



**Cork  
County Council**  
Comhairle Contae Chorcaí

## **Environment Directorate**

### **Inniscarra, Co. Cork**

#### **Section 4 Local Government (Water Pollution) Acts, 1977 to 2007**

### **Application for Licence to Discharge to Waters Part 1: Guidance Notes**

This document is issued for guidance only. It does not purport to be a legal interpretation of legislation.

#### **1. General**

Pursuant to Section 4 of the Local Government (Water Pollution) Acts 1977 to 2007, a licence is required for the discharge of trade effluent or sewage effluent to waters.

If the activity causing the discharge does not fall under the remit of the First Schedule of the Environmental Protection Agency Act, 1992 (as amended by the Protection of the Environment Act, 2003) an application for a licence must be made to the local authority in whose functional area, the discharge is to occur.

Effluent discharges for which a discharge licence must be obtained are as follows:

- All trade effluent discharges to surface water
- All trade effluent discharges to groundwater.
- All domestic wastewater discharges to surface water.
- All discharges of domestic wastewater greater than 5m<sup>3</sup>/day which is discharged to (groundwater) from a septic tank or other disposal unit by means of a percolation area, soakage pit or other method.

A discharge of domestic wastewater less than 5m<sup>3</sup>/day, discharged to ground water by means of a percolation area, soakage pit or other method, is exempt from requiring a discharge licence. However, the Water Services (Amendment) Act 2012 requires all domestic wastewater treatment systems to be registered with the Local Authority. Please see [www.protectourwater.ie](http://www.protectourwater.ie) for further details.

Note: A glossary of all terms is available in [Appendix 1C](#) of these Guidance Notes.

#### **2. Where to Apply**

The application should be made to The Secretary, Cork County Council, Environment Directorate, Room FF14, Inniscarra, Co. Cork. P31X738

The applicant is strongly encouraged to request a pre-application meeting with Environment staff to discuss the nature and scope of the information required. Please contact the Environment Directorate on 021 4532700 to arrange a meeting.

### 3. Newspaper Advertisement

A newspaper advertisement is necessary in respect of any application for a discharge to waters (including a review) of any licence to discharge to waters. The advertisement must be placed by the applicant, in a newspaper which circulates in the district of the discharge, within a period of two weeks prior to the making of an application and should state the following:

1. The Notice shall be headed "**Discharge of Effluent to Waters**".
2. Name of the applicant and the name of the Local Authority to which application is being made.
3. Give a general description of the effluent.
4. In the case of trade effluent, state the nature of the trade or industry.
5. State the name and location of the premises from which the effluent is to be discharged.
6. State the waters to which the effluent is to be discharged.

A sample Newspaper Advertisement is provided in [Appendix 1b](#)

A site notice is not required.

### 4. Documents to be submitted

1. Five copies of each of the following documents should be submitted:
  - (i) Completed application form
  - (ii) A site location map showing the site of the facility (scale 1/2500) in colour and any adjoining land in the same ownership coloured differently and with sufficient details to identify the site in relation to the appropriate Ordnance Survey map.
  - (iii) A drawing to an appropriate scale showing the wastewater collection and treatment systems, from which effluent is to be discharged, the waters to which the discharge is to be made, along with monitoring points.
  - (iv) A copy of the relevant page of the newspaper in which notice of the application has been published.
  - (v) A signed copy of the maintenance contract for the wastewater treatment plant.
  - (vi) An assessment of potential ecological impacts from the discharge
  - (vii) An assessment of the impact on the receiving water (See Section 8)

2. Fee of €380.00.

### 5. When is a licence review required?

A local authority may review a licence at intervals of not less than three years from the date of the licence, or at any time with the consent of the person making, causing or permitting the discharge. A licence may also be reviewed at any time by the Local Authority which granted it, where the authority has reasonable grounds for believing that the discharge authorized is or is likely to be injurious to public health, or render the receiving waters unfit for domestic, commercial industrial, fishery, agricultural or recreational use or where there has been a material change in the receiving waters, or a material change in the nature or volume of the discharge.

