



Environmental Report

Of the Arklow Town and Environs Development Plan 2011 – 2017



Prepared by Wicklow County Council in
conjunction with Arklow Town Council
April 2011



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Section 1 Introduction and Background

1.1 Introduction and terms of reference

This is the Environmental Report of the Arklow Town and Environs Development Plan 2011-2017 Strategic Environmental Assessment (SEA). The purpose of the report is to provide a clear understanding of the likely environmental consequences of development that occurs on foot of the zonings and objectives proposed for Arklow Town and its Environs. The SEA is carried out in order to comply with the provisions of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) and in order to improve planning and environmental management of future development within the plan area. This report should be read in conjunction with the Development Plan.

1.2 SEA Definition

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before the decisions are made. Environmental Impact Assessment, or EIA, is generally used for describing the process of environmental assessment which is limited to individual projects while Strategic Environmental Assessment, or SEA, is the term which has been given to the environmental assessment of plans, and other strategic actions, which help determine what kind of individual projects take place.

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to insure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

The kind of development that occurs within Arklow Town and Its Environs and where it occurs will be significantly determined by the implementation of the Town and Environs Development Plan. By anticipating the effects and avoiding areas in which development cannot be sustainably accommodated and by directing development towards more compatible and robust receiving environments real improvements in environmental management and planning can occur in within the plan area – the scope of any EIAs which may be required as part of planning applications are likely to be reduced; and, planning applications that comply with the provisions of the plan are more likely to be granted permission.

1.3 Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning. The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No.) 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21 July 2004.

1.4 Implications for the Councils involved and the Elected Members

The above legislation requires certain plans and programmes, which are prepared by local authorities - including Development Plans - to undergo SEA. The findings of the SEA are expressed in an Environmental Report, which is submitted to the Elected Members alongside the Development Plan. The Elected Members must take account of the Environmental Report before the adoption of the Plan. When the Plan is adopted a statement must be made public, summarising, inter alia: how environmental considerations have been integrated into the Plan; and, the reasons for choosing the Plan as adopted over other alternatives detailed in the Environmental Report.

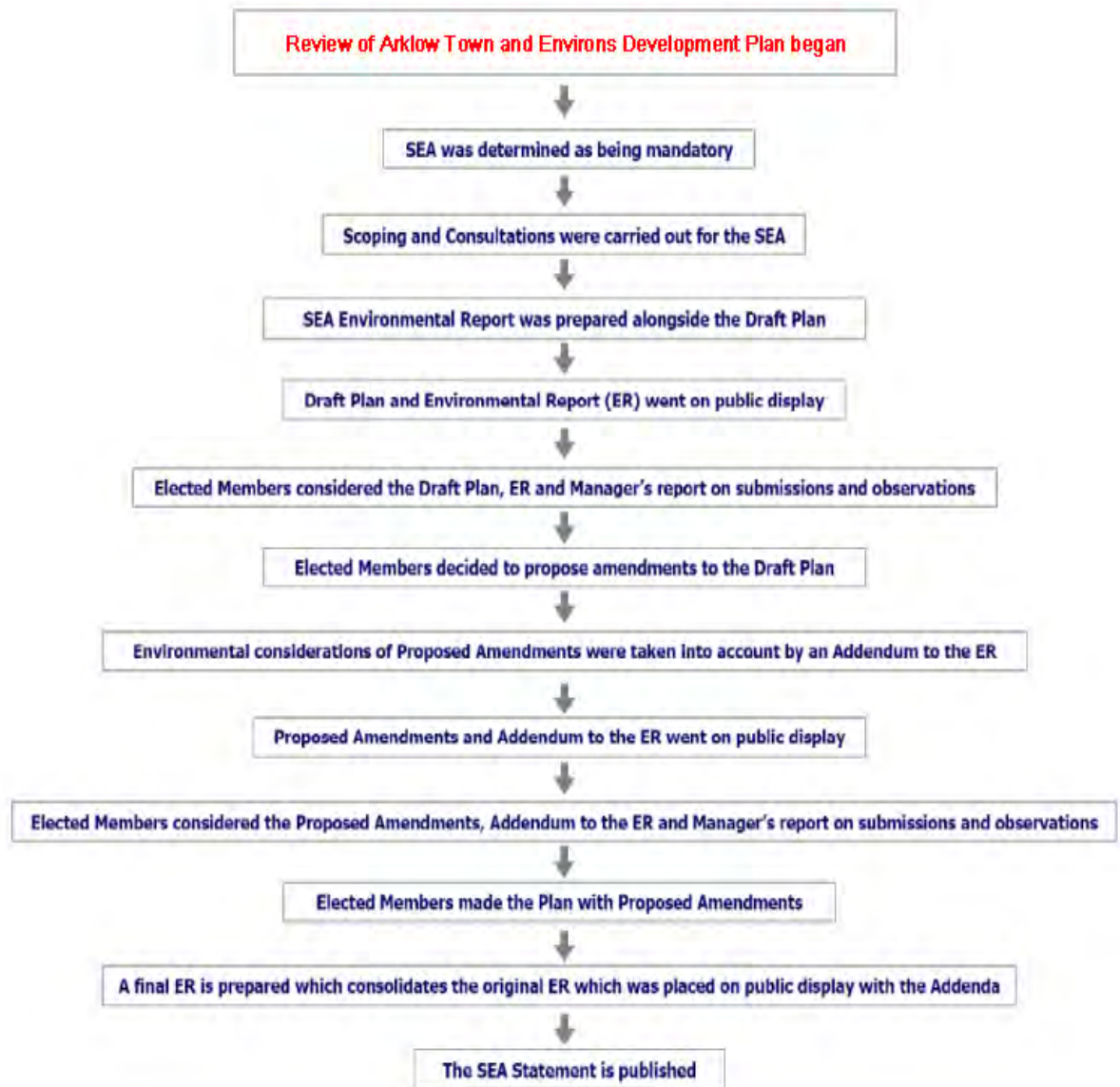


Figure 2.1 Development Plan and SEA stages

2.2 Scoping

2.2.1 Introduction

In consultation with the relevant authorities, the scope of environmental issues to be dealt with by the SEA together with the level of detail to which they are to be addressed was broadly decided on after preliminary data collection. Scoping of the SEA was continuous with certain issues being selected for further examination after certain data was obtained. Scoping helped the SEA to become focused upon the important issues, such as those relating to existing and potential environmental issues and environmental problems¹, thereby avoiding resources being wasted on unnecessary data collection.

Scoping facilitated the selection of issues relevant to the environmental components which are specified under the SEA Directive-biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.

With regard to human health, impacts relevant to the SEA are those, which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Impacts upon human beings arising as a result of social and economic conditions are not considered by SEA.

The Environmental Protection Agency (EPA), the Department of the Environment, Heritage and Local Government (DEHLG) and the Department of Communications, Energy and Natural Resources (DCENR) were all sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made in regard to the plan. Written submissions were received on the scope of the SEA from all of the above departments. Following receipt of these submissions a scoping meeting was held with the environmental authorities in order to discuss the most important issues facing the plan area.

In addition, the Council's intention to carry out SEA as part of the review of the Development Plan was indicated during the consultation process on the preparation of the new Development Plan where the public were invited to make submissions on environmental as well as planning issues.

The findings of the SEA were communicated to the plan making team on an ongoing basis from the outset in order to allow for their integration into the Development Plan thus minimising the potential for significant negative environmental effects arising from implementation of the Plan.

2.3 Most Important Strategic Environmental Issues

The principal environmental issues centre on water and water-related issues. This is because of the emergence of specific requirements from the Eastern River Basin Management Plans (ERBMP's) and the challenges of meeting those requirements on account of the existing condition and trends in both the surface and ground waters within and surrounding Arklow Town and its Environs. The following issues were among those identified during the SEA scoping process.

⇒ The timely availability of waste water treatment capacity;

¹ Annex I of the SEA Directive requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse. Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the offset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

- ⇒ The protection of designated ecological sites and corridors,
- ⇒ The protection and improvement of water bodies.
- ⇒ Flooding - The Avoca River catchment area and Arklow Town have been subject to periodic flooding over a number of years. Heavy storms in 2000 & 2010 caused severe flooding in Lower Main Street, South Quay and Ferrybank. In order to comply with the DEHLG's Guidelines on the Planning System and Flood Risk Management the Development Plan will need to ensure that appropriate zoning of lands and restriction of use will be applied in areas liable to flooding in order to avoid increased risk of flooding of the lands within or upstream or downstream of the zoned areas.

2.4 Environmental Baseline Data and other Strategic Actions

The SEA process is informed by the environmental baseline (i.e. the current state of the environment - flora and fauna, soil, water, cultural heritage etc.) to facilitate the identification, evaluation and subsequent monitoring of the effects of the Development Plan. Data was collected to describe the environmental baseline and its likely evolution without implementation of the Development Plan.

The SEA Directive (Annex I) requires that information be provided on 'any existing environmental problems, which are relevant to the plan or programme'. Information is therefore provided on existing environmental problems, which are relevant to the Development Plan, thus, helping to ensure that the Development Plan does not make any existing environmental problems worse.

The SEA Directive requires that information on the baseline environment be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the strategic action i.e. the Development Plan. Any information that does not focus upon this is surplus to requirements; therefore, the SEA of the Development Plan focuses on the significant issues, disregarding the less significant ones. In addition, the SEA Directive aims to avoid duplication of the assessment whereby a strategic action forms part of a hierarchy. Furthermore, if certain matters are more appropriately assessed at different levels of the hierarchy in which the Development Plan is positioned, or, if certain matters have already been assessed by a different level of the hierarchy then additional assessment is not needed.

In order to describe the baseline - the current state of the environment - data was collated from currently available, relevant environmental sources.

2.5 Alternatives

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified described and evaluated for their likely significant effects on the environment. Taking into account the objectives and the geographical scope of the Plan, alternatives were formulated alongside the plan-making team.

2.6 The Environmental Report

In this Environmental Report, which has been prepared alongside the Development Plan, the likely environmental effects of the Development Plan and the alternatives are predicted and their significance evaluated while having regard to the environmental baseline. The Environmental Report provides the decision-makers, who decide to adopt the Development Plan, with a clear understanding of the likely environmental consequences of decisions regarding the future development of Arklow Town and its Environs. Mitigation measures to prevent or reduce significant adverse effects posed by the DP, or to maximise any benefits

arising are identified –these have been integrated into the Plan. The alternatives are also presented in this report, as are measures concerning monitoring.

The original Environmental Report which was placed on public display alongside the Draft Arklow Town and Environs Development Plan has been altered in order to take account of amendments which were made to the Draft Plan. This document is the altered, final Environmental Report.

2.7 The SEA Statement

On adoption of the Plan, document referred to as the SEA Statement must be made public. This is required to include information on: how environmental considerations have been integrated into the Plan - highlighting the main changes to the Plan which resulted from the SEA process; how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report indicating what action, if any, was taken in response; and the reasons for choosing the Plan in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Plan was selected.

2.8 Legislative Conformance

This report complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

Table 2.1² (overleaf) is a reproduction of the checklist of information to be contained in the Environmental Report (DEHLG, 2004) and includes the relevant sections of this report, which deal with these requirements.

2.9 Difficulties Encountered

The lack of a centralised data source that could make all environmental baseline data for the County both readily available and in a consistent format posed a challenge to the SEA process.

This difficulty is one, which is encountered at local authorities across the Country and was overcome by investing time in the collection of data from various sources and through the use of Geographical Information Systems.

² DEHLG (2004) Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities Dublin: Government of Ireland

Table 2.1 checklist of information included in this environmental report.

Information Required to be included in the Environmental Report	Corresponding Section of this Report
(A) Outline of the contents and main objectives of the plan, and of its relationship with other relevant plans and programmes	Sections 4 and 5
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the plan	Section 3
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 3, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the plan, particularly those relating to European protected sites	Section 3
(E) List environmental protection objectives, established at international, EU or national level, which are relevant to the plan and describe how those objectives and any environmental considerations have been taken into account when preparing the plan	Sections 4, 7 and 8
(F) Describe the likely significant effects on the environment	Section 7 and 8
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the plan	Section 9
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Sections 2 and 6
(I) A description of proposed monitoring measures	Section 10
(J) A non-technical summary of the above information	Appendix I
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

Section 3 Baseline Environment Description

3.1 Introduction

The environmental baseline of Arklow Town and Environs is described in this section. This baseline together with the Strategic Environmental Objectives, which are outlined in Section 4, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Town and Environs Development Plan and in order to determine appropriate monitoring measures.

The environmental baseline is described in line with the legislative requirements encompassing the following components – biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these components. A description is also included of the likely effects upon each environmental component under a do-nothing scenario i.e. the likely evolution of the environment without the implementation of the Arklow Town and Environs Development Plan.

The Arklow Town and Environs Development plan is a joint plan prepared under the administration of Arklow Town Council and Wicklow County Council. The plan area is located to the south east of the county and east of the N11 National Primary Route and borders the Irish Sea. The Arklow Town and Environs area to which the plan relates is indicated in Figure 3.1 below. The area of land within the jurisdiction of Arklow Town Council is located within the blue boundary line on lands coloured in a light blue. The section of the plan (Arklow Environs) located within the jurisdiction of Wicklow County Council is located on the lands coloured light green and within the red boundary line.

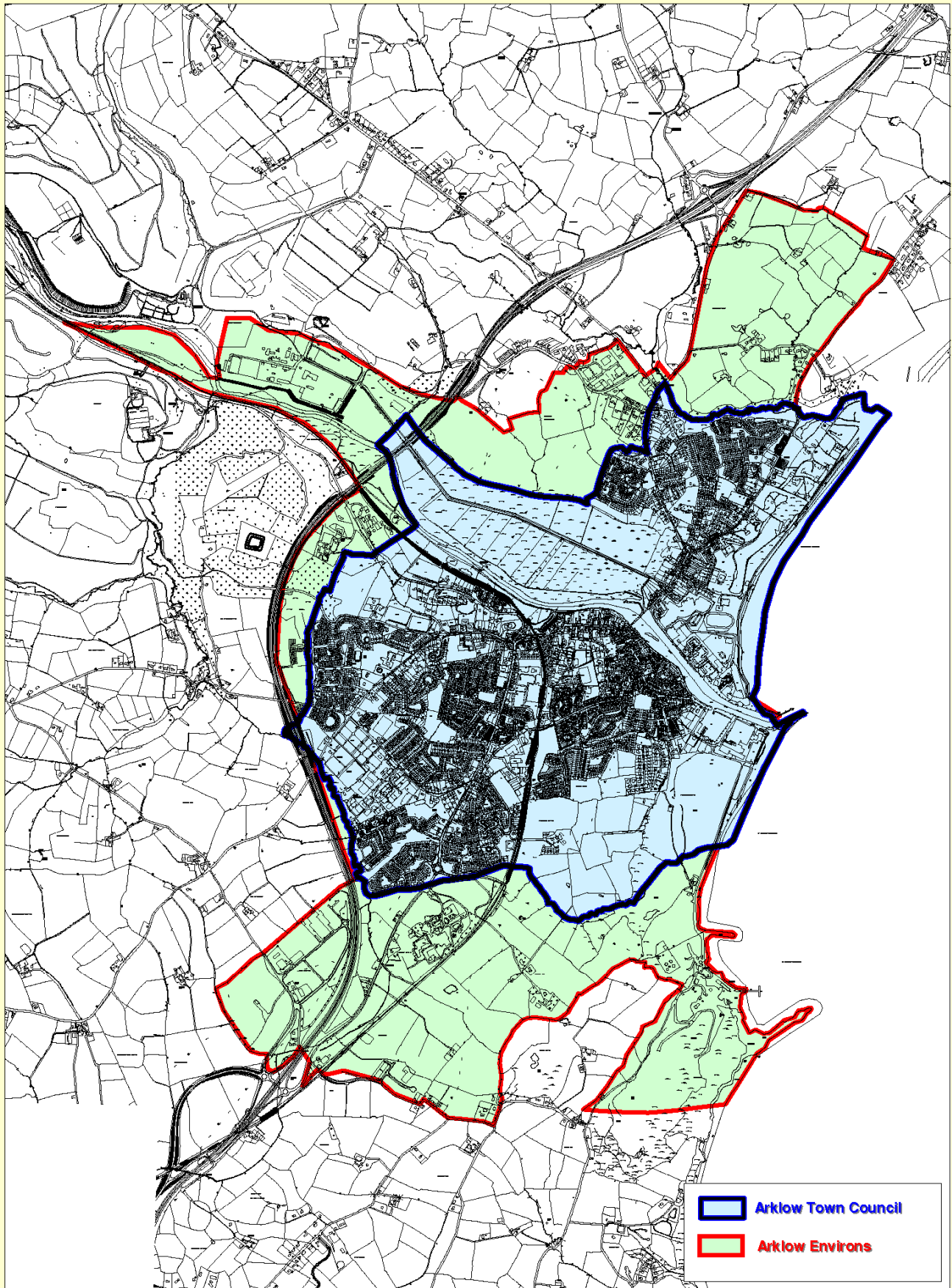
3.2 Description of Arklow Town and its Environs

Arklow is situated along the south east coast of Wicklow originally forming as a Viking settlement in the ninth century. The town is situated at the mouth of the River Avoca the longest river entirely within County Wicklow. The town is divided by the river, which is crossed by the Nineteen Arches Bridge, a stone arch bridge linking the south or main part of the town with the north part, called Ferrybank.

Arklow is designated as a large growth town II³ with a population 11,759 in 2006 and a projected population of 19,000 up to 2016 and 23,000 up to 2022. The current population makes Arklow the 4th largest settlement in the County of Wicklow. The topography of the plan area is relatively low lying with areas in close proximity to the river bank being subject to periodic flooding over a number of years. Heavy storms in 2000 & 2010 caused severe flooding in Lower Main Street, South Quay and Ferrybank.

³ Large Growth Towns as designated in the Regional Planning Guidelines and the Wicklow County Development Plan are most likely to be successful in attracting a concentration of major employment-generating investment and should have the high accessibility/connectivity and will therefore require a location on a main radial / orbital road intersection and high quality rail service. These centres should be economically self-sustaining, with a population, including its catchment, which is able to support facilities such as a high quality secondary (and sometimes tertiary) education service, a small hospital or polyclinic-type facility of sufficient size to provide non-specialised medical care and a comparison retail centre.

Figure 3.1 – Existing Arklow Town and Environs Development Boundary



3.3 Biodiversity Flora and Fauna

3.3.1 Introduction

Most habitats in the Arklow Town and Environs area have been impacted upon to varying degrees by human beings over time. The clearing of vegetation centuries ago resulted in the replacement of an amount of the natural habitats with semi-natural, low biodiversity habitats. However, a number of important natural and semi-natural habitats remain within and adjacent to the study area.

3.3.2 General Description

CORINE Land Cover mapping classifies land cover under various headings. CORINE land cover mapping for the study area is shown on Figure 3.2 CORINE Land Classification 2006. The Corine land cover mapping 'changes' from 2000 to 2006 identify pockets of land to the north and south west of the town area, which have been developed during this time and are classified as Discontinuous Urban Fabric.

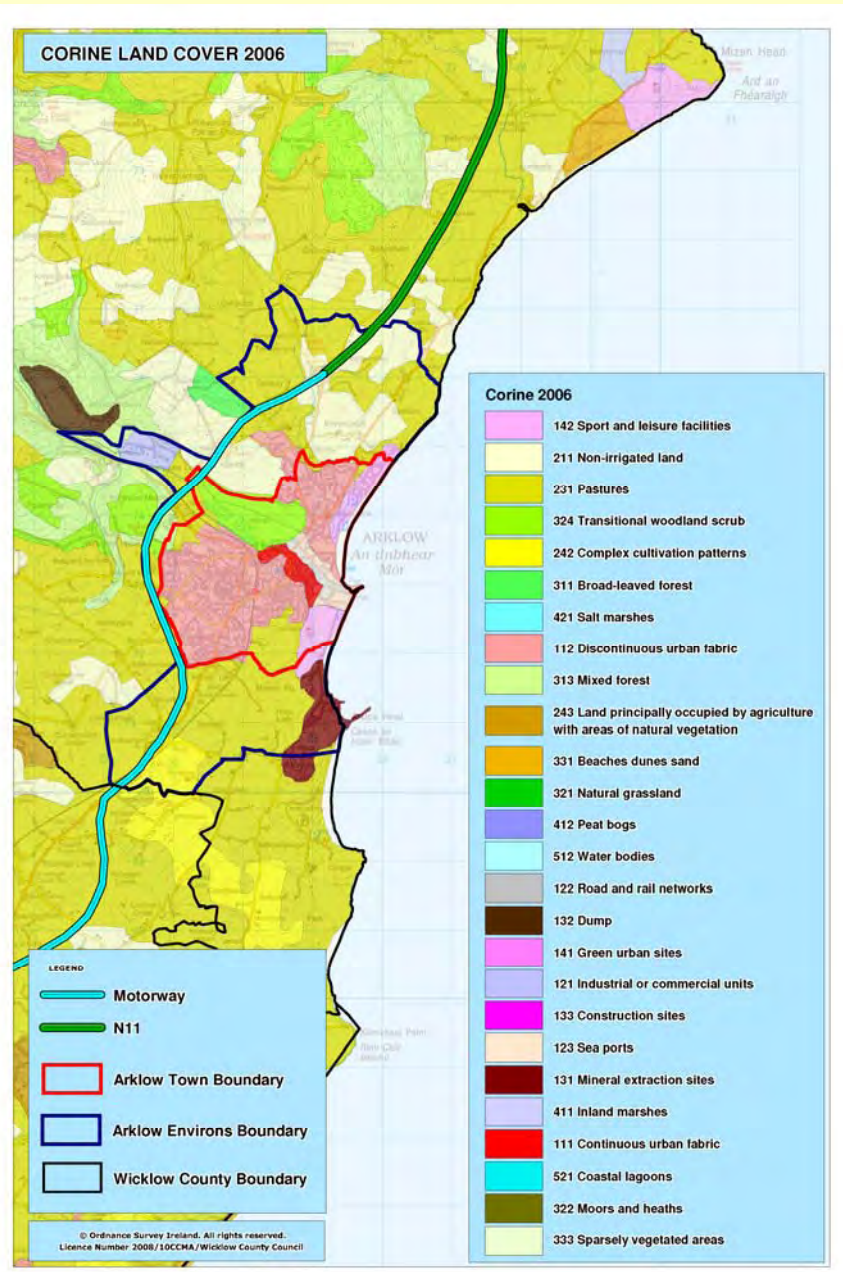
The most common land cover headings which are identified across the area include Pastures and Non-irrigated agricultural land, which are most prevalent in the northern and southern sections of the plan area. The original settlement pattern along the southern portion of the Avoca Estuary is classified as continuous urban fabric with the expansion of this area to the north and south of the River Valley being classified as discontinuous Urban Fabric. Land cover headings such as Sea Ports and Sports and leisure facilities are attributed to different areas along the coast toward the eastern boundary of the plan area.

Chapter 17 of the County Development Plan designates Arklow Town and its environs as an 'Urban Area' of low vulnerability. Chapter 18 of the County Development Plan "Coastal Zone Management" identifies coastal zones within the County. Cell 11 comprises the coastal area within the boundaries of the Arklow Environs and Arklow Town plans. This cell is described as having long sandy beaches along most of the cell, with the central harbour area the location of intensive residential and industrial development and the southern end marked by Arklow Rock. The Arklow Sand Dunes at Seabank to the north and the area around Arklow Rock – Askintinny are designated pNHAs.

The objectives for cell 11 are as follows:

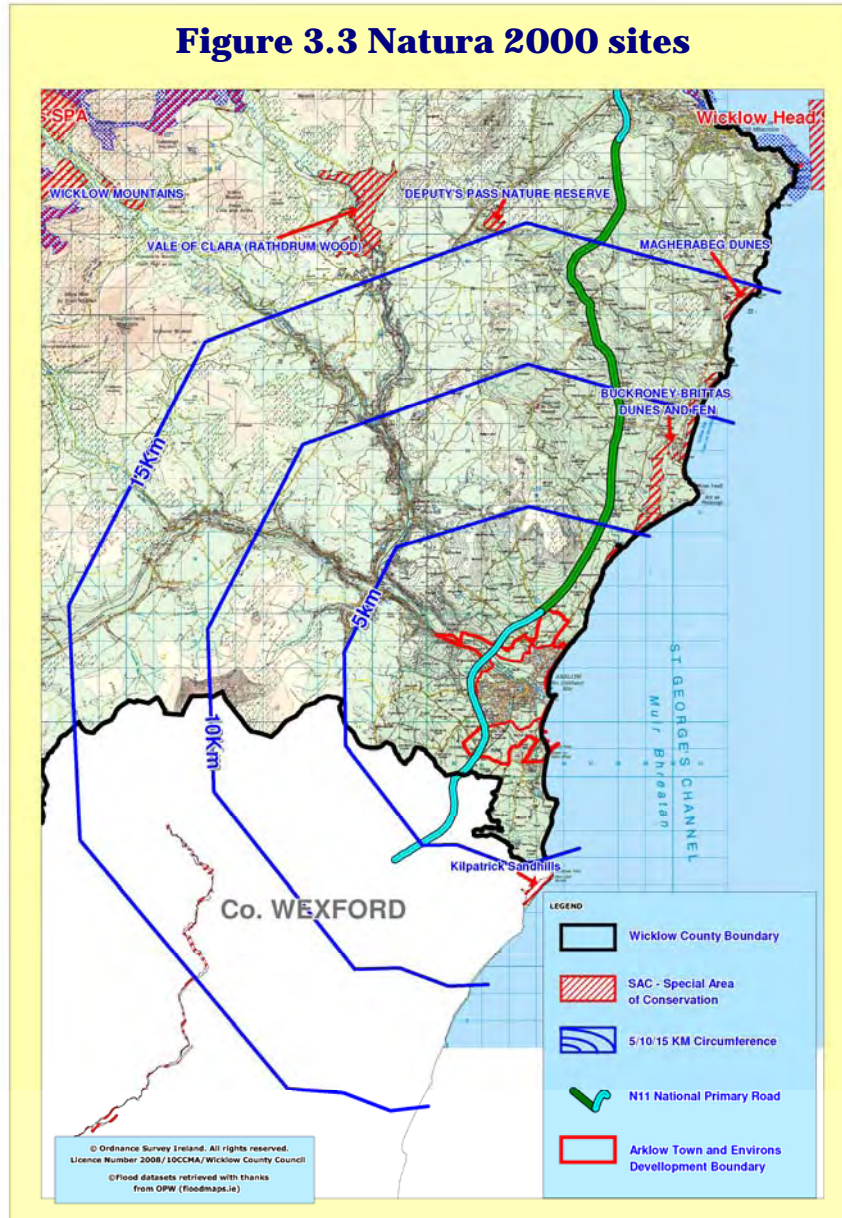
1. To enhance the visual, recreational and natural amenities of the Arklow coastal area, in accordance with the policies and objectives set out in the Arklow Environs LAP and the Arklow Town Plan. (to be amalgamated through this Development Plan process).
2. To facilitate the development and enhancement of visitor and recreational facilities along the coastal area, particularly walking routes, car parking areas, signage, changing / toilet facilities and water based clubs.
3. To support and facilitate the development of marine and shipping activity in Arklow, particularly the recreational use of the existing harbour / marina and the development of a roll on-roll off port at the existing Roadstone jetty.

Figure 3.2 – Corine Land Cover Mapping 2000



3.3.3 Designations

There are no Natura 2000⁴ sites within, adjacent to or immediately downstream of the Plan area. The closest SAC's are Kilpatrick Sandhills located c.5km to the south of the plan boundary and Brittas Bay "Buckroneys Dunes and Fen" situated c. 2.5km from the most northerly boundary of the plan area.



⁴ The 1992 Habitats Directive seeks to establish Natura 2000, a network of protected areas including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) - throughout the European Union. SACs are designated and protected under the Habitats Directive due to their conservation value for habitats and species of importance in the European Union while SPAs are designated and protected under the 1979 Birds Directive (European Council Directive on the Conservation of Wild Birds 79/409/EEC). Both Directives are transposed into Irish law through various Habitats Regulations.

3.3.4 Natural Heritage Areas

Natural Heritage Areas (NHA's) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important seminatural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes.

There are 3 proposed Natural Heritage Areas (pNHA's) within the Arklow Town and Environs Development Plan area these are;

- Arklow Town Marsh situated adjacent to the Avoca Estuary - site code 001931
- Arklow Sand Dunes situated along the northern coast of the plan area - site code 001746 and
- Arklow Rock – Askintinny situated along the southern coast of the plan area site - code 001745
- The Avoca River Valley NHA is situated just to the west of the Plan area.

