precast):

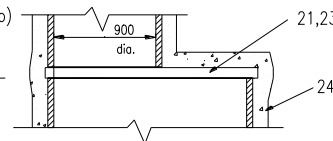
NOT Permitted in DCC Area



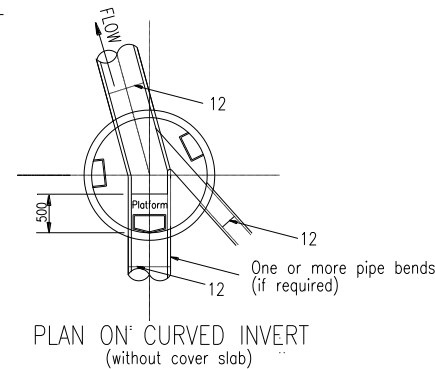
DETAILS OF TOE HOLD



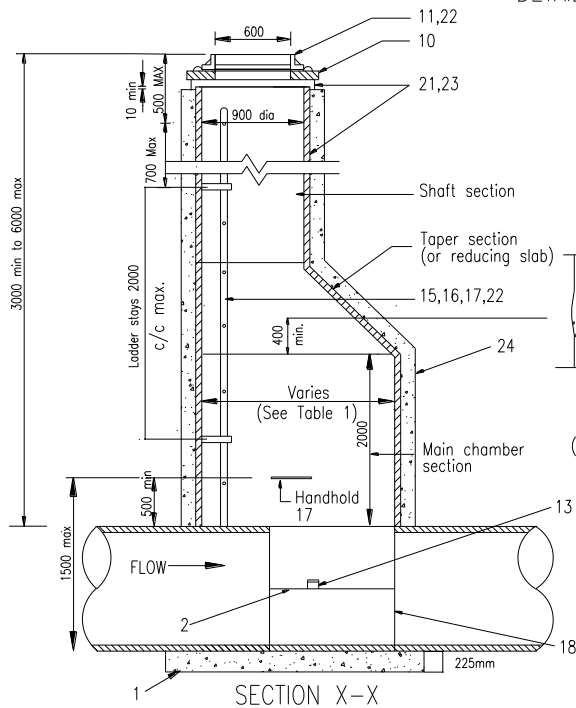
PLAN ON STRAIGHT INVERT (without cover slab)



ALTERNATIVE DETAIL (Reducing slab instead of taper section)

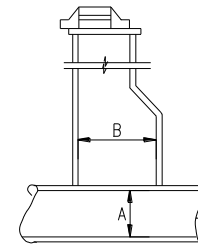


PLAN ON CURVED INVERT (without cover slab)



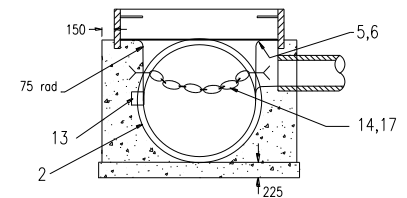
SECTION X-X

In-situ grade 20N/20mm concrete base walls, benching and base slab with precast channel as shown or in-situ formed invert as alternative, Walls to extend 150mm beyond outer face of chamber ring. Alternatively precast concrete chamber rings may be bedded in mortar or an in-situ 20N/20mm concrete base slab 300mm greater in diameter than chamber rings.



MAXIMUM PIPE DIAMETER A	CHAMBER INTERNAL DIAMETER B
225	1200
300	1200
375	1200
450	1200
525	1200
600	1200
675	1350
750	1500
900	1500
1050	2100
1200	2100

Table 1:



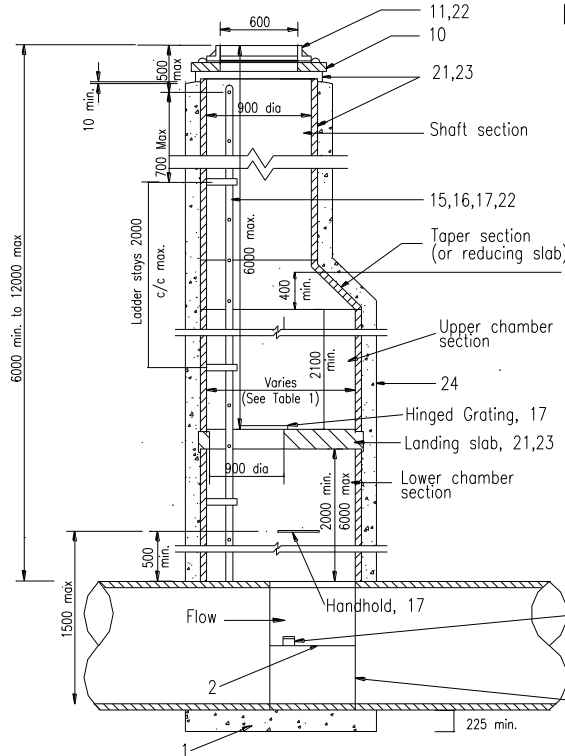
SECTION Y-Y

Greater Dublin Regional Code of Practice for Drainage Works

Project: STANDARD MANHOLE DETAILS			
Title: TYPE K MANHOLE (precast) Depth to invert 3m to 6m			
Drawn: JOM	Checked:	Approved:	
Date: May 2006	Scale: NOT TO SCALE	Drawing No.: 2127/12	
Revision		Made by	Date

I.XII. Type L Manhole (precast):

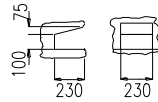
NOT Permitted in DCC Area



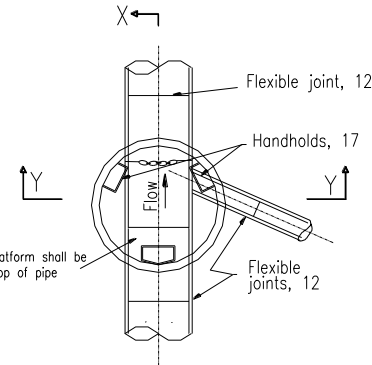
SECTION X-X

Integral in-situ 20N/20mm concrete base walls benching and base slab with precast channel as shown or in-situ formed invert as alternative. Walls to extend 150mm beyond outer faces of chamber ring. Alternatively precast concrete chamber rings may be bedded in mortar or an in-situ 20N/20mm concrete base slab 300mm greater in diameter than chamber rings.

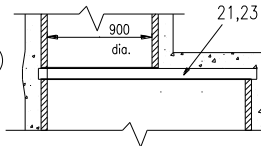
DETAILS OF TOE HOLD



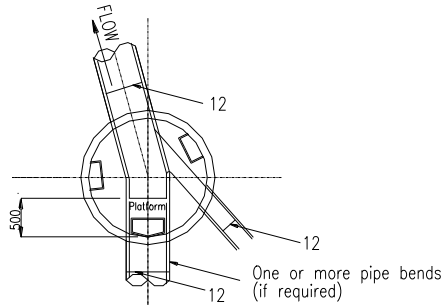
Concrete Platform shall be level with top of pipe



PLAN ON STRAIGHT INVERT (without cover slab)



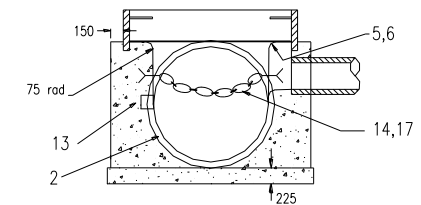
ALTERNATIVE DETAIL (Reducing slab instead of taper section)



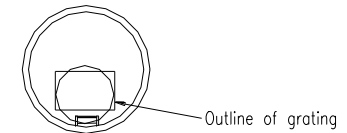
PLAN ON CURVED INVERT (without cover slab)

MAXIMUM PIPE DIAMETER A	CHAMBER INTERNAL DIAMETER B
225 - 900	1500
1050 - 1200	2100

Table 1:



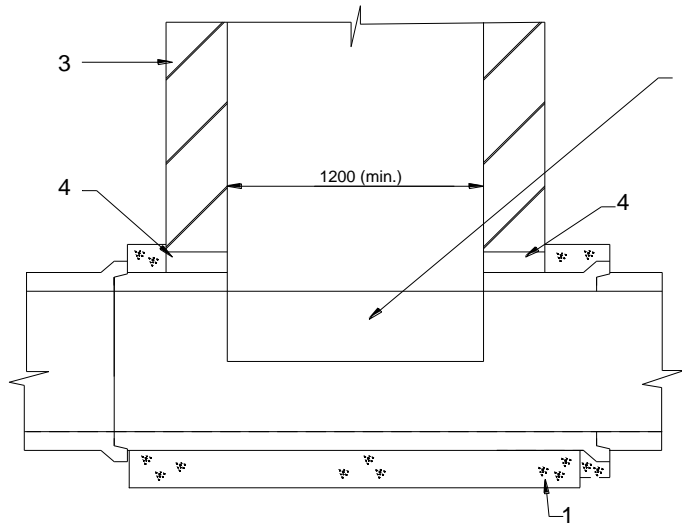
SECTION Y-Y



PLAN ON LANDING

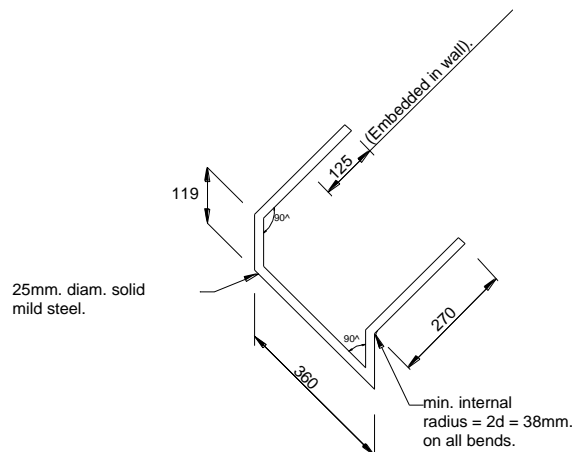
Greater Dublin Regional Code of Practice for Drainage Works			
Project: STANDARD MANHOLE DETAILS			
Title: TYPE L MANHOLE (precast) Depth to invert 6m to 12m			
Drawn: JOM	Checked:	Approved:	
Date: May 2006	Scale: NOT TO SCALE	Drawing No.: 2127/12	
Revision		Made by	Issue

Standard Rung & Safety Chain Detail:



Crown removed by cutting to half diameter provided flexible joints are situated on each side no further than 600mm. from inner face of manhole walls. (See Note 2).

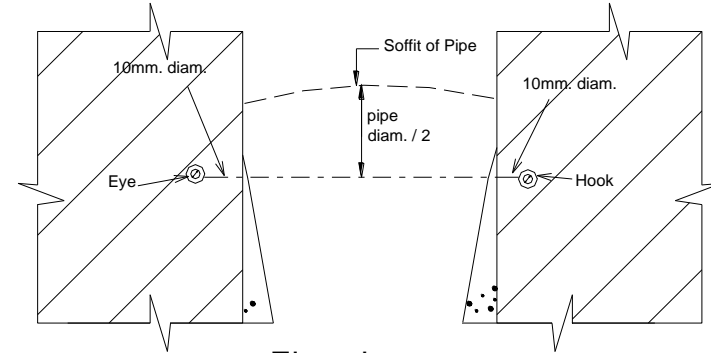
Alternative Method of Forming Channel Thru. Manhole.