Where a local authority intends to review a licence it:

- (a) Must give notice to the discharger of its intention,
- (b) Must place a notice in a newspaper circulating in the functional area of the local authority that must state that written representations relating to the review may be made within one month.
- (c) May require a licensee to submit plans or other particulars for the purpose of the review. (If these are not submitted within three months, the review may be completed without them).
- (d) Must make available any plans or particulars submitted by the Licensee for public inspection at its offices until the review or any appeal is determined.



A local authority may amend or delete any condition attached to a licence or may attach new conditions to a licence. It must then give notice of its decision to the Licencee and to any person who submitted written representations. The notice will specify any new conditions, deletions or other amendments that have been made to the licence.

## **6. Inspection of Documents**

A local authority is obliged to make available for public inspection at its offices any application and any information submitted by the applicant until the licence application or any appeal is determined. Any person may make written representations or objections to a local authority in relation to a licence application for a discharge to waters.

## **7. Decision of a local authority:**

A local authority will make a decision within two months once the application which includes all the proper information, submissions, etc. is submitted, whether to refuse a licence or to grant one subject to conditions. The local authority notifies the applicant and any person who submitted representations or objections regarding an application of their decision to grant or refuse a licence. They also publish the outcome of their decision in a newspaper circulating in the functional area of the local authority stating the decision and that the proposed licence is available for inspection at their offices by any member of the public.

Any objections, including those by the applicant, are made to An Bord Pleanála. An appeal of the local authority's decision to An Bord Pleanála must be made within one month of the decision. An Bord Pleanála may turn down an appeal or it may give directions to a local authority relating to the granting, refusing, revoking or alterations which should be made to conditions attached to a licence. A local authority must abide by the decision of the Board

## **8. Discharges to Surface Water (new and review applications)**

The following information is necessary in order to process any application for a discharge to waters:

1. Details of the standard of treatment proposed.
2. Dry Weather Flow (DWF) Volume of the discharge in m<sup>3</sup>/day.
3. DWF and 95%ile flow of receiving water or estimated low flow volumes with supporting documentation.
4. Ecological and physiochemical status of the receiving waters
5. Assessment against relevant EQS Standards using the appropriate flow rate in the receiving waters

### **8.1 Assessing the impact of a discharge on receiving water**

A mass balance calculation determines the anticipated cumulative concentrations of pollutants in the water body due to the discharge. The mass balance calculation will determine whether the discharge would cause an exceedance of environmental quality standards.

A mass balance should be provided for the following parameters: B.O.D., MRP, Ammonia at a minimum. Further parameters' assessments may be required. Full details of all calculations must be included.

Resulting concentration (**T**) should be compared with the environmental objectives and water quality standards established in Part III of European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009) as amended.



## Mass Balance

$$T = ((F \times C) + (f \times c)) / F + f \quad \text{mg/l}$$

Where	T	= Resulting concentration due to the discharge (mg/l)
	F	= flow in receiving waters at 95%ile (m <sup>3</sup> /s) *
	C	= <b>average</b> background concentration in receiving waters (mg/l)
	f	= DWF discharge flow (m <sup>3</sup> /s)
	c	= concentration in the discharge (mg/l)

\*Note for priority and priority hazardous substances the DWF m<sup>3</sup>/day must be used

### 8.2 Existing chemical quality of receiving waters

Current status, quality objectives and risk rating of waterbodies are available at [www.catchments.ie](http://www.catchments.ie) and <https://gis.epa.ie/EPAMaps/> . Contact Cork County Council and/or the EPA to obtain what monitoring data is available.

Where no monitoring data is available the applicant can use 'Adjusted Background Concentration<sup>1</sup>':  
High Status Waters Background concentration (C<sub>A</sub>) = High Status EQS less 50% of the difference between Good Status and High Status EQS.