The following descriptions of each of these habitats are taken from the National Parks and Wildlife Services site synopsis.

3.3.5 Arklow Town Marsh

This site is now the principal wetland area in Arklow. It is a large marsh located north of the Avoca estuary on the perimeter of Arklow town. A disused roadway bisects the site from east to west.

Much of the site is dominated by Reeds (*Phragmites australis*), with Creeping Bent Grass (*Agrostis stolonifera*) and Valerian (*Valeriana officianalis*) common in places. On the southern side, numerous scattered bushes of Willow (*Salix* spp.) are growing among the Reeds, forming a scrub in places. Drier areas are characterised by large tussocks of Tufted Hair Grass (*Deschampsia caespitosa*). Other plants present include Soft Rush (*Juncus effusus*), Iris (*Iris pseudacorus*), Skullcap (*Scutellaria galericulata*), Lesser Pond Sedge (*Carex acutiformis*) and several other Sedges (*Carex* spp.).

Wet grassy areas with extensive stands of Water Horsetail (*Equisetum fluviatile*) occur on the northeast margin, with Creeping Bent Grass (*Agrostis stolonifera*), Spike Rush (*Eleocharis palustris*), Meadowsweet (*Filipendula ulmaria*) and Rushes (*Juncus articulatus* & *J. conglomeratus*) present.

The scarce Broad-leaved Cottongrass (*Eriophorum latifolium*) has been recorded growing on this site.

Much of the Willow (*Salix* spp.) has been defoliated, possibly due to atmospheric pollution from the nearby fertilizer factory.

The importance of this site is that it is a good example of a relatively large wetland, despite the impacts of atmospheric pollution and its proximity to Arklow town. The presence of at least one scarce plant species increases the interest of the site.

3.3.6 Arklow Sand Dunes

This coastal site is located just north of Arklow town and comprises mainly a sand dune system. A low ridge of fore-dunes, stabilized by Marram Grass (*Ammophila arenaria*), runs parallel to the shore. Sea Holly (*Eryngium maritimum*) and Sea Bindweed (*Calystegia soldanella*) are also present.

Behind the low fore-dunes are the larger fixed dunes, which have been vegetated for a long time. In addition to Marram Grass, other grasses are common, notably Red Fescue (*Festuca rubra*). Bracken (*Pteridium aquilinum*) is locally abundant, also Common Restharrow (*Ononis repens*), Kidney Vetch (*Anthyllis vulneraria*), Lady's Bedstraw (*Galium verum*), Pyramidal

Orchid (*Anacamptis pyramidalis*), Sheep's-bit (*Jasione montana*) and Eyebright (*Euphrasia* spp.). Burnet Rose (*Rosa pimpinellifolia*) is found on the more mature dunes.

The western side of the sand dune system is bounded by a fairly steep slope which provides an 'amphitheatre-like' backdrop to the dunes and beach. The clay slopes are covered in a low scrub made up mostly of Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*).

At the southern end of the site is a small, but good example of wet woodland. The main tree is Alder (*Alnus glutinosa*) and there is a well-developed ground flora, which includes Water Dropwort (*Oenanthe crocata*), Angelica (*Angelica sylvestris*) and Water Horsetail (*Equisetum fluviatile*).

There is also a transitional grassy area dominated by False Oat (*Arrhenatherum elatius*), which although not of great interest in itself, connects the dune system to the woodland.

Although the site is small and vulnerable to pressures from the adjacent amenity sites, it is important as an example of a sand dune system which is relatively intact and showing the stages of dune development from the early fore dunes to mature fixed dunes.

3.3.7 Arklow Rock Askintinny

This coastal site is located just south of Arklow, Co. Wicklow. Arklow Rock is an Ordovician volcanic intrusion, which forms a knoll of rhyolite. A large quarry, which is still being worked, has been cut into the rock. The sandy beach and cliffs south of Arklow Head form part of the site.

Heath vegetation extends from Arklow Rock to Arklow Head. This is characterised by Gorse (*Ulex europaeus*), Bracken (*Pteridium aquilinum*), Honeysuckle (*Lonicera peryclimenum*), Brambles (*Rubus fruticosus* agg.) and Broom (*Cytisus scoparius*). The scarce Greater Broomrape (*Orobanche rapum-genistae*), a parasitic species which grows on the roots of Gorse and Broom, grows here. A legally protected plant, Birds'-foot (*Ornithopus perpusillus*) is quite common in the area. It is a species of dry and gravelly places and is confined to the south and east coasts of Ireland. There are some grassy fields within the site but these are not intensively managed and in places are reverting back to heath.

The heath merges into exposed rock and scree at Arklow Rock. An interesting and uncommon lichen community indicative of metal rich siliceous rocks is found here. At the south end of the quarry, the steep rock face supports breeding Fulmars and Raven. The very rare and legally protected fern, Lanceolate Spleenwort (*Asplenium billotii*), grows at the edge of the quarry but has not been recorded since 1970.

Steep rocky cliffs occur south of Arklow Head. Soil pockets in the rock support coastal cliff plants such as Sea Pink (*Armeria maritima*), Sea Plantain (*Plantago maritima*), English Stonecrop (*Sedum anglicum*) and Wild Thyme (*Thymus praecox*). Small numbers of Fulmars nest in slopes. A dune system occurred here but has been completely eroded within the last 20 years. Some recent fore dune deposits have accumulated at the base of the clay slopes.

The site also includes a small ravine with Willow (*Salix atrocinerea*) and Hazel (*Corylus avellana*).

3.3.8 The Avoca River Valley

While the Avoca River Valley is not directly situated within the plan boundary it does border the plan area and therefore should be taken into consideration in assessing the impacts of the Plan.

The Avoca River Valley is a large mixed woodland located in the valleys of the Avoca and Aughrim rivers, both of which flow through the site and on towards the estuary at Arklow.

The steep slopes of these deep valleys contain both coniferous and deciduous woodland. The best examples of relatively pure deciduous woods are found around Shelton Abbey, with several other smaller areas throughout the site. Oak (*Quercus petraea*) is the dominant tree species, with Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*) and Birch (*Betula pubescens*) locally abundant. In places there is a well developed shrub layer of Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*) and Honeysuckle (*Lonicera periclymenum*). The ground flora is variable and is usually predominated by Wood Rush (*Luzula sylvatica*) or Bluebells (*Hyacinthoides non-scripta*). Other species present include Lords and Ladies (*Arum maculatum*), Wood Sorrel (*Oxalis acetosella*), Wood Anemone (*Anemone nemorosa*) and Wood Sanicle (*Sanicula europea*). Ferns are abundant and include Buckler Fern (*Dryopteris dilitata*), Male Fern (*Dryopteris felix-mas*) and Soft Shield Fern (*Polystichum setiferum*).

A large area of the site consists of broadleaved woods, which have been underplanted with a variety of conifers. Here, the understorey is generally similar to the broadleaved woods, but as the conifers become more abundant the ground flora becomes less diverse with Ivy (*Hedera helix*), Brambles (*Rubus* agg.) and some Ferns replacing the other species.

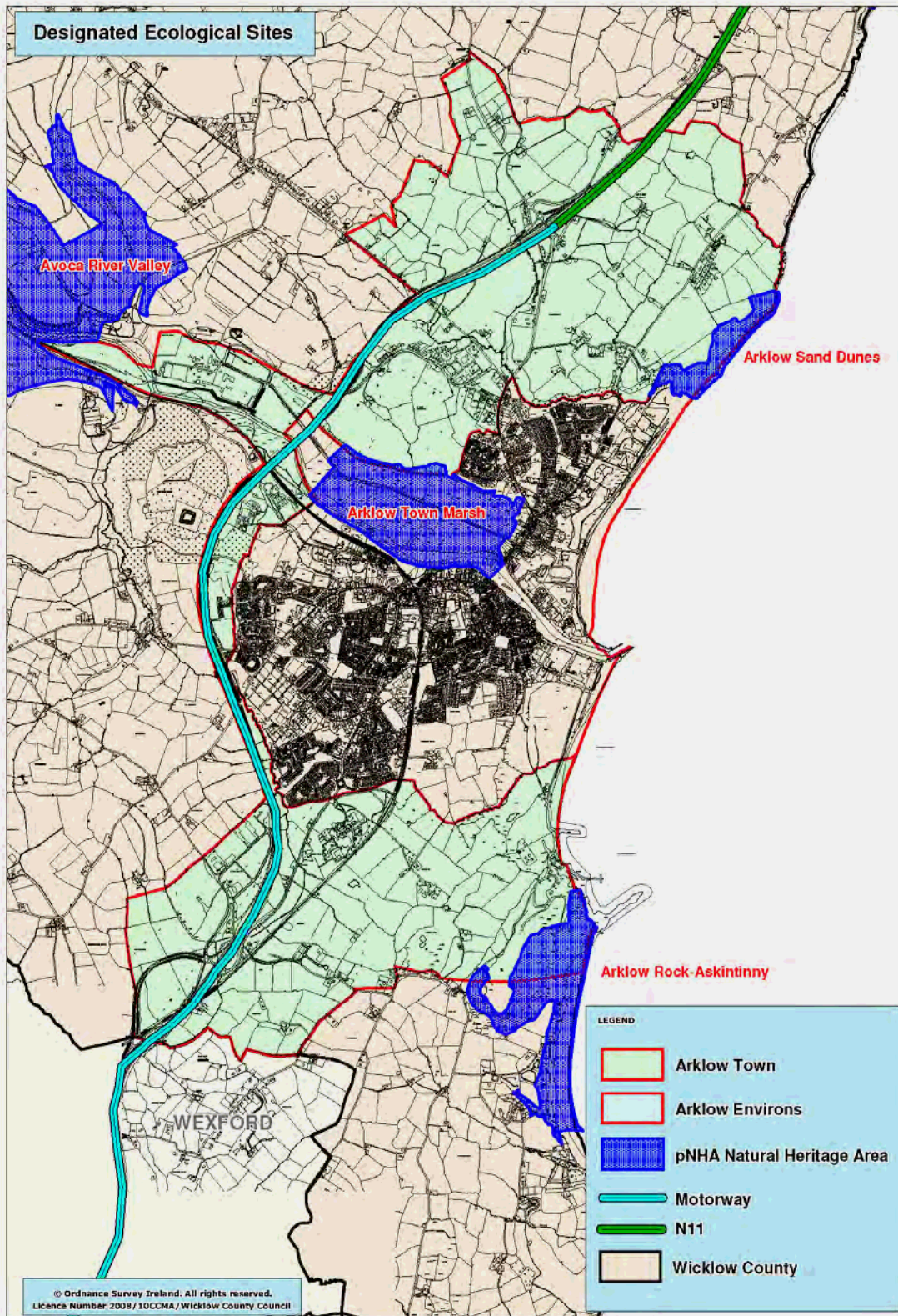
There are a few blocks of commercial conifer plantations throughout the site, managed for forestry. Small areas of wet woodland with Alder (*Alnus glutinosa*), Willow (*Salix atrocinerea*) and Birch (*Betula pubescens*) occur on the lower gradients adjacent to the rivers.

A study on the birds of this area has shown the commonest species to be Goldcrest, Robin, Wren, Coal Tit and Chaffinch. The rare Redstart has also been recorded.

This area has been subject to great disturbance from the mines at Avoca, the planting of conifers and from air pollution emanating from the fertiliser factory downstream, near Arklow. The eastern part of the site has been more affected by pollution than the western end.

It remains however, a site of considerable importance as it contains good examples of deciduous woodland with a typical flora and fauna and some rare species occurring. These areas are remnants of more extensive deciduous woodland coverage throughout these valleys and it is important to conserve this dwindling resource.

Figure 3.4 Natural Heritage Areas



3.3.9 Ecological Connectivity

Article 10 of the Habitats Directive recognizes the importance of ecological networks as corridors and stepping-stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the Natura 2000 network of designated ecological sites are maintained and it recognises the need for the management of these areas through land use planning and development policies. Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. Ecological networks are composed of linear features, such as treelines, hedgerows, rivers and canals, which provide corridors or stepping stones for wildlife species moving within their normal range. They are particularly important for mammals, especially for bats and small birds.

3.3.10 Urban Habitat Mapping Study

The Arklow Urban Habitat Study provides baseline information on the flora, fauna and habitats of “green sites” within the Arklow Town Area in order to inform the decision-making processes involved in the future uses of these sites. The study provides information, which alongside management guidelines and recommendations, aims to assist the future planning and management of the identified areas in order to prevent negative impacts to sensitive sites.

The Arklow Urban Habitat Mapping study⁵ was carried out in 2008 with a number of objectives in mind;

- To create habitat maps and vegetation surveys for the Arklow Urban Area,
- Identify local important biodiversity sites
- Identify linkages between unidentified biodiversity areas and the surrounding countryside.
- Use of data to make recommendations on conservation priorities.
- To develop a user-friendly set of habitat management guidelines
- To facilitate future research.

The study involved the identification and mapping⁶ of 31 habitats located within the Arklow Area. Of the 31 habitat sites surveyed 12 sites were considered to be of high value/locally important for the following reasons:

Site 2: Situated to the South West of the plan area along the N11 comprising a small stream, which formed part of a corridor network along the town boundary that was considered to be species rich.

Site 3: Located to the south west of the town boundary comprising an old graveyard species rich in an urban environment.

Site 4: Situated to the South West of the plan area along the N11 comprising an agricultural field with a small stream running along its boundary. Considered to be of medium value due to the presence of native and non-native tree species.

Site 6: Situated to the south west of the town boundary comprising agricultural lands divided by species rich hedgerows and margins.

Site 8: An amenity park area/managed public space of medium value due to the existing bird species.

Site 9: The Templerainy River was considered to be of high value acting as a corridor for birds and other wildlife.

⁵ Arklow Urban Habitat Mapping, Prepared by MERC Consultants on behalf of Wicklow County Council and The Heritage Council, November 2008.

⁶ Please refer to Figure 3.2 below.

Site 19: Situated to the south of the town boundary with a high conservation value due to the presence of a series of hedgerows forming a corridor for nesting birds.

Site 25: Situated to the north west of the town boundary on the opposite side of the N11 comprising amenity grassland. Site of high importance due to the presence of an extensive hedgerow.

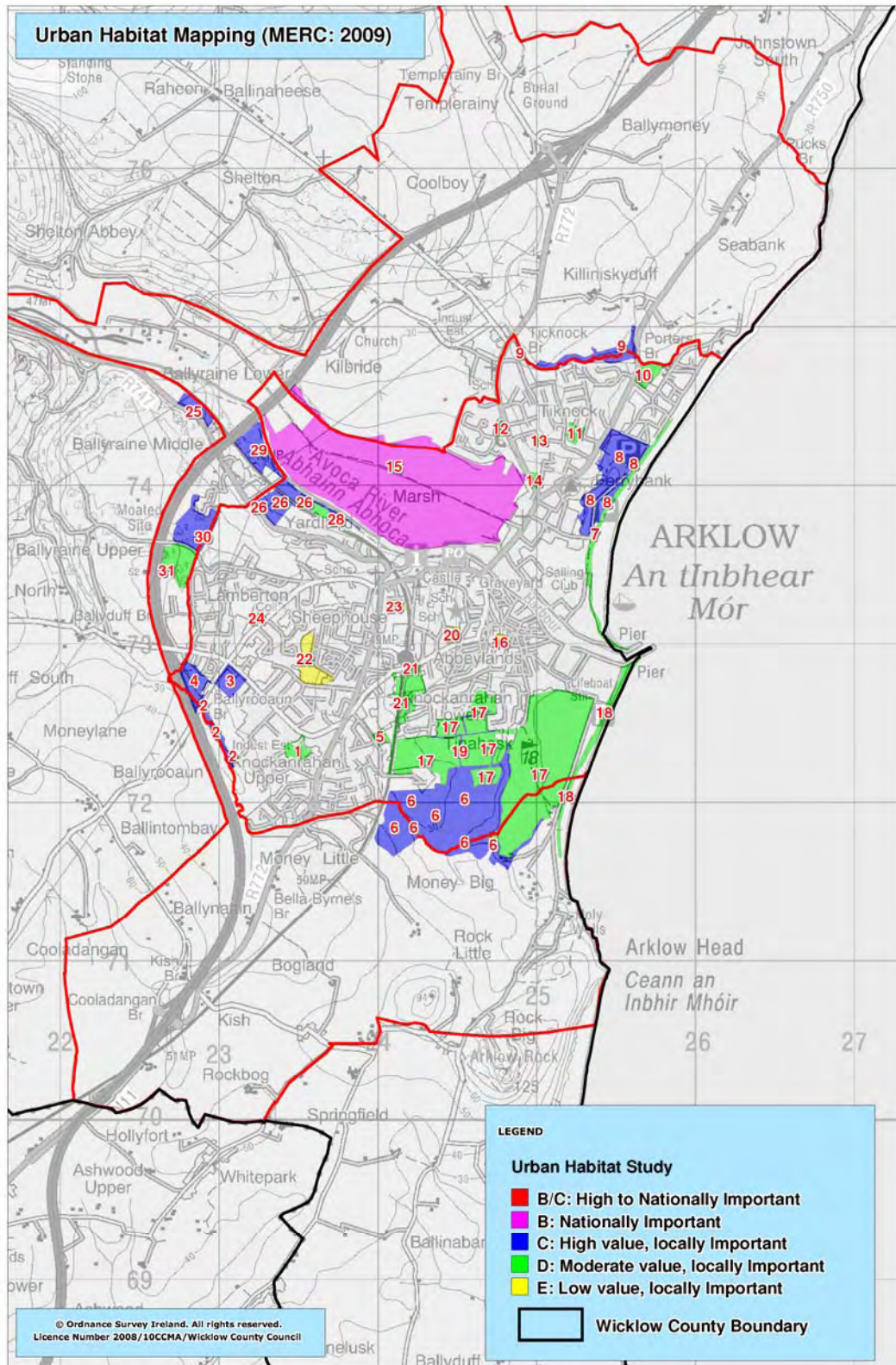
Site 26: Rough grasslands surrounding Arklow GAA of medium conservation value due to the presence of a series of hedgerows.

Site 28: continuation of site 26 above.

Site 29: Situated along the banks of the Avoca River comprising mixed broadleaved woodlands providing a good mix of tree species and acting as a wildlife corridor along the northern banks adjoining Arklow Marsh pNHA.

Site 30: Situated to the west of the town along the N11 comprising a semi-natural woodland of mixed tree species with species rich ground flora.

Figure 3.5 Urban Habitat Mapping (MERC: 2008)



As can be seen from the brief site descriptions above there are a number of ecological corridors situated throughout the plan area. The most important of these are considered to be the water based corridor areas situated along the local rivers and streams namely the Avoca River, Templerainy River and their tributaries.

Existing Environmental Problems

Infrastructure and water quality - Arklow Town and its Environs does not currently benefit from the use of a wastewater treatment facility. While permission has been granted for a treatment facility to cater for a population equivalent of 18,000 the construction phase of this infrastructure has yet to begin. The current network has a number of outfalls directly connected to the Avoca River which if continued will negatively impact on the water quality status of the Avoca River Valley and its tributaries which is likely to be impacting upon aquatic biodiversity, flora and fauna to the extent where certain fish populations or macro-invertebrates cannot be supported as they are not tolerant to serious pollution.

Designated Sites and connectivity – Arklow Marsh is a natural wetland within Arklow Town, which acts as a natural flood plain during peak flood periods. Developments pressures in and surrounding the marsh area have the potential to adversely impact on the drainage patterns in this area directly impacting on the species within this site and indirectly impacting on ecological connectivity.

Ecological networks throughout the plan area have been adversely impacted upon by the development of infrastructure such as roads which result in the habitat fragmentation as well as by the development of housing necessitating the removal of hedgerows or development which occurs along the edges of inland surface waters.

Terrestrial Biodiversity, Flora and Fauna - Over time, ongoing road and building developments within the study area have impacted upon biodiversity and flora and fauna with semi-natural habitats replaced by artificial surfaces as indicated by the discontinuous urban fabric shown on Figure 3.2.

With regard to terrestrial flora and fauna, all greenfield development in the area causes an impact - the replacement of natural and semi natural habitats with artificial surfaces results in loss of flora and fauna and therefore adversely impacts upon this environmental component. The significance of the impact of greenfield development depends on whether individual greenfield developments result in the loss of habitats or species of importance together with the cumulative amount of habitats and species lost and fragmented as a result of all greenfield developments. It is noted that development of brownfield sites and re-development can also have impacts on terrestrial flora and fauna.

Evolution of Biodiversity, Flora & Fauna in the absence of a Town and Environs Development Plan:

In the absence of a Development Plan for the Arklow Town and Environs area development would have no guidance as to where to be directed and planning applications would be assessed on an ad-hoc/individual basis with flora and fauna, habitats and ecological connectivity only being protected by a number of generic strategic actions relating to biodiversity flora and fauna with no local level focus.

3.4 Population and Human Health

3.4.1 Population

Arklow town’s population has been increasingly modestly since 1991, with annual increases in the range of 1.5 % – 2%, increasing to around 4% per annum between 2002 and 2006.

Population – Arklow Town

Year	1971	1981	1986	1991	1996	2002	2006
Population	6,948	8,646	8,388	7,987	8,557	9,993	11,759

(Source: CSO Census of population)

Having regard to Arklow's designation as a Large Growth Town in the Regional Planning Guidelines for the Greater Dublin Area and the Wicklow County Development Plan, Arklow and its environs is targeted to grow up to 2022 at a faster rate than over the past number of years. In particular, the population target of 19,000 in 2016 will require a growth rate of c. 6% per annum between 2006 and 2016.

Population targets – Arklow Town & Environs

Year	2016 target	2022 target
Population	19,000	23,000

(Source: Wicklow County Development Plan 2010)

The 2006 Census revealed a total of 4,270 households in Arklow 'town', equating to an average household size of 2.75, which was below the County average of 2.89. It is estimated that there are currently (June 2010) 5,250 housing units in the entire settlement, the additional number being made up of (a) additional units completed post 2006 and (b) units in the 'environs' area, which would not have been considered part of the 'town' in the Census, but are included in the new development plan area.

It is estimated that by 2017 average household size in Wicklow will have declined to 2.52. Assuming this same household size for Arklow and its environs, there would be a need for 7,800 dwelling units in the settlement by 2017. Further declines to 2020 will necessitate a total housing stock in the region of 9,000 units to meet the 2020 population target. Although the proposed new plan will have a lifespan up to 2017, it will make provision for the future growth of Arklow and its environs up to 2020. Therefore the new development plan will be required to make provision for nearly 4,000 new housing units.

3.4.2 Human Health

With regard to human health, impacts relevant to the SEA are those, which arise as a result of interactions with environmental vectors i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings.

Human health has the potential to be impacted upon by environmental vectors including water, soil and air. Hazards or nuisances to human health can arise as a result of exposure to these vectors and incompatible landuses.

In particular the development of the plan area in the absence of a wastewater treatment works has the potential to adversely impact on human health through water (including bathing waters) and air pollution. The provision of individual treatment works serving single and multi-unit developments where inadequate maintenance and management of such systems takes place has the potential to adversely impact on groundwater's and potential drinking supplies.

Flooding within the town area also has the potential to adversely impact on Human Health placing increased demands on drainage systems and existing infrastructure. This has the potential to impact on water supplies through contamination and air quality arising from the overloading of existing wastewater treatment infrastructure.

These factors have been considered with regard to the description of: the baseline of each environmental component, and; the identification and evaluation of the likely significant environmental effects of implementing the plan and the alternatives.

Existing Environmental Problems

There is a lack of waste water treatment plant to serve granted planning permissions in the Arklow Town and Environs area. This lack of capacity is constraining the ability of the plan to meet the projected population growth; - a significant number of residential developments have

been granted planning permission in the Arklow Town area subject to restrictions which prevent construction and occupation of units until adequate sewerage, water and roads infrastructure is in place.

Septic tanks form the majority of waste water treatment systems within the Environs of Arklow Town. Such systems require continual maintenance in order to avoid pollution of groundwaters. Untreated waste from inefficient septic tanks may have significant negative effects on human health. Areas which have high numbers of septic tanks, such as Sea Bank and Kilbride alongside the existing outfalls from public network may cumulatively have potential to pollute groundwater, with consequent effects on human health.

Evolution of Population and Human Health in the absence of a Town and Environs Development Plan:

Due to the constraints regarding land availability within the administrative boundaries of Arklow Town Council, land within the Environs of Arklow Town is required to accommodate the anticipated population increases over the coming years. The occurrence of growth in areas not identified as having environments which are compatible to such land uses can result in significant adverse impacts on the environment. As there is likely to be further increases in Arklow Town and its Environs population over the coming years, there is a need to direct growth towards the most robust and away from the most sensitive environments.

This can be done by policies and objectives, which are included in a Development Plan and by zoning sufficient amounts of land in order to ensure that growth is directed towards the most compatible environments. In the absence of a Development Plan such management of growth would be unlikely to occur and would be likely to result in significant adverse impacts upon a range of environmental components including the landscape, biodiversity, flora and fauna, cultural heritage and water resources.

In the absence of a Development Plan for the area there would be no framework for the provision of infrastructure to serve existing and future development and this would be likely to delay or hinder the provision of infrastructure which would have the potential to result in impacts on environmental vectors to which humans are exposed e.g. a lack of appropriate waste water treatment infrastructure could adversely impact upon drinking water quality and subsequently upon human health.

In the absence of a Development Plan, demographic and policy variations that have occurred over the period of the current Arklow Town Development Plan and the Arklow Environs LAP would be made more difficult to integrate into planning for the area.

3.5 Soil

3.5.1 Introduction

Soil performs many vital functions including: food and other biomass production; storage; filtration, and; transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Figure 3.4 Soils⁷ shows the spatial distribution of soils in the study area. The biodiversity, flora and fauna detailed under Section 3.2 are facilitated by these soils, as is an extent of agricultural land use.

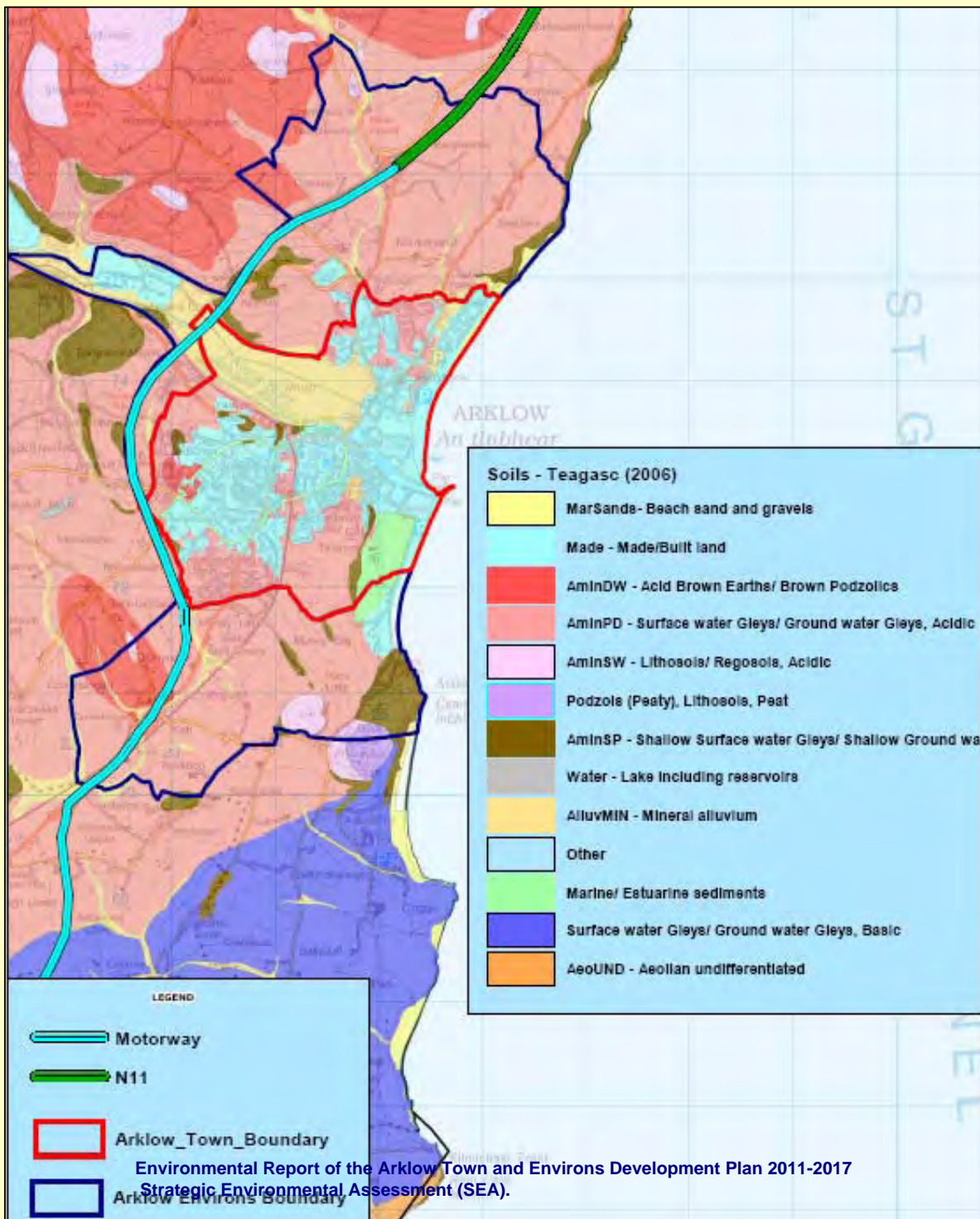
⁷ Teagasc, Geological Survey of Ireland, Forest Service & EPA (2006) Soils and Subsoils Class Dublin: DEHLG

3.5.2 Soil Types

The majority of the northern and southern sections of the plan area within the Arklow Environs Area comprise surface and groundwater gley soils (coloured pink in figure 3.4). Groundwater gley soils develop where drainage is poor because the water table (phreatic surface) is high, whilst Surface-water gleying occurs when precipitation inputs at the surface do not drain freely through the ground. To the north, south and dotted throughout the plan area, shallow surface and groundwater gleys are located.