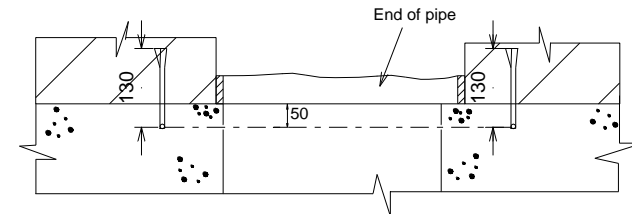
Standard Rung (Hot Dip Galvanised)

(Iron Steps Not Permitted)

Note: Chain, Hook & Eye to be hot dipped galvanised or stainless steel
Chain to be 10mm. closed links.



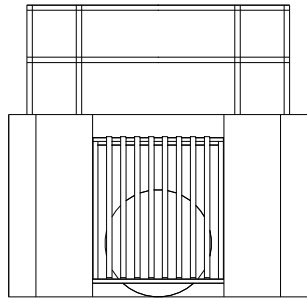
Elevation



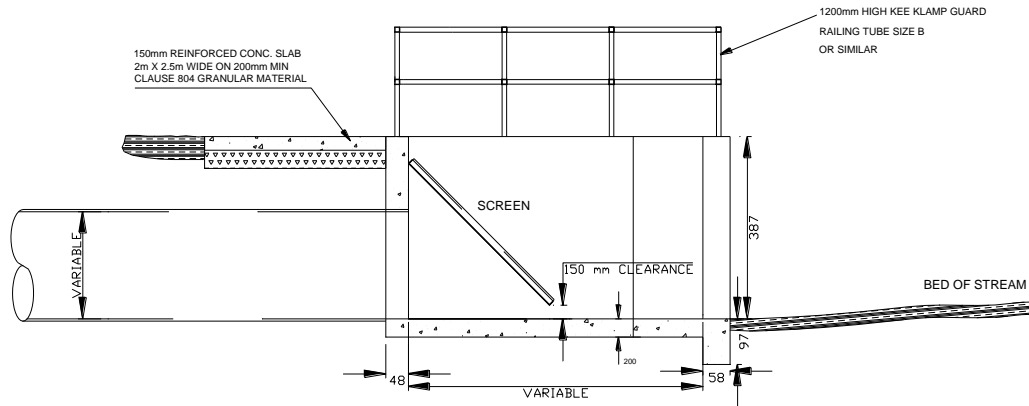
Plan (Safety Chain, Hook & Eye)

Greater Dublin Regional Code of Practice for Drainage Works			
Project: STANDARD MANHOLE DETAILS			
Title: STANDARD RUNG & SAFETY CHAIN DETAIL			
Drawn : JOM	Checked :	Approved :	
Date: APR 2000	Scale: NOT TO SCALE	Drawing No.: 2127/11	
Revision		Made by	Date
		KO'S	12/11/02

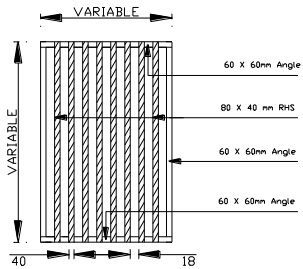
I.XIII. Typical Screen Detail:



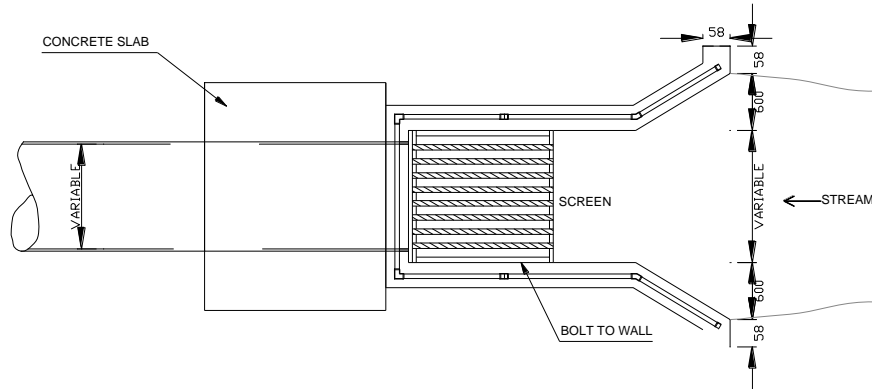
FRONT ELEVATION



SIDE ELEVATION



SCREEN DETAIL



SCREEN TO BE CONSTRUCTED FROM 80 mm X 40 mm X 5 mm RHS ATTACHED TO FRAMEWORK FORMED FROM 60 mm X 60 mm X 6 mm M.S. ANGLES. WELDED CONSTRUCTION THROUGHOUT. FRAME FIXING BOLT-HOLES @ 300 mm CENTRES TO ACCOMMODATE M20 FIXING BOLTS. ENTIRE ASSEMBLY TO BE HOT DIPPED GALVANISED TO BS 729.

Greater Dublin Regional Code of Practice for Drainage Works			
Project:		STANDARD MANHOLE DETAILS	
Title: STANDARD DETAIL OF RIVER SCREEN			
Drawn: CP	Checked: AOD	Approved:	
Date: JAN '99	Scale: NOT TO SCALE	Drawing No: 5018	
Revision		Made by	Issue
A	RHS BOX SECTION RE-SIZED TO 80x40mm	T.McM.	JAN '04

APPENDIX II

Dublin City Council's Application Forms



Application For Sewer Connection

Drainage Division,
Block 1, Floor 2,
Fishamble Street,
Dublin 8.
Tel: 222 2155 Fax: 222 300
www.dublincity.ie

All applicants are advised that a connection will be provided only on condition that the development is in compliance with the requirements of the Sanitary Authority (Local Government (Planning and Control) Act 1990). In particular, applicants should note the following:

1. Dublin City Council will carry out all connection work to public sewers at the applicant's expense.
2. Connections to the public sewer **will not be granted under any circumstances** until the internal drainage layout has been completed in accordance with the appropriate Planning Permission conditions, and has been inspected and approved by The Local Sanitary Authority's Planning and Development Control Inspector, who can be contacted in our Bannow Road Depot on 01-838 3870 / 838 8193
3. The connection fee includes two on site visits from a The Local Sanitary Authority Inspector. Subsequent visits will be charged for at the appropriate hourly rate.
4. Four copies of the detailed drainage drawings for the site must be submitted with the completed application form.
5. Drainage layouts for developments that contain public sewers must be constructed in accordance with The Local Sanitary Authority requirements as set out in "Code of Practice for Development Works – Drainage", copies of which are freely available from The Local Sanitary Authority at the above address.
6. Applicants **must** have an approved Interceptor trap fitted on their own drainage system prior to discharging to the public foul sewer. (See drawing overleaf).
7. All drainage from basement level must be pumped to ground level before being by gravity from the site to the public sewer.
8. Outfall manholes, in general, shall be 1.2 meters to 1.5 meters deep.
9. It is a matter for the applicant to ensure that they have adequate fall from their site to the public sewer. In general, the outgoing invert level of the connection pipe should allow for a fall of at least 1:100 to the crown level of the receiving public sewer. (See drawing overleaf). Details regarding positions and levels of public sewers can be obtained from The Local Sanitary Authority records office, at the above address.

Opening Hours

9.30 a.m. – 12.30 p.m.
2.00 p.m.– 4.00 p.m.

10. Applicants must investigate the location of adjacent services and ensure that there is an unobstructed route from the site to the public sewer to allow the connection work to proceed.
11. Payment by Bank draft or cash is preferable to payment by cheque, as all cheques must be cleared before the application can be processed. The applicant is reminded that any monies owing for the development, including any planning levies and special drainage levies, if applicable, must be paid before a connection can be granted.

NOTE: The applicant shall be made aware that this connection process takes a minimum of 5 weeks.



Application For Sewer Connection

Application To:

Drainage Division,

Block 1, Floor 2,

Fishamble Street,

Dublin 8.

Tel: 222 2155 Fax: 222 300

www.dublincity.ie

Michael Phillips

City Engineer

Name and Address of Applicant:

Telephone:	Fax:

Site Address for Connection:

Telephone:	Fax:

Connection Details

Pipe Size Diameter (mm)	Length (m)	Depth (m)	Foul, Surface or Combined

Planning Details

Planning Application No:

Decision Order No:

Permission Date:

<u>Office Use Only</u>			
Date Received:			
ID:		Dub:	
P.E.:		P.I.:	

If the connection is not subject to Planning approval, the applicant must explain why.

Four copies of the Site Drainage Layout **must** be submitted with this Application Form. Please list the relevant drawing's below.

I hereby certify that all particulars are complete and comply with the requirements of The Local Sanitary Authority

Signature of Applicant:

Date:

Revised 24th May 2000

**The Local Sanitary Authority
Dublin City Council
Civic Offices
Fishamble Street
Dublin 8**

Tel 222 2155

DUBLIN CITY COUNCIL

**LOCAL GOVERNMENT (WATER POLLUTION) ACTS, 1977 & 1990
AND
LOCAL GOVERNMENT (WATER POLLUTION) REGULATIONS 1978 & 1992**

**Application for a Licence / Licence Review to discharge
Trade Effluent or Other Matter to a Sewer**

Notes on completion of the application:

1. The application should be completed in accordance with the above-mentioned Acts and regulations.
2. The application should be accompanied by:
 - (a) A site location map, in **duplicate**, to a suitable scale showing premises, public roadways and all points of discharge to the public sewers.
 - (b) A site drainage plan, in **triplicate**, to a scale of 1:100 (or other appropriate scale) and such other particulars as are necessary to describe the premises, works, apparatus or plant from which the effluent is to be discharged. The site drainage plan shall clearly indicate all drainage on site and shall be **colour coded**.
 - (c) An application fee of €380.00 (three hundred and eighty euros).
3. Completed applications should be sent to:

**The Divisional Engineer
The Local Sanitary Authority
Dublin City Council
Civic Offices
Dublin 8
Tel 222 2155 Fax 2222 300**

1. Name and address of Applicant: _____
_____ Tel. No. _____
2. Name and address of the Premises:

3. Number of employees at premises: _____
4. Date of commencement of discharge: _____
5. Description of the process or activity: _____

6. Point of discharge to sewer: _____
7. Size and type of discharge pipe: _____
8. Location of sampling point: _____
9. Average Volume _____ m³/day.
10. Maximum Volume _____ m³/day.
11. Maximum rate of discharge _____ litres/sec.
12. Method of flow measurement: _____
13. Period or periods of discharge during day: _____

14. Number of days worked per annum: _____
15. Particulars of effluent treatment: _____

16. Characteristics of the Trade Effluent or other Matter

Complete for all applicable characteristics giving ranges where available. Concentrations to be expressed in mg / litre.