Good Status Waters Background concentration (C<sub>A</sub>) = midway between the High Status EQS and Good Status EQS.

#### Biological

An assessment of the biological rating for the receiving waters should be undertaken by a suitably qualified person, and a Q value submitted. The assessment should be carried out at a location immediately up-stream of the proposed discharge point.

### 8.3 Flow of receiving surface waters

Flow measurement and assessments shall be carried out by a suitably qualified person.

#### **(A) Measured Data**

The 95%ile and Dry Weather Flow (DWF) data may be available from the Hydrometric Section of the EPA or on their website: <http://hydronet.epa.ie>

#### **(B) Estimated**

Where no data exists for the proposed receiving waters, the following EPA Hydrometric Section methodology should be used: *Following a sustained period of dry weather, i.e. at least 20 days of no or negligible rainfall, measure the flow in the river to ISO 1070/BS 3680 standards at the point of interest. Measurements should preferably be undertaken towards the end of a dry summer period, i.e. July, August and September, so that any surface runoff still in storage is allowed to discharge.*

<sup>1</sup> Guidance, Procedures and Training on the Licensing of Discharges to Surface Waters, Groundwater and to Sewer for Local Authorities. Volume 1- Technical Guidance Manual. WSTG, 2011)



## 9.0 Discharges to Ground Waters (new and review applications).

For discharges to ground water a “Source-Pathway-Receptor” risk assessment in accordance with **Part 4 of Guidance on the Authorization of Discharges to Groundwater (EPA, 2011)** must be submitted. The type and volume of the discharge will determine whether a Tier 1, Tier 2 or Tier 3 assessment is required.

An assessment of the effects of the discharge against relevant groundwater quality standards European Communities Environmental Objectives (Ground Waters) Regulations, 2009 (S.I. No. 9 of 2010) as amended.

**Note:** Please contact the Environment Directorate prior to undertaking any site suitability assessment being undertaken in support of a S4 Licence Application. Technical staff may wish to inspect the trial hole.

<b>Tier 1 Assessment</b>	A Tier 1 Assessment must be carried out in support of all applications to discharge to groundwater.
<b>Tier 2 Assessment</b>	<p>A Tier 2 Assessment must be carried out for the following:</p> <ul style="list-style-type: none"> <li>• Where the proposed discharge is an input greater than 5 m<sup>3</sup>/d and less than or equal to 20 m<sup>3</sup>/d of domestic waste water associated with OSWTS and ICWs;</li> <li>• Where the proposed discharge is a trade effluent (moderate risk);</li> <li>• Where the Tier 1 Assessment indicates uncertainty about the risk of impact to groundwaters, the Applicant must proceed to a Tier 2 Assessment.</li> </ul> <p>Note that an Applicant may be requested to conduct a Tier 2 Assessment where the Licensing Authority, following a risk screening of the discharge, deems that there is a moderate risk of impact to groundwaters from the discharge.</p>
<b>Tier 3 Assessment</b>	<p>A Tier 3 Assessment must be carried out for applications to discharge to groundwater that relate to the following activities:</p> <ul style="list-style-type: none"> <li>• Inputs greater than 20 m<sup>3</sup>/d of domestic waste water;</li> <li>• Discharges from Landfills;</li> <li>• Where the proposed discharge is a trade effluent (high risk)</li> <li>• Where the Tier 1 and Tier 2 Assessments indicate uncertainty about the risk of impact to groundwaters, the Applicant must proceed to a Tier 3 Assessment.</li> </ul> <p>Note that an Applicant may be requested to conduct a Tier 3 Assessment where the Licensing Authority, following a risk screening of the discharge, deems that there is a high risk of impact to groundwaters from the discharge.</p>



## 10. Appropriate Assessment

### Natura 2000 Sites

Ireland aims to conserve habitats and species, through designation of conservation areas.

