

## 2 GENERAL

### 2.1 Legal Requirements to Support Policies

Current legislation relating to drainage involvement in new development includes:

- ◆ Local Government (Sanitary Services) Acts 1878 to 1964;
- ◆ Building Regulations, 1997;
- ◆ Planning and Development Act, 2000.

The Drainage Department of the Local Council represents the Sanitary Authority under current legislation.

#### 2.1.1 Definitions

Basic system definitions, in accordance with the legislation are contained in the “Recommendations for Site Development Works for Housing Areas”. “Drains” are defined as underground pipework or conduits for the conveyance of foul or surface water, not intended to be taken over and maintained (“taken in charge”) by the Local Authority. This definition is extended to include “Shared Drains” which are defined as single private drain used for the drainage of two or more separate premises.

“Sewers” are defined as underground pipework or conduits for the conveyance of foul or surface water, which are intended to be taken in charge.

The Building Regulations state “No part of a drainage system conveying foul water shall be connected to a sewer reserved for surface water and no part of a drainage system conveying surface water shall be connected to a sewer reserved for foul water”. This statement thus confirms that the drainage of all developments must be separate, and by implication that the sewerage systems serving those developments must also be separate.

Sustainable drainage systems (SuDS) require that surface water runoff be separated from foul flows and controlled on site, with the view of minimising discharge of stormwater from the site. Such systems also dictate separate foul and storm drainage systems. SuDS are being recommended for adoption in the Dublin Region, as expanded upon in later Chapters.

#### **Separation of Foul and Storm Drainage**

**Existing Policy to be maintained: Drainage systems for foul water shall be connected to foul sewers, and drainage systems for surface water shall be connected to surface water sewers**

**New development shall incorporate SuDS for stormwater control and environmental improvement**

#### 2.1.2 Drainage Objectives in the Development Plan

The First Schedule of Section 10 of the Planning and Development Act, 2000 states that Development Plans should have the following objectives, with respect to drainage:

- ◆ Regulating, restricting or controlling development in areas at risk of flooding (whether inland or coastal), erosion and other natural hazards;

- ◆ Regulating, restricting or controlling development in order to reduce the risk of serious danger to human health or the environment;
- ◆ Regulating and controlling, in accordance with the principles of proper planning and sustainable development, the following: the provision of water, waste water, waste and public lighting facilities;
- ◆ Ensuring the provision and siting of sanitary services;
- ◆ Protecting and preserving the quality of the environment, including the prevention, limitation, elimination, abatement or reduction of environmental pollution and the protection of waters, groundwater, the seashore and the atmosphere;
- ◆ Prohibiting, regulating or controlling the deposit or disposal of waste materials, refuse and litter, the disposal of sewage and the pollution of waters.

From the drainage perspective, these objectives should be encapsulated in the general policy statements on the Council Development Plans:

#### **Objectives for Drainage Planning of New Development**

**New development shall be controlled in areas at risk of flooding, erosion and other natural hazards**

**New development shall be controlled in order to reduce the risk of serious danger to human health or the environment**

**New development shall be controlled in accordance with the principles of proper planning and sustainable development**

**New development shall include the provision and siting of sanitary services**

**New development shall protect and preserve the quality of the environment**

**New development shall control the deposit or disposal of foul sewage and surface run-off, the disposal of sewage and the pollution of waters**

**Existing and new development lands shall be categorised in terms of risk of flooding with appropriate planning controls**

### **2.1.3 Refusal of Planning Permission**

The Fourth Schedule of the Planning and Development Act, 2000 states drainage related reasons for refusal of permission:

1. Development of the kind proposed on the land would be premature by reference to any one or combination of the following constraints and the period within which the constraints involved may reasonably be expected to cease-
  - ◆ An existing deficiency in the provision of water supplies or sewerage facilities;
  - ◆ The capacity of existing or prospective water supplies or sewerage facilities being required for other developments;
2. The proposed development is in an area which is at risk of flooding;

3. The proposed development would cause serious air pollution, water pollution, noise pollution or vibration or pollution connected with the disposal of water.