The coastal areas are classified as beach sand and gravels, which also include Arklow Marsh (coloured yellow in map 3.4). Pockets of the plan area to the east are classified as being Acid Brown Earths/Brown Podzolics (coloured red in figure 3.4). These soils often develop over relatively permeable bedrock of some kind but are also found over unconsolidated parent materials like river gravels.

Figure 3.6 Soil Types



Soils underlying the developed areas of Arklow Town and its Environs are man-made or urban soils (coloured light Blue on Figure 3.4). Urban soils are soils which have been disturbed, transported or manipulated by man's activities in the urban environment and are often overlain by a non-agricultural, man-made surface layer that has been produced by mixing, filling, or by contamination of land surfaces in urban and suburban areas.

Urban soils have a combination of characteristics that differ from natural soils. These characteristics are due to alterations in both physical and chemical soil properties that cause long term deviation from the natural state. Natural soil profiles generally tend to gradually change from one horizon to the next; however, urban soils show abrupt changes from one horizon to another depending on the construction history of the soil. Layers may drastically differ in structure, pH, texture, and properties important to plant growth such as aeration, drainage and water holding capacity. A soil's aeration and water drainage capabilities are negatively affected by compaction, which occurs as a result of overlying conditions, which include traffic and building.

Existing Environmental Problems:

Greenfield development involves the building upon and thereby sealing off of soil thus representing an environmental problem. There is potential that soil may be polluted and contaminated as a result of pollution from development, which is not serviced by appropriate waste water treatment infrastructure,⁸ and from agricultural sources.

Soil erosion due mainly to surface erosion resulting from construction works and agricultural / forestry operations has major potential to impact on water quality and fishery resources.

Evolution of Soil in the absence of a Town and Environs Development Plan:

The currently proposed Soil Directive suggests encouraging the rehabilitation of brownfield sites, thus reducing the depletion of Greenfield sites. However, in the absence of a development plan there would be no framework for the direction of growth towards brownfield sites in the Arklow Town and Environs area, where such direction is appropriate. As a result Greenfield development would be likely to occur on an increased basis and would result in the building upon and thereby sealing off of the nonrenewable subsoil and soil resources.

3.6 Water

3.6.1 The Water Framework Directive

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003) and requires that all member states implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving good status by 2015.

For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. Arklow Town and its Environs fall within the Eastern River Basin District (ERBD).

Within each River Basin District - for the purpose of assessment, reporting and management - water has been divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies.

⁸ Individual wastewater treatment infrastructure which has not been properly constructed or which is not being properly managed

In order to achieve the objectives of the WFD it is necessary:

- ⇒ To assess the risk that water bodies may not achieve good quality status;
- ⇒ To identify the pressures from human activities causing this risk; and,
- ⇒ To develop strategies and management plans to minimise the risk.

Risk assessment procedures were developed at national level and applied across all River Basin Districts in order to analyse the impact of the pressures. The risk assessments were predictive, i.e. they examined each pressure and predicted the magnitude, which would be likely to have a negative impact.

Each water body has been assessed and classified, on the basis of human activity, whether it is at risk or not at risk of failing to achieve the WFD's objectives by 2015. The classifications used for reporting this assessment are:

- ⇒ **(1a)** At Significant Risk - water body is at risk of failing to meet good status in 2015
- ⇒ **(1b)** Probably at Significant Risk – water body is thought to be at risk of failing to meet good status in 2015 pending further investigation
- ⇒ **(2a)** Not at Significant Risk - the water body is expected to meet good status in 2015.
- ⇒ **(2b)** Probably Not at Significant Risk - water body is expected to meet good status in 2015, pending further investigation

Water bodies placed in the (1a) At Significant Risk category will need improvement to achieve the required status while water bodies in the (1b) Probably at Significant Risk category are likely to need improvement in order to achieve the required status.

3.6.2 Risk Assessment:

In terms of achieving the objectives of the Water Framework Directive the following is of note:

The **Avoca River** (from Arklow to Aughrim) is classified as being at significant risk of not achieving good status due to Point Source Pollution – Mine Risk and Groundwater Quality Risk.

The **Avoca Estuary** situated in the heart of Arklow Town and is classified as being at significant risk due to the presence of 'OSPAR' Nutrients⁹.

The **Templerainy River** situated to the north of the town is classified as being at significant risk due to Point Source pollution – CSO's (Combined Sewer Overflows), Diffuse pollution – EPA diffuse model and Point/Diffuse pollution.

The **Ballyduff River** situated to the south west of the town is classified as being at significant risk due to Diffuse pollution and Point Source pollution (CSO's).

3.6.3 Eastern River Basin Management Plan

Local Authorities located in the ERBD have prepared a River Basin Management Plan with a life span of 6 years from 2009-2015. The ERBD Plan Management Plan describes the actions that are proposed to ensure the necessary protection of the district's water including Arklow's waters over the coming years. It sets out how the aims and objectives of improving and protecting water quality and ecology in the waters of each river basin district could be achieved, by means of a Programme of Measures.

⁹ The presence of excessive enrichment of water with nutrients which may cause an increase in the accelerated growth of algae in the water column and higher forms of plants living on the benthic. This may result in a range of undesirable disturbances in the marine ecosystem, including a shift in the composition of the flora and fauna which affects habitats and biodiversity, and the depletion of oxygen, causing death of fish and other species. (Eutrophication)

3.6.4 Rivers, Transitional and Coastal Waters:

The Avoca River and Estuary, which dissects the entire plan area forms the main water body within the plan area. The river system begins life as two rivers, the Avonmore River and the Avonbeg River, which meet at the vale of Avoca or an area known as the “meeting of the waters” which flows directly into the Irish Sea at Arklow where it widens into a large estuary “The Avoca Estuary”. A number of streams flow along the Urban Town Boundary linking into the Avoca River with the Templerainey River located to the east of the town boundary connecting directly into the Irish Sea.

Figure 3.7 Rivers, Transitional and Coastal Water Quality

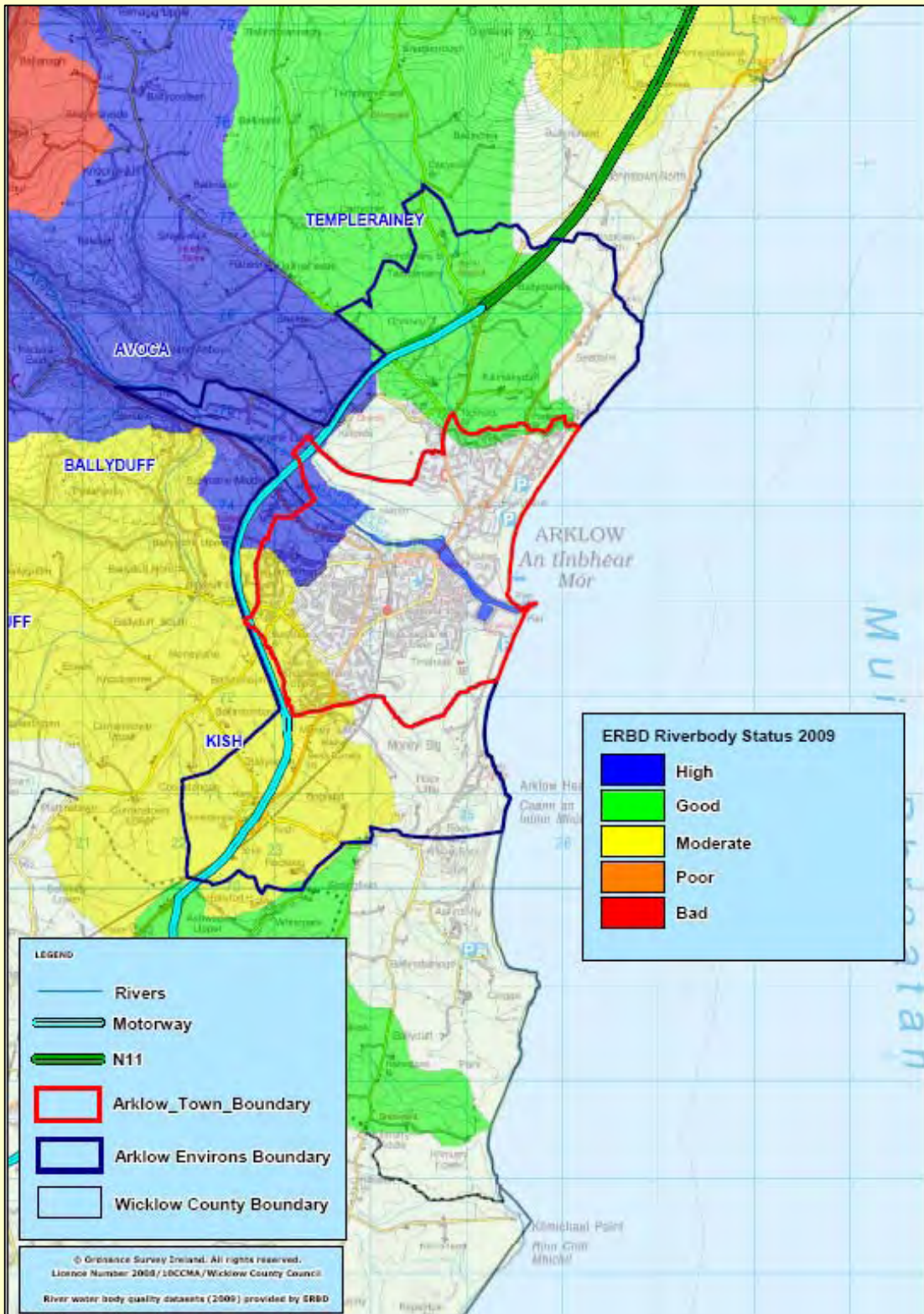
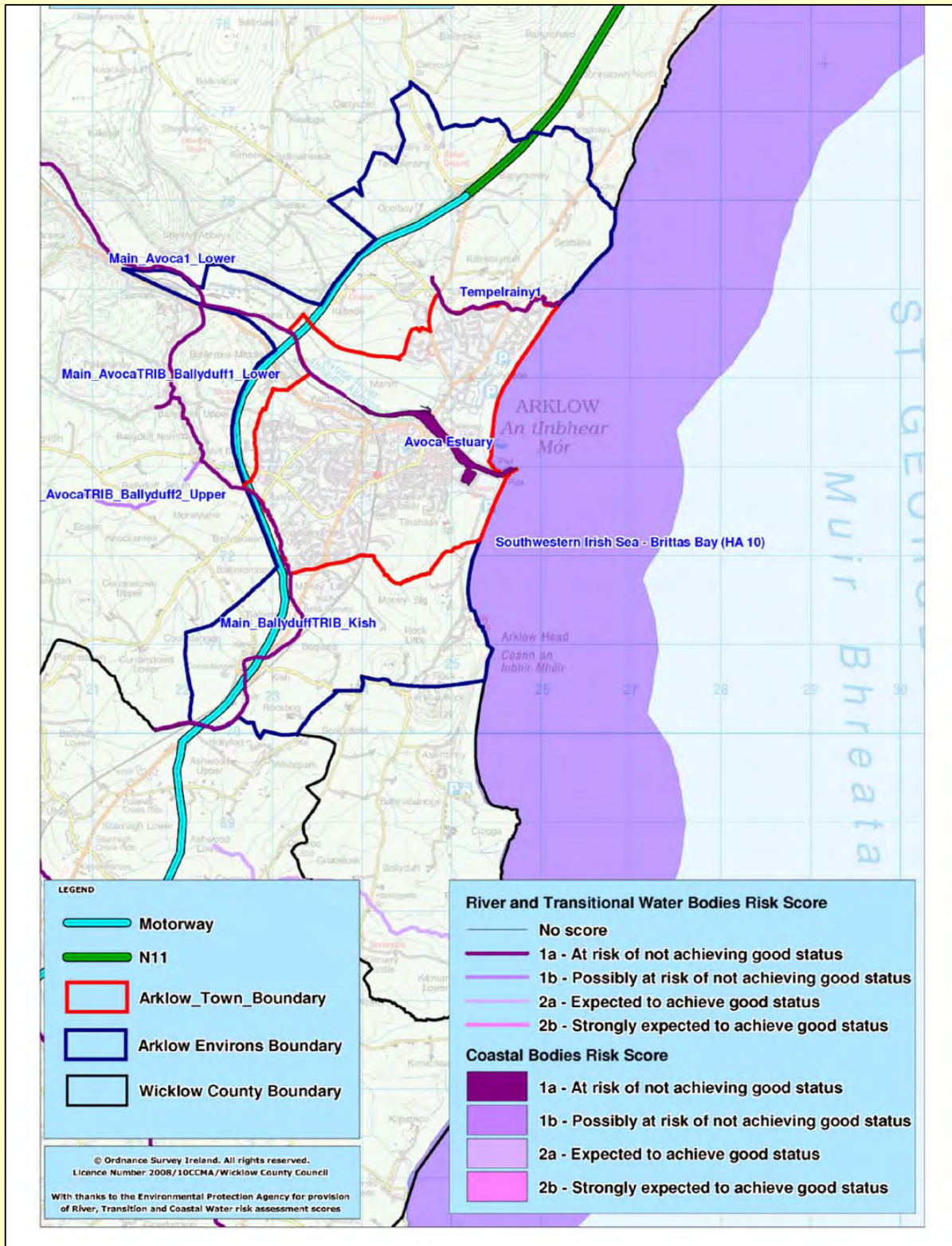


Figure 3.8 WFD Risk Assessment for Rivers, Transitional and Coastal Waters risk assessment



3.6.5 Groundwater

The Groundwater body for the Arklow Urban area is defined in the Eastern River Basin District Management Plan as being of good status with an overall objective to protect, while the Wicklow Central water body (Avoca Mine¹⁰) is defined as being poor with an overall objective to restore to good status.

The ERBD management plan has identified the Wicklow Central (Avoca) groundwater body as a special case and is the only water body in the Eastern District where it is thought that good status cannot be achieved within the timeframes stipulated in the WFD. Treating the point source discharges to the river from the mine has been proven to be viable, but dealing with the pollutants moving through the natural fissures in the rocks and through the spoil is very much more difficult. A detailed investigative study has been recommended to further investigate the technical viability of restoration and the costs and benefits of such actions.

Arklow Urban – is listed as being of good status but at risk of not achieving good status due to point source pollution (contaminated lands) and general ground water quality.

Wicklow Central/Avoca Mine – is listed as being of poor status and at risk of not achieving good status due to point source risk (mine risk) and general ground water quality.

3.6.6 Productivity and Vulnerability

The Geological Survey of Ireland (GSI) rates aquifers according to their vulnerability to pollution. This rating is shown on Figure 3.8 below. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. The ratings in the plan area range from Low vulnerability mainly in the northern section of the plan area to High vulnerability located in close proximity to the centre of the plan area. Areas of extreme vulnerability are sporadic through the plan area with large sections situated along the south-eastern coast and the south.

¹⁰ Data based upon Draft RBMP Report, 22/12/2008

Figure 3.9 Groundwater Risk Assessment

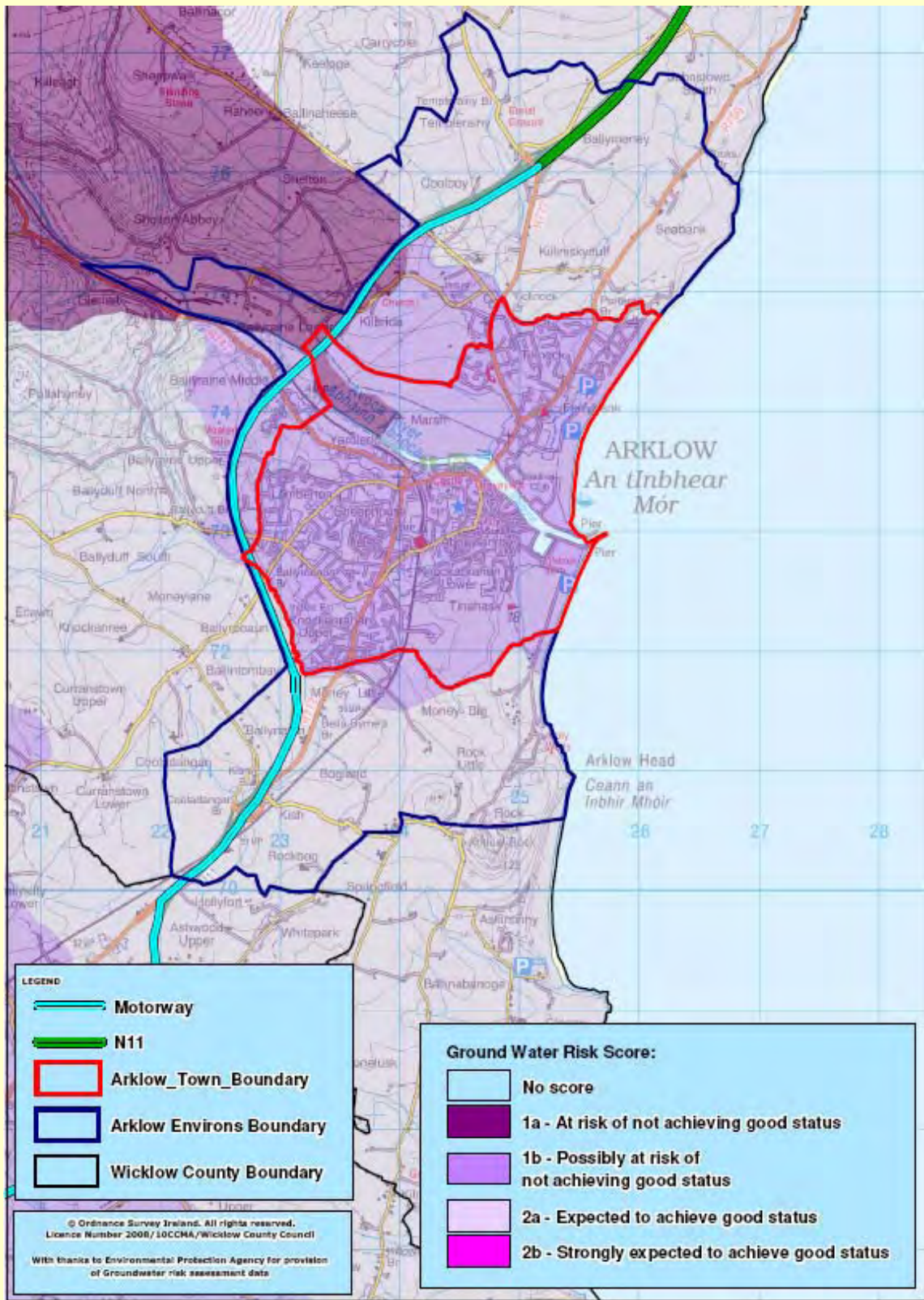
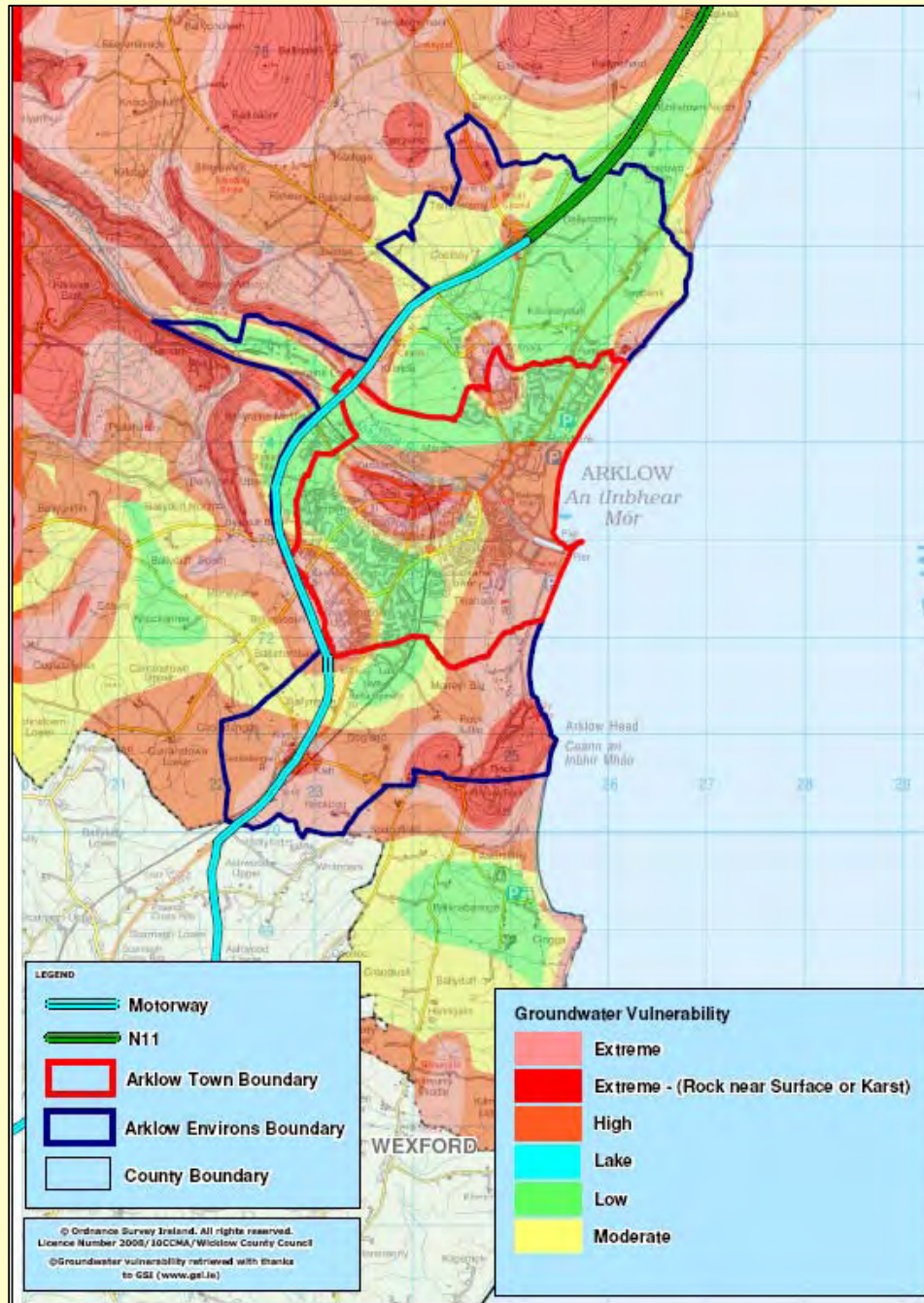


Figure 3.10 Groundwater Vulnerability



3.6.7 Water Supply

The existing water supply serving Arklow Town and Environs is produced in the water treatment works at Ballyduff. Raw water to the treatment works is sourced at two surface water locations. 1) The impounding reservoir at Ballyduff and 2) The Goldmine River at Woodenbridge. Treated water is currently pumped from the treatment works to reservoirs at Lamberton via 3 no. rising mains.

Due to existing problems with yield and the need to accommodate the projected population growth figures for Arklow Town and Environs it is proposed to upgrade the current water

supply. A number of production wells, 16 in total, have been proposed to connect into the existing network, which shall be capable of meeting the projected demand. Each of these sources have been assessed for environmental impacts. As part of this process it is intended that the existing treatment works at Ballyduff shall be decommissioned.

3.6.8 Register of Protected Areas

The WFD requires that Registers of Protected Areas (RPA) are compiled for a water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife. There are **no entries** to the RPA in the Plan area. The closest RPA is situated some distance to the south of the plan area at Clogga Beach.

Existing Problems

Problems with regard to water quality have the potential for significant adverse impacts upon biodiversity, flora and fauna, drinking water supplies and human health.

All water bodies - rivers, transitional and coastal - within the study area which have been included in the ERBD's Risk Assessment, with the exception of the groundwater body and have been classified as being (1a) representing water bodies at significant risk of not achieving good status by 2015.

With regard to the area's groundwater, a significant amount of the waters are classified as being either of extreme or high vulnerability.

The failure to provide appropriate wastewater treatment infrastructure and capacity alongside development (see Section 3.7) presents a significant potential problem, which could affect the Council's ability to meet its commitments under the WFD.

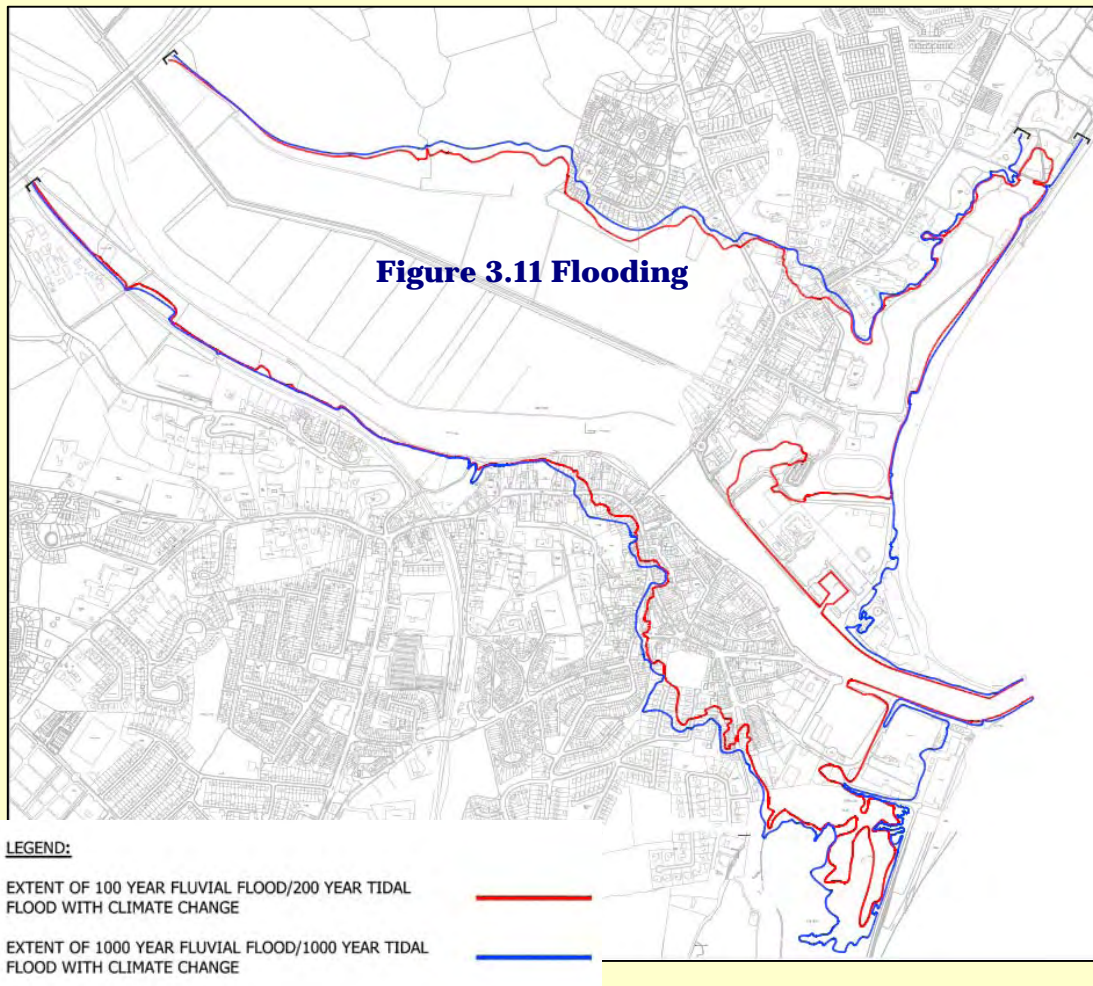
3.6.9 Flooding

Flooding is an environmental phenomenon which, as well as causing economic and social impacts, could in certain circumstances pose a risk to human health. The Avoca River catchment area and Arklow Town have been subject to periodic flooding over a number of years. Heavy storms in 2000 & 2010 caused severe flooding in Lower Main Street, South Quay and Ferrybank.