Natura 2000 is a European network of important ecological sites. The network is made up of Special Protection Areas (SPA), established under the EU Birds Directive (79/409/EEC), and Special Areas of Conservation (SAC), established under the Habitats Directive itself. Further information is available from National Parks and Wildlife ([www.npws.ie](http://www.npws.ie))

1. Special Protection Areas (SPAs) are sites designated for the protection of vulnerable species of bird. County Cork designated SPAs are available at :  
<http://www.npws.ie/en/ConservationSites/SpecialProtectionAreasSPAs/Cork/>
2. Special Areas of Conservation (SACs) are conservation areas considered to be important on a European as well as Irish level. To view Cork's designated SACs, visit:  
<http://www.npws.ie/en/ConservationSites/SpecialAreasofConservationSACs/Cork/>

An ecological assessment carried out under Article6(3) of the Habitats Directive of the implications of a discharge on a Natura 2000 site in view of the site's conservation objective.

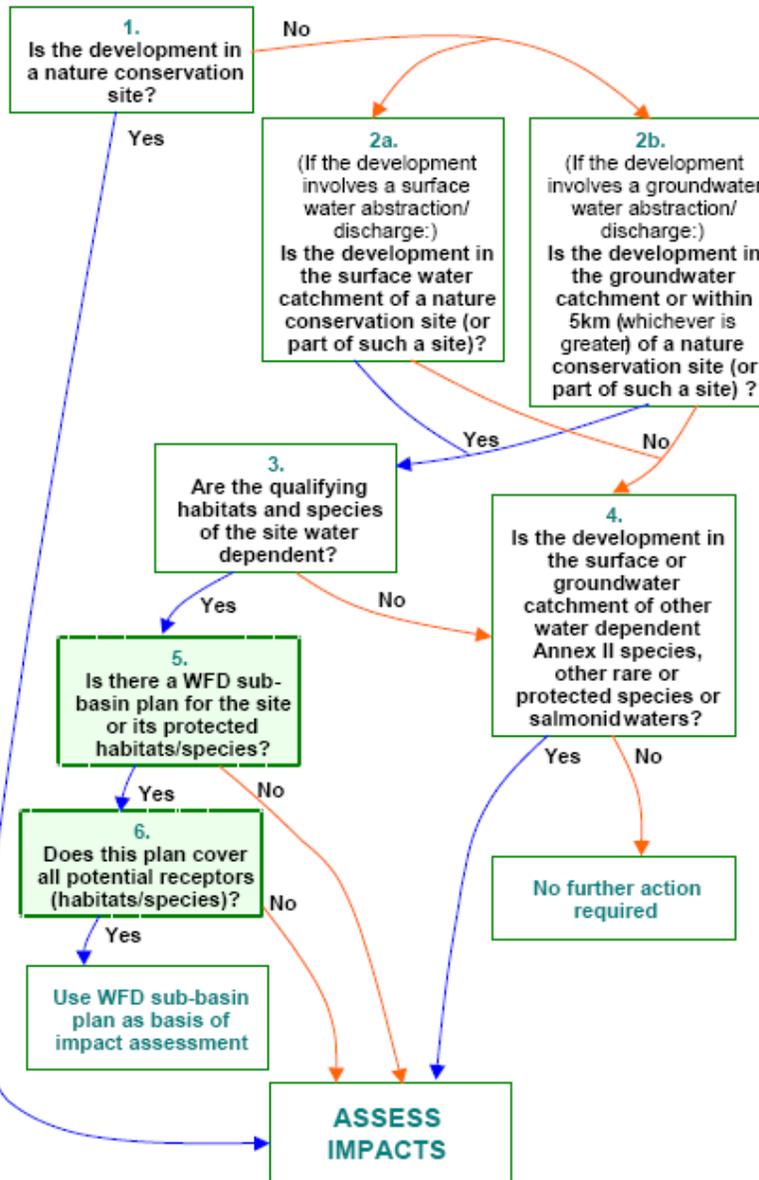
An application for any plan or project within a Natura 2000 site that is not directly connected with or necessary to the management of the site, and which on its own or in combination with other plans or projects is likely to have a significant effect (inc. unknown effects) on the site will require the preparation of a Statement for Appropriate Assessment, i.e. a comprehensive ecological impact assessment of the plan or project on the site. The competent authority carries out an Appropriate Assessment based on the Statement for AA submitted by the applicant , and any other information as it considers necessary.