#### 2.1.4 Granting of Planning Permission

The Fifth Schedule of the Planning and Development Act, 2000 states drainage related conditions, which may be imposed on the granting of permission:

1. A condition under *paragraphs (g) and (j) of section 34(4)*, requiring the giving of security for satisfactory completion of the proposed development (including maintenance until taken-in-charge by the local authority concerned of roads, open spaces, car parks, sewers, water mains or drains);
2. A condition, included in a grant of permission pursuant to *sections 48 or 49*, requiring the payment of a contribution for public infrastructure benefiting the development;
3. Any condition relating to the regulation, restriction and control of development of coastal areas or development in the vicinity of inland waterways;
4. Any condition regulating, restricting or controlling development in areas at risk of flooding;
5. Any condition relating to the provision and siting of sanitary services and waste facilities, recreational facilities and open spaces;
6. Any condition relating to the protection and conservation of the environment including the prevention of environmental pollution and the protection of waters, groundwater, the seashore and the atmosphere;
7. Any condition prohibiting, regulating or controlling the deposit or disposal of waste materials and refuse, the disposal of sewage and the pollution of rivers, lakes, ponds, gullies and the seashore.

The Planning and Development Act requires that the period from receipt of planning applications to decision be no longer than 8 weeks.

## 2.2 Drainage Involvement in New Development

This Policy Document deals with the relationship between Drainage and Planning Departments and Developers, with particular respect to new development and its effect on the existing and future drainage infrastructure.

The objectives of the policy are to:

- Ensure that the Planning Department maintains control of the planning process, and manages developments through use of a planning database;
- Ensure that proposed development is compatible with existing and proposed drainage infrastructure;
- Ensure that the Drainage Department specifies the requirements for the new development. The conditions should be standardised as far as possible, with purpose-made requirements to suit the Council and particular development;
- Ensure that the Planning Department understands any constraints imposed by the Drainage Department on the new development;
- Ensure that the Planning Department imposes any requirements specified by the Drainage Department related to new development;

- Ensure that the Developer understands any requirements for the design, construction and taking-in-charge of the new development;
- Ensure that all drainage construction complies with satisfactory design and construction standards;
- Ensure that all records of new development are satisfactorily managed.

The Policy comprises four procedures, corresponding to the phases in the life of a typical development.

The first procedure for **Development Plan Liaison** deals with the involvement of the Drainage Department (and other utility departments) in the production of the Council's Development Plan.

The second procedure for **Planning Application Procedures & Approvals** covers the selection and review of planning applications, and the approval of the Planning Application from the Developer.

The third procedure for **Drainage Construction and Connection** is concerned with the monitoring of site work, the making of connections to the public system and associated certification.

The fourth procedure for **Taking in Charge** deals with the taking over of drainage from the developer, the final inspections and completion of agreements.

The procedures are demonstrated by coloured flow diagrams with accompanying text in Chapter 3.

#### **Drainage Involvement in New Development**

**The following procedures will be adopted by Planning and Drainage Departments:**

**Development Plan Liaison**

**Planning Application Procedures and Approvals**

**Drainage Construction and Connection**

**Taking in Charge**

### **2.3 Inter-Local Authority Discharges**

All Local Authorities will be applying a charge for cross-border sewage flows contributing to their collection and treatment systems.

For example, Dublin City Council will be charged, by the plant operators, for all sewage flowing into the upgraded Ringsend WwTW. In addition to Dublin City, the Councils that contribute foul flows are Dun Laoghaire Rathdown, Fingal, Meath and South Dublin.

The cost of treating the sewage is based on a combination of the flow and organic load as it enters the treatment plant. Dublin City Council will in turn charge the adjacent Councils based on their flow and load.

Dublin City Council is installing permanent flow monitors on trunk sewers as they enter and cross their boundary from the adjacent Council areas. Readings taken from these monitors will be used to establish the actual flows being discharged from the adjacent Council areas into the Ringsend

WwTW catchment. The organic load will be established by taking regular samples at the cross border locations.

Similar arrangements will be needed for Meath sewage contributions to the new WwTW at Balbriggan, and for Wicklow discharges from Bray to Shanganagh.

#### **Inter-Local Authority Discharges**

**All Local Authorities will charge neighbouring Councils for all sewage flow contributions to their collection and treatment systems**

**Treatment costs will be based on measurements of flow and organic load in the trunk sewers as they enter and cross the boundary between Local Authorities**

## **2.4 Liaison Between Councils**

The Steering Committee for the GSDSDS has set up a Liaison Committee to co-ordinate the work of the Councils involved in the Study. This committee proved to be a useful forum for the Councils' drainage engineers.