Much of the flooding in the Arklow area occurs during adverse weather conditions whereby heavy rainfall causes high river flows. Local conditions within the Arklow area including the nineteen Arch bridge and culverts - which restrict high flows, debris which cause blockages and land use changes also increase the risk of flooding.

3.6.10 Developments in Flood Management in Arklow

The Office of Public Works (OPW) is the lead agency for flood risk management in Ireland. This gives the OPW a role in policy advice and coordination in addition to its operational roles. Arklow Town Council has undertaken a flood relief study and programme.



3.6.11 Flood Risk Management Guidelines for Local Authorities

Newly published Guidelines from the Department of Environment, Heritage and Local Government entitled 'The Planning System and Flood Risk Management' ['The Guidelines' hereafter] require consideration of flooding to be included as part of Strategic Environmental Assessment, accordingly it is considered within this review.

In accordance with the provisions of the Flood Risk Management Guidelines two types of considerations emerge:

- 1/ Lands at risk of flooding that are currently zoned for development under the existing plan
- 2/ Lands that are proposed to be developed under the proposed plan

The Guidelines recommend that where flood risk assessments highlight existing, undeveloped areas which, on their own merits, were zoned for development in previous development plans but which new information indicates may now, or in the future, be at risk of flooding, that planning authorities should reconsider the zoning objective for any such lands. Furthermore specific guidelines as to the options that may be considered are provided which include:

- The Removal of the existing zoning for all types of development on the basis of the unacceptable high level of flood risk;
- A Reduction the zoned area and change or add zoning categories to reflect the flood risk; and/or replace the existing zoning with a zoning or a specific objective for less vulnerable uses;
- The Preparation of a local area plan informed by a detailed flood risk assessment to address zoning and development issues in more detail and prior to any development; and/or
- To specify, in exceptional circumstances and where the criteria of the Justification Test have been met, design of structural or non-structural flood risk management measures as pre-requisites to development in specific areas, ensuring that flood hazard and risk to other locations will not be increased or, if practicable, will be reduced.

Therefore the SEA **may** recommend that in compliance with the Guidelines the proposed plan should remove the existing zoning for all types of development on the basis of the unacceptable high level of flood risk; and replace the existing zoning with a zoning or a specific objective for less vulnerable uses.

2/ Lands that are proposed to be zoned under the proposed plan

The Guidelines state that 'Planning authorities will ensure development is not permitted in areas of flood risk, particularly floodplains, except where there are no suitable alternative sites available in areas at lower risk that are consistent with the objectives of proper planning and sustainable development' therefore the SEA **may** recommend that compliance with the Guidelines will require that certain lands should not be rezoned for development in the proposed Plan.

3.6.12 Future influences of flood risk

Large-scale changes in the plan area over the next 50 to 100 years, which could significantly influence flood risk and increase the magnitude and occurrence of flooding may include:

- Climate changes resulting in increased river flows and rising sea levels (see Section 3.6);
- Large-scale land use changes
- Urban development increasing the speed and volume of run-off; and
- Changes to geomorphological processes such as sediment transport, siltation and erosion.

Existing Problems

The above descriptions identify a number of sensitivities with regard to the status of water bodies within the Arklow Development Plan area. All surface waters and parts of the underlying groundwater within the plan area are "at significant risk" of not meeting the

legislative water quality objectives under the Water Framework Directive. The pressures which have been identified by the ERBD in the characterisation of the water bodies within and surrounding the Plan area include:

- ⇒ Point Source Pollution – Mine Risk and Groundwater Quality Risk, CSO's (Combined Sewer Overflows), Diffuse pollution – EPA diffuse model and Point/Diffuse pollution
- ⇒ The presence of 'OSPAR' Nutrients¹¹.
- ⇒ Diffuse pollution

Evolution of Water in the absence of a Development Plan

Surface Waters

Based on the above findings from the Risk Assessment characterisation reports the main surface water bodies located within Arklow Town and its Environs would be unlikely to meet the objectives of the Water Framework Directive.

Groundwaters

The potential for groundwater pollution would be increased with the developments being served by individual wastewater treatment plants, which may not have been constructed properly or managed sufficiently to prevent groundwater pollution.

¹¹ The presence of excessive enrichment of water with nutrients which may cause an increase in the accelerated growth of algae in the water column and higher forms of plants living on the benthic. This may result in a range of undesirable disturbances in the marine ecosystem, including a shift in the composition of the flora and fauna which affects habitats and biodiversity, and the depletion of oxygen, causing death of fish and other species. (Eutrophication)

Flooding:

Inappropriate development on land prone to flooding would increase the effects and extent of flooding potentially causing pollution of groundwater sources (as above) impacting on water supplies.

Much of the flooding in the Arklow area occurs during adverse weather conditions whereby heavy rainfall causes high river flows.

3.7 Air and Climatic Factors

3.7.1 Introduction and Legislation

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

The principles to this European approach are set out under the Air Quality Framework Directive 1996 as transposed into Irish law under the Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999 (SI No. 33 of 1999).

Four daughter Directives lay down limits or thresholds for specific pollutants. The first two of these directives cover: sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead; and, carbon monoxide and benzene. Two more daughter directives deal with: ozone; and polyaromatic hydrocarbons, arsenic, nickel, cadmium and mercury in ambient air.

In order to comply with these directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002). The main areas defined in each zone are:

- Zone A: Dublin Conurbation.
- Zone B: Cork Conurbation.
- Zone C: Other cities and large towns comprising Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Wicklow, Naas, Carlow, Tralee and Dundalk.
- Zone D: Rural Ireland, i.e. the remainder of the State - small towns and rural areas of the country - excluding Zones A, B and C.

The Arklow Town and Environs area is located in Zone D. There is currently no ambient air quality monitoring in the Arklow Area with past monitoring stations being situated in Avondale and Bray.

Air quality in the general study area is not considered to be a significant issue.

3.7.2 Potential sources of point source emissions to Air:

IPPC Licensed Facilities:

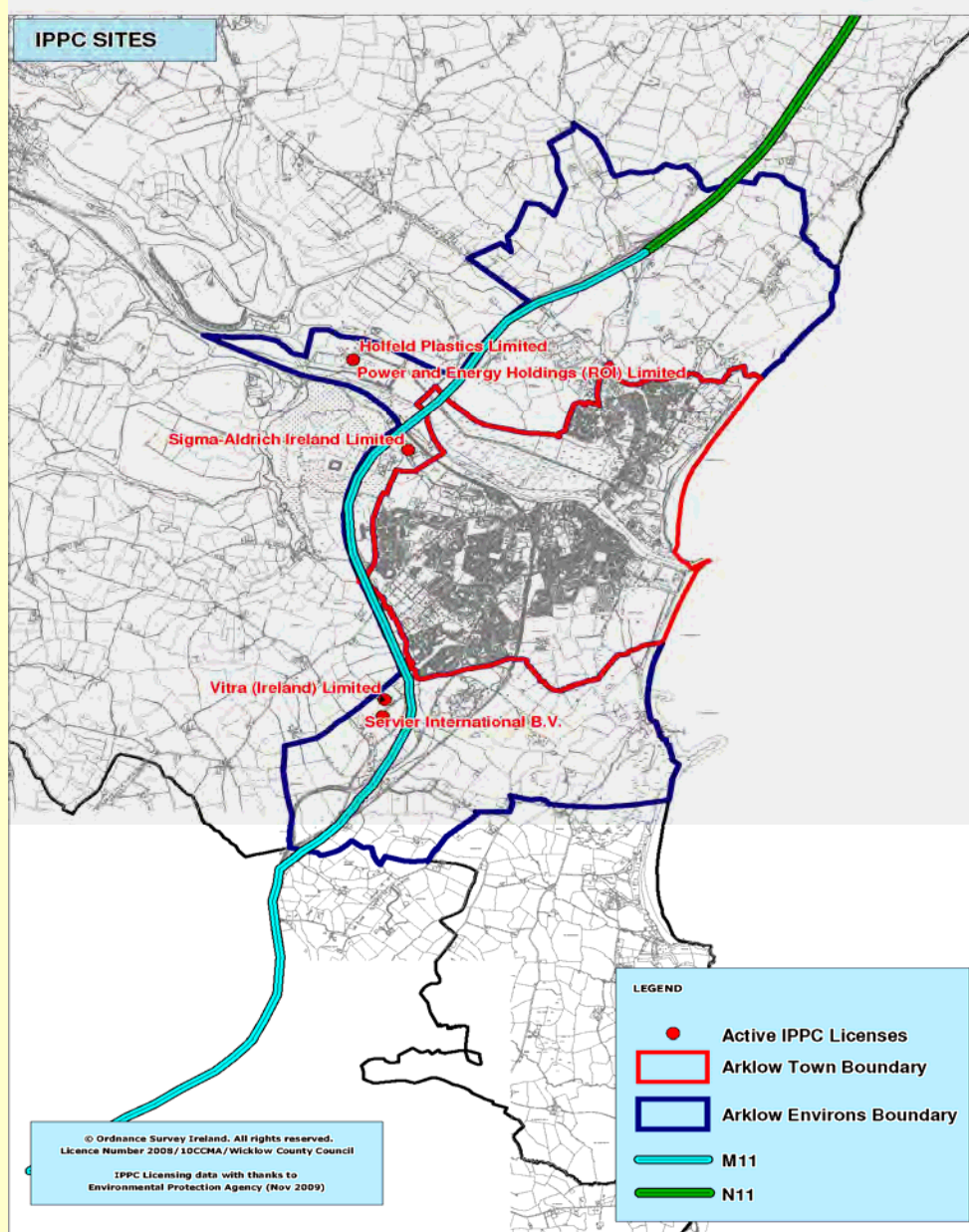
There are four active IPPC licensed facilities located within the Arklow and Environs Area.

Licence No.	Name	Location	Class of Activity	Description
P0031-01 P0031-02	Holfeld Plastics Limited	Arklow	5.5.0: Chemicals	The manufacture of artificial fertilizers
P0848-01	Power and Energy Holdings (ROI) Limited	Avoca River Park, Arklow	2.1.0: Energy	The operation of combustion installations with a rated thermal input equal to or greater than 50MW
P0089-01 P0089-02	Sigma-Aldrich Ireland Limited	Vale Road, Arklow	5.6.0: Chemicals	The manufacture of pesticides, pharmaceutical or veterinary products and their intermediates
P0089-03 P0089-04			5.16.0: Chemicals	The use of a chemical or biological process for the production of basic pharmaceutical products.
P0823-01	Vitra (Ireland) Limited	IDA Business Park, Ballynattin, Arklow, County Wicklow, Wicklow.	13.4.1: Other Activities	The manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, or with a kiln capacity exceeding 4 m3 and a setting density per kiln exceeding 300 kg/m3.
P0128-01	Servier International B.V.	Gorey Road, Arklow, Co. Wicklow, Wicklow	5.6.0: Chemicals	The manufacture of pesticides, pharmaceutical or veterinary products and their intermediates.

As can be seen from the above table the primary IPPC licensed activities being carried out relate to the manufacturing of fertilizers, pesticides, pharmaceutical and veterinary products, construction materials such as tiles, blocks bricks etc and surface coatings.

The IPPC Licensee requires that all operations on-site be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary.

Figure 3.12 IPPC Licensed Facilities

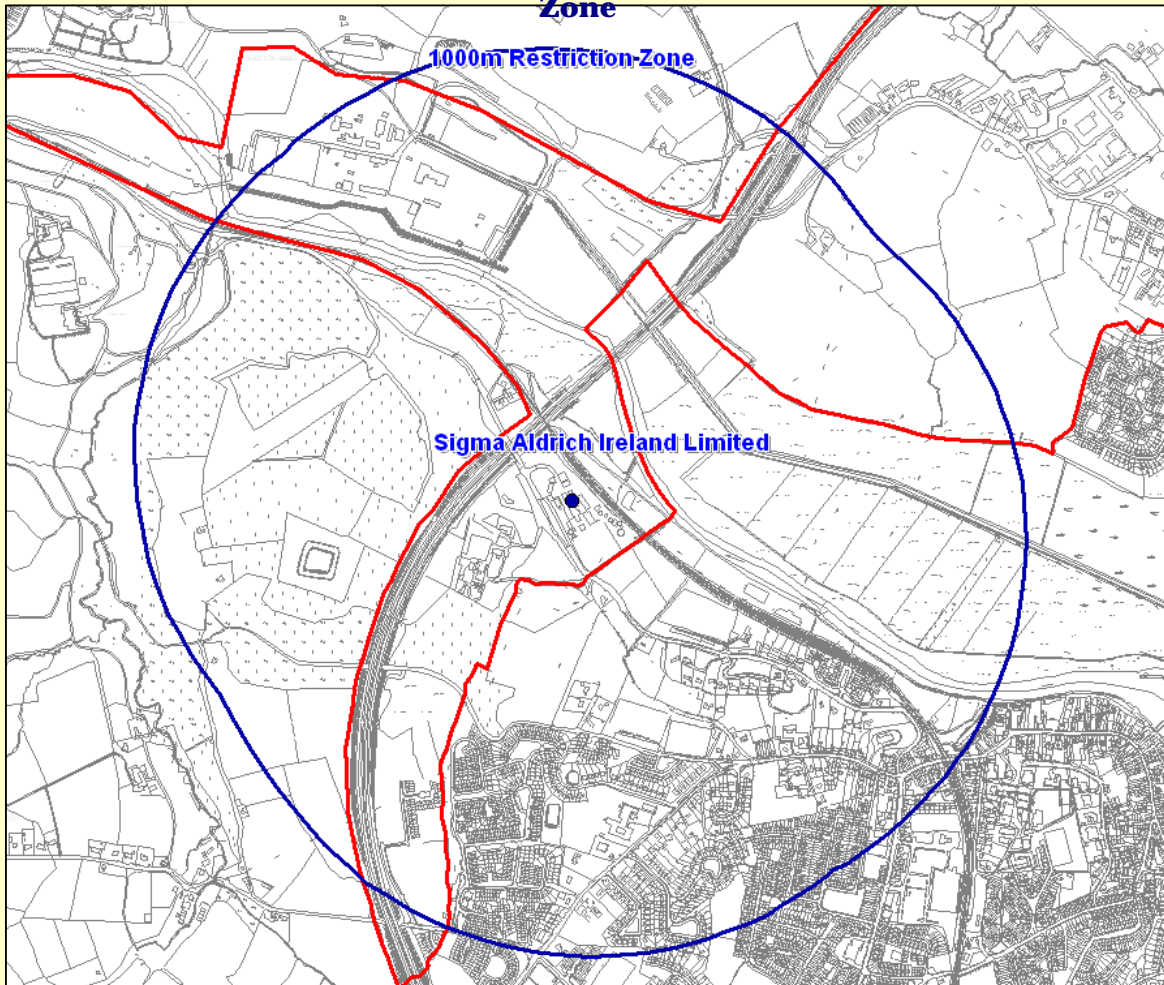


3.7.3 Seveso Sites

The 'control of major accident hazards involving dangerous substances Directive 1996' also referred to as the Seveso II or COMAH Directive, aims to ensure that, at locations where dangerous substances are handled in quantities above specified thresholds; there will be a high level of protection for people, property and the environment. This is to be achieved by: preventing or minimising the risk of a major accident; and, taking all the necessary measures to limit the consequences of such an accident, should it occur. The Directive is transposed

into Irish law through the European Communities (control of major accident hazards involving dangerous substances) Regulations 2006 (SI No. 74 of 2006) implementing Council Directive 2003/105/EC (amending Directive 96/82/EC).

Figure 3.13 Seveso - Sigma Aldrich Ireland Limited – 1000m Consultation Zone



A consultation distance of 1000m is provided for whereby the planning authority is obliged to seek technical advice from the Health and Safety Authority for all proposed developments located within this zoned.

There is one designated Seveso site located within the Plan area. This is located at the Sigma Aldrich Ireland Limited located along the vale Road in Arklow.

3.7.4 Noise

Within the Arklow Town and Environs plan area the places most commonly affected by noise are urban areas and areas along roadsides. Noise is unwanted sound. It can seriously harm human health and interfere with daily activities at school, at work, at home and during leisure time. The main health risks of noise identified by the WHO include: pain and hearing fatigue;

hearing impairment; annoyance; interferences with social behaviour; interference with speech communication; sleep disturbance and all its consequences; and performance at work and school.

The over-riding noise source within the plan area is from traffic. Streets in low lying areas that have high traffic counts as well as enclosing taller buildings are likely to have harsh sensory environments in regard to noise levels.

In addition, there are localised noise sources, which include air conditioning equipment, marine traffic, port activities, train movements and night clubs. Traffic hotspots within some of the towns are likely to have elevated levels of air pollution and noise due to traffic congestion. These hotspots are located along the main road routes - especially at intersections - and provide for a harsh sensory environment, which may impact upon human health.

The existing quarrying activities at Arklow Rock also form a source of noise pollution. The processes involved in exposing the mineral to be extracted and the actual excavation and transportation of such materials can all accumulate to form a significant adverse impact on the surrounding environment and Human Health.

Existing Air and Climatic Problems

Traffic hotspots within the urban parts of the Plan area and along the main arterial routes off the N11 are likely to have elevated levels of air pollution and noise due to traffic congestion.

Arklow's location within the commuter belt for Dublin and North Wicklow amount to a large quantity of traffic movements along the N11 that is a significant concern within the plan area. A lack of sustainable public transport linking Arklow to these areas and other settlements within the County has resulted in increased private car trips. Such linkages must be provided before public transport becomes a viable alternative to car trips. Reductions in private car movements will result in a reduction in emissions such as PM10 and NOx.

Localised air pollution incidences with regard to PM10 and PM2.5 and noise pollution are both likely to occur when demolition/construction takes place - especially in relation to PM10 if suppression techniques are not introduced

Changes in sea level and/or changes in the occurrence of severe rainfall events as a result of climate change could adversely impact upon the plan areas human beings, its biodiversity and its economy (*see also previous section on Flooding*).

In terms of the impact of various licensed industrial facilities on future development, the development of brownfield sites for mixed use development will need to have regard to any health and safety constraints imposed by existing industrial uses.

Ireland's current emissions are exceeding targets agreed in the peer review of Ireland's 2006 submission to the United Nations Framework Convention on Climate Change. It is unlikely that Ireland will meet these targets and it is likely therefore that financial penalties will be incurred. Transport related emissions continue to be the dominant growth sector.

Evolution of Air and Climatic Factors in the absence of a Development Plan

In the absence of a Development Plan there would be no framework for the location of new development and as a consequence development would be likely to occur in a piecemeal fashion, spread out across wider areas than otherwise may be the case. This would result in significant increases in travel related emissions to air.

While increases in the use of catalytic converters, cleaner fuels, better engine technology and maintenance is generally reducing the pollution omitted per motor vehicle, this reduction is probably being offset by the increase in the number of cars as well as the increase in the volume and incidences of traffic congestion. Increases in the number of cars as well as the

increase in the volume and incidences of traffic congestion may lead to increases in air and noise pollution in the future.

In the absence of a Development Plan, the realisation of objectives relating to energy efficiency, renewable energy and a reduction in transport related emissions contained within the Development Plan would be made more difficult.

If new development or an intensification of existing land uses were to occur in the Plan area adverse impacts upon air quality and noise levels, and resultant impacts upon human health, would be likely to arise if unmitigated.

The Development Plan provides an opportunity to provide for the regeneration of certain areas within the town centre close to existing public transport linkages. This regeneration would provide for an increased population, which would be less dependent upon private modes for transportation and would therefore be likely to generate less transport related greenhouse gas emissions than populations located further away from the urban areas. In the absence of a Development Plan regeneration of the areas provided for would not be achieved and an opportunity to prevent the generation of future transport related greenhouse gas emissions would be missed.

3.8 Material Assets

3.8.1 Waste Water

Arklow Town and its Environs does not currently benefit from the use of an effluent treatment facility. The current treatment demand for the plan area is identified as being 16,997 with domestic demand being 14,447 and non-domestic demand being 2,550. The proposed Waste water treatment works for the area will cater for a population equivalent of 18,000. The County Development Plan projects a population of 19,000 for the Arklow Area in 2016 and 23,000 in 2022. The construction of the Arklow main drainage scheme will remove outfalls from the Avoca River.

The immediate provision of this facility is a vital requirement in the fulfillment of the area's development requirements.

3.8.2 Drinking Water

The existing water supply serving Arklow Town and Environs is produced in the water treatment works at Ballyduff. Raw water to the treatment works is sourced at two surface water locations. 1) The impounding reservoir at Ballyduff and 2) The Goldmine River at Woodenbridge. Treated water is currently pumped from the treatment works to reservoirs at Lamberton via 3 no. rising mains.

Due to existing problems with yield and the need to serve the projected population growth figures for Arklow Town and Environs it is proposed to upgrade the current water supply. A number of production wells, 16 in total, have been proposed to connect into the existing network, which shall be capable of meeting the projected demand. Each of these sources has been assessed for environmental impacts and all boreholes are situated to the south of the Avoca River. As part of this process it is intended that the existing treatment works at Ballyduff shall be decommissioned.

There is a problem with leakage from the mains. In order to limit leakage, the Council have a works programme for leakage reduction, which is ongoing during the lifetime of the plan.

In addition to the above the absence of an adequate public wastewater treatment works capable of serving the plan area and its projected population has the potential to adversely impact on drinking water quality arising from individual treatment plants serving new development and impacting on groundwater's within the plan area. This issue poses serious problems for drinking water quality in the area with the existing supply being identified by the HSE (as stated earlier) as an area where further investigation or improvement is required.

3.8.3 Transport

The town of Arklow is by-passed by the N11/M11 National primary route. The old N11 road running through the centre of the town still provides the main route for local traffic and joins the N11/M11 bypass to the north and south of the town. The provision of a third interchange along this national route to serve the population of both Arklow and to provide a connection to the south west of the county is an objective of the Wicklow County Plan 2010-2016.

The regional R747 link forms the main route, west to Aughrim and Tinahely, whilst the R750 coastal road provides an alternative route to Wicklow in the north. To the south west of the town, Coolgreaney Road, Cemetery Road and Emoclew Road form a distributor ring to the west of Wexford Road. To the east of the N11, Main Street, Abbey Street and Yellow Lane form a similar loop to the east of Wexford Road.

Below this distributor level network are secondary routes that provide through and loop access to the town centre, residential areas and other sectors of the town. At a tertiary level are mainly cul-de-sac accesses to developments.

Public transport to Arklow town is provided by: a train service through the station located to the south west of the town centre; a Bus Éireann bus service that runs approximately every two hours, connecting to Dublin and southerly towns such as Arklow and Waterford. The limited availability of public transport services is reflected in the dominance of car use as the main transportation mode.

3.8.4 Flooding

The Avoca River catchment area and Arklow Town have been subject to periodic flooding over a number of years. Heavy storms in 2000 & more recently in 2010 caused severe flooding in Lower Main Street, South Quay and Ferrybank. The Office of Public Works (OPW) is the lead agency for flood risk management in Ireland. This gives the OPW a role in policy advice and coordination in addition to its operational roles. The Council has undertaken a flood relief study and programme. The plan will need to take cognisance of the existing flooding problems in Arklow Town, which demonstrates a need for the development of surface water attenuation mechanisms and SUDS (Sustainable Urban Drainage Systems). These are of particular importance as part of any development proposals in areas close to existing water bodies.

3.8.5 Waste Management

The emphasis in the Plan will be to carry out waste management in conjunction with Wicklow County Council. Arklow Town Council will conform to the European Union and national waste management hierarchy in the undertaking of waste prevention, waste recycling and, energy recovery and disposal. In particular, Arklow Town Council will encourage, enable and facilitate Wicklow County Council and the implementation of the Wicklow Waste Management Plan 2006-2011 to provide recycling facilities and services in the town.

Arklow Town Council and Wicklow County Council are responsible for the operation of litter collection within the plan area. Both Councils recognise that littering and illegal dumping are serious problems. To this accord the Councils have, in cooperation with the relevant agencies, and in consultation with the public, prepared and implemented Litter Management Plans for both Arklow Town and Wicklow County. These Litter Management Plans put in place policies and initiatives to combat the problems of litter and illegal dumping. The success of these plans will be the measure of how litter pollution is controlled, alleviated and / or prevented in the plan area during its lifetime.

Existing Problems

The failure to provide a wastewater treatment plant with sufficient capacity for existing and permitted development represents a significant existing environmental problem that is likely to be adversely impacting upon the Council's ability to meet its commitments under the Water Framework Directive (see section on WFD). The construction of the new wastewater treatment plant will help to solve this problem and enable future population growth.

In order to accommodate recent and future growth, the new wastewater treatment plant, increased water supply and additional transport infrastructure etc are needed. Such infrastructural projects or programmes are likely to have significant adverse impacts on the environment if not mitigated. These projects or programmes may require environmental assessments to be carried out on them in order to prevent such impacts.

In the designation of lands for certain uses a strong recognition of the findings of the flood risk assessment must be carried out in order to ensure compliance with the Flood Risk Management Guidelines 'The Planning System and Flood Risk Management'.

Evolution of Material Assets in the absence of a Development Plan

In the absence of a development plan the provision of a waste water treatment and water supply network serving all lands within the plan area would become unfeasible with sprawled development increasing the costs and feasibility of providing such services.

The development of lands prone to flooding in the absence of relevant guidance and infrastructure would be likely to increase the occurrences and extent of flooding within the plan area.

The objectives of the Arklow land use and transportation study 2003 - prepared to provide detailed land use and transportation proposals for the future growth of the Arklow Town area, having particular regard to land-use patterns that compliment local public transport, walking and cycling - which have been taken into consideration and integrated into the Development Plan which might not have been integrated into planning for the area in the absence of a Development Plan.

3.9 Cultural Assets

3.9.1 Introduction

Heritage, by definition, means inherited properties, inherited characteristics and anything transmitted by past ages and ancestors. It covers everything, from objects and buildings, to the environment. Cultural heritage includes physical buildings, structures and objects complete or in part, which have been left on the landscape by previous and indeed current generations.

The Wicklow County Development Plan 2010-2016, in line with the Planning and Development Act 2000 and Government Policy seeks to protect and conserve buildings, areas, structures and features of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

The most important items of archaeological and architectural heritage in the Arklow Area are set out in chapter 8 of the Arklow Town and Environs Development Plan.

3.9.2 Archaeological Heritage

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence. As archaeological heritage can be used to gain knowledge and understanding of the past it is of great cultural and scientific importance.

Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features such as wrecks. Archaeological sites may have no visible surface features; the surface features of an archaeological site may have decayed completely or been deliberately removed but archaeological deposits and features may survive beneath the surface. Such sites may sometimes be detected as crop-marks visible from the air or have their presence indicated by the occurrence of artefact scatters in ploughed land, but in other cases may remain invisible unless uncovered through ground disturbance.

Archaeology in Ireland is protected under the National Monuments Acts 1930 to 2004.

3.9.3 Monuments

The Record of Monuments and Places (RMP), was established under Section 12 of the National Monuments (Amendment Act) 1994. Structures, features objects or sites listed in this record are known as Recorded Monuments.

Monuments include: any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections; any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position; any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or, ritual, industrial or habitation site; and any place comprising the remains or traces of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State', but excludes 'any building or part of any building, that is habitually used for ecclesiastical purposes'.

The historic core of Arklow is as a Zone of Archaeological Potential, containing known recorded monuments. Other recorded monuments occur in the townlands of Templerainey, Kilbride, Bogland and Rock Big. Burial grounds are an important part of local heritage, often containing the standing remains of sites of earlier structures and also a great diversity of animal and plant life.

Within the plan area, there are 7 entries to the Record of Monuments and Places and one Zone of Archaeological Potential.