Characteristic	Prior to Treatment	As Discharged
Temperature (°C)	_____	_____
pH	_____	_____
Colour (degree Hazen)	_____	_____
B.O.D.	_____	_____
C.O.D.	_____	_____
Suspended Solids	_____	_____
Settleable Solids (ml/litre)	_____	_____
Dissolved Solids	_____	_____
Ammonia (as N)	_____	_____
Nitrates (as N)	_____	_____
Phosphorous (as P)	_____	_____
Sulphates (as SO ₄)	_____	_____
Chlorides (as Cl)	_____	_____
Phenols (as C ₆ H ₅ OH)	_____	_____
Detergents (as Methylene Blue Active Substances)	_____	_____
Oils, fats and grease	_____	_____
Metals (Specify each)	_____	_____
_____	_____	_____
Organohalogen compounds (specify)_____	_____	_____
_____	_____	_____
Organophosphorous compounds (specify) _____	_____	_____
_____	_____	_____
Organotin compounds (specify) _____	_____	_____
_____	_____	_____
Mineral oils or Hydrocarbons of Petroleum origin	_____	_____
Other toxic substances (specify) _____	_____	_____

Other relevant characteristics

SIGNED: _____

DATE: _____

<p><u>For Office Use</u> REGISTER / FILE REF: _____ DATE RECEIVED: _____</p>
--



**Standard Checklist for
Drainage Construction**

Drainage Division,
Block 1, Floor 2,
Wood Quay,
Dublin 8.
Tel: 222 2155 Fax: 222 2300
www.dublincity.ie

Manholes

Name of Site: _____

Name of Contractor: _____

Name of Consultant: _____

Foul Sewer Manhole Surface Water Manhole

Concrete Block Work

Manhole No: _____

	PASS	FAIL	DATE	Comments
Manhole Type				
Manhole Size				
Base				
Channel				
Benching				
Walls				
Arch				
Ladder/Step Irons				
Roof Slab				
Ope. In Roof Slab				
Cover & Frame				
Ladder				
Engineering Brick				
Interceptor Trap				
Chain & Stopper				
Water Test				

General Comments:

Signed:

DCCDD Inspector: _____

Contractors Representative: _____

Final Inspection by DCCDD: _____ **Date:** _____



**Standard Checklist for
Drainage Construction**

Drainage Division,
Block 1, Floor 2,
Wood Quay,
Dublin 8.
Tel: 222 2155 Fax: 222 2300
www.dublincity.ie

Pipeline

Name of Site: _____

Name of Contractor: _____

Name of Consultant: _____

Pipe Details:

Foul Sewer Manhole Surface Water Manhole

Concrete Clayware Ductile Iron

From Manhole No: _____ To Manhole No: _____

	PASS	FAIL	DATE	Comments
Pipe Size				
Ground Conditions				
Shuttering				
Concrete Bedding				
Fall				
Channel Depth				
Joints				
Surround				
Connection to MH				
Backfall to Pipe				

AIR TEST

Head at T= 0 min _____ mm Head at T= 5 min _____ mm

Result PASS FAIL

General Comments:

Signed:

DCCDD Inspector: _____

Contractors Representative: _____

Final Inspection by DCCDD: _____ **Date:** _____



Standard Checklist for Drainage Construction

Drainage Division,
Block 1, Floor 2,
Wood Quay,
Dublin 8.
Tel: 222 2155 Fax: 222 2300
www.dublincity.ie

Sewer Abandonment

Foul Sewer Manhole Surface Water Manhole

Sewer Identification: From m/h_____ to m/h_____

Background Information:

	Yes	No
Has method of abandonment been approved? Y/N	<input type="checkbox"/>	<input type="checkbox"/>
Has camera survey been carried out and submitted to supervising authority? Y/N	<input type="checkbox"/>	<input type="checkbox"/>
Has supervising authority received confirmation from consultants that all connections to sewer redundant? Y/N	<input type="checkbox"/>	<input type="checkbox"/>

*Note: Contractor may not commence works unless **all** the above information has been received and approved.*

Works Data:

Date	
Name of Site	
Name of Contractor	
Name of Consultant	
Method of Abandonment	

General Comments:

Signed:

DCCDD Inspector: _____

Contractors Representative: _____

FINAL INSPECTION BY DCCDD: _____ **DATE:** _____

APPENDIX III

DUN LAOGHAIRE-RATHDOWN **COUNTY COUNCIL'S** **APPLICATION FORMS**

DUN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

LICENCE APPLICATION

TO DISCHARGE TRADE EFFLUENT OR OTHER MATTER TO A SEWER UNDER
SECTION 16/1 OF THE LOCAL GOVERNMENT
(WATER POLLUTION) ACTS, 1977 AND 1990

Before completing this application please read explanatory notes on Page 5.

I hereby make application for a licence, under Section 16/1 of the Local Government (Water Pollution) Act, 1977 as amended 1990, to discharge trade effluent to a sewer in accordance with the particulars and information attached to this application.

This application should be accompanied by the following:

- a. Drainage plans in triplicate, to a scale of 1:100 (or other appropriate scale) indicating the premises drainage system and any works, apparatus or plant from which the effluent is to be discharged from.***
- b. A site location map in triplicate to a suitable scale showing the premises and point of discharge to any waters.***
- c. A fee of 380.00 must be included with this application.***

To:

Senior Engineer,
Drainage Section,
Environmental Services Department,
Level 3,
County Hall,
Dun Laoghaire,
Co. Dublin

Signed: _____ Date: _____

Name of Applicant _____

_____ Tel. No. _____

Address of premises from where effluent will be discharged:

Registered Office Address _____

Effluent Volume _____ cubic meters/day

Maximum Volume _____ cubic meters/day

Maximum rate discharge _____ litres/sec

Periods or periods of discharge during the day _____

Date of commencement of discharge _____

Description of process or activity _____

Seasonal, or other variation (including shift work): _____

Working days per week: _____

Details of sampling and monitoring arrangements for effluent:

Size of discharge pipe: _____

Particulars of any screening or treatment of effluent before discharge to any waters.

Number of employees at premises: _____

Contract Water Charges Account No. _____

Characteristics of the Trade Effluent or other Matter

**Complete for all applicable characteristics giving ranges where available.
Concentrations to be expressed in mg/litre.**

Characteristics	Prior to Treatment	As Discharged
Temperature (°C)	_____	_____
Ph	_____	_____
Colour (degree hazen)	_____	_____
B.O. D.	_____	_____
C.O. D.	_____	_____
Suspended Solids	_____	_____
Settleable Solids (ml/litre)	_____	_____
	_____	_____
	_____	_____
	_____	_____
Dissolved Solids	_____	_____
Ammonia (as N)	_____	_____
Nitrates (as N)	_____	_____
Phosphorus (as P)	_____	_____
Sulphates (as SO ₄)	_____	_____
Chlorides (as CL)	_____	_____
Phenols (as C ₆ H ₅ OH)	_____	_____
	_____	_____
	_____	_____
Detergents (as Methylene Blue Active Substances)	_____	_____
Oils, fats and grease	_____	_____
Metals (Specify each)	_____	_____
	_____	_____
	_____	_____

Organohalogen compounds _____
(specify) _____

Organophosphorous compounds _____
(specify) _____

Mineral oils or Hydrocarbons of
Petroleum origin

Other toxic substances (specify) _____

Other relevant Characteristics

SIGNED: _____ DATE: _____

FOR OFFICE USE
REGISTER/FILE REF: _____
DATE RECEIVED: _____

EXPLANATORY NOTES

WATER POLLUTION ACT 1977 - 1990

“Trade Effluent” as defined in Section 4-1 of the Local Government (Water Pollution) Act, means effluent from any works apparatus, plant or drainage pipe used for the disposal to any waters except under and in accordance with a licence under this section.

If you have any queries in relation to this application please contact Pat Ruddy at the Water Pollution Section at Sandyford Reservoir, Enniskerry Road, Sandyford, County Dublin

Telephone 2943100 / 2955063 / 2955087

DUN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

LICENCE APPLICATION

TO DISCHARGE TRADE EFFLUENT TO WATERS UNDER SECTION 4-(1) OF THE LOCAL GOVERNMENT (WATER POLLUTION) ACTS, 1977 AND 1990

Before completing this application please read explanatory notes on Page 5.

I hereby make application for a licence, under Section 4-(1) of the Local Government (Water Pollution) Act, 1977 as amended 1990, to discharge trade effluent to waters in accordance with the particulars and information attached to this application.

This application should be accompanied by the following:

- d. Drainage plans in triplicate, to a scale of 1:100 (or other appropriate scale) indicating the premises drainage system and any works, apparatus or plant from which the effluent is to be discharged from.***
- e. A site location map in triplicate to a suitable scale showing the premises and point of discharge to any waters.***
- f. A fee of 380.00 must be included with this application.***

To:

*Senior Engineer,
Drainage Section,
Environmental Services Department,
Level 3,
County Hall,
Dun Laoghaire,
Co. Dublin*

Signed: _____ Date: _____

Name of Applicant _____

_____ Tel. No. _____

Address of premises from where effluent will be discharged:

Registered Office Address _____

Effluent Volume _____ cubic meters/day

Maximum Volume _____ cubic meters/day

Maximum rate discharge _____ litres/sec

Periods or periods of discharge during the day _____

Date of commencement of discharge _____

Description of process or activity _____

Seasonal, or other variation (including shift work): _____

Working days per week: _____

Details of sampling and monitoring arrangements for effluent:

Size of discharge pipe: _____

Particulars of any screening or treatment of effluent before discharge to any waters.

Number of employees at premises: _____

Contract Water Charges Account No. _____

Characteristics of the Trade Effluent or other Matter

**Complete for all applicable characteristics giving ranges where available.
Concentrations to be expressed in mg/litre.**

Characteristics	Prior to Treatment	As Discharged
Temperature (°C)	_____	_____
Ph	_____	_____
Colour (degree hazen)	_____	_____
B.O. D.	_____	_____
C.O. D.	_____	_____
Suspended Solids	_____	_____
Settleable Solids (ml/litre)	_____	_____
	_____	_____
	_____	_____
	_____	_____
Dissolved Solids	_____	_____
Ammonia (as N)	_____	_____
Nitrates (as N)	_____	_____
Phosphorus (as P)	_____	_____
Sulphates (as SO ₄)	_____	_____
Chlorides (as CL)	_____	_____
Phenols (as C ₆ H ₅ OH)	_____	_____
	_____	_____
	_____	_____
Detergents (as Methylene Blue Active Substances)	_____	_____
Oils, fats and grease	_____	_____
Metals (Specify each)	_____	_____
	_____	_____
	_____	_____
	_____	_____

Organohalogen compounds _____
(specify) _____

Organophosphorous compounds _____
(specify) _____

Mineral oils or Hydrocarbons of
Petroleum origin

Other toxic substances (specify) _____

Other relevant Characteristics

SIGNED: _____ **DATE:** _____

FOR OFFICE USE

REGISTER/FILE REF: _____

DATE RECEIVED: _____

EXPLANATORY NOTES

WATER POLLUTION ACT 1977 - 1990

“Trade Effluent” as defined in Section 4-1 of the Local Government (Water Pollution) Act, means effluent from any works apparatus, plant or drainage pipe used for the disposal to any waters except under and in accordance with a licence under this section.