The Department of Environment, Heritage and Local Government has published the following guidelines: Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. (DOEHLG, 2009)

**Note that a decision chart is required for all applications and should be submitted with the application. (See Appendix 1a Guidance notes, and Section 6 of application form)**



## Appendix 1a –Flow Chart



## Appendix 1b- Newspaper Advertisement Example

### Discharge of Effluent to Waters

Notice is hereby given that Acme Developments Ltd intend to apply to Cork County Council for a licence to discharge treated domestic wastewater from the Brideview housing development wastewater treatment plant at Knockenmore, Ovens, Co, Cork, to the River Bride (WFD Code: BRIDE (LEE)\_050) at Knockenmore, Ovens, Co. Cork.

Refer to Regulation 5 [S.I. No. 108/1978](#) - Local Government (Water Pollution) Regulations, 1978 for further information.



## Appendix 1c- Glossary of Terms

The following provides a glossary of terms used in this document. The definitions therein are not to be taken as comprehensive but solely as an aid to the non-technical reader.

**Abstraction**-In relation to water contained in any source of water, means the doing of anything whereby any of that water is removed from that source of water, whether temporarily or permanently, including anything whereby the water is so removed for the purpose of being transferred to another source of water (*Source: Water Services Act, 2007*)

**Appropriate Assessment**-In accordance with Article 6(3) of the Habitats Directive (92/43/EEC), an Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site (European network of special areas of conservation and special protection areas), and the development, where necessary, of mitigation or avoidance measures to mitigate negative effects.

**Aquifer**-A subsurface layer or layers of rock, or other geological strata, of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater (Groundwater Regulations, 2010).

**Authorised person**-A person appointed in writing by the Minister or by a Water Services Authority / Local Authority for the purposes of enforcing the legislation under which they have been appointed.

**Diffuse Sources**-Diffuse sources of pollution are spread over wider geographical areas rather than at individual point locations. Diffuse sources include general land use activities and landspreading of industrial, municipal wastes and agricultural organic and inorganic fertilisers.

**Direct Input**-An input to groundwater that bypasses the unsaturated zone (e.g. direct injection through a borehole) or is directly in contact with the groundwater table in an aquifer either year round or seasonally.

**Domestic Waste Water**-Waste water of a composition and concentration (biological and chemical) normally discharged by a household, and which originates predominantly from the human metabolism or from day to day domestic type human activities, including washing and sanitation, but does not include fats, oils, grease or food particles discharged from a premises in the course of, or in preparation for, providing a related service or carrying on a related trade. (Water Services Act, 2007).

**Dry Weather Flow (Effluent)**-For a waste water treatment plant, the Dry Weather Flow is the average daily flow to the plant without any contribution from storm water inflow or infiltration of groundwater into the waste water collection system.

**Dry Weather Flow (Receiving Water)**-The Dry Weather Flow of a stream or river is the annual minimum daily mean flow rate with a return period of 50 years. The Dry Weather Flow is a statistical measure of low flow and usually requires reliable long term low flow data or sufficient information that would allow the estimation of the Dry Weather Flow.

**Environmental Quality Standard (EQS)**-The concentration of a particular pollutant or group of pollutants in a receiving water which should not be exceeded in order to protect human health and the environment.