The results and recommendations of the GSDSDS will require Council involvement long after the completion of the Study, in such topics as:

- ◆ Roll out and implementation of the Regional Policies;
- ◆ Agreement and implementation of the Regional Drainage GIS;
- ◆ Updating of the Drainage Strategy resulting from the GSDSDS;
- ◆ Resolving staffing arrangements resulting from recommendations.

It is therefore recommended that liaison be continued after the completion of the GSDSDS.

#### **Liaison Between Councils**

**The GSDSDS Liaison Committee should be continued to implement the recommendations of the Study, and to agree on drainage matters as affecting the Councils of the Region**

## **2.5 Liaison with the GSDSDS**

Relative to the life of drainage assets, the duration of the GSDSDS represents a snapshot of the drainage of the Region. Planning scenarios, asset databases and hydraulic models are being produced as part of the Study, which should be updated to maintain their value to the Client Authorities.

Although the Study will produce paper-based reports of strategy etc, the electronic format of much of the base data means that maintenance and updating is readily achievable. Transfer of the Study GIS into the Regional Drainage GIS will provide much of the impetus.

**Liaison with the GSDS**

**The GSDS Liaison Committee should promote maintenance of drainage data to support future drainage strategy in the Region**

**2.6 Development on Floodplains**

Section 5.7 of the Regional Policy for Environmental Management recommends the following:

- Local authorities to actively participate in the National Flood Policy Review, being facilitated by the Office of Public Works (OPW);
- Local authorities to control development in the natural flood plain of rivers and develop guidelines, in co-operation with the adjoining local authorities, for permitted development in different flood risk category areas;
- Local authorities to require all significant developments impacting on flood risk areas to provide a Flood Impact Assessment, to identify potential loss of flood plain storage and how it would be offset in order to minimise impact on the river flood regime;
- Local authorities to require all developments to submit, prior to commencement, details of a Sediment and Water Pollution Control Plan, for the agreement of the Drainage and Environmental Departments.

In supporting these policies, the overall objectives of the New Development policy should be that:

- Local authority Drainage and Planning Departments understand the extent of flood plains, and the likelihood of such areas being flooded, by the production of flood risk maps;
- Development should not take place which has an unacceptable risk of flooding, leading to danger to life, damage to property and wasteful expenditure on remedial works;
- Development should not create or exacerbate flooding elsewhere;
- Development should not take place that prejudices possible works to reduce flood risk.

The Planning and Drainage Departments should generally steer inappropriate development away from flood plains. However a developer may wish to develop within the flood plain, in which case the onus should be on the developer to prove that his development will not be at risk of flooding or increase risk of flooding elsewhere.

Councils should promote these principles at two levels:

**County Development Plan**

Local authority Drainage Departments should produce flood risk maps of watercourses within the Dublin region. Many watercourses will cross Council boundaries, and such mapping will require liaison between the affected Councils. These flood risk maps should be integrated into the various County Development Plans, with the Planning and Drainage Departments categorising land for development.

In practical terms there will be pressures to develop land in areas under flood risk, where the more pragmatic approach is to manage flood risks rather than ban development.

The risk categories for future development should be:

1. Low risk from flooding, **no restrictions to development**;
2. Medium risk from flooding, **development allowed only with approval of flood impact assessment**;
3. High risk from flooding, **only certain types of development allowed subject to flood impact assessment, flood defence and warning facilities**;
4. Known areas of flooding, corresponding to the 1 in 100 year flood boundary (preferable) or 1 in 50 year flood boundary (minimum), **no development allowed**.

Where houses or other developments are located close to watercourses the finished floor level shall be a minimum of 500mm above the highest recorded flood level, or the boundary of the 1 in 100 year flood event, whichever is the higher.

The flood risk maps will also identify existing development within the risk categories. The Councils should seek to remove existing inappropriate development, particularly during redevelopment, and such lands should be marked accordingly in the Development Plan.

Subject to access and operational requirements, medium and high flood risk areas would generally not be suitable for essential civil infrastructure, such as hospitals, fire stations and emergency depots.

For high-risk areas, residential, commercial and industrial development would be subject to provision of flood defence and warning facilities, with preference against creation of new areas. Development in sparsely populated areas should not be permitted. Development of sports and amenity areas would be possible, with minimum infrastructure to service its use. No caravan or camping sites would be allowed.

Where flood risk maps are not available, the developer will be required to assess the flood risk for his site, in accordance with the above requirements.

### **Planning Approval**

To obtain planning approval within medium and high risk areas, the developer should demonstrate that his site will be provided with appropriate flood defence, that it will not impede flood flows, that it will not result in a net loss of floodplain storage, and that it will not increase flood risk elsewhere.