If you have any queries in relation to this application please contact Pat Ruddy at the Water Pollution Section at Sandyford Reservoir, Enniskerry Road, Sandyford, County Dublin

TELEPHONE 2943100



FOR OFFICE USE ONLY
Drainage Reference No:
Date Application Received:
Date Received in Depot:
Road Opening Licence Number:

Application for Sewer Connection

Name and Address of Applicant		Site Address for Connection
Telephone:		
Fax:		
Email:		
Note: If all contact details are not provided this application will not be processed		

Connection Details

Description of Premises:
Year of construction:
Number domestic houses:
Number Apartments:
Number Commercial units (number persons and nature of business):

Foul Connection	Surface Water Connection
No. of connections required	No. of connections required
Connecting pipe diameter (mm)	Connecting pipe diameter (mm)
Invert level of connection	Invert level of connection
Type of connection - Manhole <input type="checkbox"/>	Type of connection - Manhole <input type="checkbox"/>
Saddle <input type="checkbox"/>	Saddle <input type="checkbox"/>
Backdrop required <input type="checkbox"/>	Backdrop required <input type="checkbox"/>
Please tick appropriate box(es)	Please tick appropriate box(es)

Planning Details

Planning Application No	
Decision Order No	
Permission Dat	
Road Opening Licence Number	

If trade waste will be discharged to the public sewer please state the nature of the discharge and the quantity.

I hereby certify that all particulars are complete and comply with the requirements of the Environmental Services Section.

Signature of Applicant: _____ **Date:** _____



Environment Department
An Rannóg Comhshaoil

**Water Services
Level 3
County Hall
DUN LAOGHAIRE**

Telephone: 2054700 - Ext 4409, 4478, 4416
Fax: 2300125

www.dlrcoco.ie

Application For Sewer Connection

All applicants are advised that a connection will be provided only on condition that the development is in compliance with the requirements of the Sanitary Authority (Local Government (Planning and Control) Act 1990). In particular, applicants should note the following:

- 1. Dún Laoghaire-Rathdown County Council will carry out all connection work to public sewers at the applicant's expense (unless otherwise agreed by the Drainage Section).**
2. Connections to the public sewer **will not be granted under any circumstances** until the internal drainage layout has been completed in accordance with the appropriate Planning Permission conditions.
- 3. A site location map, a drawing showing the location of the public sewer and the proposed connection and a drawing detailing the 'as constructed' drainage layout must be submitted. (Note if any of these drawings are not provided the application will NOT be processed).**
4. If any Public Area is being opened (i.e. road, footpath or grass margin) a Road Opening Licence must be obtained from the Council's Roads Authority, Tel 01 2054809. The Licence Number must be included on the Drainage Connection Application Form.
5. It is a matter for the applicant to ensure that they have adequate fall from their site to the public sewer. In general, the outgoing invert level of the connection pipe should allow for a fall of at least 1:100 to the crown level of the receiving public sewer. Details regarding positions and levels of public sewers can be obtained from the **Environmental Services Section**, at the above address.

OPENING HOURS

9.30 a.m. – 1.00 p.m.

2.15 p.m. – 4.30 p.m. (2.15 p.m. – 4.00 p.m. Friday)

6. Applicants must investigate the location of adjacent services and ensure that there is an unobstructed route from the site to the public sewer to allow the connection work to proceed.
7. Payment by Bank draft or cash is preferable to payment by cheque, as all cheques must be cleared before the application can be processed. The applicant is reminded that any monies owing for the development, including any planning levies and special drainage levies, must be paid before a connection can be granted.
8. **NOTE:** The applicant shall be made aware that this connection process takes a minimum of 5 weeks.

APPENDIX IV

Fingal County Council's **Application Forms**

Application for SEWER/SURFACE WATER Connection

(To be completed by the applicant)

OFFICE USE ONLY

OUR REF NO: F/S /

To: FINGAL COUNTY COUNCIL
Water Services Department, 1st Floor, Grove Road,
Blanchardstown,
Dublin 15.

1. SITUATION OF PREMISES: (Complete particulars must be given and a plan or sketch to identify accurately the premises or site in relation to the existing roads or buildings).

2. DESCRIPTION OF PREMISES:

3. VALUATION

(State whether dwelling, shop, factory, workshop, garage, field, etc)

4. If trade waste discharges, state nature and quantity

5. Size and number of proposed connections to mains

6. Is the supply required for a house (new), Development or Reconstruction YES/NO:

7. If this application is in respect of a NEW HOUSE, DEVELOPMENT or RECONSTRUCTION, the applicant is required to state whether approval has been obtained under the Local Government (Planning and Development) Acts, and the Council's Building Bye-Laws and to enter below the appropriate Reference details. (Further information, if required, may be obtained from the Planning Department, County Hall, Main Street, Swords, Co. Dublin).

REGISTER NO: P.C. NO:

PLANNING APPROVAL per order P / /

Dated: Dated:

8. Where the public road, footpath or grass margin is to be opened, the work shall not commence until a Road Opening Licence is obtained from the Roads Authority, Grove Road, Blanchardstown, Dublin 15.

If the licence has been obtained state No. Dated:

If licence has been applied for state date of application:

All connections to public sewer must be made by the Council, at the applicant's expense. I hereby undertake that all work shall be carried out in accordance with Council's rules, regulations and ByeLaws.

Name of Applicant: (IN BLOCK LETTERS)

Address (in full):

Date: Telephone No:

Date Received:



LOCAL GOVERNMENT (WATER POLLUTION) ACTS 1977 & 1990

APPLICATION FOR LICENCE

to discharge trade effluent or other matter

(other than domestic sewerage or storm water) to a SEWER

I hereby make application for a licence, under Section 16 of the Local Government (Water Pollution) Act, 1977 as amended, to discharge trade effluent in accordance with the plans and other particulars attached.

Signed: _____

Date: _____

IMPORTANT

Before completing the application form please read the following:

1. The licence application form should be accompanied by the plan, **in triplicate** indicating the locations referred to in paragraph (4) of the application form.
2. Plans, **in triplicate** indicating the premises, drainage system and any works, apparatus or plant from which the effluent or other matter is to be discharged must accompany this application form. Point of discharge should be shown on 1-2500 O.S. map.
3. "Trade effluent" is defined in section 1 of the Local Government (Water Pollution) Act, 1977, as amended.

4. If the application relates to matter other than trade effluent such other matter should be detailed and described.
5. At paragraph (9) of the application form all relevant and applicable characteristics should be completed giving concentration ranges where available. Concentration to be expressed in mg/l where applicable. This list is meant to be indicative only - such other physical, chemical or other characteristics as are pertinent to the effluent in question should be specified.
6. A licence is not required for the discharge to a sewer of domestic sewage or storm water. See Section 16(1) of Local Government (Water Pollution) Act, 1977 as amended.
7. Please ensure, before returning this form, that Parts (1) to (10) inclusive are fully completed including signature at foot of Page 3.
8. **FEE:** ARTICLE 7 of the Local Government (Water Pollution) Regulations 1992 provides as follows:-
 - (1) A fee shall be paid to a local authority by an applicant in respect of a licence application under section 4 of the Principal Act and to a sanitary authority in respect of a licence application under section 16 of that Act.
 - (2) The amount of the fee payable under this article is hereby specified to be €380.

IT SHOULD BE NOTED THAT AN APPLICATION CANNOT BE CONSIDERED UNTIL THE CORRECT FEE IS PAID

COMHAIRLE CHONTAE FHINE GALL
FINGAL COUNTY COUNCIL

1. **Name of Applicant:** _____
Tel. No.: _____
Address:

2. **Name and address of the premises from which the effluent or other matter is to be Discharged:**

3. **If trade effluent, describe activity giving rise to the discharge:**

4. **(a) Location of point of discharge to sewer:**

- (b) Details of size and type of discharge pipe:**

5. **Details of provisions made for sampling and measuring flow of the effluent:**

6. **Particulars of any other discharge from the premises in question:**

7. **Details of any special arrangements to prevent accidental discharge:**

8. **General**
 - (a) **Date of commencement of discharge:**

 - (b) **Trade Effluent Volume of effluent to be discharged:**

 - (i) **Normal per day:** _____
 - (ii) **Maximum in any one day:** _____
 - (iii) **Maximum rate per hour:** _____

(iv) Period or periods of the day in which the discharge is to take place: _____

(v) Seasonal, or other variations (including any arising from plant malfunction), in volumes of effluent to be discharged:

(c) Particulars of effluent treatment : _____

(d) No. Of employees based in premises: _____

(e) Contract Water Charges Account No.: _____

9. Characteristics of Trade Effluent:

Characteristic	Prior to Treatment	As Discharged
Temperature °C	_____	_____
pH	_____	_____
Colour (degrees hazen)	_____	_____
B.O.D.	_____	_____
C.O.D.S.	_____	_____
Suspended Solids	_____	_____
Settleable Solids (mg/l)	_____	_____
Dissolved Solids	_____	_____
Ammonia (as N)	_____	_____
Nitrates (as N)	_____	_____
Phosphorus (as P)	_____	_____
Sulphates (as SO ₄)	_____	_____
Chlorides (as Cl)	_____	_____
Phenols (as C ₆ H ₅ OH)	_____	_____
Detergents (as Laurylsulphate)	_____	_____
Oils, grease and fats	_____	_____
Metals - Specify each	_____	_____
Organohalogen compounds (Specify)	_____	_____
Organophosphorus compounds (Specify)	_____	_____

Characteristic	Prior to Treatment	As Discharged
-----------------------	---------------------------	----------------------

Organotin compounds
(Specify) _____

Minerals Oils or hydrocarbons
of petroleum origin _____

Other toxic substances
(Specify)

Other relevant characteristics:

10. Signature of Applicant (or his Agent)

FOR OFFICE USE ONLY:

Application Type:

Reference No.:

Amount received:

Receipt No.:

Date:

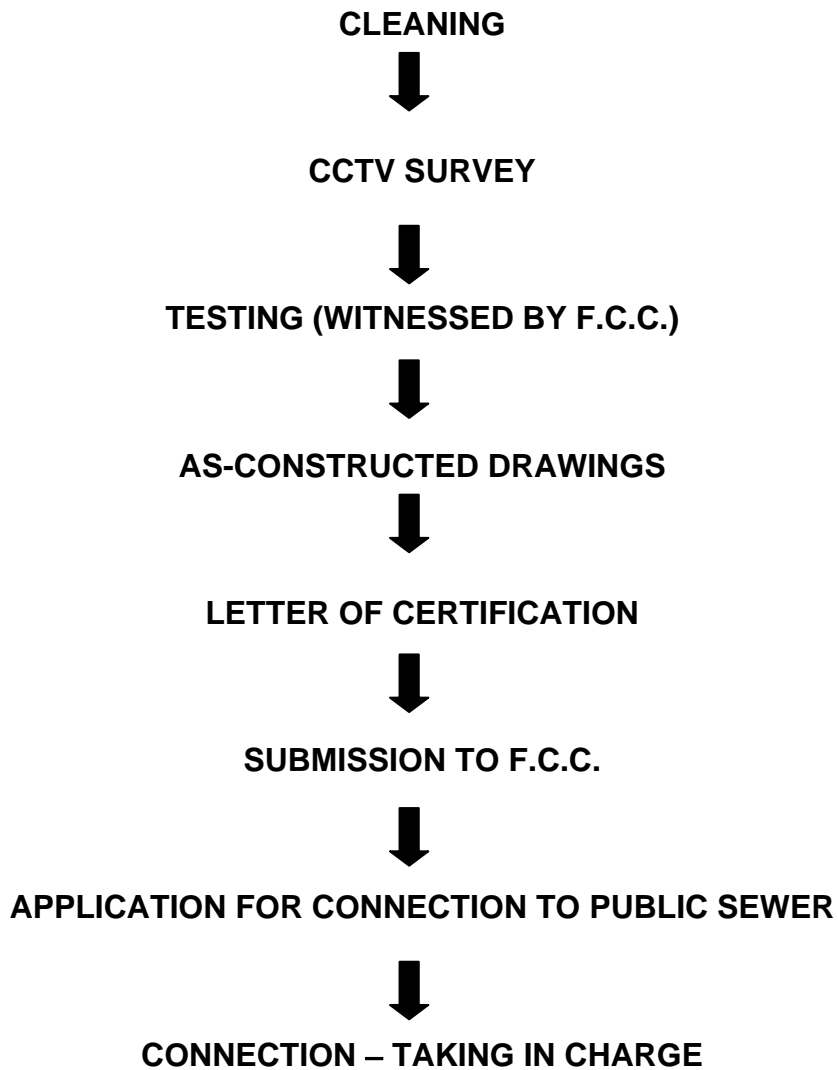


REQUIREMENTS FOR THE CONNECTION TO PUBLIC SEWERS

Before a connection to a Public Sewer shall be granted, the Water Services Department of Fingal County Council requires the following:

1. On completion of the construction of the sewers, all sewers shall be thoroughly cleansed before the CCTV survey and testing are commenced. A CCTV survey of all pipes shall then be carried out and a copy of this, along with a report, should be submitted to _____ showing clean, debris-free drainage pipes with no defects or infiltration.
2. Air/Water Tests shall be carried out on all pipes and the standards to which the tests comply with should be specified. A report on these Tests shall be submitted to _____. The report should include:
 - The sewers tested, cross-referenced to the “as-constructed drawings”
 - The dates that each section of sewer was tested
 - The name of person(s) who witnessed the tests, their position (professional) within the company
 - The results of each test, whether passed or failed and details of re-tests, if any.
3. Fingal County Council shall be afforded the opportunity to attend the testing of the sewers and should be given three working days notice of same. Notification in writing shall be given to the Senior Executive Engineer (Drainage), Water Services Dept., County Hall, Swords, Co. Dublin. The Senior Executive Engineer, Building Control Department, Blanchardstown Library and Offices, Dublin 15 shall also be notified and invited on-site to witness the testing.
4. 3No. hard copies of the “As-constructed” drawings and an electronic copy in .dwg or .dxf format, referenced to the National Grid, shall be submitted to _____. These drawings should indicate the elements of drainage that are being certified and, if the Development is phased, details of each phase to be submitted as they are complete. The pipe sizes, materials and gradients shall be clearly indicated in addition to cover and invert levels of all manholes.
5. A cover letter shall be submitted to _____ stating that there is no infiltration of ground water into the system and, where applicable, that the foul sewer and surface water drainage are separate. The standards to which the pipes were laid in accordance with should be specified.
6. Developments may be connected on a phased basis. Each phase will be subject to a separate application. Where a later phase is to be connected in, this sewer shall be physically blocked off in a manner previously agreed with the Drainage Area Engineer. All future connections to be finished in a sealed manhole.
7. For a connection to a public sewer, a connection application shall be made to the Water Services Department, Swords from where the forms are available. The Drainage Area Engineer should then be contacted. This connection will be carried out or supervised by Fingal County Council, Water Services Department at their discretion.
8. When a connection has been given, the sewer(s) shall be deemed to have been taken in charge by Fingal County Council. Any future connections to these sewers will be at the discretion of F.C.C.

FLOWCHART OF REQUIREMENTS FOR CONNECTION TO PUBLIC SEWER



APPENDIX V

Kildare County Council's Application Forms



KILDARE COUNTY COUNCIL

APPLICATION FOR PERMISSION TO MAKE SEWERAGE CONNECTION

Form of Application for permission to make a Sewerage Connection as set out below should be **fully completed and forwarded at least 28 days before the Sewerage Connection is required to: Water Services Department, Kildare County Council, Áras Chill Dara, Devoy Park, Naas, Co. Kildare.**
Phone No. 045-980362

Please Note: This application should provide a **detailed drainage plan (minimum scale 1:200)** of the premises which is to be connected to the public foul sewer. This plan should also show the exact location of all foul and surface water drains (including manholes, gullies, soakways, etc) located within the site boundary. The plan should also show the proposed route of the foul drain from the premises to its connection point with the public foul sewer. Applicants should note that only foul sewage (i.e. sink/toilet waste) would be permitted to discharge to the public foul sewer.

Work must not commence until you receive the official consent of the County Council to make the connection.

A location map identifying accurately the site(s) in respect of which connections(s) are required must accompany the application.

N.B

Foul sewers and drains should be tested in accordance with section 3.20 of Recommendations for Site Development Works for Housing Area and a certificate of compliance from a reputable Engineer including the results should be submitted to Water Services for approval prior to connection to public sewers.

Please submit a photocopy of Planning Permission with your Sewerage Connection Application Form.

Applicants Check List:

Please ensure the following items are included with application:-

- Detailed drainage plan (minimum scale 1:200)
- Site location map
- Copy of planning permission
- Road opening form (required if any public area is being opened, i.e. road, footpath or grass margin.) Available from Kildare County Council
- Ensure form is signed

Please note that there is a fee payable for sewerage connections which the applicant will be notified of once application is assessed

1. **Name of Applicant:** _____

2. **Address:** _____

3. **Tel. No.** _____ **Fax** _____ **email** _____

4. **Situation of Premises in relation to sewer mains.** (Complete and accurate particulars should be given, also a detailed plan including longitudinal section showing gradients, size of pipes, invert level, ground levels of chainages should be submitted to enable position of site or premises to be identified with regard to existing roads, buildings or sewers)

5. **Planning Ref. No. relevant to this application:** _____

6. **Date planning permission granted:** _____

7. **Amount of development levy:** _____

8. **Date Paid:** _____ **Receipt No:** _____

9. **Description of premises to be supplied:**

Dwellinghouse(s), Shop, Office, Factory, Workshop.

10. **Description of proposed work (particulars of pipe size etc):**

11. **Name and Address of Engineer involved in works on the site:** _____

Telephone Number: _____

Dated this _____ **day of** _____ **2006**

Signature of Applicant: _____

Kildare County Council

Local Government (Water Pollution) Acts 1977 and 1990

Application for Licence to Discharge Trade Effluent or other matter (other than domestic sewage or storm water) to a sewer

Explanatory Notes

1. A fee of €380 is payable from 1 November 1992 in respect of licence application.
2. The licence application form should be accompanied by the plans, in duplicate, indicating the locations referred to in paragraph 4 of the application form.
3. Plans, in duplicate, indicating the premises, drainage system and any works, apparatus or plant from which the effluent or other matter is to be discharged must accompany this application form. Point of discharge should be shown on 1-2500 OS map.
4. "Existing discharge" means a discharge which is similar in nature, composition and temperature to, and is of a similar volume and is made at a similar rate to, a discharge made during any corresponding period in the period of twelve months which ended on 1 January 1979, (See Section 18 (4) of the Local Government (Water Pollution) Act 1977).
5. "Trade effluent" is defined in Section 1 of the Local Government (Water Pollution) Act 1977.
6. If the application relates to matter other than trade effluent, such other matter should be detailed and described.
7. At paragraph 9 of the application form, all relevant and applicable characteristics should be completed giving concentration ranges where available. Concentration to be expressed in mg/l where applicable. The list is meant to be indicative only – such other physical, chemical or other characteristics as are pertinent to the effluent in question should be specified.
8. A licence is not required for the discharge to a sewer of domestic sewage or storm water (See Section 16(1) of the Local Government (Water Pollution) Act 1977).

Kildare County Council

Local Government (Water Pollution) Acts 1977 and 1990

Application for Licence to Discharge Trade Effluent or other matter (other than domestic sewage or storm water) to a sewer.

To/County Secretary
Kildare County Council
Environment Section
Arás Chill Dara, Devoy Park
Naas
Co Kildare

I hereby make an application for a licence under Section 16 of the Local Government (Water Pollution) Act 1977, as amended and extended by the Local Government (Water Pollution) (Amendment) Act 1990 to discharge *() effluent in accordance with the plans and other particulars attached. The discharge for which a licence is sought is / is not an existing discharge ** as defined in Section 18(4) of the Principal Act.

I enclose application fee of €380.

Signed: _____

On Behalf of: _____

Date: _____

* Insert "trade", "sewage" or "trade and sewage".

** See explanatory notes.

EFFLUENT DISCHARGE LICENCE APPLICATION (SECTION 16)

<p>1. <u>NAME & ADDRESS OF APPLICANT:</u></p> <p>Telephone No:</p>	
<p>2. Name and address of: premises from which effluent is to be discharged:</p> <p>Telephone No:</p>	
<p>3.If effluent is a trade effluent, give description of the process or activity giving rise to the discharge:</p>	
<p>4.(a)Location of point of discharge to sewer</p> <p>(b) Details of size and type of discharge pipe</p>	
<p>5. Details of provision made for sampling and measuring flow of the effluent.</p>	
<p>6.Particulars of any other discharges from the premises in question</p>	

EFFLUENT DISCHARGE LICENCE APPLICATION (SECTION 16)

<p>7. Details of any special arrangements to prevent accidental discharges:</p>	
<p>1. General (a) Date of commencement of discharge.</p>	
<p>8. (b) Trade Effluent Volume of effluent to be discharged</p>	
<p>1. Normal per day: (M³)</p>	
<p>(ii) Max in any one day: (M³)</p>	
<p>(iii) Max rate per hour: (M³)</p>	
<p>(iv) The Period or periods of the day in which discharge is to take place:</p>	
<p>(v) Any seasonal or other variations (including any arising from plant malfunction) in volumes of effluent to be discharged</p>	
<p>(b) Particulars of effluent treatment.</p>	

EFFLUENT DISCHARGE LICENCE APPLICATION (SECTION 16)

9. Characteristics of trade effluent

Complete for all applicable characteristics, giving concentration ranges where available. Concentration to be expressed in mg/l where applicable. The following list is meant to be indicative only – such other physical, chemical or other characteristics as are pertinent to the effluent in question should be specified.