Table 3.1 - Arklow Recorded Monuments:

RMP Number	Townland/Location	Classification
40:29	Abbeylands/ Ferrybank/ Sheephouse/ lower/ Yardland	Arklow/ Marsh/ Tinnahask
40:21	Kilbride	Historic Town, Castle (in ruins), site of church and graveyard
45:3	Bogland	Kilbride Church (in ruins), Grave Yard, Mausoleum
45:4	Rock Big	Church and Graveyard site
45:6	Rock Big	Site of St. Iver's Holy Well
45:7	Rock Big	Lady's Holy Well
45:5	Rock Big	Site of St. Patrick's Holy Well
		Ecclesiastical Remains/Chapel site

Figure 3.14 Recorded Monuments and Structures Overview Map

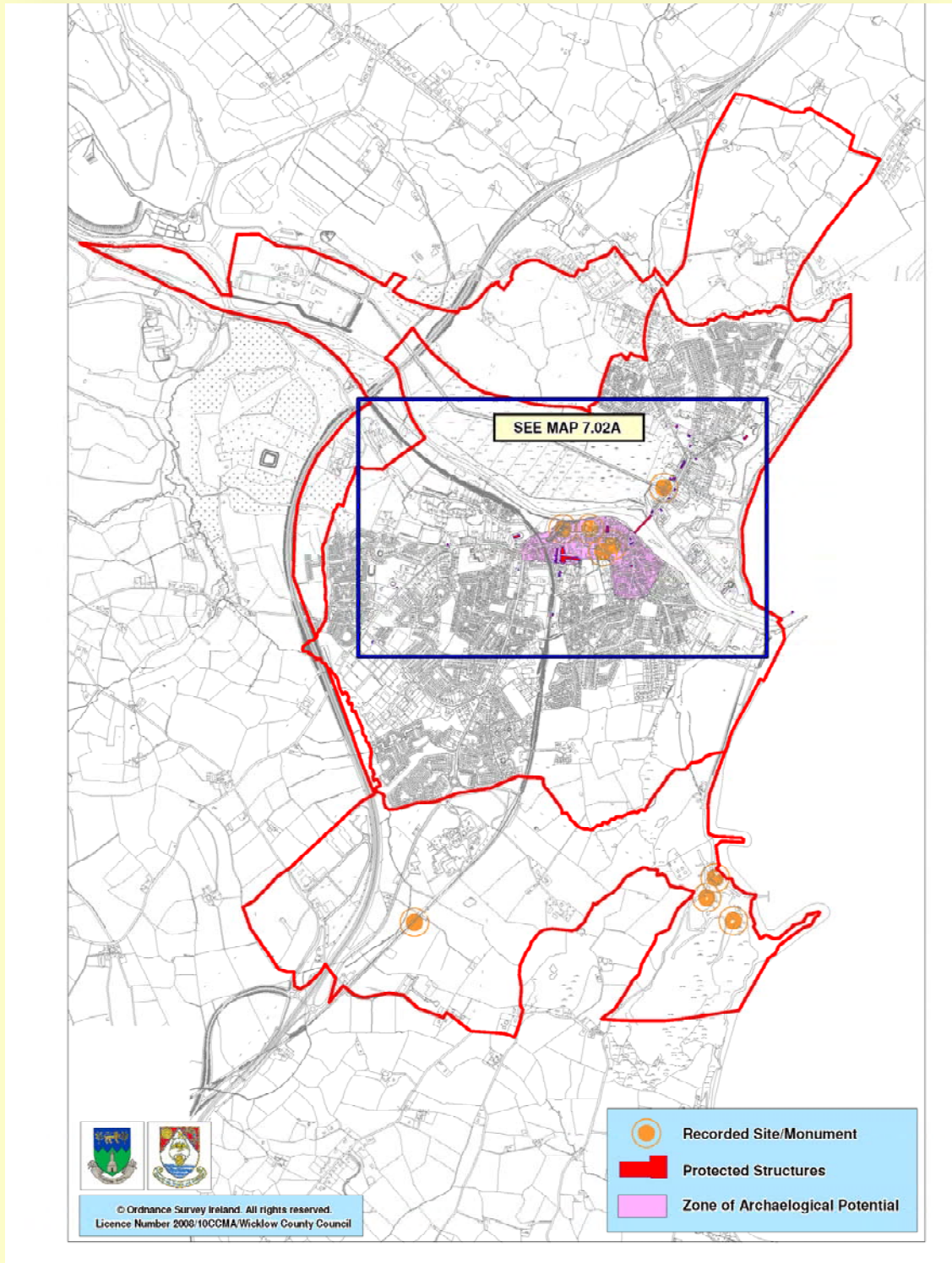
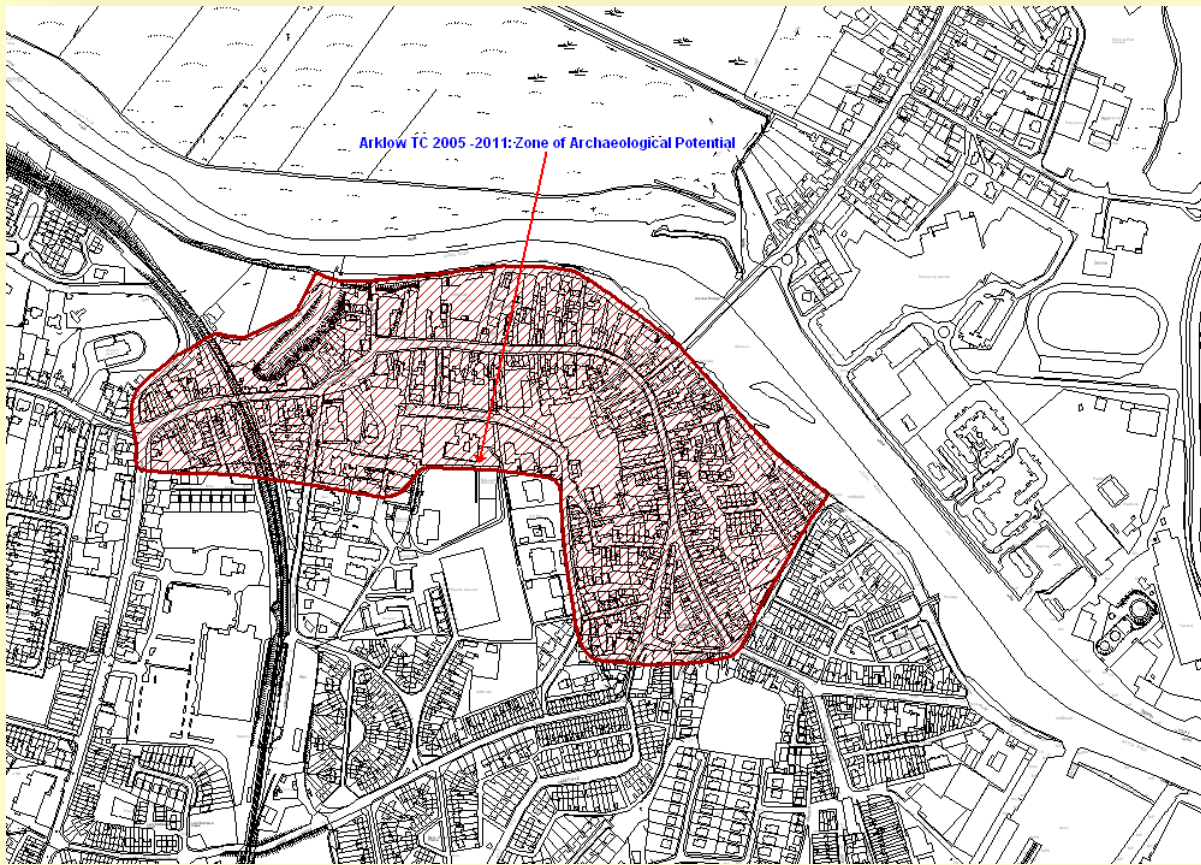


Figure 3.15 Zone of Archaeological Potential



3.9.4 Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all:

- ⇒ Structures and buildings together with their settings and attendant grounds,
- ⇒ Fixtures and fittings;
- ⇒ Groups of structures and buildings; and
- ⇒ Sites, which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

The Record of Protected Structures (RPS) included in the County Wicklow Development Plan is legislated for under Section 51 of the Planning and Development Act 2000 and includes a number of structures within the study area. All structures, buildings, or erections, which came into existence after 1700 A.D., can be protected through enlistment in the RPS. Protected Structures - structures enlisted on the RPS - are defined as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. The term 'structure' encompasses the interior of the structure, the surrounding land or 'curtilage' of the structure, any other structures lying within that curtilage.

There are 38 existing entries to the RPS, which have been carried forward in the Development Plan. There is no Architectural Conservation Areas (ACAs) designated

The NIAH is a state initiative under the administration of the DEHLG which was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify,

record, and evaluate the post- 1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. It is intended that the NIAH provides the basis for the inclusion of particular structures in the RPS.

Table 3.2 - Arklow Record of Protected Structures:

Town Plan Ref Number NIAH number (if applicable)	Structure & Address	Description
A01 16322001	St.Saviours Church Coolgreaney Road, Arklow.	Detached multiple-bay single-storey Early English Gothic Style church, built 1899 to designs by Sir Arthur Bloomfield. The church is constructed in coursed rock-faced granite with smooth granite dressings
A02 16322008	Lamberton Water Tower, Coolgreaney Road	Detached three-stage water tower, built c.1930. The tower is constructed in reinforced concrete and comprises of a circular shaft which supports an inverted cone, which in turn supports a drum shape.
A03 16322009	Lamberton Gate Lodge, Coolgreaney Road, Arklow.	Detached two-bay one and a half-storey picturesque former gate lodge, built in 1898, and now in use as a house. The building is constructed in squared rock-faced granite with smooth granite dressings.
A04 16322011	Cemetery Gate Lodge , Emoclew Road, Arklow.	Detached three-bay single-storey Classical style gate lodge, built c.1870. The building is constructed in dressed coursed granite.
A05 16322012	Bank Of Ireland, Main Street, , Arklow.	End-of-terrace three-bay three-storey bank, built c.1880. The façade is finished in rusticated granite at ground floor level, with brick to the upper storeys, granite sill courses and granite coping to the parapet.
A06 16322014	St.Marys and Peters Church, Parade Ground, Saint Mary's Road, Arklow.	Detached seven-bay double-height Renaissance Style church, built 1861 to designs by Patrick Byrne. The building is finished in ashlar granite to the front north façade and squared rubble granite elsewhere; transepts to south end of the east and west sides.
A07 16322015	Fr.Michael Murphy statue, Parade Ground, Arklow.	Statue by G. Smyth of Dublin, erected in 1898 to commemorate the centenary of the death of United Irishman Fr Michael Murphy in the 1798 Rebellion
A08 16322020	1 Saint Mary's Terrace, Saint Mary's Road.	End-of-terrace three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif
A09 16322021	2 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif
A10 16322022	3 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif.
A11 16322023	4 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif
A12 16322024	5 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif.
A13 16322025	6 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey former house, built c.1870, and now in use as a solicitors office. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters

		with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif.
A14 16322026	7 Saint Mary's Terrace, Saint Mary's Road.	Terraced three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with a heavy moulded surround with keystone motif.
A15 16322027	8 Saint Mary's Terrace, Saint Mary's Road.	End-of-terrace three-bay two-storey house built c.1870. The house is finished in unpainted lined render with moulded quoins. The panelled timber door is framed with pilasters with console brackets, a plain fanlight and is set within a semi-circular headed opening with heavy moulded surround with keystone motif.
A16 16322029	Arklow Railway Station, Arklow.	Detached four-bay two-storey Railway Station, built 1863. The building is finished in roughcast render with surrounds to the openings; to the north and south are small lean-to and flat-roofed recent additions. The timber sheeted door opening on to the platform is set below a gabled bracketed roof. Window openings are flat-headed and mainly with two over two timber sash frames.
A17 16322030	Navigation Beacon, North Quay, Arklow.	Free standing tall navigation beacon set on the north quay of the Arklow harbour within the tidal estuary of the Avoca River, built in the first half of the 20th century.
A18 16322031	10 Townville St.Marys Road, Arklow	Semi-detached three-bay two-storey Domestic Revival style pair of houses, built c.1900. The houses are rendered with rusticated finish to the ground floor, dry dash finish to the first floor and with moulded quoins. Each is double-gabled
A19 16322031	11 Townville St.Marys Road, Arklow	Semi-detached three-bay two-storey Domestic Revival style pair of houses, built c.1900. The houses are rendered with rusticated finish to the ground floor, dry dash finish to the first floor and with moulded quoins. Each is double-gabled. The northern house has a panelled door with plain fanlight and both are set within a flat-headed opening; and framed with an open gabled porch supported on timber brackets. To
A20 16322032	Arklow School (Former), Saint Mary's Road	Detached four-bay two-storey former school, built 1878, and now in use as a house. The building is finished in roughcast render with a projecting two-storey gabled bay to the south side. The front door is now covered with a glazed porch addition which abuts a flat-roofed addition
A21 16322033	Saint Marys and Saint Peters Convent (Apartments) St.Marys Road, Arklow.	Detached nine-bay two-storey former convent built c.1880, and now converted to apartments. The building is constructed in squared semi-coursed basalt rubble with straw coloured brick dressings. To either side is a projecting hipped roof square bay in symmetrical arrangement. To the south is a chapel addition dating from the 1930s while to the rear north is a very long return
A22 16322034	48 Main Street, Arklow	Terraced five-bay two-storey former house, built c.1840, now in use as two shops. The façade is finished in painted render, whilst the pitched roof is slated and has a large rendered chimneystack to the east. To the ground floor are two non-identical timber shopfronts of c.1880
A23 16322035	22 Main Street, Arklow.	Terraced five-bay three-storey house, built c.1760, with shopfront insertion of c.1900. The façade is in brick with a granite base course, granite 'quoins' to the shopfront, and painted stone surrounds to the other ground floor openings, whilst the exposed section of the gabled east elevation is rendered. The pitched roof is slated and has brick chimneystacks
A24 16322037	85 Lower Main Street, Arklow.	Terraced single-bay two-storey former house, built c.1840, now is use as a shop
A25 16322045	2 Bridge Street, Arklow	Terraced two-bay two-storey shop with living quarters, built c.1880. The façade is finished in painted render whilst the pitched roof is covered in artificial slate and has rendered chimneystacks
A26 16322046	Arklow Bridge Arklow	Nineteen-arch stone built road bridge over the Avoca river, built c.1755. The bridge has a large central pier with cutwaters to both the north and south sides of the other smaller piers.
A27 16322047	27 Main Street, Arklow.	End-of-terrace five-bay two-storey house and shop, built c.1890. The façade is finished in brick with moulded string courses and small decorative moulded clay panels. The gabled east elevation is finished in unpainted render.
A28 16322048	AIB 23 & 24 Main Street, Arklow	End-of-terrace three-bay two-storey Queen Anne Revival style bank, built 1914. The symmetrical front elevation, which has a central full-height gabled projection, is finished ashlar limestone to the ground floor level and brick to the upper level, but with Giant order pilasters, upper floor window surrounds and eaves course also in limestone.
A29 16322058	Aberconic Masonic Hall, Ferrybank, Arklow.	Detached three-bay single-storey over tall basement Masonic hall, built 1903. The building is finished in roughcast render with moulded eaves course and base course. The panelled front door with lattice pane fanlight is set within a pointed arch opening with moulded stone surround.

A30 16322059	58 Ferrybank, Arklow.	End-of-terrace three-bay two-storey house/ retail unit, built c.1860. The house is finished in lined rendered with moulded quoins. The panelled front door has a decorative fanlight over and is framed with panelled pilasters with console brackets and a moulded painted surround; all is set within an elliptical-headed opening
A31 16322074	Arklow Methodist Church Ferrybank, Arklow.	Detached five-bay single-storey gable-ended Gothic style Methodist church, built c.1860. The church is rectangular in plan, with the façade finished in uncoursed rubble stone with dressed stone to the openings. The slated, steeply pitched gable-ended roof has a small octagonal spirelet to the east-facing front and a small stone chimneystack to the rear, as well as stone parapets.
A32 16322079	Kynoch Lodge, Sea Road, Arklow.	Detached multiple-bay single-storey double-pile timber-clad house, built c.1895, originally as a temporary structure. The house is rectangular in plan with a five-sided projecting bay to the north-west corner and two widely spaced canted bays to the south elevation.
A33 16322084	The Cottage, Sea Road Arklow.	Detached two-bay single-storey house, built c.1915, with later extension to the east. The building is roughly rectangular in plan but with a canted bay to the west elevation, a recessed bay to the south-east corner, and a projection to the north-east
A34 16322086	National Training and Development Centre (Former national school) Briggs Lane, Arklow.	Detached five-bay single-storey former national school, built 1892, and now in use as a National Training and Development Centre. The building is constructed in semi-coursed rubble granite with brick dressings.
A35 16322087	National Training and Development Centre (Former Sunday school) Briggs Lane, Arklow.	Detached seven-bay single-storey former Sunday School hall, built c.1890, and now in use as a National Training and Development Centre. The building is constructed in semi-coursed rubble granite with brick dressings. To the north is a recent modern lean-to addition
A36 16322088	Kilbride Rectory , Dublin Road, Arklow.	Detached three-bay two-storey house, built c.1920. The house is finished in lined render. The panelled door has multiple-pane sidelights and sits in a slightly projecting flat-roofed recent porch addition.
A37	43 Main Street, Murphy's Public House, Arklow	Semi detached, four bay, three-storey house/ public house. The façade is finished in painted render with moulded quoins. Timber shopfront with panelled doors. The first floor windows are flat-headed and have plain timber sash frames, modern replacement windows on second floor.
A38	4 Lower Main St, 'Liam De Paor' Arklow	Two storey, two bay, terrace house now in use as a fruit and vegetable shop. Street fronted with painted render façade and a timber shopfront.

Environmental Problems

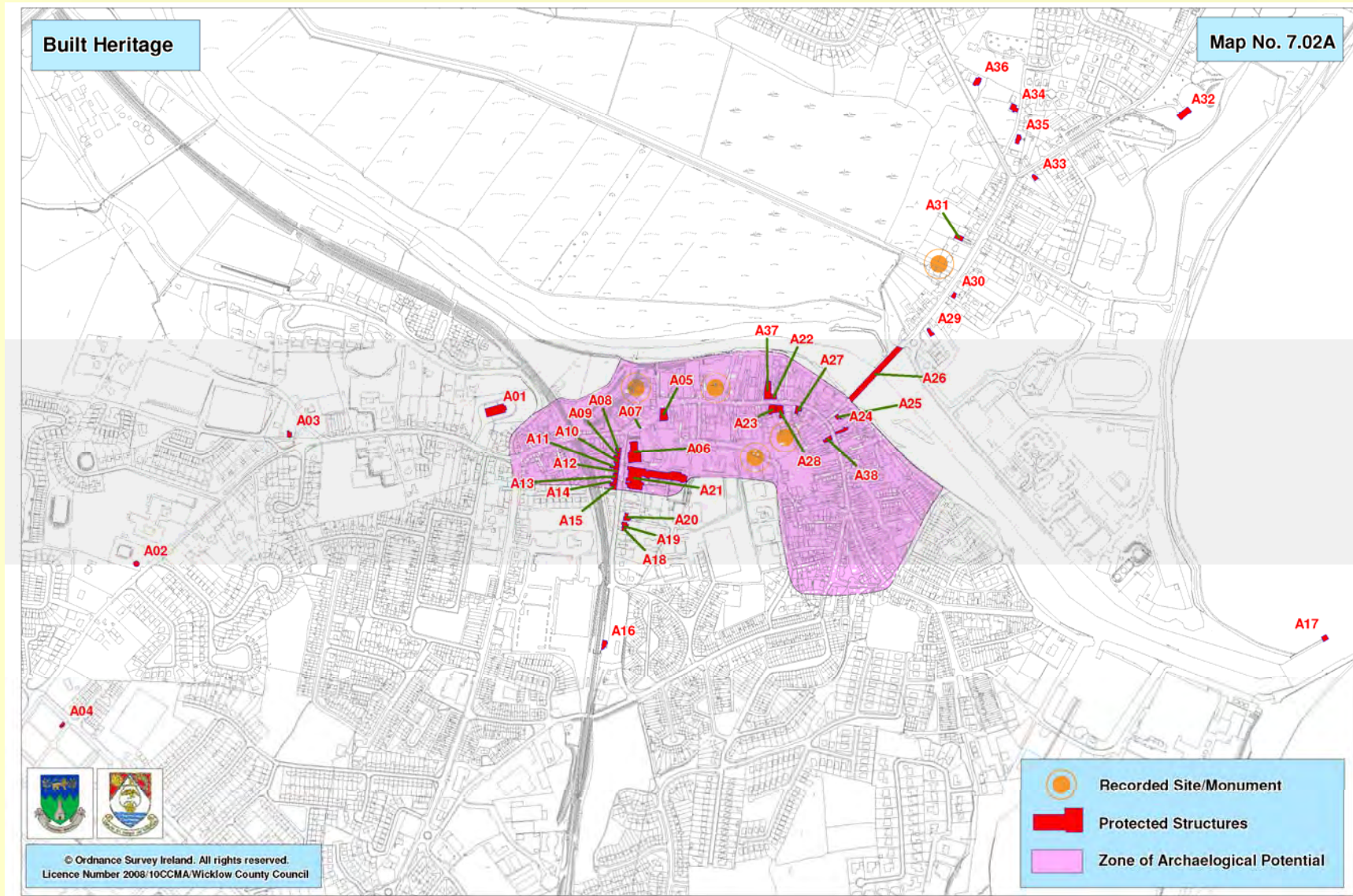
The cumulative accommodation of large-scale development within the plan area has the potential to cumulatively impact upon cultural heritage. Archaeology can be previously unknown but can be damaged through development causing ground disturbance. Development which involves material alteration or additions to protected structures can detract from the special character of the structure and its setting and has the potential to result in the loss of features of architectural or historic interest and the historic form and structural integrity of the structure are retained.

Development on sites adjoining protected monuments; places or structures can also impact upon the setting of these cultural heritage items. Encouraging and facilitating development of growth on brownfield sites will contribute to mitigating a number of the adverse impacts associated with greenfield development, however, brownfield development has the potential to significantly adversely impact upon cultural heritage - both archaeological and architectural - if unmitigated against.

Evolution of Cultural Assets in the Absence of a Development Plan

In the absence of a development plan, protection of buildings and archaeological heritage would still take place due to the continued protection afforded by the RMP and RPS. It should be noted however, that development in general would be more widely spread out, impacting on intact landscapes and protected structures and their curtilage. Retention and active use of protected structures would probably be less widespread, as development incorporating the monuments and structures on the RPS and RMP could not be easily enforced or policed.

Figure 3.16 Recorded Monuments and Structures Detail Map



3.10 Climate Change and Sustainability

Climate change refers to any change in climate over time. It causes a significant change in the average weather or climate that a region experiences and can be caused by natural factors such as variations in sunlight intensity.

The Intergovernmental Panel on Climate Change (IPCC) concluded in its 4th assessment report (2007) that warming of the climate system is unequivocal. This report was preceded by Sir Nicholas Stern's 2006 economic review estimating the cost of inaction regarding combating climate change.

For this reason it is important that Arklow Town Council and Wicklow County Council and its residents, act responsibly at a local level in order to assist in the reduction of greenhouse gas emissions - which are created primarily by the use of non-renewable fossil fuels. Holistically reducing these emissions will require implementing an overarching strategy affecting many aspects of the development of the County.

3.10.1 Greenhouse Gas Emissions

The term climate change is more generally used to refer to changes in our climate due to the build up of greenhouse gases (GHG's) in the atmosphere. In order to reduce greenhouse gas emissions the internationally agreed Kyoto Protocol established emissions reduction targets for developing countries. Ireland's emission target for greenhouse gases is to limit the increase in their combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels.

Based on the inventory figures for 2006, the EPA estimates that Ireland's emissions in 2006 were 25.5 per cent higher than the baseline estimate that underlies Ireland's allowable emissions for the period 2008-2012, as agreed in the peer review of Ireland's 2006 submission to the United Nations Framework Convention on Climate Change.

Transport continues to be the dominant growth sector with emissions at 682,000 tonnes higher in 2006 than in 2005. This represents a 5.2% increase on 2005 levels and 165% increase on the 1990 transport emissions. Road transport accounts for 97% of the transport sector emissions. The increase in the GHG emissions from the transport sector reflects sustained increases in fuel consumption with petrol usage up 3.4% and diesel consumption up 7.9% from the previous year.

3.10.2 Potential Effects of Climate Change

Climate change is not limited to changes in temperatures or weather - it can also mean changes in the occurrence of extreme and unstable weather conditions, storms and floods, droughts and coastal erosion.

The EPA's Climate Change: Scenarios and Impacts for Ireland (2003) report identifies where vulnerability to climate change exists in Ireland and what adjustments are likely in the operation of environmental systems in response to such changes.

At a regional scale, the major effects of a sea level rise are loss of land as a consequence of increased erosion (due to changes in coastal currents and sedimentation rates) and increased risk of flooding (both at the coast and inland along major river networks during storm surge events). Flood risk would also be increased if a storm surge were coupled with intense or long duration precipitation events. Coastal floodplains are especially at risk on occasions when a high tide and storm surge coupled with a period of intense rainfall lead to a breach in the carrying capacity of the drainage network, a situation in Ireland which has become evident over the last decade and is quite common in Arklow.

Sea level rise presents itself as a serious problem for Arklow where infrastructure is at risk of inundation. In Ireland, the EPA report identifies the impacts of sea level rise will be most apparent in the major cities, including Dublin, and that these will be most vulnerable from an economic perspective. The inability of the shoreline to adjust naturally to a change in conditions in areas of dense infrastructure may exacerbate any impacts as the system tries to attain a new equilibrium between sediment erosion, transportation and deposition.

As increased temperatures will lead to greater amounts of water vapour in the atmosphere and an accelerated global water cycle, it is reasonable to expect that river catchment areas will be exposed to a greater risk of flooding. Heavier winter rain and summer storms may cause more flash flooding, causing an increase in diffuse pollution loads to waters from soil run-off or the overflow from CSOs (combined sewer overflows) and raising demand for flood controls. Summer droughts are more likely and there may be a reduction in drinking water supplies.

River flooding tends to be more common during the wetter winter months when soils are near saturation and can be exacerbated in coastal areas when interactions occur between high tides and high flows. Many of the rivers draining upland areas have a rapid or 'flashy' response to rainfall enhanced by rising topography. Steep slopes and thin soils favour rapid flow pathways and water is rapidly transmitted to the channel network especially in urbanised catchments with extensive areas of impermeable surfaces.

The effect of a sea level rise on estuaries will tend to enlarge their vertical and horizontal extent, resulting in the penetration of tides further upstream. The outflow from rivers would be impeded as a consequence, which, in a high intensity rainfall event where runoff is high, would increase the risk of flooding.

A critical impact of climate change will be the likely changes to habitats and the flow conditions in rivers and lakes. The ERBD has been undertaking research work on the effects of abstractions on river and lake ecology to develop an understanding of the relationship between hydrology, flow, depth and habitats for key species.

Existing Problems

As has been noted above, the single greatest issues facing Arklow Town and its Environs in relation to climate change relate to the danger posed by flooding events, which will occur as a result of a changing climate. Solutions require reductions in unsustainable transport movements, and the amelioration of potential flooding events.

Traffic Emissions:

The manner in which transport emissions can be reduced is tied into the provision of high quality public transport network as an alternative to the private car providing ease of access to neighboring employment settlements such as Wicklow Town, Bray and employment opportunities in Dublin. At a micro level in Arklow itself the design and incorporation of walkable and cycle friendly urban developments needs to be accommodated.

The preservation, or creation of walking links within existing urban areas, specifically to shop(s), workplaces, schools and public transport links, along the most direct routes must be given high priority, otherwise trips by car will continue to grow. Reducing car movement at the neighbourhood level through increasing ease of pedestrian movement must be the foundation stone for an overall decrease in emissions.

Flooding:

Section 3.6 above relating to water highlights the existing problems facing Arklow in relation to flooding. Accommodation of works to address flood risks must be considered at this stage, prior to the onset of major flooding events. It should be noted that a major study is currently being undertaken in order to address flood risk in Arklow Town and develop a Flood Defence Scheme which will be subject to an Environmental Impact Assessment.

Evolution of Climate Change in the Absence of a Development Plan

Increases in the use of catalytic converters, cleaner fuels, better engine technology and maintenance is generally reducing the pollution omitted per motor vehicle. However, this reduction is probably being offset by the increase in the number of cars as well as the increase in the volume and incidences of traffic congestion. Increases in the number of cars as well as the increase in the volume and incidences of traffic congestion may lead to increases in air and noise pollution in the future.

If new dispersed development occurs in the Town and its environs, adverse impacts upon air quality and noise levels, and resultant impacts upon human health, would be likely to arise if unmitigated.