**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 of twelve months ending on the date of application.

**Groundwater**-All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil (Groundwater Regulations, 2010).

**Groundwater Body (GWB)**-A volume of groundwater defined as a groundwater management unit for the purposes of reporting to the European Commission under the Water Framework Directive. Groundwater bodies are defined by aquifers capable of providing more than 10 m<sup>3</sup> per day, on average, or serving more than 50 persons.

**Groundwater Dependent Terrestrial Ecosystems (GWDTEs)**-These are groundwater dependent wetlands, whereby the dependency is either on groundwater flow, level or chemistry as the controlling factors or qualifying interests of associated habitats. Examples are raised bogs, alkaline fens and turloughs. Groundwater dependent terrestrial ecosystems are listed on the EPA's register of protected areas in accordance with Regulation 8 of the Water Policy Regulations, 2003.

**Groundwater Protection Scheme (GWPS)**-A scheme comprising two principal components: a land surface zoning map which encompasses the hydrogeological elements of risk (of pollution); and a groundwater protection response matrix for different potentially polluting activities (DELG/EPA/GSI, 1999).

**Groundwater Recharge**-Two definitions: a) the process of rainwater or surface water infiltrating to the groundwater table; b) the volume (amount) of water added to a groundwater system.

**Hazardous Substances**-Substances or groups of substances that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances which give rise to an equivalent level of concern. A list of hazardous substances has been published by the EPA (2010a).



**Hydraulic Conductivity**-The rate at which water can move through a unit volume of geological medium under a potential unit hydraulic gradient. The hydraulic conductivity can be influenced by the properties of the fluid, including its density, viscosity and temperature, as well as by the properties of the soil or rock.

**Integrated Constructed Wetlands (ICWs)**-Constructed wetlands are artificially constructed or modified wetland systems supporting vegetation, which provide secondary treatment, by physical and biological means, to effluent from a primary treatment step. Guidance (DEHLG, 2010) is available that outlines the ICW concept, and provides information on site assessment, design, construction, operation, maintenance and monitoring.

**Karst** -A distinctive landform characterised by features such as surface collapses, sinking streams, swallow holes, caves, turloughs and dry valleys, and a distinctive groundwater flow regime where drainage is largely underground in solutionally enlarged fissures and conduits.

**Non-hazardous Substances**-Pollutants listed in Schedule 2 of the Groundwater Regulations 2010 that are not considered hazardous, as well as any other non-hazardous pollutants not listed in Schedule 2 but presenting an existing or potential risk of pollution. Non-hazardous substances are listed in a document by the EPA (2010a).

**Pathway**-The route which a particle of water and/or chemical or biological substance takes through the environment from a source to a receptor location. Pathways are determined by natural hydrogeological characteristics and the nature of the contaminant, but can also be influenced by the presence of features resulting from human activities (e.g., abandoned ungrouted boreholes which can direct surface water and associated pollutants preferentially to groundwater).

**Point Source**-Any discernible, confined or discrete conveyance from which pollutants are or may be discharged. These may exist in the form of pipes, ditches, channels, tunnels, conduits, containers, and sheds, or may exist as distinct percolation areas, integrated constructed wetlands, or other surface application of pollutants at individual locations. Examples are discharges from waste water works and effluent discharges from industry.

**Polluting Matter**-Any substance liable to cause pollution, and, for the purpose of this definition, 'substance' includes bacteria and other pathogens, where relevant, and the expression "polluting matter" shall be construed accordingly. (Source *European Communities Environmental Objectives (Surface Waters) Regulations, 2009*).

**Pollution**-The direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment (Groundwater Regulations, 2010).

**Priority Substances**-Those substances or groups of substances, identified by the Commission in accordance with Article 16(2) of the Water Framework Directive and listed in Tables 11 and 12 of Schedule 6 of the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (as amended) that have been prioritised for action by the setting of environmental quality standards at Community level.