CHARACTERISTICS Prior to treatment As Discharged

Temperature °C		
pH		
Colour (Degrees Hazen)		
BOD ₅		
COD		
Suspended Solids		
Settleable Solids (ml/l)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorous (as P)		
Orthophosphate (as P)		
Sulphates (as SO ₄)		
Chlorides (as Cl)		

9. CHARACTERISTICS Prior to treatment As Discharged

Phenols (as C ₆ H ₅ OH)		
Detergent (as Laurysulphate)		
Oils, greases and fats		
Arsenic		
Chromium		
Copper		
Cyanide		
Fluoride		
Lead		
Nickel		
Zinc		
Other Metals		

EFFLUENT DISCHARGE LICENCE APPLICATION (SECTION 16)

Pesticides & Solvents	Prior to Treatment	As Discharged
Atrazine		
Dichloromethane		
Simazine		
Toluene		
Tributyltin		
Xylenes		

Organohalogen Compounds (Specify)		
Organophosphorous Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral oils or hydrocarbons of petroleum origin		
Other toxic substances Specify		
Other relevant characteristics (including fish toxicity data from tests carried out on all or part of the effluent)		

Signed:

On behalf of

Date:

Kildare County Council

Local Government (Water Pollution) Acts 1977 and 1990 Application for Licence to Discharge Trade Effluent or other matter (other than domestic sewage or storm water) to waters

Explanatory Notes

Before completing the application form please read the following notes:

1. A fee of €380 is payable from November 1st 1992 in respect of licence application.
2. Prior to the making of a licence application, the applicant is required to publish in a newspaper circulating in the functional area of Kildare County Council, a notice of his intention to make such application. The notice shall contain, as a heading, the words "DISCHARGE OF EFFLUENT TO WATERS" and
 - (a) state the name of the applicant and the name of the local authority (i.e. Kildare County Council) to which application is being made:
 - (b) give a general description of the effluent:
 - (c) in the case of trade effluent, state the nature of the trade or industry:
 - (d) state the name and location of the premises from which the effluent is to be discharged, and,
 - (e) Indicate the waters to which the effluent is to be discharged.
3. Completed licence application form should be submitted to the County Secretary, Kildare County Council, Environment Section, Arás Chill Dara, Devoy Park, Naas, Co Kildare accompanied by the following:
 - (a) A copy of the newspaper in which the notice has been published:
 - (b) such plans, ***in duplicate*** and such other particulars as are necessary to describe the premises, draining system and any works, apparatus or plant from which the effluent is to be discharged and to identify the waters to which the discharge is to be made and the point of discharge:
 - (c) particulars of the nature, composition, anticipated temperature, volume and rate of discharge of, and the proposed method of any treatment of, the effluent, and the period or periods during which the effluent is to be discharged:
 - (d) In the case of trade effluent, a general description of the process or activity giving rise to the discharge.
4. Application may also be required to furnish such other particulars as Kildare County Council may reasonably require, including particulars of the quality, volume and flow rate of receiving waters and the effects of the discharge on such waters.
5. Where:-
 - (a) period of more than two weeks has elapsed between the publication in a newspaper of a notice and the making of the relevant application, or
 - (b) It appears to Kildare County Council that any such notice does not comply with the provisions of (1) above or, because of its content or

for any other reason, is misleading or inadequate for the information to the public, Kildare County Council may require the applicant to publish such further notice in such terms as it may specify in relation to compliance with any such requirement.

6. "Existing discharge" means that a discharge, which is similar in nature, composition and temperature to, and is of similar volume and is made at a similar rate to, a discharge made during any corresponding period in the period of twelve months, which ended on 1st October 1978.

EFFLUENT DISCHARGE LICENCE APPLICATION (SECTION 4)

<p>1. NAME & ADDRESS OF APPLICANT:</p> <p>Telephone No:</p>	
<p>2. Name and address of premises from which effluent is to be discharged:</p> <p>Telephone No:</p>	
<p>3. If effluent is a trade effluent, give description of the process or activity giving rise to the discharge:</p>	
<p>4.(a) Location of point of discharge to sewer</p> <p>(b) Details of size and type of discharge pipe</p>	
<p>5 Details of provision made for sampling and measuring flow of the effluent treatment:</p>	
<p>6 Particulars of any other discharges from the premises in question</p>	
<p>7 Details of any special arrangements to prevent accidental discharges:</p>	

8. General	
(a) Date of commencement of discharge	
(b) Trade Effluent Volume of effluent to be discharged	
(i) Normal per day: (M ³)	
(ii) Max in any one day: (M ³)	
(iii) Max rate per hour: (M ³)	
(vi) The Period	
(vii) Any seasonal or other variations (including any arising from plant malfunction) in volumes of effluent to be discharged	

9. Characteristics of trade effluent

Complete for all applicable characteristics, giving concentration ranges where available. Concentration to be expressed in mg/l where applicable. The following list is meant to be indicative only – such other physical, chemical or other characteristics as are pertinent to the effluent in question should be specified.

CHARACTERISTICS Prior to treatment As Discharged

Temperature °C		
pH		
Colour (Degrees Hazen)		
BOD ₅		
COD		
Suspended Solids		
Settleable Solids (ml/l)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorous (as P)		
Orthophosphate (as P)		
Sulphates (as SO ₄)		
Chlorides (as Cl)		

9. CHARACTERISTICS Prior to treatment As Discharged

Phenols (as C ₆ H ₅ OH)		
Detergent (as Laurylsulphate)		
Oils, greases and fats		
Arsenic		
Chromium		
Copper		
Cyanide		
Fluoride		
Lead		
Nickel		
Zinc		
Other Metals		

Pesticides & Solvents Prior to Treatment As Discharged

Atrazine		
Dichloromethane		
Simazine		
Toluene		
Tributyltin		
Xylenes		

Organohalogen Compounds (Specify)		
Organophosphorous Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral oils or hydrocarbons of petroleum origin		
Other toxic substances Specify		
Other relevant characteristics (including fish toxicity data from tests carried out on all or part of the effluent)		

Signed: _____

On behalf of _____

Date: _____

APPENDIX VI

Meath County Council's Application Forms

MEATH COUNTY COUNCIL

LOCAL GOVERNMENT (WATER POLLUTION) ACT, 1977
LOCAL GOVERNMENT (WATER POLLUTION) REGULATIONS 1978
AS AMENDED BY
LOCAL GOVERNMENT (WATER POLLUTION) (AMENDMENT) Act, 1990
AND
LOCAL GOVERNMENT (WATER POLLUTION) TRANSFER OF APPEALS
(REVOCATION) ORDER 1992
AND
LOCATION GOVERNMENT (WATER POLLUTION) REGULATIONS 1992
Application for Licence to Discharge Trade Effluent or Sewage Effluent to Waters

<p>1. Name, Address and Phone No. of Applicant</p> <p>.....</p> <p>.....</p>	<p>7. Particulars of any other discharge from premises in question</p> <p>.....</p> <p>.....</p>
<p>2. Name, Address, and Phone No. of Agent</p> <p>.....</p> <p>.....</p>	<p>8. Details of any special arrangements to prevent accidental discharges:</p> <p>.....</p> <p>.....</p>
<p>3. Name and Address of the premises from which the effluent or other matter is to be discharged</p> <p>.....</p> <p>.....</p>	<p>9. GENERAL</p> <p>(a) Date of commencement of discharge.....</p> <p>(b) Sewage Effluent</p> <p>(i) Number of persons Served.....</p> <p>(ii) Anticipated dry weather flow.....</p>
<p>4. If the effluent is a trade effluent, give the general description of the process or activities giving rise to the discharge.</p> <p>.....</p> <p>.....</p>	<p>(c) Trade effluent: Volume of effluent to be discharged</p> <p>Normal per day.....</p> <p>Maximum in any one day.....</p> <p>Maximum rate per hour.....</p>
<p>5. (a) Location of point of discharge (to be also shown on a 12500 Ordnance Survey Map)</p> <p>.....</p>	<p>(d) The period or periods of the day in which the discharge is to take place.....</p>
<p>(b) Description of waters to which discharge is to be made</p> <p>.....</p>	<p>(e) Any seasonal, or other variations (including any arising from plant malfunction) in volume or effluent to be discharged.....</p>
<p>(c) Details of size and construction of outlet</p> <p>.....</p> <p>.....</p>	<p>(f)Particulars of effluent treatment</p> <p>.....</p>
<p>Plans, in duplicate, indicating the premises, drainage systems and any works, apparatus or plant from which the effluent or other matter is to be discharged must accompany this application form.</p>	<p>(g)Particulars of the quality, volume and flow rate of the receiving waters shall be submitted.</p>
<p>6. Details of provision made for sampling and measuring flow of effluent</p> <p>.....</p> <p>.....</p>	<p>(h) Details of the effect of discharging on such waters shall be submitted</p> <p>(i) Results of any other investigations made shall be submitted.</p>
	<p>10. Characteristics of Trade Effluent Complete for all applicable characteristics giving concentration ranges where available.</p> <p>Concentration to be expressed in mg/1 where applicable.</p>

WAT

The following list is meant to be indicative only – such other physical, chemical or other characteristic as are pertinent to the effluent question should be specified.

Characteristic	Prior to Treatment	As Discharged
Temperature C		
PH		
Colour (degrees Hazen)		
B.O.D.		
C.O.D.		
Suspended Solids (mg/l)		
Settleable Solids (mg/l)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorus (as P)		
Sulphates (as SO ₄)		
Chlorides (as CL)		
Phenols (as C ₆ H ₅ OH)		
Detergents (as MBAS)		
Oils, Grease and Fats		
Metal – specify each)		
(a)		
(b)		
(c)		
(d)		
(e)		
Organohalogen compounds (Specify)		
Organophosphorus Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral Oils or Hydrocarbons of Petroleum Origin		
Other toxic substances (Specify)		
Other relevant Characteristics (including fish toxicity data from tests carried out on all or part of the effluent)		
Particulars of effluent treatment employed or proposed.		

I hereby make application for a licence under Section 4 of the Local Government (Water Pollution) Act, 1977 as amended by Local Government (Water Pollution) (Amendment) Act, 1990, to discharge trade and/or sewage effluent (delete whichever is inapplicable) in accordance with the plans and other particulars attached.

Signature of Applicant: Date:.....