In the absence of the Plan, the realisation of objectives relating to energy efficiency, renewable energy and a reduction in transport related emissions contained within the Plan would be made more difficult.

The Plan inter alia provides an opportunity to provide for the regeneration of certain urban areas within the Town namely the Water Front Development Zone (Action Area 3) and the Town Centre opportunity sites, which are close to the existing public transport linkages. This regeneration would provide for an increased population, which would be less dependent upon private modes for transportation and would therefore be likely to generate less transport related greenhouse gas emissions than populations located further away from the urban areas. In the absence of the Plan, regeneration of these areas would not be achieved and an opportunity to prevent the generation of future transport related greenhouse gas emissions would be missed.

3.11 Landscape

3.11.1 Introduction

Landscape comprises the visible features of an area of land, including the physical elements of landforms, water bodies such as rivers, lakes and the sea, living elements of land cover including indigenous vegetation, human elements including land uses, buildings and structures, and transitory elements such as lighting and weather conditions.

The Arklow Town and Environs area is located along the south east coast of County Wicklow. The coastal situation of the plan area makes it sensitive to development alongside the Avoca River and Estuary, which dissects the plan area and connects to the Irish Sea. The topography of the lands is relatively low lying with a frequent history of flooding in particular along the northern quays.

The more Urban and Developed lands of the Development Plan are located within the jurisdiction of Arklow Town Council with the majority of the environs area containing greenfield lands which have yet to be developed.

3.11.2 Arklow Town

The more urban section of the plan area comprises Arklow Town, which is relatively compact in terms of the location of residential development to the main street. The majority of the residential element of the town is situated to the south of the river with smaller portions being located either side of the Dublin Road to the north of the river. The main street to the south of the river along with the Bridgewater shopping centre to the north of the river, form the main retail and commercial areas within the plan area.

The topography of the Arklow Town area is relatively low lying particularly to the north of the Avoca River where flood events have previously occurred, most recently in 2010. The Water Front Development zone situated to the north and south of the original port form the largest areas for potential development within the town boundary with a large number of apartment developments having already developed within the lifetime of the previous plan. A significant portion of land to the south of the Avoca River is currently undeveloped.

Limited open space exists within the town council area given its development over time. Passive recreational facilities (not including open spaces in housing estates) include the North Beach and South Beach, the river walk, the Lake and Nature Reserve, Abbey Park and Main Street Park. The Lake and park area is a large, mainly pedestrianised area located adjacent to the coast. The two town parks are both small in size, but are formally laid out with park benches and flower beds. The North and South beaches are also a major quasi-passive recreational facility. The existing golf course to the south of the Water Front Development Zone forms a large area of private open space in close proximity to the coast and the town itself.

Arklow is rich in natural amenity areas most notably the river Avoca, the Marsh and the North and South Beaches. The Town area also includes a landscaped river walk close to the town. The North and South Beaches and adjoining dune systems are a major amenity resource to the town. Improved water quality and improved walkways will increase their value.

3.11.3 Arklow Environs:

As mentioned above the Arklow Environs Area comprises the more rural lands in the overall plan area. The main population concentrations within the Arklow Environs area are located in the Kilbride ED: containing Seabank, Kilbride, Coolboy and Templerainy.

The Arklow Environs Area also accommodates a large amount of employment-zoned lands with optional zonings to the north at Killiniskyduff and to the south at Tinahask. These zonings were included in the previous Arklow environs plan as optional zonings for the lifetime of the plan only, and have been included in the Plan as zonings for a single stand alone

employment development. The Kilbride Industrial Estate to the north west contains a number and variety of businesses, many of which are promoted by IDA and Enterprise Ireland. To the south of the Environs plan area the IDA business park exists that is zoned Kish A in the current Arklow Environs Plan. Roadstone Ltd. operates at Arklow Rock in the townland of Rock Big, quarrying and producing road construction materials.

The topography of the Environs area is also quite low lying (with the exception of Arklow Rock) gradually rising from the sea to the south west of the Avoca River. In terms of passive recreational facilities in the Environs area the North and South Beach are of paramount importance.

3.11.4 Landscape Categorisation

Wicklow County Council's Landscape Characterisation section as set out in chapter 17 section 17.8 of the County Development Plan classifies landscapes in Wicklow according to their sensitivity – their ability to accommodate change or intervention without suffering unacceptable effects to character and values. The most sensitive landscapes are Areas of Outstanding Natural Beauty - which are of a very high sensitivity - and Areas of Special Amenity - which are of a high sensitivity. Landscapes of lesser sensitivity are Rural Areas and Corridor Areas, which are both of medium sensitivity. Urban areas are classified as having a low sensitivity.

Within the study area Arklow Town and its Environs fall within the category of an Urban Area with the lands to the north and south east and outside of the plan boundary falling within the Coastal Area AONB (Area of Outstanding Natural Beauty). Lands to the immediate west of the plan boundary fall within the Corridor Zone.

Urban Area – Landscape Category

All locations designated as 'settlements' in the County settlement hierarchy are considered 'urban' areas for the purpose of landscape classification of the County Development Plan, although it is acknowledged that many of the smaller towns and villages are not 'urban' in the same sense as settlements such as Arklow.

In terms of landscape classification, these settlements including Arklow have already been deemed suitable for development (of the type allowed by the settlement strategy and the development standards of the County Development Plan) and the impacts on the wider landscape arising from such development have already been deemed as being generally acceptable. The reasoning behind this classification relates to the existing built urban environment of the majority of the plan area, which is not considered to cause any adverse visual impact on the surrounding landscape. The CDP further states that it will not be necessary for developments in urban areas to have regard to the surrounding landscape classification or to carry out landscape or visual impact assessment.

Coastal Zone Management

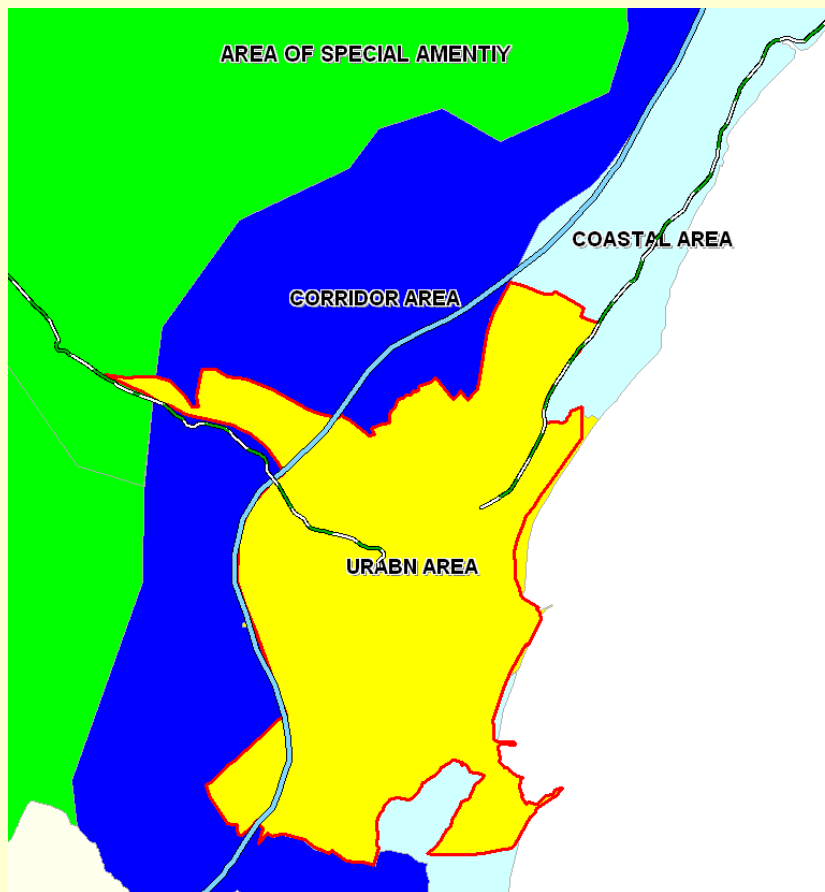
The County Development Plan 2010-2014 also includes a Coastal Zone Management plan as set out in Chapter 18. The Coastal Zone management section of the plan divides the coast of the county into a number of cells as not all coastal areas have the same characteristics or pressures.

Arklow Town and Environs fall within Cell 11 of the Coastal Zone Management plan describing this cell as having long sandy beaches with a central harbour area, the location of intensive residential and industrial development with the southern end marked by Arklow Rock. The cell description also recognizes the designation of Arklow Rock – Askintinny and Arklow Sand Dunes at Seabank as pNHA's.

The plan sets out the following objectives for Cell 11 Arklow Town and Environs:

1. To enhance the visual, recreational and natural amenities of the Arklow coastal area, in accordance with the policies and objectives set out in the Arklow Environs LAP and the Arklow Town Plan.
2. To facilitate the development and enhancement of visitor and recreational facilities along the coastal area, particularly walking routes, car parking areas, signage, changing / toilet facilities and water based clubs.
3. To support and facilitate the development of marine and shipping activity in Arklow, particularly the recreational use of the existing harbour / marina and the development of a roll on-roll off port at the existing Roadstone jetty.

Figure 3.17 Landscape Category Mapping



3.11.5 Prospects of Special Amenity or special interest

The Wicklow County Development Plan identifies one prospect in the plan area of special amenity/special interest as follows:

Prospect No.	Origin	Feature
30	R750 – regional road	Wicklow to Arklow Prospect towards the sea from the coast road

This prospect of special amenity enters the plan boundary along the R750 regional road to the north of the plan area only.

Existing Environmental Problems

Given the relatively low lying topography of the Arklow area the issue of visual impact is not considered to be significant, however the cumulative visual impact of development such as single rural dwellings to the north of the plan area along the R750 regional road at Seabank has the potential to cumulatively and adversely significantly impact upon the above listed prospect of special amenity/special interest.

Evolution of the plan in the absence of the Development Plan

In the absence of a Development Plan new developments would not be directed to the most appropriate locations and would have to be assessed on an application-by-application basis.

It is likely that in the absence of a Development Plan for Arklow Town and its Environs there would be no framework directing housing developments to appropriate locations or requiring certain mitigation measures for developments located in more sensitive landscapes. It is likely that one off housing applications would increase, as would the potential that sensitive landscapes and sensitive landscape components - such as the prospect of special amenity value to the north of the plan area - would be impacted upon.

3.12.Overlay Mapping of Environmental Sensitivities

3.12.1 Introduction:

In order to identify where most sensitivities in the study area occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other.

Environmental sensitivities on the figures, which follow, are indicated by colours and range from extreme sensitivity (dark red) to high sensitivity (light red) to elevated sensitivity (orange/red) to moderate sensitivity (orange) and low sensitivity (Yellow). Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. This is particularly the case where the cumulative development of small-scale projects, such as small housing developments, gradually causes a slow deterioration of a resource, such as water quality.

3.12.2 Methodology

A Risk weighting system applied through Geographical Information System (GIS) software was used in order to calculate the sensitivity of all parts of the study area. The following table sets out the values placed on the landscape categories within and surrounding the plan area.

Table 3.4 Landscape Categorisation Weightings:

The table below provides details of further risk weightings applied to relevant environmental components located within the plan area such as ecological designations, surface waters at significant risk, Groundwater, entries to the Record of Protected Structures, Zones of Archaeological Conservation and the findings of the Urban Habitat Mapping Study. While there are elements of unavoidable subjectivity inherent to the selection and weighting of environmental sensitivities the SEA and plan making team worked closely in order to minimise such subjectivity. The more sensitive the environmental component was deemed to be the higher the risk weighting that was applied e.g. pNHA's are given a risk weighting of 10 as these habitats would be highly sensitive to development and therefore at a higher risk.

Table 3.5 Environmental Components Weighting Table:

Landscape Category	Sensitivity	Risk Weighting
Urban Area	Low	1
Coastal Area	High	10
Corridor Area	Medium	5

Key Environmental Components	Description	Arklow's Context	Risk Weighting
Ecological Designations	NHA designations	Marsh/Arklow Rock/ Avoca River Valley	10
Surface Waters	Rivers and Estuaries	Templerrainy – Significant Risk Ballyduff – Significant Risk Avoca River – Significant Risk	10
Groundwater	Drinking Supplies	Low Vulnerability – Northern Section of the plan area High Vulnerability – Town Centre and Surrounding Area Extreme Vulnerability – South of Environs	1A at risk of not achieving good status = 10 1B possibly at risk of not achieving good status = 5
Cultural Heritage	NIAH RPS RMP Zone of Archaeological Potential		10
Other Environmental Components			
Urban Habitat Mapping Study (Town Centre)	High Value and Locally Important Habitats	Located within the Arklow Town boundary of the plan area.	5
Flood extents	Extent of 1000yr fluvial flood/1000 year tidal flood with climate change	Lands Adjoining and in the immediate vicinity of the Avoca River and Estuary	5

Each environmental component was then overlaid on top of the plan boundary map with scores for each area being multiplied by each other in order to determine overall sensitivity. A working example of how this was carried is provided below in figure 3.18. This example demonstrates how differing environmental components that fell within the Arklow Marsh area were overlaid in order to derive a figure for this land areas overall sensitivity.

Figure 3.18 – working example of overlay mapping for lands located within the Arklow Marsh Area



Arklow Marsh pNHA boundary Area without overlay landscape category map – Urban Area Weighting of (1).



Arklow Marsh pNHA boundary Area with overlay of pNHA weighting score of 10.

1



Arklow Marsh pNHA boundary Area with overlay of Water Framework Directive Groundwater Risk Assessment Weighting of (5) (5 – 1B at possibly at risk of not achieving good status (WFD)).

(x)

10



1000 year flood extent of the Avoca River and Avoca Estuary (5)

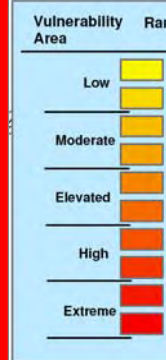
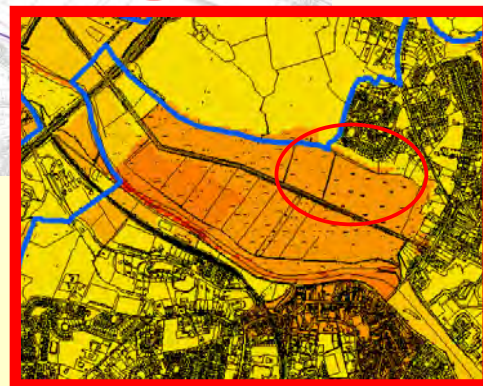
(x)

5

(x)

5

= 250



Total Sensitivity of lands highlighted within Arklow Marsh

250 = High Sensitivity

Given the extent of the values derived from multiplying the environmental components, where they overlap each other, the range of values were normalised/re-classified. The reason for this was due to the fact that, where a vulnerable groundwater source (weighting 10) and a recorded Monument (weighting 10) where all falling within the same area this could produce a sensitivity rating of 1000. Based on this, the sensitivity range was reclassified using GIS (re-classification tool as set out below) to provide for a more simplified sensitivity range of 0 to 19+ as set out below.

Figure 3.19 – GIS reclassification Tool used in order to normalise the sensitivity findings of overlay mapping.

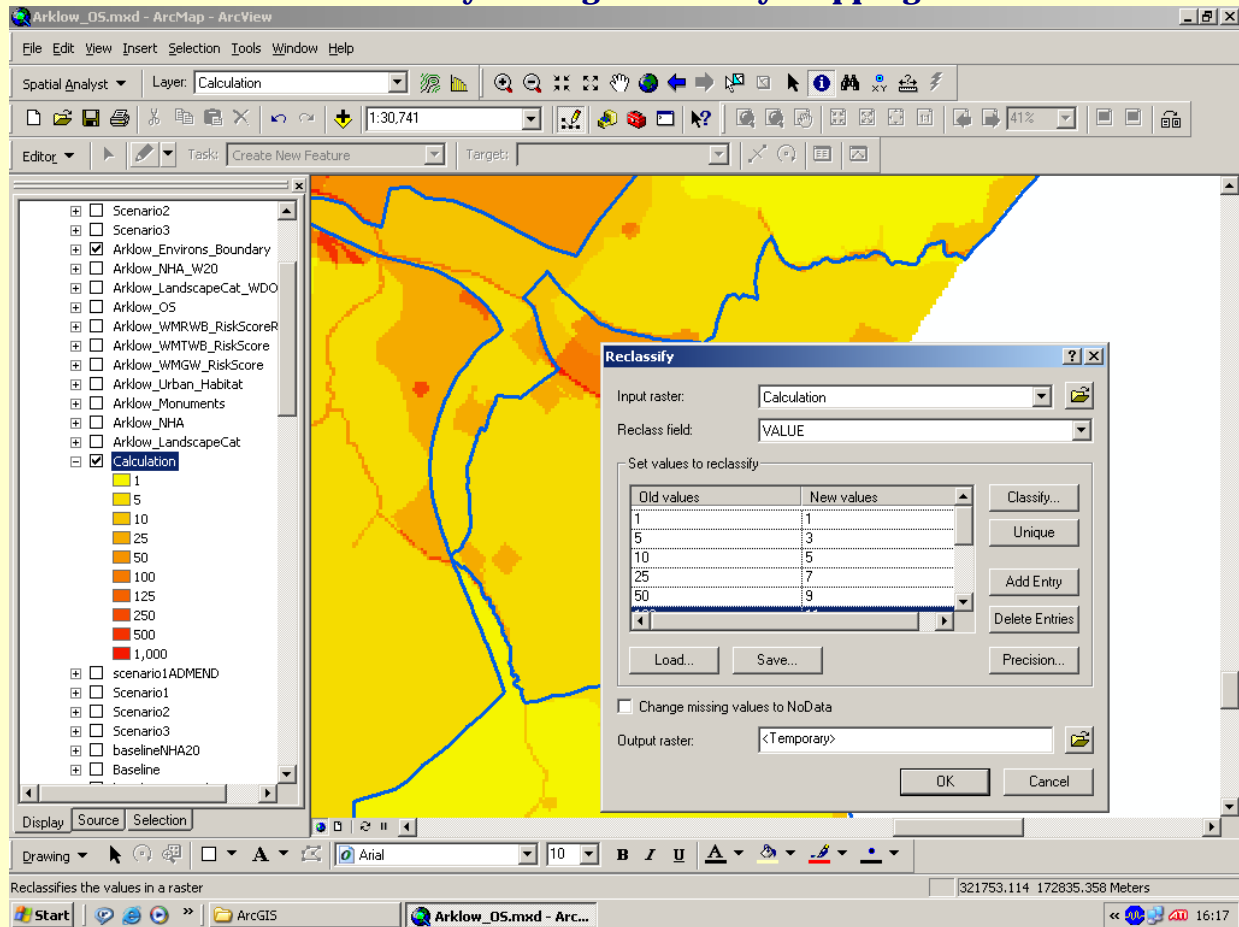


Table 3.6 – Re-Classified Sensitivity Range

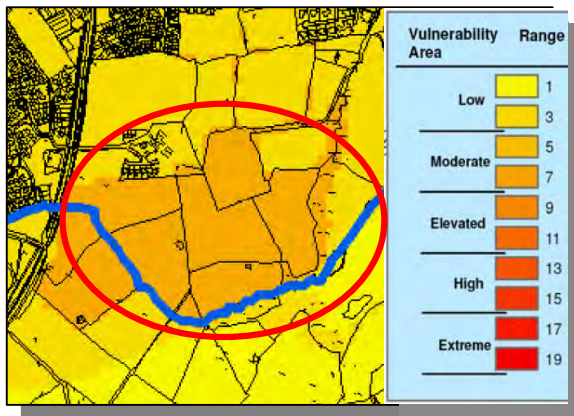
Sensitivity Range prior to Re-	Re-classified sensitivity Range	Sensitivity
1 – 10	0-3	Low
10 – 50	4-7	Moderate
50 – 100	8-11	Elevated
100 – 500	12-15	High
500 - 1000	16-19+	Extreme

3.12.3 Mapping

Figure 3.20 below 'Overlay of Weighted Environmental Sensitivities' (all selected factors given equal weight) is an overlay of environmental sensitivities with all selected environmental factors given equal weight. This map was chosen to be used as the sensitivity map for the plan area as it provides the most balanced approach in assessing sensitivity.

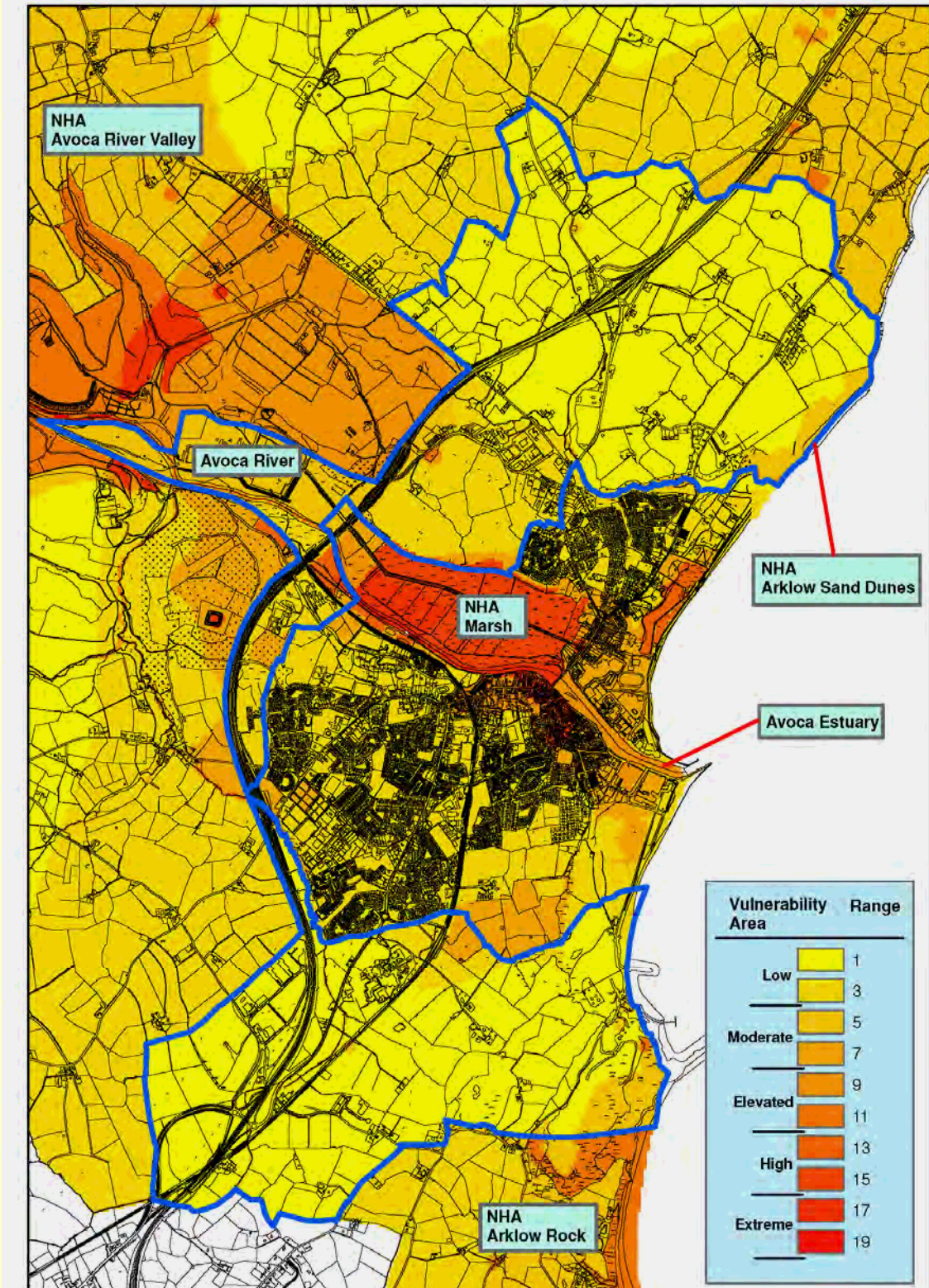
As can be seen from this map the distribution of the most sensitive areas relate to the locations where a number of the environmental components fall within the same area as set out above in figure 3.18. The sensitivity rating derived for this area (part of the Arklow Marsh lands), indicates that this area has a high level of sensitivity and would therefore fall within the 12-15 range in the re-classified table above.

Another example to the south of the Avoca River within the town centre area, it can be seen from figure 3.20 below that this area falls within the high sensitivity range for the following reasons: Zone of Archaeological Potential rating of 10 and the Water Framework Directive Groundwater Risk Assessment Weighting of 5 (IB possibly at risk of not achieving good status) and Flood Zone = 5 fall within the same area providing for a total sensitivity of 250.



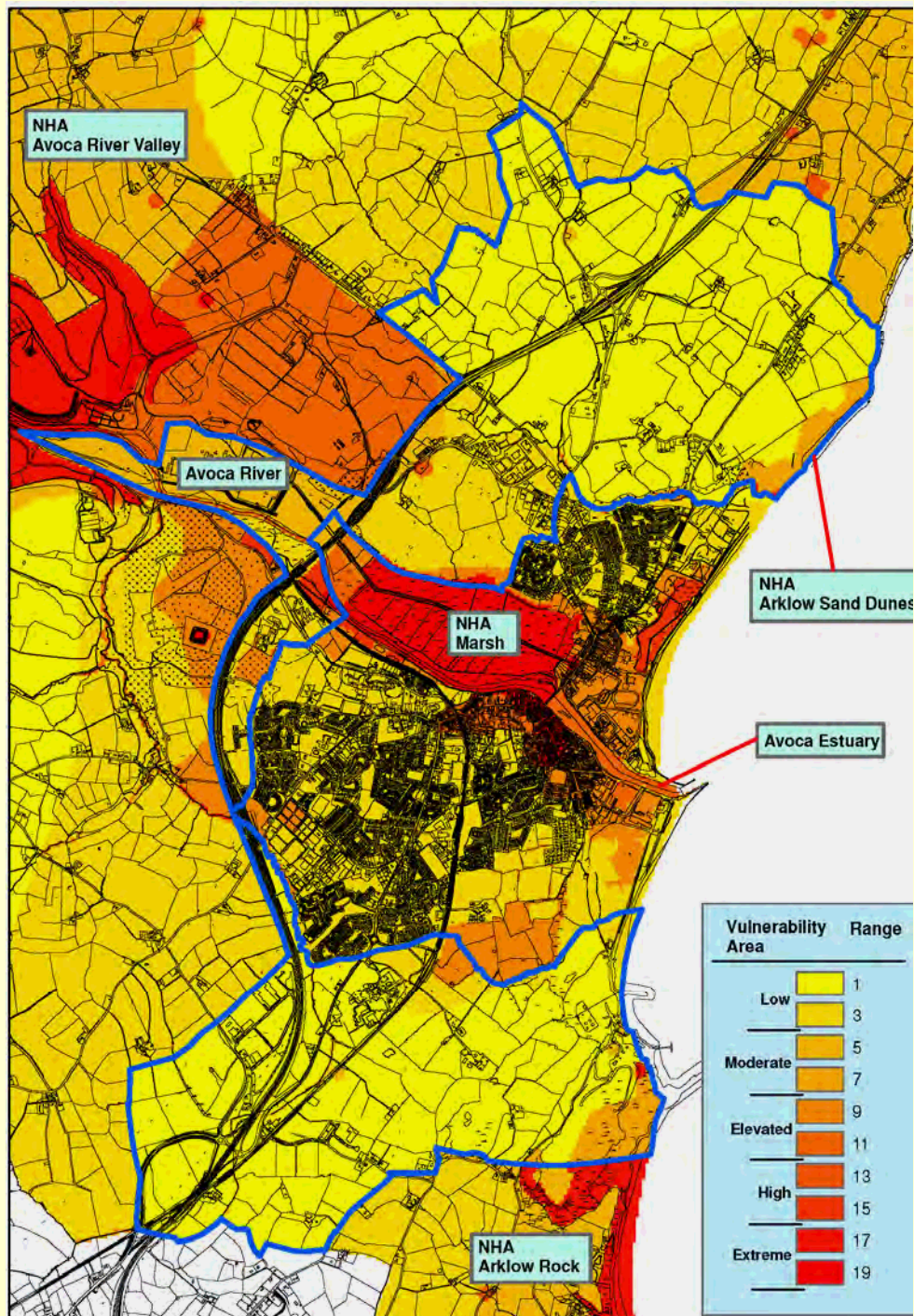
A third example as indicated in this diagram demonstrates that the lands located to the extreme south east of the Arklow Town Council Boundary have derived a sensitivity/risk weighing of 25 as the environmental components of a Local Important Urban Habitat risk weighting (5) and the Water Framework Directive Groundwater Risk Assessment risk weighting of 5 (IB possibly at risk of not achieving good status) fall within in this area. Multiplied by each other they produce a risk weighting of 25 which when re-classified falls within the moderate sensitivity range 5-7.