The developer will therefore carry out a Flood Impact Assessment for his site, including the following minimum requirements:

- Liaison with the Council Drainage Department on available information on the site and its environs;
- Location plan of geographical features, watercourses and other bodies of water, cross-referenced to the existing drainage system;
- Site plans showing development and supporting infrastructure with both existing and proposed levels and contours;
- Location plan of flooding sources with existing information on extent and depth of flood events, flood risk boundaries and climate change effects;

- Assessment of flooding events, their effect on drainage, runoff, and impact on water courses and local areas;
- Design of any flood defences, storage compensation and watercourse modifications proposed, together with their effect under storm events;
- Site plans of routes of any overland flows resulting from flooding or blockage of drainage facilities, demonstrating that such flood routing will not cause detriment within or outside the site.

Failure to meet approval should result in the planning application being delayed or refused. Where the planning application is granted the developer should, prior to commencement, agree with the Drainage and Environmental Departments of the Council, the Sediment and Water Pollution Control Plan for the site.

#### **Development on Floodplains**

**Flood risk mapping for the Dublin Region to be produced. Where such flood risk mapping is not available the developer will assess the flood risk for his site**

**Planning and Drainage Departments to categorise existing and future development areas in terms of low, medium, high and unacceptable flood risk, and state on Development Plans**

**Planning permission to be granted in accordance with flood risk categories**

**Planning permission for development in areas of flood risk to be subject to satisfactory Flood Impact Assessment**

**All development sites to operate under an agreed Sediment and Water Pollution Control Plan**

## **2.7 Development Near Riparian Corridors**

Section 5.3 of the Environmental Management Policy recommends the following for watercourses:

- Planning authorities to clarify riparian rights and responsibilities in urban areas and codify with planning instruments;
- Planning authorities to maintain or create where possible, a 10m to 15m wide riparian buffer strip either side of all watercourses measured from top of bank;
- DoEHLG, OPW and local authorities to establish a working group to oversee preparation of a guide on Irish river rehabilitation and a public education programme;
- Local authorities to evaluate all watercourses for rehabilitation potential, particularly in conjunction with sustainable drainage measures;
- Local authorities to undertake pilot studies for rehabilitation/enhancement of watercourses.

The main recommendation affecting new development policy relates to the maintenance or creation of buffer strips.

**Riparian Corridors**

**New development will not be permitted within a 10m to 15m wide riparian buffer strip, either side of all watercourses measured from top of bank**

**Redevelopment shall seek to create riparian buffer strips in conjunction with other rehabilitation/enhancement measures for watercourses**

**2.8 Basements in New Development**

The Regional Policy on Basements recommends that a register of basements be prepared containing information on location, use, floor level, drainage infrastructure and flooding history. The intention is to produce a register of at-risk properties, and to use hydraulic models to understand where basements are currently at risk, and would be at future risk from new development and climate change effects. The Regional Policy also recommends that basements in all new developments be hydraulically isolated from the Councils' drainage systems.

Planning applications for premises with basements should satisfy the Drainage Department on the following:

- Details of proposed basements, use, and drainage facilities;
- Level of risk to basements presented by the local drainage;
- Means of isolation of basement drainage from the Councils' systems.

The preference would be that all new basements install pumping stations to lift basement drainage to ground level, as it can discharge by gravity. Basement drainage installations would be subject to inspection by the Drainage Department but not be taken-in-charge. Capital, on-going costs and overall maintenance responsibility would remain with the owner.

The regional policy document on Basements (Ref: GSDSDS/NE02057/28-06) should be consulted for more information.

**2.9 Ransom Strips**

Ransom Strips are corridors of land (usually narrow) left by developers through their developments to facilitate (and charge for) access for services for adjacent developments. Such charges are often excessive, and the practice should be curtailed.

Drainage layouts and plot boundaries should be reviewed to identify any obvious strips of land being left between the development and adjacent land and any oversizing of pipes without explanation. It is recognised that it is difficult to identify such instances where the developer is determined to obscure his intentions. Site inspectors should also be vigilant for unexplained revisions to boundaries or additional connections.

**Ransom Strips**

**The use of Ransom Strips is to be curtailed, by review of drainage layouts at Planning Application stage to identify any obvious opportunity being created by the applicant. Site inspectors should be aware of the practice, and be vigilant for such opportunities being created on site**