MEATH COUNTY COUNCIL

LOCAL GOVERNMENT (WATER POLLUTION) ACT, 1977
LOCAL GOVERNMENT (WATER POLLUTION) REGULATIONS 1978
AS AMENDED BY
LOCAL GOVERNMENT (WATER POLLUTION) (AMENDMENT) Act, 1990
AND
LOCAL GOVERNMENT (WATER POLLUTION) TRANSFER OF APPEALS
(REVOCATION) ORDER 1992
AND
LOCAL GOVERNMENT (WATER POLLUTION) REGULATIONS 1992

Application for Licence to Discharge Trade Effluent or other matter (other than Domestic Sewage or Storm Water) to a Sewer

<p>1. Name, Address and Phone No. of Applicant</p> <p>.....</p> <p>.....</p>	<p>8. Details of any special arrangements to prevent accidental discharges:</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>2. Name, Address, and Phone No. of Agent</p> <p>.....</p> <p>.....</p>	<p>9. GENERAL</p> <p>(a) Date of commencement of discharge.....</p> <p>(b) Trade effluent: Volume of effluent to be discharged</p> <p>(i) Normal per day.....</p> <p>(ii) Maximum in any one day.....</p> <p>(iii) Maximum rate per hour.....</p> <p>(iv) The period or periods of the day in which the discharge is to take place.....</p> <p>(v) Any seasonal, or other variations (including any arising from plant malfunction) in volume or effluent to be discharged.....</p> <p>.....</p> <p>.....</p>
<p>3. Name and Address of the premises from which the effluent or other matter is to be discharged</p> <p>.....</p> <p>.....</p>	<p>(c)Particulars of effluent treatment</p> <p>.....</p> <p>.....</p>
<p>4. If the effluent is a trade effluent, give the general description of the process or activities giving rise to the discharge.</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>10. Characteristics of Trade Effluent</p> <p>Complete for all applicable characteristics giving concentration ranges where available. Concentration to be expressed in mg/l where applicable.</p>
<p>5. (a) Location of point of discharge (to be also shown on a 1:2500 Ordnance Survey Map)</p> <p>.....</p> <p>.....</p> <p>(b) Details of size and construction of outlet</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Application for Licence to Discharge Trade Effluent or other matter (other than Domestic Sewage or Storm Water) to a Sewer</p>
<p>Plans, in duplicate, indicating the premises, drainage systems and any works, apparatus or plant from which the effluent or other matter is to be discharged must accompany this application form.</p>	<p>NOTE FOR THE GUIDANCE OF APPLICANT.</p> <p>(1) Under the above legislation, a licence is required to discharge any effluent or other matter (other than Domestic Sewage or Storm Water) to a Sewer.</p> <p>(2) Applications shall be made to the secretary, Meath County Council, County Hall, Navan, Co. Meath.</p> <p>(3) The application shall be accompanied by:</p> <p>(a) Fee of €380</p> <p>(b) Two copies of plan and other such particulars as are necessary to describe the premises, drainage system, and any other works, apparatus, or plant from which effluent or other material is to be discharged. Point of discharge should be shown on a 1:2500 Ordnance Survey Map.</p>
<p>6. Details of provision made for sampling and measuring flow of effluent</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>THESE NOTES ARE FOR GUIDANCE ONLY AND DO NOT PURPORT TO BE A LEGAL INTERPRETATION OF THE PROVISION CONCERNED.</p>
<p>7. Particulars of any other discharge from premises in question</p> <p>.....</p> <p>.....</p> <p>.....</p>	

WAT

The following list is meant to be indicative only – such other physical, chemical or other characteristic as are pertinent to the effluent question should be specified.

Characteristic	Prior to Treatment	As Discharged
Temperature C		
PH		
Colour (degress Hazen)		
B.O.D.		
C.O.D.		
Suspended Solids (mg/1)		
Settleable Solids (mg/1)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorus (as P)		
Sulphates (as SO ₄)		
Chlorides (as CL)		
Phenols (as C ₆ H ₅ OH)		
Detergents (as MBAS)		
Oils, Grease and Fats		
Metal – specify each)		
(a)		
(b)		
(c)		
(d)		
(e)		
Organohalogen compounds (Specify)		
Organophosphorus Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral Oils or Hydrocarbons of Petroleum Origin		
Other toxic substances (Specify)		
Other relevant Characteristics		

I hereby make application for a licence under Section 4 of the Local Government (Water Pollution) Act, 1977 as amended by Local Government (Water Pollution) (Amendment) Act, 1990, to discharge trade and/or sewage effluent (delete whichever is inapplicable) in accordance with the plans and other particulars attached.

Signature of Applicant: Date:.....

APPENDIX VII

South Dublin County Council's Application Forms

COMHAIRLE CHONTAE ÁTHA CLIATH THEAS SOUTH DUBLIN COUNTY COUNCIL



Local Government (Water Pollution) Acts 1977 and 1990

Application for Licence to discharge trade or sewage effluent to WATERS

Note: "Trade effluent" is defined in Section 1 of the Local Government (Water Pollution) Act, 1977, as amended. A Licence is required for the discharge of domestic sewage from a septic tank only where the discharge is to surface waters or, in the case of a discharge to groundwater, when the volume of the discharge exceeds 5m³ per day (See Article 4 of the Local Government (Water Pollution) Regulations, 1978, (as amended)).

IMPORTANT

Before completing the application form please read the following:

1. The licence application form must be accompanied by the plans, **in triplicate** indicating the locations referred to in paragraph 4 of the application form.
2. Plans, **in triplicate** indicating the premises, drainage systems and any works, apparatus or plant from which the effluent is to be discharged must accompany this application form. Point of discharge should be shown on 1-2500 O.S. map. Details of size and construction of outlet must be given.
3. At paragraph (13) of the application form all relevant and applicable characteristics should be completed giving concentration ranges where applicable. This list is meant to be indicative only - such other physical chemical or other characteristics as are pertinent to the effluent in question should be specified. Application must include copies of MSDS Sheets for all chemicals/detergents used on site and likely to be discharged as part of the trade effluent.
4. **Fee:** Article 7 of the Local Government (Water Pollution) Regulations 1992 as amended, provides as follows: -

- (i) A fee shall be paid to a local authority by an applicant in respect of a licence application under Section 4 of the Principal Act and to a sanitary authority in respect of a licence application under Section 16 of that Act.
- (ii) The amount of the fee payable under this article is hereby specified to be €380.

Please note that an application will not be considered until the correct fee is paid.

- 5. Please ensure, before returning this form, that Parts 1 to 13 inclusive overleaf are completed in full.
- 6. N.B. Public Notice Requirement Section 5 of the Local Government (Water Pollution) Regulation, 1978, as amended, provides that public notice of intention to apply for a licence must be given in a newspaper circulating in the area in which the discharge is made. The page of the newspaper carrying the advertisement should accompany the application. The application must be made within 14 days of the date of the newspaper advertisement. It must contain as a heading the words "Discharge of Effluent to Waters" and shall :
 - (a) state the name of the applicant and the name of the local authority to which the application is being made.
 - (b) give a general description of the effluent.
 - (c) in the case of trade effluent, the nature of the trade or industry.
 - (d) State the name and location of the premises from which the effluent is to be discharged.
 - (e) Indicate the waters to which the effluent is to be discharged.

I hereby make application for a licence, under Section 4 of the Local Government (Water Pollution) Act, 1977 as amended, to discharge trade effluent in accordance with the plans and other particulars attached.

Signed: _____

Date: _____

Completed Application Form accompanied by all relevant documents and appropriate fee should be submitted to:

Environmental Services Department,
South Dublin County Council,
County Hall,
Tallaght,
Dublin 24.

All enquiries relating to the application should be referred to the Environmental Services Department at the above address or Tel. No. 01 4149211.

Local Government (Water Pollution) Acts 1977 – 1990

Application for Licence to Discharge Trade Effluent to Sewer

New Licence ●

Review of Existing Licence ● Please give Ref. No. of Existing Licence _____

1. **Applicant :** _____

Correspondence Address:

Contact Name & Tel. No.

2. Name and address of the premises from which the trade effluent is to be discharged:

3. Description of activity giving rise of the discharge:

4. (a) Location of point of discharge (include National Grid Reference if possible):

(b) Description of waters to which discharge is to be made:

2. Details of provision made for sampling and measuring flow of the effluent:

3. Particulars of any other discharge from the premises:

4. Details of any special arrangements to prevent accidental discharges:

5. Date of commencement of discharge:

9. Volume of effluent to be discharged:

(i) Normal per day

(ii) Maximum in any one day:

(iii) Maximum rate per hour:

(iv) Period or periods of the day in which the discharge is to take place:

(v) Seasonal, or other variations (including any arising from plant malfunction) in volumes of effluent to be discharged :

10. Particulars of effluent treatment

11. No. of Employees based in premises:

12. Commercial Water Charges Account No.

13. Characteristics of Trade Effluent :

Characteristic:	Prior to Treatment	As Discharged
Temperature °C		
PH		
Colour (Degrees Hazen)		
BOD		
COD		
Suspended Solids		
Settleable Solids (ml/l)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorus (as P)		
Sulphates (as SO ₄)		
Chlorides (as Cl)		
Phenols (as C ₆ H ₅ OH)		
Detergents (as Laurylsulphate)		
Oils Grease and Fats		
Metals (Specify Each)		
Organohalogen Compounds (Specify)		
Organophosphorus Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral Oils or Hydrocarbons of Petroleum origin		
Other relevant characteristics (specify)		

COMHAIRLE CHONTAE ÁTHA CLIATH THEAS SOUTH DUBLIN COUNTY COUNCIL



Local Government (Water Pollution) Acts 1977 and 1990

Application for Licence to discharge trade effluent to SEWER

Note: "Trade effluent" is defined in Section 1 of the Local Government (Water Pollution) Act, 1977, as amended. A licence is not required for discharge of domestic sewage or storm water to a sewer. See Section 16 (1) of Local Government (Water Pollution) Act 1977 as amended.

IMPORTANT

Before completing the application form please read the following:

7. The licence application form must be accompanied by the plans, **in triplicate** indicating the locations referred to in paragraph 4 of the application form.
8. Plans, **in triplicate** indicating the premises, drainage systems and any works, apparatus or plant from which the effluent is to be discharged must accompany this application form. Point of discharge should be shown on 1-2500 O.S. map or 1 - 1000 O.S. map.
9. At paragraph (13) of the application form all relevant and applicable characteristics should be completed giving concentration ranges where applicable. This list is meant to be indicative only - such other physical chemical or other characteristics as are pertinent to the effluent in question should be specified. Application must include copies of MSDS Sheets for all chemicals/detergents used on site and likely to be discharged as part of the trade effluent.
10. **Fee:** Article 7 of the Local Government (Water Pollution) Regulations 1992 as amended, provides as follows: -

- (iii) A fee shall be paid to a local authority by an applicant in respect of a licence application under Section 4 of the Principal Act and to a sanitary authority in respect of a licence application under Section 16 of that Act.
- (iv) The amount of the fee payable under this article is hereby specified to be €380.

Please note that an application will not be considered until the correct fee is paid.

- 11. Please ensure, before returning this form, that Parts 1 to 13 inclusive overleaf are completed in full.

I hereby make application for a licence, under Section 16 of the Local Government (Water Pollution) Act, 1977 as amended, to discharge trade effluent in accordance with the plans and other particulars attached.

Signed: _____

Date: _____

Completed Application Form accompanied by all relevant documents and appropriate fee should be submitted to:

Environmental Services Department,
South Dublin County Council,
County Hall,
Tallaght,
Dublin 24.

All enquiries relating to the application should be referred to the Environmental Services Department at the above address or Tel. No. 01 4149211.

Local Government (Water Pollution) Acts 1977 – 1990

Application for Licence to Discharge Trade Effluent to Sewer

New Licence ●

Review of Existing Licence ●

Please give Ref. No. of Existing Licence

1. **Applicant :**

Correspondence Address:

Contact Name & Tel. No.