Figure 3.20 - Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight)



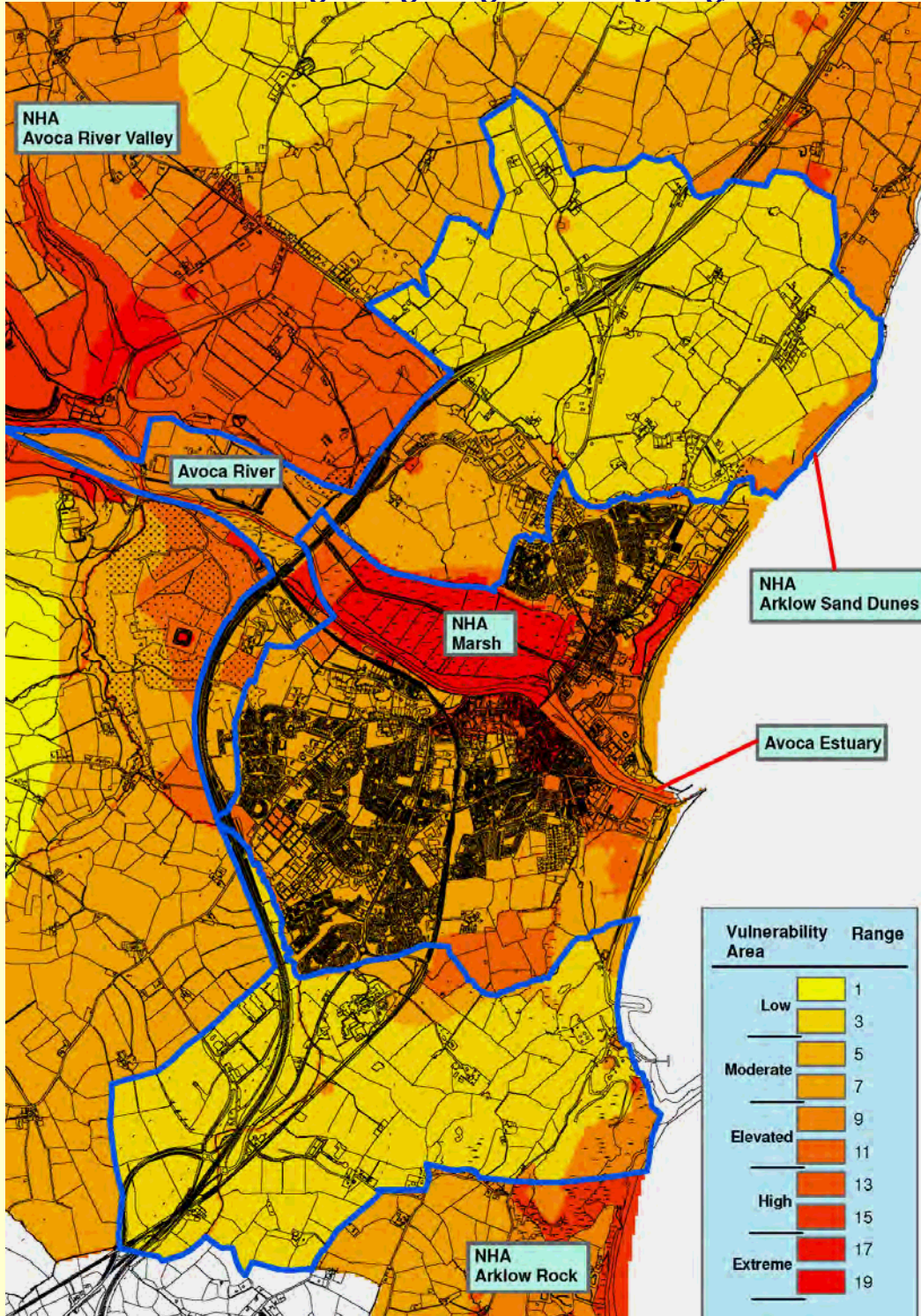
The weighting system used for Figure 3.21 Overlay of Weighted Environmental Sensitivities (Ecological Designations given greater weight) places more importance on ecological sensitivities (consequently these factors are given double the rating of other factors). Here the 3 pNHA's of Arklow Marsh, Arklow Rock and Arklow Sand Dunes are more sensitive because of this increased risk weighting of 20.

Figure 3.21 - Overlay of Weighted Environmental Sensitivities (Ecological Designations given greater weighting)



Similarly, Figure 3.13 Overlay of Weighted Environmental Sensitivities (Landscape Sensitivities given greater weight) places more importance on landscape sensitivities.

Figure 3.22 - Overlay of Weighted Environmental Sensitivities (Landscape Categories given greater weighting)



Limitations

It is noted that there are elements of subjectivity to the weighting systems used. However, efforts are made to be as objective as possible - for Figure 3.20 each sensitive factor is given an equal weighting while for Figures 3.21 and 3.22 an attempt has been made to take account of placing differing importance on the environmental components of biodiversity, flora and fauna (pNHAs given a weighting of 20) and landscape.

Section 4 Strategic Environmental Objectives

4.1 Introduction

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Plan can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated.

SEOs are distinct from the objectives of the Plan - although they will often overlap - and are developed from international, national and regional policies, which generally govern environmental protection objectives. Such policies include those of various European Directives, which have been transposed into Irish law, all of which are intended to be implemented at a local level within the Arklow Town and Environs Development Plan.

The SEA Directive requires that the evaluation of plans be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. In compliance with this requirement, the SEA has focused upon the most relevant aspects of the environmental characteristics within and surrounding Arklow Town and Environs. SEOs relating to these environmental characteristics have been identified and developed for the SEA. Most attention has been given to environmental components, which are likely to be impacted as a result of implementation of a Development Plan for Arklow Town and Environs.

A number of SEOs are linked to indicators which can facilitate monitoring the environmental effects of implementing the Plan when adopted, as well as to targets which the Plan can help work towards.

The primary source used in formulating the SEOs was Table 4B of the SEA Guidelines (DEHLG, 2004). This list has been amended to give affect to objectives that are considered relevant to the receiving environment of Arklow Town and Environs. The use of SEOs, although not a statutory requirement, does fulfill obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

4.2 Biodiversity Flora and Fauna:

4.2.1 International, European and National Strategic Actions

4.2.2 UN Convention on Biological Diversity (CBD) 1992

The United Nations Convention on Biological Diversity 1992 requires the promotion of the conservation and sustainable use of biodiversity.

4.2.3 National Biodiversity Plan 2002

The preparation and implementation of Ireland's National Biodiversity Plan 2002 complies with an obligation under the UN Convention on Biological Diversity. The overall goal of the Plan is to secure the conservation, including where possible the enhancement and sustainable use of biological diversity in Ireland and to contribute to conservation and sustainable use of biodiversity globally. Objectives following on from this goal are to:

- ⇒ Conserve habitat diversity, including all sites of special biodiversity importance;
- ⇒ Conserve species diversity;
- ⇒ Conserve genetic diversity, both wild and domesticated; and
- ⇒ Contribute to the conservation and sustainable use of biodiversity and to advancing other obligations of the CBD in the EU, regionally and internationally.

4.2.4 Birds Directive 1979

The 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC), referred to as the Birds Directive, - as well as its amending acts - seeks to: protect, manage and regulate all bird species naturally living in the wild within the European territory of the Member States, including the eggs of these birds, their nests and their habitats: and regulate the exploitation of these species. Special Protection Areas (SPAs) are provided protection under the Directive and have been designated by the DEHLG due to their conservation value for birds of importance in the European Union.

4.2.5 Habitats Directive 1992

The European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC), referred to as the Habitats Directive, aims to ensure the conservation of certain natural habitats and species which are at favourable conservation status. Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping-stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the network of designated ecological sites are maintained and it recognises the need for the management of these areas through land use planning and development policies.

Special Areas of Conservation (SACs) are designated and protected under the Habitats Directive 1992 (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union.

The obligation to undertake Appropriate Assessment derives from Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC. Appropriate Assessment is a focused and detailed impact assessment of the implications of a plan or project, alone and in combination with other plans and projects, on the integrity of a Natura 2000 site in view of its conservation objectives.

The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. SACs together with SPAs - which are designated under the 1979 Birds Directive - form Natura 2000.

4.2.6 Wildlife Act 1976 and Wildlife (Amendment) Act 2000)

The basic designation for wildlife is the Natural Heritage Area (NHA). They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. Under the Wildlife Amendment Act (2000), NHAs are legally protected from damage from the date they are formally proposed for designation.

Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated - designation will proceed on a phased basis over the coming years.

Prior to statutory designation, pNHAs are subject to limited protection, in the form of:

- ⇒ Rural Environment Protection Scheme (REPS) plans which require conservation of pNHAs and operate for a period of 5 years;
- ⇒ Forest Service requirement for NPWS approval before they will pay afforestation grants on pNHA lands; and/or,
- ⇒ Recognition of the ecological value of pNHAs by Planning and Licensing Authorities.

4.2.7 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been identified and developed with regard to the objectives of the above strategic actions and the environmental baseline described in Section 3.

SEO B1	To ensure compliance with the Habitats Directive and National Biodiversity Plan with regard to protected species and habitats both within and outside of designated sites in accordance with the provisions of Articles 6 and 10 of the Habitats Directive.
Indicator B1:	Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive
Target B1:	Maintenance of favourable conservation status for all habitats and species protected under national and international legislation
SEO B2	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites such as Arklow Marsh, Arklow Rock Askintinny and Arklow Sand Dunes pNHA, by development within or adjacent to these sites
Indicator B2:	Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the DP
Target B2:	No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the DP
SEO B3	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape – by sustaining, enhancing or - where relevant - preventing the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
Indicator B3:	Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the DP.

Target B3:	No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the DP.
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Note: The impact of implementing the Plan on aquatic biodiversity and flora and fauna is also influenced by both impacts upon the quality of surface water bodies - which relates to SEO W-S - and the provision of appropriate levels of waste water treatment infrastructure - this relates to SEO WW.

4.3 Population and Human Health

4.3.1 Population

In order to promote sustainable development and allow for public transport systems to function more effectively - as promoted by higher-level land use strategic actions including the National Spatial Strategy - it is essential to consolidate the physical growth of settlements within the Town.

Within the Town this can be achieved through the development of vacant, derelict and underutilised lands, in particular where they are in close proximity to public transport routes.

The DEHLG's Residential Density Guidelines 1999 and the DEHLG's Sustainable Residential Development in Urban Areas Guidelines 2008 recommend planning authorities to promote higher residential densities, particularly in redeveloping 'brownfield' sites and in proximity to town centres and public transport corridors.

The impacts of implementing the Development Plan on both the spatial distribution of population and the nature of development with regard to greenfield and brownfield development relates to SEO R1, which aims to maximise sustainable brownfield development and minimise greenfield development.

4.3.2 Human Health

The impact of implementing the Development Plan on human health is determined by the impacts, which the Plan will have upon environmental components. Impacts, which the Plan might have upon these components, would be influenced by:

- ⇒ The extent to which new development is accompanied by appropriate infrastructure - this relates to SEOs WW and DW;
- ⇒ Impacts upon the quality of water bodies - these relate to SEOs WS (surface waters) and WG (Ground waters);
- ⇒ The extent of development provided by the Plan which would increase flood risk - this relates to SEO WF (Flooding) and,
- ⇒ The interaction between human beings and the noise generated by the land uses provided for by the Plan.

4.3.3 Emission Limits

Emission limits for discharges to air, soil and water are set with regards to internationally recognised exposure limit values. These are generally set to be many times the safe exposure limit - in order to provide protection. In the event that a land-use plan began to have adverse health effects on surrounding populations it is likely that it would have been identified as being in breach of such emission standards at a very early stage - and long before the manifestation of any adverse health effects in the population. Nonetheless for the sake of consistency with the requirements of the SEA Regulations this section includes an objective, indicator and target for health.

4.3.4 SEOs, Indicators and Targets

SEO R1	Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands
Indicator R1	Area of brownfield lands developed over the Development Plan's lifespan
Target R1:	Reduced availability of brownfield land (subject to availability on the open market, the demand for such land and the ability for such lands to be sustainably re-used) at the end of the Development Plan lifespan

4.4 Soils

4.4.1 Proposal for a Soil Framework Directive

To date, there is no legislation which is specific to the protection of soil resources and soil protection is addressed indirectly and/or within sectoral policies: water, waste, chemicals, industrial pollution prevention, nature protection, pesticides and agriculture.

However, there is currently an EU Thematic Strategy on the protection of soil, which includes a proposal for a Soil Framework Directive which proposes common principles for protecting soils across the EU.

Article 5 of the proposed Directive states that, for the purposes of preserving the various functions of soil; sealing, the development of artificial surfaces on top of soil resources, should be limited. The proposed Directive suggests that this may be achieved through rehabilitating

SEO HH1	To protect human health from hazards or nuisances arising from exposure to incompatible land uses in particular from the re-use of brown field lands in areas where previous uses may have contaminated lands such as the Water front Development Zone in Arklow.
Indicator HH1	Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors as identified by the Health Service Executive (HSE) and Environmental Protection Agency (EPA)
Target HH1	No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan

brownfield sites, thus reducing the depletion of greenfield sites. The proposed Directive also states soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.

4.5 Water

4.5.1 Water Framework Directive 2000

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003). The WFD requires that all member states implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving good status by 2015.

4.5.2 Quality Standards for Surface Waters

The European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) is the final major piece of legislation needed to support the WFD and gives statutory effect to Directive 2008/105/EC on environmental quality standards in the field of

water policy. The Surface Waters Regulations also give further effect to the WFD, establishing a framework for Community action in the field of water policy and Directive 2006/11/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.

The Surface Waters Regulations apply to all surface waters - including lakes, rivers, canals, transitional waters, and coastal waters - and provide, inter alia, for:

- ⇒ The establishment of legally binding quality objectives for all surface waters and environmental quality standards for pollutants;
- ⇒ The examination and where appropriate, review of existing discharge authorizations by Public Authorities to ensure that the emission limits laid down in authorisations support compliance with the new water quality objectives/standards;
- ⇒ The classification of surface water bodies by the EPA for the purposes of the Water Framework Directive;
- ⇒ The establishment of inventories of priority substances by the EPA, and;
- ⇒ The drawing up of pollution reduction plans by coordinating local authorities (in consultation with the EPA) to reduce pollution by priority substances and to cease and/or phase out discharges, emissions or losses of priority hazardous substances.

In addition, the Regulations require that a public authority shall not, in the performance of its functions, undertake those functions in a manner that knowingly causes or allows deterioration in the chemical status or ecological status (or ecological potential as the case may be) of a body of surface water.

In order to satisfy the overall WFD objective of 'good status', a surface water body must achieve the requirements of good ecological¹ and chemical² status.

4.5.3 Quality Standards and Threshold Values for Ground Water

Detailed provisions to achieve the aims of the WFD for ground water have been presented in a Groundwater Daughter Directive (Directive 2006/118/EC on the protection of groundwater against pollution and deterioration).

This Directive sets up environmental objectives of good groundwater quantitative and chemical status, as well as ensuring a continuity to the 1980 Groundwater Directive (Directive 80/68/EEC on the protection of groundwater against pollution caused by dangerous substances) which is due to be repealed under the WFD by the end of 2013.

Article 3 of the 2006 Directive required that the assessment of the chemical status of groundwater use both quality standards identified in Annex I of the Directive and threshold values to be set by individual member states.

Groundwater quality standards are environmental quality standards expressed as the concentration of a particular pollutant, group of pollutants or indicator of pollution in groundwater, which should not be exceeded in order to protect human health and the environment. Annex I of the Directive sets standards for two pollutants: Nitrates - 50mg/l - and; Active substances in pesticides³, including their relevant metabolites, degradation and reaction products - 0,1 µg/l and 0,5 µg/l (total⁴).

¹ Ecological status comprises: biological quality elements, physiochemical conditions and hydromorphological quality elements. The overall ecological status of the water body is determined by the lowest level of status achieved across all quality elements.

² Chemical status assessment is based on compliance with the standards laid down for priority substances by Directive 2008/105/EC on environmental quality standards in the field of water policy (the Surface Waters Regulations give effect to the environmental standards established by this Directive).

³ 'Pesticides' means plant protection products and biocidal products as defined in Article 2 of Directive 91/414/EEC and in Article 2 of Directive 98/8/EC, respectively.

⁴ 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

Irish groundwater threshold values⁵ are currently in the process of being set by the EPA.

4.5.4 Bathing Water

EU Mandatory and Guide levels are set out for bathing waters in the *1976 Bathing Water Directive* (Directive 76/160/EEC) as implemented in Ireland by the Quality of Bathing Water Regulations, 1992, (SI No. 155 of 1992). The purpose of the Bathing Water Regulations is the protection of human health, local authorities.

Mandatory Values are values, which must be observed if the bathing area is to be deemed compliant with the Directive. Compliance with guide values exceeds guidance with mandatory values and can be regarded as quality objectives which bathing sites should endeavour to achieve.

A new *2006 Bathing Water Directive* (2006/7/EC) - which entered into force in March 2008 - revises the 1976 Directive with the purpose of: preserving, protecting and improving the quality of the environment and protecting human health by complementing the Water Framework Directive (2000/60/EC). The 2006 Bathing Water Directive is implemented by the Bathing Water Quality Regulations 2008 (SI No. 79) of 2008.

The 2006 Directive establishes a new classification system for bathing water quality based on four classifications 'poor', 'sufficient', 'good' and 'excellent' and generally requires that a classification of 'sufficient' be achieved by 2015 for all bathing waters.

The new classification system is currently being introduced and related to current EU guide and mandatory standards specified in the 1976 EU Bathing Water Directive (76/160/EEC) by the EPA⁶. The 'good' classification is related to compliance with guide and mandatory values, the 'sufficient' classification is related to compliance with the mandatory values only, whereas the 'poor' classification is non-compliance with mandatory values. The 1976 Directive does not have bathing water standards that equate to an 'excellent' classification.

Having regard to Bathing water quality within the plan area it should be noted that the EPA do not have any monitoring points for coastal waters adjoining the plan area.

4.6 Flooding

4.6.1 EU Flood Directive:

European Directive 2007/60/EC on the assessment and management of flood risks aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.

The Directive requires Member States to carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas at risk of flooding. For such zones flood risk maps are required to be drawn up by 2013. By 2015 flood risk management plans focused on prevention, protection and preparedness must be established by 2015.

The Directive is to be carried out in coordination with the Water Framework Directive and flood risk management plans and river basin management plans should be coordinated.

⁵ Threshold values are to be established by Member States for all pollutants and indicators of pollution, which characterise groundwater bodies classified as being at risk of failing to achieve good groundwater chemical status under the WFD. Threshold values are required to be established in a way that, should the monitoring results at a representative monitoring point exceed the thresholds, this will indicate a risk that one or more of the conditions for good groundwater chemical status - with regard to the ability of groundwater to support human uses and with regard to waters used for the abstraction of drinking water - are not being met.

⁶ Transitional measures are in place until the new Bathing Water Quality Regulations 2008 (SI No. 79 of 2008) are fully implemented

4.6.2 DEHLG Flood Risk Management Guidelines

In November 2009 the DEHLG issued *The Planning System and Flood Risk Management Guidelines* for Planning Authorities. These are aimed at ensuring a more consistent, rigorous and systematic approach, which will fully incorporate flood risk assessment and management into the planning system.

The Guidelines require the planning system to, among other things:

- ⇒ Avoid development in areas at risk of flooding, particularly flood plains, unless there are proven sustainability grounds that justify appropriate development and where flood risk can be reduced or managed to an acceptable level, without increasing flood risk elsewhere;
- ⇒ Adopt a sequential approach to flood risk management when assessing the location for new development based on avoidance, reduction and mitigation of flood risk; and,
- ⇒ Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals.

4.6.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been identified and developed with regard to the objectives of the above strategic actions and the environmental baseline described in Section 3.

SEO Code W-S	To maintain and improve, where possible, the quality of Rivers, and other surface waters
Indicators W-S:	Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)
Target W-S:	To achieve 'good status' ⁷ in all bodies of surface waters by 2015 and to not knowingly allow deterioration in the status of any surface water
Indicators W-S(2)	Poor, Sufficient, Good and Excellent classifications of bathing water as set by Directive 2006/7/EC
Target W-S(2)	To achieve - as a minimum - the 'Sufficient' classification as set by Directive 2006/7/EC, and where possible to achieve the 'Good' or 'Excellent' classifications

SEO Code W-G	To prevent pollution and contamination of ground water
Indicators W-G:	Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Target W-G:	Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC

SEO Code W-F	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
Indicators W-F:	Number of developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk

⁷ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA:

- Q4 in the biological classification of *rivers*;
- *Mesotrophic* in the classification of *lakes*; and,
- *Unpolluted* status in the Assessment of Trophic Status of *Estuaries and Bays* in Ireland (ATSEBI).

Target W-F:	Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines</i> for Planning Authorities
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4.7 Material Assets

4.7.1 Water Services Act 2007

The Water Services Act 2007 (SI No. 30 of 2007) incorporates a comprehensive review, update and consolidation of all existing water services⁸ legislation, and facilitates the establishment of a comprehensive supervisory regime to ensure compliance with specified performance standards.

Section 36 of the Act provides for the making of 6-year Water Services Strategic Plans (WSSPs) in order to:

- ⇒ To protect human health and the environment;
- ⇒ To facilitate the provision of sufficient water services for domestic and non-domestic requirements in the area to which the plan relates; and,
- ⇒ To support proper planning and sustainable development, including sustainable use of water resources.

WSSPs are to be made by Water Services Authorities for their functional areas. The Act allows for two or more Water Services Authorities to jointly make a WSSP in relation to all of their combined functional areas, or parts thereof.

WSSPs are required to include information on the following:

- ⇒ Drinking water quality;
- ⇒ The prevention or abatement of risk to human health or the environment;
- ⇒ Current and projected need for water services;
- ⇒ Arrangements in place or planned for the provision of water services;
- ⇒ Shortfalls in the provision of water services;
- ⇒ Water conservation measures in place or planned;
- ⇒ Monitoring arrangements;
- ⇒ Asset management planning; and,
- ⇒ Income and expenditure.

Section 36 (9) of the Act allows for the making of regulations prescribing the manner in which any matter is to be set out or addressed in a water services strategic plan, notification or consultation requirements and procedures or associated time limits, prior to and after its making.

4.7.2 Urban Waste Water Treatment Directive 2001

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI No. 254 of 2001). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. The Regulations stipulate that sewage treatment facilities are in place in all towns by 2005.

Appropriate treatment is essential in order to meet the requirements of the Water Framework Directive.

⁸ Services, including the provision of water intended for human consumption, which provide storage, treatment or distribution of surface water, groundwater or water supplied by a water services authority, or waste water collection, storage, treatment or disposal.

4.7.3 Drinking Water Regulations 2007

The environmental baseline with regard to drinking water demand and supply is identified in Section 3 and measures have been integrated into the Development Plan in order to help ensure a clean and wholesome water supply.

The European Communities (Drinking Water) Regulations (No. 2) 2007 require the compliance of water intended for human consumption with 48 parameters.

4.7.4 SEOs, Indicators and Target

The following SEOs, Indicators and Targets have been identified and developed with regard to the objectives of the above strategic actions and the environmental baseline described in Section 3.

Wastewater Infrastructure

SEO Code WW	To serve new development with appropriate waste water treatment
Indicators WW:	Number of new developments granted permission which can be adequately served with waste water treatment over the lifetime of the Plan
Target WW:	All new developments granted permission to be connected to and adequately served by waste water treatment over the lifetime of the Plan
Indicators WW(2)	Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for Arklow and its Environs.
Target WW(2)	For the Council to prepare a Water Services Strategic Plan in compliance with the Water Services Act

Drinking Water

SEO Code DW	To serve development within the Plan area with drinking water that is both wholesome and clean
Indicators DW:	Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health
Target DW:	No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan
Indicators DW(2)	Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for the functional area of the Council
Target DW(2)	For the Council to prepare a Water Services Strategic Plan in compliance with the Water Services Act

4.8 Air and Climatic Factors:

4.8.1 Introduction

The impact of implementing the Plan on air quality and climatic factors will be determined by the impacts which the Plan has upon the traffic levels which relate to SEOs C1 and C2.

Travel is the source of most:

- ⇒ Noise;
- ⇒ Air emissions; and,
- ⇒ Energy use (41.4% oil equivalent of final energy consumption in 2006 was taken up by transport - sourced from Sustainable Energy Ireland's online Energy Statistics Data Bank).

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning, increases in greenhouse gases can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

4.8.2 Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well being of the Town's inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

The principles to this European approach are set out under the Air Quality Framework Directive 1996 while four daughter Directives lay down limits or thresholds for specific pollutants.

4.8.3 Climatic Factors

In order to reduce greenhouse gas emissions the internationally agreed Kyoto Protocol established emissions reduction targets for developing countries. Ireland's emission target for greenhouse gases is to limit the increase in their combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels.

4.8.4 Noise

Noise is unwanted sound. Traffic noise alone is harming today the health of almost one third of Europeans⁹.

The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.

The Directive requires competent authorities in Member States to:

- Draw up *strategic noise maps* for major roads, railways, airports and agglomerations, using harmonised noise indicators¹⁰ and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;
- Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and,
- Inform and consult the public about noise exposure, its effects, and the measures considered to address noise.

The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.

4.8.5 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been identified and developed with regard to the objectives of the above strategic actions and the environmental baseline described in Section 3.

⁹ World Health Organization Regional Office for Europe (2003) *Technical meeting on exposure-response relationships of noise on health 19-21 September 2002* Bonn, Germany Bonn: WHO

¹⁰ [L_{den} (day-evening-night equivalent level) and L_{night} (night equivalent level)]

It is noted that - in addition to being addressed as part of this assessment - traffic issues will also be addressed by lower-tier plans and at the level of individual projects by the development management process and, for certain projects, by EIA.

SEO Code AQ1	To reduce travel related greenhouse emissions to air
Indicators AQ1:	Percentage of population within the Town travelling to work or school by public transport or non-mechanical means
Target AQ1:	An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means
Indicators AQ1(2)¹¹	Average distance travelled to work or school by the population of the Town
Target AQ1(2)	A decrease in the average distance travelled to work or school by the population of the Town

SEO Code AQ2:	To reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
The use of the SEO C2 provides a qualitative directional measure, which is used to evaluate the effects of implementing the Plan.	

4.9 Cultural Heritage:

4.9.1 Archaeological Heritage:

Valletta Convention 1992

The European Convention on Protection of the Archaeological Heritage known as the Valletta Convention of 1992. This was ratified by Ireland in 1997 and requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.

National Heritage Plan for Ireland 2002

The core objective of the National Heritage Plan for Ireland 2002¹² is to protect Ireland's heritage. In this regard the polluter pays and the precautionary principle are operable.

National Monuments Acts

Archaeology in Ireland is protected under the National Monuments Acts 1930 to 2004.

Recorded monuments are protected by inclusion on the list and marked on the map which comprises the Record of Monuments and Places set out County by County under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest, which have so far been identified.

Any works at or in relation to a recorded monument requires two months notice to the Department of the Environment, Heritage and Local Government under Section 12 of the National Monuments (Amendment) Act, 1994.

Direct impacts on national monuments in State or Local Authority care or subject to a preservation order require the consent of the Minister for the Environment, Heritage and Local

¹¹ As measure by the Central Statistics Office

¹² Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Heritage Plan for Ireland* Dublin: Government of Ireland

Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004.

4.9.2 Architectural Heritage:

Planning and Development Act 2000-2007

Records of Protected Structures (RPSs) are legislated for under Section 51 of the Planning and Development Act 2000 and include structures which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Architectural Heritage and Historic Monuments Act 1999

The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the DEHLG which was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. It is intended that the NIAH provides the basis for the inclusion of particular structures in RPSs.

4.9.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been identified and developed with regard to the objectives of the above strategic actions and the environmental baseline described in Section 3.

Archaeological Heritage:

SEO Code AH1	To protect the archaeological heritage of Arklow including entries to the Record of Monuments and Places – the towns Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
Indicators AH1:	Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential - (and their context of the above within the surrounding landscape where relevant) protected
Target AH1:	Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential - (and their context of the above within the surrounding landscape where relevant)

Architectural Heritage:

SEO Code AH2	To preserve and protect the special interest and character of Arklow's architectural heritage including entries to the Record of Protected Structures, and their context within the surrounding landscape where relevant
Indicators AH2:	Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected
Target AH2	Protect entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant)
Indicators AH2 (B)	Number of additions to the Record of Protected Structures and the number of additional ACAs
Target (B) AH2 (B)	Make Additions to the Record of Protected Structures and make additional ACAs, where appropriate.