**Priority Hazardous Substances**-Those substances or groups of substances forming a subset of priority substances identified by the Commission in accordance with Article 16(3) of the Water Framework Directive and for which measures have to be taken to cease or phase-out discharges, losses and emissions and which are listed in Table 12 of Schedule 6 of the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (as amended).

**Receptors**-Receptors are existing and potential future groundwater resources, drinking water supplies (e.g. springs and abstraction wells), surface water bodies into which groundwater discharges (e.g. streams) and groundwater dependent terrestrial ecosystems (GWDEs).

**River Basin Management Plan (RBMP)**-A detailed document describing the characteristics of a river basin district, the environmental objectives that need to be achieved, and the pollution control measures required to achieve these objectives through a specified work programme.

**Section 4 Licence**- A licence to discharge to waters, given by local authorities under the Local Government (Water Pollution) Acts 1977 to 2007

**Section 16 Licence** -A licence to discharge to sewer, given by Irish Water under the Local Government (Water Pollution) Acts 1977 to 2007 (to be replaced by Section 63 of the Water Services Act 2007).

**Sewage Effluent**-Effluent from any works, apparatus, plant or drainage pipe used for the disposal to waters of sewage, whether treated or untreated (Source: *Local Government (Water Pollution) Act 1977*)

**Source Pathway Receptor (SPR) Model**-A SPR model involves identifying whether and how pollution sources are connected to a receptor via a pathway. A conceptual model provides an understanding of all the relationships between SPR factors in a particular hydrogeological setting.



**Source Protection Area**-The catchment area around a groundwater source which contributes water to that source (Zone of Contribution), divided into two areas; the Inner Protection Area (SI) and the Outer Protection Area (SO). The SI is designed to protect the source against the effects of human activities that may have an immediate effect on the source, particularly in relation to microbiological pollution. It is defined by a 100-day time of travel (TOT) from any point below the water table to the source. The SO covers the remainder of the zone of contribution of the groundwater source.

**Storm Water**-Runoff of rainwater mainly in urban settings during high intensity rainfall events. Stormwater may enter and discharge to groundwater or other receptors through storm drains.

**Trade** includes agriculture, aquaculture, horticulture and any scientific research or experiment.

**Trade Effluent**-Effluent from any works, apparatus, plant or drainage pipe used for the disposal to a waste water works of any liquid (whether treated or untreated), either with or without particles of matter in suspension therein, which is discharged from premises used for carrying on any trade or industry (including mining), but does not include domestic waste water or storm water (Water Services Act, 2007).

**Waste Water Effluent**-Any quantity or volume of waste water generated from a domestic, industrial, or commercial facility. Typically disposed of via an onsite waste water treatment system or a specially designed treatment facility such as a waste water treatment plant.

**Water Body**-A WFD management unit. It refers to all types of waters, including surface water bodies, transitional and coastal water bodies, as well as groundwater bodies.

**Waters**-is defined as:

- (a) any (or any part of any) river, stream, lake, canal, reservoir, aquifer, pond, watercourse or other inland waters, whether natural or artificial
- (b) any tidal waters, and
- (c) where the context permits, any beach, river bank and salt marsh or other area which is contiguous to anything mentioned in paragraph (a) or (b), and the channel or bed of anything mentioned in paragraph (a) which is for the time being dry, but does not include a sewer
- (d) a discharge to waters includes a discharge from a septic tank or other waste water treatment system to a percolation area or to soil."

**Water Pollution**-The discharge by man, directly or indirectly, of substances or energy into the aquatic environment, the results of which are such as to cause hazards to human health, harm to living resources and to aquatic ecosystems, damage to amenities or interference with other legitimate uses of water.

**Zone of Contribution (ZOC)**-The area surrounding a pumped well or spring that encompasses all areas or features that supply groundwater to the well or spring. It is defined as the area required to support an abstraction and/or overflow (in the case of springs) from long-term groundwater recharge

