



# 16

CHAPTER 16

## Evaluation of Likely Significant Impacts on the Environment of Implementing the Plan

## 16 EVALUATION OF LIKELY SIGNIFICANT IMPACTS ON THE ENVIRONMENT OF IMPLEMENTING THE PLAN

### 16.1 Introduction

The Planning and Development Act 2000-2004, Part II, Section 10 (5) (A) requires that a development plan contain information on the likely significant effects on the environment of implementing the Plan.

### 16.2 The Existing Environment and County Kildare

Utilising preliminary Strategic Environmental Assessment techniques, it has been established that the environmental resources of the County include the extensive areas of fertile soils; the areas of undrained bogland; the major river systems; the Curragh and a rich cultural and historical heritage. The Planning Authority however has been advised that by far the most important and sensitive environmental resource is the large and vulnerable aquifers in the centre of the County.

Other significant and sensitive environmental resources include the Rivers Liffey, Barrow and the Rye Waters, all of which are used for abstraction and dilution.

#### Background

##### 16.2.1 Environmental Factors in County Kildare

Kildare County contains a sand and gravel aquifer, covering a significant area around Kildare, Newbridge and Kilcullen (see Figure 16.1). The aquifer is designated as having regional importance (due to its yield) by the Environmental Protection Agency<sup>1</sup>. As a result of the relatively high permeability of the sand and gravel material, the aquifer is potentially vulnerable to ground pollution, particularly in those areas of low subsoil depth. The Planning Authority has been advised that any land use activities with contamination/pollution potential can affect this natural resource of significance to the area.

An unclassified and unconfined limestone aquifer also occurs to the north-west of the County. Being an unconfined water aquifer with a high water table, the groundwater is vulnerable to surface or ground contamination.

Adjacent to the eastern boundary, in County Wicklow - outside the County boundary and thus not shown in Figure 1 - locally important sand and gravel aquifers occur. Any activity, therefore on the eastern Kildare uplands has the potential to affect those aquifers as a result of the elevation gradient, high permeability and groundwater flow direction.

<sup>1</sup> Appendix VI: Aquifer Maps (EPA, 2000), based on Groundwater 'Resources in the Republic of Ireland' (1982) prepared by the GSI

### 16.2.2 Vulnerable Watersheds

The River Liffey water catchment area covers the north-eastern quarter of County Kildare including Golden Falls and Poulaphouca.

### 16.2.3 Sensitive Land Cover

Sensitive land cover areas indicated in Figure 16.3 include:

- Broadleaved forests
- Mixed forests
- Agricultural lands with significant areas of natural vegetation
- Natural grassland
- Transitional woodland scrub
- Sparsely vegetated areas
- Peat bogs
- Water bodies



These land-use categories include areas that are visually open and exposed with sparse or low growing vegetation cover that is insufficient to provide screening. Even if planting is introduced, the exposed nature and soils of these areas will not support any significant tall vegetation.

As a result of the low vegetation, any development has the potential to be visible over a wider area. The exceptions to this are broadleaved, mixed forest and transitional woodland scrub areas, which support tall vegetation with potential to screen development. However these categories are sensitive themselves due to their natural character and their longevity in the landscape.

### 16.2.4 Significant Landscapes

The areas indicated in Figure 16.4 show the significantly distinctive landscape areas that resulted from the Kildare Landscape Appraisal (detailed in chapter 18 of the Development Plan). These areas generally have high amenity and scenic value, and include:

1. The River Liffey Valley: characterised mostly by smooth terrain and low vegetation, with some areas of natural woodland. The corridor presents a landmark in the County, with scenic, extensive open mountain views.
2. The River Barrow Valley: characterised by floodplain levels and gentle slopes of deciduous trees with a slow progression to pasture lands. The extensive and open nature of the corridor allows for long distance mountain vistas.

3. Royal Canal and Grand Canal: smooth terrain and even topography characterise the canal corridors, which generally progress into pasturelands and boglands, although natural vegetation occurs at some of the sections. The corridor and its adjacent lands have been landscaped and enhanced along the sections where the canals cross urban areas. Canal locks are distinctive features of this water corridor.
4. The Curragh: the most important landmark in the County due to its uniqueness as a large and flat, mostly acidic, grassland area and to its archaeological/historical value. This extensive open plain constitutes a unique national asset from the point of view of landscape, geomorphology, and conservation.
5. Pollardstown Fen: unique and extensive landscape area of primary and secondary fen peat, lacking scrub vegetation on its surface; Pollardstown fen is the largest spring-fed fen in Ireland and has a well developed flora and fauna.
6. Allen Remnant Bog: of scientific interest with distinctive soil and vegetation characteristics. The surface is generally flat, although domed in profile, allowing for extensive open vistas to surrounding environs.
7. The eastern uplands, although not indicated in the map, also represent a significant landscape character area due to its elevated nature and long-distance visibility. The uplands are generally smooth with certain tall vegetation associated with woodland areas.

### 16.2.5 Scenic Designations

Scenic views can be found in public roads and upland areas from which views and prospects of areas of visual amenity, natural beauty and interest can be enjoyed by the public.

The views and prospects designated within the Kildare County Development Plan are detailed in chapter 19, volume 2 of the Plan. It is an objective of the Council to preserve, improve and open up places or areas from which these views of high amenity value may be enjoyed.

### 16.2.6 Ecological Designations

Ecological designations reflect areas of sensitive habitats, flora and fauna, as well as elevated public awareness. County Kildare contains Natural Heritage Areas (NHA) and Special Areas of Conservation (SAC) indicated in Figure 16.6.

NHAs mainly refer to remnant bogland areas and water bodies and features. These are dispersed throughout the County.

NHAs are national designations introduced by the Wildlife (Amendment) Act 2000. Although these designations are not yet in force, as the relevant legislation has not yet been enacted, the County Council policies in regard to these areas relate to their protection and conservation.

Special Areas of Conservation have been created by the Habitats Directive (92/43/EEC) to enable the protection, conservation and, where possible and necessary, the restoration of certain habitats and/or species. Designated SACs are compiled within a framework of protected areas - i.e. Natura 2000. [detailed in chapter 17 of the Development Plan]

### 16.2.7 Sensitive Land Uses: Stud Farms

Stud farms represent a significant land use in the County. A survey carried out in 1972 indicated that a total of 21,832 acres of land were attached to stud farms at that time. Stud farms are generally associated with well-managed fields and large land holdings. These lands are of special importance from an economic and amenity point of view and are sensitive to unsympathetic development with particular reference to noise and air pollution.

## 16.3 Future Development

The County Development Plan, which is in accordance with the strategy set out in the Regional Planning Guidelines for the Greater Dublin Area, shows that the majority of future settlement, development and economic activity within the County is likely to take place in areas above significant aquifers as well as within the catchment of the River Liffey and its tributaries. The Council has in place strategies and policies to manage the growth and development of the County, in accordance with National and Regional policy and these will ensure the protection of the county's natural resources. These include the Ground Water Protection Plan (currently being finalised) and the Waste Management Plan. The Council has an active role in the Eastern and South Eastern River Basin Districts.

The implementation of the Water Framework Directive and the SEA Directive, during the lifetime of this plan, will impact on the manner in which development occurs where it affects aquifers or requires major abstractions from or discharges to the Liffey.

The Council will control development to ensure that there are no adverse affects on these water resources in order to protect human health and ensure that the status of important ecological and amenity resources are retained and improved.

<sup>2</sup>Survey of Stud Farms and Training Establishments in County Kildare, M Dunne & N. Meagher, 1977.