3. Name and address of the premises from which the trade effluent is to be discharged:

3. Description of activity giving rise to the discharge:

4. (a) Location of point of discharge to sewer:

(b) Details of size and type of discharge pipe:

5. Details of provision made for sampling and measuring flow of the effluent:

6. Particulars of any other discharge from the premises:

7. Details of any special arrangements to prevent accidental discharges:

8. Date of commencement of discharge:

9. Volume of effluent to be discharged:

(i) Normal per day

(ii) Maximum in any one day:

(iii) Maximum rate per hour:

(iv) Period or periods of the day in which the discharge is to take place:

(vi) Seasonal, or other variations (including any arising from plant malfunction) in volumes of effluent to be discharged:

10. Particulars of effluent treatment

11. No. of Employees based in premises:

12. Commercial Water Charges Account No.

13. Characteristics of Trade Effluent :

Note: In the case of an application for revised licence a copy of most recent sample results must be submitted with the application :

Characteristic:	Prior to Treatment	As Discharged
Temperature °C		
PH		
Colour (Degrees Hazen)		
BOD		
COD		
Suspended Solids		
Settleable Solids (ml/l)		
Dissolved Solids		
Ammonia (as N)		
Nitrates (as N)		
Phosphorus (as P)		
Sulphates (as SO ₄)		
Chlorides (as Cl)		
Phenols (as C ₆ H ₅ OH)		
Detergents (as Laurylsulphate)		
Oils Grease and Fats		
Metals (Specify Each)		
Organohalogen Compounds (Specify)		
Organophosphorus Compounds (Specify)		
Organotin Compounds (Specify)		
Mineral Oils or Hydrocarbons of Petroleum origin		
Other relevant characteristics (specify)		

COMHAIRLE CHONTAE ATHA CLIATH THEAS
SOUTH DUBLIN COUNTY COUNCIL

**APPLICATION FOR FOUL / SURFACE WATER CONNECTION TO PUBLIC SEWER
OR TO A PRIVATE DRAINAGE SYSTEM LEADING TO A PUBLIC SEWER**



To: Environmental Services Department,
South Dublin County Council,
P.O. Box 4112, Town Centre,
Tallaght, Dublin 24.
Tel: (01) 4149211
Fax: (01) 4149101

Our Ref: _____

IMPORTANT

1. The following documents **MUST** accompany this application:
 - (a) Location map
 - (b) Drawing showing the sewer layout in the immediate vicinity of the proposed connection.
 - (c) Plan and Cross Section of the proposed connection / manhole on the existing sewer.
2. Under the Local Government Water pollution Acts 1977/90, it is a legal requirement to have a Licence to Discharge if you are discharging trade effluent or other matter (other than domestic sewerage or storm water) to a sewer
3. **All** conditions of your planning permission must be complied with before your application can be considered.
4. This form **will not** be processed without the above conditions being met.
5. The processing of this application will include the determination of a connection fee.
6. A copy of the Regional Drainage Code of Practice is available from South Dublin County Council Environmental Services Department or at www.sdcc.ie

Applicant (Block Letters): _____

Correspondence Address: _____

Contact Person: _____

Telephone No.: _____

1. **Location of premises.**

2. **Description of Development (Dwelling, Factory, Shop, Restaurant, etc.).**

3. **Register Reference No. of relevant planning permission obtained under the Local Government (Planning & Development) Acts 1963-1992.**

4. **Type of Connection.**

Foul Sewer: Size of pipe: _____ Number of connections: _____

Surface Water: Size of pipe: _____ Number _____ of connections: _____

5. **Trade Effluent Discharges.**

Is a licence under Section 16 of the Local Government (Water Pollution) Acts 1977 & 1990 required?

Yes: _____ No: _____ (Please Tick)

If Yes, approval for the drainage connection(s) will not be granted until details of the licence have been produced to the Environmental Services Department.

Licence Number (if applicable): _____

6. **Road Opening Licence.**

If any public area is being opened (i.e. road, footpath or grass margin) a Road Opening Licence must be obtained from the Council's Roads Authority, Tel: (01) 4149300.

Yes: _____ No: _____ (Please Tick)

If Yes, approval for the drainage connection(s) will not be granted until details of the licence have been produced to the Environmental Services Department.

Licence Number (if applicable): _____

Conditions of Connection to Sewer

The following conditions must be complied with before connection to the sewer will be permitted.

- The Site Drainage works to be substantially completed
- Approval letter received from the Council
- Minimum notice as detailed in the Approval letter to be given prior to connection
- All drainage as-built drawings to be submitted to the Senior Executive Engineer, Drainage Maintenance, both on CD (*.dwg or *.dxf format and referenced to the national grid) and on A1 paper.
- Air/Water tests shall be carried out on all pipes/manholes in accordance with the Regional Drainage Code of Practice to the satisfaction of the Council Drainage Maintenance Section. Testing of the drainage works to include visual verification and the CCTV (on DVD) to be submitted to the Drainage Area Engineer, Drainage Operations, Deansrath House, New Nangor Road, Clondalkin, Dublin 22.
- All works must be in compliance with the Regional Drainage Code of Practice (which is available on South Dublin County Council's Environmental Services website at www.sdcc.ie) and the above conditions.

N.B. All connections to public sewers must be made under the supervision of South Dublin County Councils Drainage Inspector.

Declaration:

I have read and understand the conditions as laid out herein.

I hereby undertake that all work shall be carried out in accordance with best work practices, the Regional Drainage Code of Practice and with South Dublin County Council's requirements (Planning conditions, Trade effluent licences, Road Opening licences, Drainage Section conditions, etc.).

Signature of Applicant: _____

Date: _____

APPENDIX VIII

WICKLOW COUNTY COUNCIL'S **APPLICATION FORMS**

WICKLOW COUNTY COUNCIL

Local Government (Sanitary Services) Acts 1878 – 1995.

**APPLICATION FOR SEWERAGE CONNECTION
(N.B. No work should commence until permission is received).**

_____ Sewerage Scheme

I wish to apply for a sewerage connection from the above sewerage scheme to serve my house/premises/land described below:

Name of Applicant

Address of Applicant

Contact Phone Number

Address of house/premises/site to be connected. (Plan or sketch to enable location to be identified should be submitted)

No. of connections required _____

Purpose for which supply is required: DOMESTIC | BUSINESS |

If “business” please state type _____

Please note that all planning fees and contributions must be paid before the connection can be made.

Details of Planning Permission: Reg. Ref. _____

Date: _____

Did planning permission require contribution towards the cost of provision of a sewerage scheme in the area to serve your development? YES/NO

If “YES” has contribution been paid? YES/NO

If “YES” date of payment _____

(All existing and proposed buildings and developments which are to be served by this sewerage connection and for which planning permission is required under the Planning Acts, must be shown to have full planning permission as otherwise a connection will not be given).

Contd. Overleaf.....

I hereby apply to Wicklow County Council for permission to connect the above mentioned premises to the public sewer. I agree to comply in full with any conditions imposed by the County Council and to pay the cost of road and/or footpath restoration applicable when required to do so.

Dated this _____ day of _____ 2006.

APPLICANT'S SIGNATURE

**To: Water and Environmental Section,
Wicklow County Council,
County Buildings,
Wicklow.**

APPENDIX IX

Relevant Standards

B.S.8005 Part 1	Guide to New Sewerage Construction
Part 2	Guide to Pumping Stations and Pumping Mains
Part 3.	Guide to Planning and Construction of sewers in Tunnel.
Part 4.	Guide to design and construction of outfalls.
B.S. 65	Specification for Vitrified clay pipes, fittings and ducts, also flexible mechanical joints for use solely with surface water pipes and fittings.
B.S. 534	Specification for steel pipes, joints and specials for water and sewerage.
B.S. 729	Specification for hot dip galvanized coatings on iron and steel articles.
B.S. 1247	Specification for Manhole Steps.
B.S. 3505	Specification for uPVC pressure pipes for cold potable water.
B.S. 4211	Specification for ladders for permanent access.
B.S. 4346	Joints and fitting for use with uPVC pressure pipes.
B.S. 5228	Noise and vibration control on construction and open sites.
B.S. 7903	Guide to selection and use of gully tops and manhole covers for installation within the highway.
B.S. 8007	Code of Practice for designing concrete structures for retaining aqueous liquids.
B.S. 8010	Code of Practice for pipelines
B.S. 8110	Structural use of concrete
B.S. 8301	Code of Practice for Building Drainage
Dept of Environ. Building Reg.	Technical Guidance Document H, Drainage and waste disposal.
IS 6	Concrete sewer pipes.
IS 20	Concrete building blocks
IS 91	Clay Building Bricks
IS 166	Concrete surface water pipes.
IS 325	Code of practice for use of masonry.
IS 406	Masonry Mortars.
IS EN 124	Gully tops and manhole tops for vehicular and pedestrian areas
IS EN 295	Vitrified clay pipes and fittings and pipe joints for drains & sewers.
IS EN 476	General requirements for components used in discharge pipes, drains and sewers for gravity systems.
IS EN598	Ductile iron pipes, fittings, accessories and their joints for sewerage application.
IS EN 752	Drain and sewer systems outside buildings.
IS EN 1610	Construction and testing of drains and sewers.

IS EN 1671	Pressure sewerage systems outside buildings.
BD 37/88	Loads for highway bridges.
EN 1825-1	Principles of design, performance and testing. Working and quality control of grease traps.
EN 1825-2	Selection of nominal sizes, the installation, operation and maintenance of grease traps.
B.S. EN545	Ductile iron pipes, fittings, accessories and their joints for water pipelines.
B.S. EN752	Drain and sewer systems outside buildings.
ISO 7186	Ductile Iron products for sewerage applications.

Wicklow County Council,

Water Services Section,

County Buildings, Station Road, Wicklow.

Tel: 0404 20100 Fax: 0404 67792

Email: env@wicklowcoco.ie

South Dublin County Council,

Drainage Operations Section

Environmental Services Department,

County Hall, Town Centre, Tallaght, Dublin 24

Tel: 01-414 9000 Fax: 01-414 9101

Email: drainageoperations@sdblincoco.ie

Meath County Council,

Infrastructural Project Office,

Unit 41-42, Navan Enterprise Centre, Trim Road, Navan, Co. Meath

Tel: 046 906 7455 Fax: 046 906 7454

Email: navan@meathcoco.ie

Kildare County Council,

Water Services Section,

Aras Chill Dara, Naas, Co Kildare

Tel: 045 980 362 Fax: 045 980 359

Fingal County Council,

Water Services Section,

Grove Road, Blanchardstown, Fingal, Dublin 15.

Tel: 01 890 5970 Fax: 01 890 5919

Email: waterservices@fingalcoco.ie Web: www.fingalcoco.ie

Dun Laoghaire Rathdown ,

Environmental Services,

Level 3, County Hall, Marine Road, Dun Laoghaire.

Tel: 01 2054700 Fax: 01 2300125

E-Mail: environ@dlrcoco.ie

Dublin City Council,

Drainage Division ,

Block 1, Floor 2, Civic Offices, Wood Quay, Dublin 8.

Tel: 01 222 2155 Fax: 01 222 2300

www.dublincity.ie