4.10 Landscape

4.10.1 Introduction

Ireland signed and ratified the European Landscape Convention (2000) in 2002 with the Convention entering into force in Ireland in 2004. The aims of the Convention include: to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity; to harmonise changes in the landscape which are brought about by social, economic and environmental processes, and to enhance landscapes.

4.10.2 Wicklow County Development Plan 2010-2016

The Wicklow County Development Plan classifies the Arklow Town and Environs Development Plan area as an Urban Area in terms of landscape classification. Given the plan areas location along the east coast of Wicklow the plan areas main landscape classification is determined by the Chapter 18 'Coastal Zone Management' and the objectives associated with Cell 11. This cell is described as having long sandy beaches along most of the cell, with the central harbour area the location of intensive residential and industrial development and the southern end marked by Arklow Rock. The Arklow Sand Dunes at Seabank to the north and the area around Arklow Rock – Askintinny are designated pNHAs.

The objectives for cell 11 are as follows:

1. To enhance the visual, recreational and natural amenities of the Arklow coastal area, in accordance with the policies and objectives set out in the Arklow Environs LAP and the Arklow Town Plan. (To be amalgamated through this Development Plan process).
2. To facilitate the development and enhancement of visitor and recreational facilities along the coastal area, particularly walking routes, car parking areas, signage, changing / toilet facilities and water based clubs.
3. To support and facilitate the development of marine and shipping activity in Arklow, particularly the recreational use of the existing harbour / marina and the development of a roll on-roll off port at the existing Roadstone jetty.

4.10.3 SEO, Indicator and Target

The following SEO, Indicator and Target have been identified and developed with regard to the objectives of the strategic actions mentioned above and the environmental baseline described in Section 8.

SEO Code L1	To protect and avoid significant adverse impacts on the landscape of Arklow, including landscape features such as the coastal region, Arklow Sand Dunes and designated views and prospects within the plan area.
Indicators L1:	Number of complaints received from statutory consultees regarding avoidable impacts on the landscape resulting from development which is granted permission under the Plan
Target L1:	No developments permitted which result in avoidable impacts on the landscape resulting from development which is granted permission under the Plan

Section 5 Context for the Development Plan

5.1 Legislative Context

Under Section 9 of the Planning and Development Act 2000 as amended, every planning authority must make a development plan, setting the framework for all future development in the planning authority's area for the stated period, for the whole functional area of the authority every six years.

The Arklow Town and Environs Development Plan 2011 - 2017 has been prepared in accordance with the requirements and provisions of the Planning and Development Acts 2000 as amended. It sets out an overall strategy for the proper planning and sustainable development of Arklow Town and Environs over the period 2011- 2017.

The Plan relates to the functional area of Arklow Town Council (Arklow Town) and Wicklow County Council (Arklow Environs).

5.2 Structure of the Plan

The Development Plan consists of a written statement, as detailed below, with accompanying maps. The maps give a graphic representation of the proposals of the Plan, indicating land use and other control standards together with various objectives of the Council.

The written statement comprises 11 chapters and a number of appendices, the content of which are briefly outlined below.

Chapter 1 Legislative and Plan Context

This section sets out the legislative background to the plan and the overall context of the plan area.

Chapter 2 Core Strategy

Chapter 2 sets out the overall vision for the development of the Arklow Town and Environs Area up to 2017.

Chapter 3 Settlement and Housing Strategy

This chapter sets out the population projections and housing allocations for the plan area.

Chapter 4 Main Street Strategy

Here a strategy for the rejuvenation of the main street in Arklow is set out.

Chapter 5 Transportation

This section sets out the future objectives regarding the transportation needs of the plan area

Chapter 6 Economic Development, including Retail and Tourism

Specific objectives directing employment, retailing and tourism developments to appropriate locations are set out in chapter 6.

Chapter 7 Natural and Built Heritage

Here objectives relating to the natural and built environment are set out.

Chapter 8 Service Infrastructure - Waste, Water & Energy

This section relates to Water and Sewage, telecommunications and energy infrastructure within the plan area.

Chapter 9 Social & Community Infrastructure - Recreation, Amenity

The plan strategy and objectives for meeting community, recreational, amenity and educational needs of the projected population is set out in this chapter.

Chapter 10 Action Area Plans

Details relating to the three proposed Action Area Plans at Kilbride and two at Tinahask.

Chapter 11 Land Use Zoning Objectives

Sets out specific details relating to each zoning type.

Appendices

Map 1	Land –Use Zoning
Map 2	Specific Objectives
Map 3	Built Heritage/Natural Heritages

5.3 Vision Statement

Following a public consultation process a number of key themes emerged regarding the future development of Arklow Town and Environs. These themes have been amalgamated and expressed in the following vision:

“For Arklow town and its Environs (plan area) to be a cohesive community of people enjoying distinct but interrelated urban and rural environment; where natural surroundings and important resources are protected; where opportunities abound to live and work in a safe atmosphere, allowing people to enjoy the benefits of well paid jobs, a variety of housing choices, excellent public services, ample cultural and leisure opportunities, and a healthy environment”.

5.4 Alternatives:

Section 6 & 7 of this report identify, describe and evaluate different alternative development scenarios for the Plan, taking into account the relevant land use strategic actions, the SEOs identified in section 4 as well as the geographical scope of the functional area of Arklow Town and its Environs. The evaluation of the alternatives results in the identification of potential environmental effects. These environmental effects are considered alongside planning - social and economic - effects leading to the emergence of a preferred alternative.

5.5 Interactions with relevant Planning Policy:

5.5.1 European framework

While a wide range of EU policies and directives have bearing and influence on the crafting of this plan, the principle areas of relevance to this plan are those addressing water quality and protected habitats

Water Framework Directive (2000) & Groundwater Directive 2006

The EU Water Framework Directive (WFD) is an important piece of EU environmental legislation, which aims at improving our aquatic environment. It requires governments to take a new holistic approach to managing their waters. It applies to rivers, lakes, groundwater, estuaries and coastal waters. The Groundwater Directive complements the WFD by establishing environmental objectives for groundwater chemical status and ensuring continuity with previous Groundwater Directives. These directives aim to achieve good ecological status in all waters by 2015, protect high ecological status in our pristine waters and authorities must ensure that this status does not deteriorate in any waters. Local Authorities are charged with implementing the Water Framework and Groundwater Directive objectives.

For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. The management of water resources will be based on these river basin districts. Within each River Basin District - for the purpose of assessment, reporting and management - water has been divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies. River Basin Management Plans list the current status of our waters and detail the measures required to bring those failing back to good status and maintain the high status of our pristine sites.

Habitats Directive (1992)

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the ‘Habitats Directive’ - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

5.5.2 National Framework

National Spatial Strategy 2002-2020 (NSS)

The NSS is a plan that takes a longer and more strategic view over a twenty-year period than the six-year life span of a Development Plan. Its focus is on balanced regional development throughout the regions in Ireland. Balanced regional development is defined as “developing the full potential of each area to contribute to the optimal performance of the state as a whole –economically, socially and environmentally”. The Dublin and Mid East Region being the Greater Dublin Area, of which Wicklow is a part, includes the remaining two counties of the Mid East, Kildare and Meath and the four Dublin authorities. The eastern part of the County forms part of the Dundalk – Dublin – Waterford strategic corridor. Arklow is strategically located along this corridor and as a result benefits from good linkages to air and sea international transport connections.

The National Development Plan 2007-2013 (NDP)

The ‘National Development Plan-Transforming Ireland- A better Quality of life for all’ sets out strategic development frameworks for regional development, for rural communities, for all-island co-operation and for the protection of the environment with common economic and social goals. In acknowledging the importance of the spatial management of the Country the NDP focuses upon regional development and environmental sustainability as being central to the investment structure of the plan. The NDP recognises the Dublin Metropolitan Area as the gateway within the Greater Dublin Area (of which Wicklow forms part) and the main catalyst of regional and national growth. Investment plans and priority spending areas have been identified. The integration of National Development Goals and Investment Strategies are highlighted, as are the challenges and general goals that are to be met during the term of this NDP.

Smarter Travel and Transport (National Transport Authority)

Transport 21 forms part of the NDP and comprises a ten-year investment programme for the development of the national road network, public transport and airports. It aims to expand capacity, increase public transport use, increase accessibility and integration, enhance quality and ensure sustainability.

Smarter Travel is a policy document, which sets out a broad vision for the future and establishes objectives and targets for transportation. The document examined past trends in population and economic growth and transportation and concluded that these trends are unsustainable into the future. The main objectives are to reduce dependency on car travel and long distance commuting, increase public transport modal share and encourage walking and cycling, improve quality of life and accessibility for all, improve economic competitiveness through maximising the efficiency of the transport system, alleviating congestion and infrastructural bottlenecks, minimising the environmental impact by reducing localised air pollutants and greenhouse gasses and improving security of energy supply by reducing dependency on imported fossil fuels.

The aim is that by 2020 future population and economic growth will have to predominately take place in sustainable compact urban and rural areas, which discourage dispersed development and long commuting. The documents outline ambitious targets, which involve a complete turnaround on current trends. It is envisaged that these targets will be achieved through a number of key actions, which can be grouped into four main areas:

- ⇒ Actions to reduce travel by private car and encourage smarter travel
- ⇒ Actions to provide alternatives to the private car;
- ⇒ Actions aimed at improving fuel efficiency;
- ⇒ Actions aimed at strengthening institutional arrangements to deliver the targets.

National Energy Policy

The National Energy Efficiency Action Plan 2009-2020 outlines a strategy to reduce the Country's dependence on imported fossil fuels and improve efficiency across a number of sectors as a key step in a sustainable energy policy. Energy efficiency is internationally recognised as the most cost-effective means of reducing dependence on fossil fuels. The Government's energy policy framework for the period 2007-2020 incorporates this goal and is designed to direct Ireland towards a new and sustainable energy future; one that increases security of supply, makes energy more affordable, improves national competitiveness and reduces green house gas emissions.

National Climate Change Strategy 2007-2012

This document outlines the measures that Ireland will take in order to meet its commitment to limit its greenhouse gas emissions over the 2008-2012 period to 13% above 1990 levels, which include the following policy mechanisms:

- ⇒ The need to take a long-term view having regard to likely future commitments and the economic imperative for early action.
- ⇒ The promotion of sustainable development, including integration of climate change considerations into all policy areas.
- ⇒ The protection of economic development and competitiveness, utilising market-based instruments with the exploitation of new markets and opportunities.
- ⇒ The maximisation of economic efficiency both on a macro-economic basis and within sectors;
- ⇒ An equitable approach to all sectors, having regard to the relative costs of mitigation between sectors.

National Heritage and Biodiversity Plans

A key objective of the National Heritage Plan (2002) is to "place heritage at the heart of public life". The plan recognises that heritage is communal and we all share a responsibility to protect it. Protection of heritage must begin at local level enabling citizens to become actively involved in preserving and enhancing that, which belongs to us all. While this plan sets out a vision nationally for heritage management, it emphasises the needs to manage heritage locally, through the preparation of Local Heritage Plans.

The National Biodiversity Action Plan (2002) sets out actions for the promotion and delivery of biodiversity conservation at both national and local levels. The plan calls on each Local Authority to prepare a Local Biodiversity Action Plan, and emphasises the important role of local authorities in promoting and delivering biodiversity conservation through local plans and programmes. Wicklow County Council has prepared a County Biodiversity Plan.

5.5.3 Regional Strategies

Regional Planning Guidelines for the Greater Dublin Area 2010-2022(RPG'S)

The Greater Dublin Area incorporates the Dublin Regional Authority and the Mid East Regional Authority, being the geographical and administrative areas of Dublin City, Dun Laoghaire-Rathdown, Fingal, South Dublin, Wicklow, Meath and Kildare. The Regional Planning Guidelines (RPG) is a policy document, which aims to direct the future growth of the Greater Dublin Area over the medium to long term and works to implement the strategic planning framework as set out in the National Spatial Strategy (NSS) published in 2002. The RPGs inform and direct the City and County Development Plans for each of the Councils in the Greater Dublin Area. They provide the clear policy link between national policies- the National Development Plan and the National Spatial Strategy and other national policy documents and guidance- and Local Authority planning policies and decisions.

The Regional Planning Guidelines (RPG's) make a distinction between the existing built up area and its environs, where the built up area is the "metropolitan" and the remainder the "hinterland" with a wide range of settlement sizes that have the potential to attain an enhanced level of sustainability. In this regard Wicklow is identified as the Dynamic Metropolitan cluster and Arklow is regarded as the hinterland, in this regard Arklow is identified as a large growth town II.

Greater Dublin Area Retail Strategy

The Greater Dublin Area Retail Strategy sets out a co-ordinated and sustainable approach to the assessment and provision of retailing within the Greater Dublin Area so that:

- ⇒ Adequate and suitable provision is made to meet the needs of changing population patterns, and provide for healthy competition and consumer choice.
- ⇒ Retail in suitable locations is provided and integrated within existing growth areas and public transport investment.
- ⇒ Significant overprovision, which would place more marginal locations under severe pressure and undermine sustainability driven policies aimed at revitalising town centres, is avoided.

By setting out a strategic framework for retailing, the strategy seeks to give guidance on where future retail should be provided and what issues need to be addressed. To this end, the strategy proposes a retail hierarchy as a core spatial policy around which future growth, rejuvenation and expansion in the retail sector needs to be focused. The Retail Strategy for County Wicklow is set within the context of the Retail Strategy for the Greater Dublin Area. In the regional retail strategy Arklow is identified as a level 3 Town and/or district centres & sub county town centres.

5.5.4 Local plans, strategies and studies

Wicklow County Development Plan

The County Development Plan addresses the issues set out in Section 10 of the Planning and Development Act 2000. In the settlement hierarchy of County Wicklow, Arklow is designated as a Large Growth Town II. These settlement types are defined as the most likely to be successful in attracting concentration of employment generating investment and these areas should have the greatest accessibility/connectivity to public transport. These centres should be economically self-sustaining, with population, including its catchments, which are able to support a wide range of facilities. While only that part of the plan area outside of the administrative boundary of Arklow Town Council is bound by the County Development Plan, the County Development Plan includes the following strategies that apply also in the Town Council area:

- ⇒ The County Wicklow Retail Strategy
- ⇒ The County Wicklow Housing Strategy

County Development Board (CDB) 'Outlook – a 10 year strategic plan for County Wicklow'

The main function of the County Development Board is to co-ordinate the plans and activities of all the main players in County Wicklow. This will ensure that the people of Wicklow will benefit from a more efficient and effective service delivery. It is important that any overlaps or gaps in this delivery are identified and addressed, in an integrated way. In order to achieve this, the CDB has drawn up a ten year Strategy for the Social, Economic and Cultural Development of County Wicklow. In addition, the strategies and operational plans of agencies and groups in the County will be proofed against the CDB strategy. This plan can be seen as a framework for decision-making, a look into the future, a problem-solving initiative and a shared values document. The strategy will be delivered by the member organisations of the CDB through their own operational plans. Both CBD strategies and development plans are required to formulate strategies for the development of counties and consider the socio-economic and physical issues. They exist at parallel statements on the future development of the area. The focus of the CDB Strategy is on economic, social and cultural development, while the focus of the development plan is on physical development and land-use and how this can serve wider social, economic and environmental objectives. Land-use decisions must be informed by socio-economic considerations, while the spatial dimensions of the CBD strategy will reflect the land-use policies and objectives of the development plan.

IFPLUTS

An Integrated Framework Plans for Land Use and Transportation (IFPLUT) was prepared for Arklow in 2003. The purpose of an integrated land use and transport plan is to review the planning, development and transportation context of a settlement and its environs, and to provide land use and transportation guidance for future development.

While the principal role of such studies is to inform local planning strategies, transport has a regional dimension and therefore these plans were considered in the crafting of the town and environs plan.

Wicklow Outdoor Recreation, Sports and Play Strategies

Strategies have been adopted for 'outdoor recreation', 'sports and recreation' and 'play' during the life of the County Development Plan 2004-2010. All of these strategies set out policies and objectives with the ultimate goal of improving quality and life and wellbeing of Wicklow residents and visitors, and making maximum use of the County's resources, in a sustainable and sensitive manner. These strategies particularly influence the new Development Plan in the areas of tourism and recreation and community development.

Wicklow Waste Management Plan

A new County Waste Management Plan was adopted in 2006. The overriding aim to reduce and manage waste pervades all aspects of land use and development planning and therefore is influential in the formulation of the Development Plan.

Ministerial Guidelines

Ministerial Guidelines have been prepared on a wide range of topics, and regard has been taken of all such guidelines in the preparation of this plan. Of particular relevance however are the following:

Guidelines on Sustainable Residential Development in Urban Areas

These guidelines set out the manner in which development plans should contain policies and objectives underpinning the creation of sustainable developments. They also include clear guidance on implementation measures, particularly with regard to the phased and co-ordinated provision of physical infrastructure, public transport and community facilities.

Guidelines on Flood Risk Management

These Guidelines contain advice to local authorities to incorporate measures to manage the risk of flooding from climate change and rising sea levels in their development plans and development management systems. Advice is also given to developers and architects on designing for flood risk including sustainable urban drainage systems. In the case of Arklow, as per these guidelines, a justification test has been carried out in the preparation of the Town and Environs Development Plan, which relates to the zoning of lands.

Section 6 Description of Alternative Plan Scenarios

6.1 Introduction

One of the critical roles of a SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative strategies for accommodating the future development of the Arklow Town and Environs area within the constraints imposed by intrinsic environmental conditions and higher-level strategies. In this instance the consideration of conceptual alternatives arose during the early stages of plan inception. The principal findings are presented in this section.

The SEA Directive requires that reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated for their likely significant effects on the environment. Alternatives were formulated through consultation between the SEA and Plan making teams.

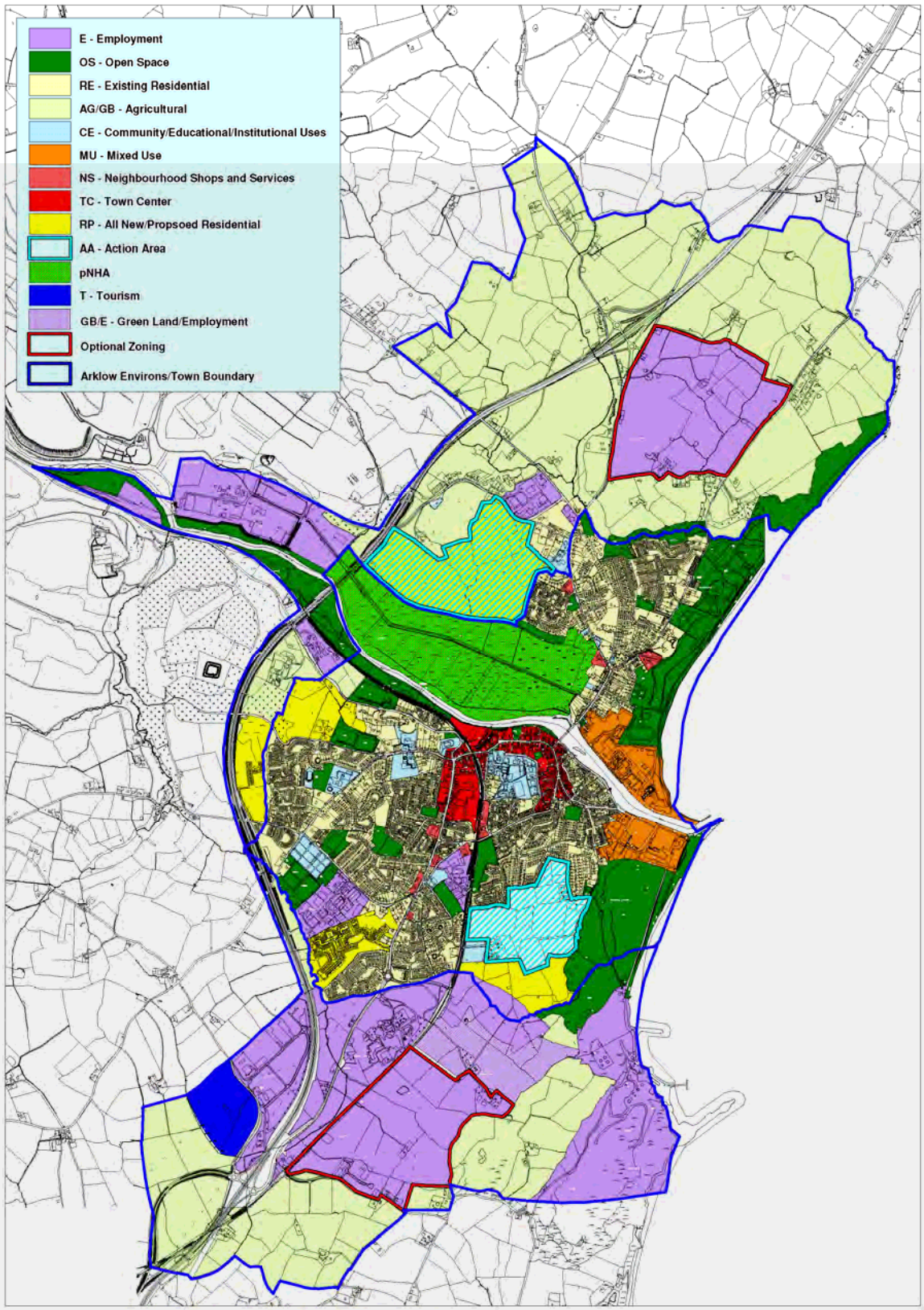
Later sections of this report identify, describe and evaluate different alternatives of how to achieve the overall strategy - taking into account the relevant land use strategic actions and the SEOs identified previously, as well as the geographical scope of the Development Plan. The evaluation of alternatives results in the identification of a preferred alternative, which will be submitted to the Elected Members of the Arklow Town and Wicklow County Councils along with this report for consideration.

6.2 Identification and Description of Alternative Plan Scenarios

The following section of this environmental report contains details of the alternative types of plan strategies that could be adopted. In order to fully understand the origins of these plan scenarios it is firstly important to provide a description and map of the existing plans in place namely the Arklow Town Development Plan and the Arklow Environs Local Area Plan.

The Arklow Town and Environs Development involves an amalgamation of these two previous plans in order to provide a more coherent strategy for the development of the overall area of Arklow. The following land use map provides an overview of these existing plans combined using the current standardized zoning colouring used by Wicklow County Council.

Figure 6.1: Amalgamated Map of the existing Arklow Town Development Plan and the Arklow Environs Local Area Plan



6.3 General Description of Existing Plans

The Arklow Town Development Plan

The Arklow Town Development Plan relates to the area located within the smaller Blue boundary as indicated in figure 6.1 above. The plan area contains the mainly Urban/more developed areas including the town centre, the Water Front Development Zones, community/amenity uses along the coast and a new Action Area Plan located at Tinahask. The Plan boundary also includes Arklow Marsh, which is a proposed natural heritage area.

The Arklow Environs Local Area Plan

The Arklow Environs Plan area contains all lands located within the larger blue Boundary as indicated in figure 6.1 above. This area is less developed than the town plan lands and contains large tracts of agricultural zonings with the majority of the employment zonings for the Arklow Area being located to the north and south of the town development boundary. Two sections of the employment zonings, the first at Killiniskyduff and the second at Kish are included as optional employment zonings for the lifetime of the plan. The environs area also includes a large Action Area at Kilbride and the existing quarry activities at Arklow Rock.

6.4 Identification of Alternative Plan Scenarios

A range of three potential scenarios for the types of planning strategies that could be adopted are described in this section. They represent increasingly intensive and extensive development. A number of features are core to all scenarios, namely the location, extent and use of lands adjoining Arklow Marsh (pNHA), zoning along the coastal area and within new green field lands.

Scenario 1 Minimal Development Envelope

Characteristics of this scenario as set out below in figure 6.2 include extensive green buffers along local green corridors, a strong recognition of ecological designations within the plan area, a strong recognition of the 1000m-consultation zone from the designated Seveso site, strict implementation of the Flood Management Guidelines. This scenario places a strong emphasis on the protection of locally important sites as identified in the Urban Habitat Study carried out in the Arklow area and along the coast of the plan area.

The plan also places an emphasis on the development of lands in line with adequate infrastructure and therefore reduces the extent of lands zoned for residential and employment purposes in line with the projected demand arising from existing permissions and uses. This specifically relates to the omission of lands at Tinahask located within the Arklow Development Plan Boundary where an action area plan for these lands was previously included to provide for primarily residential development. This action area has been omitted, as the actual potential WWTP capacity of 18,000 would not be able to accommodate the level of potential development in this area alongside other zonings¹³ within the overall plan area.

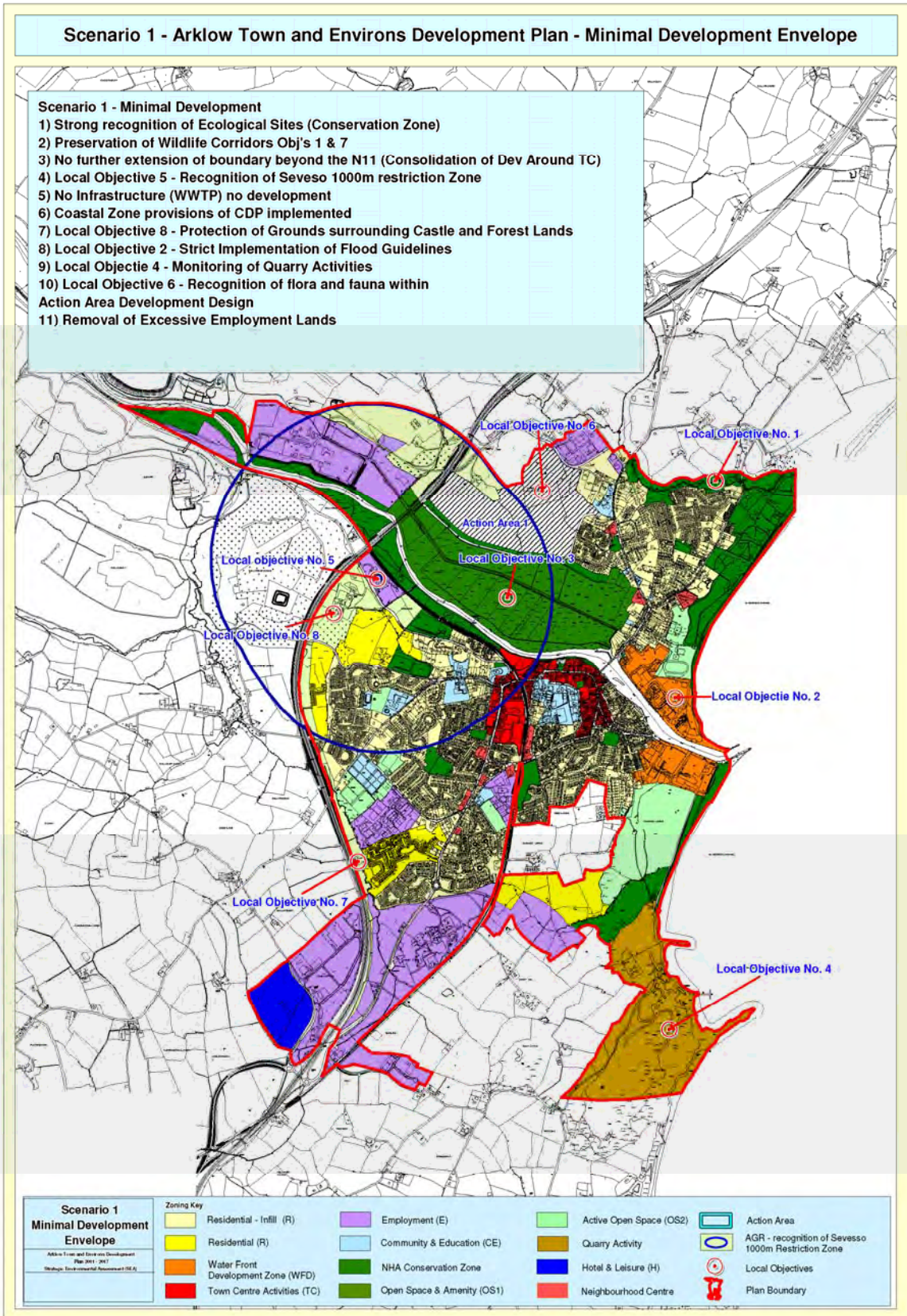
This scenario includes the following local objectives:

- ⇒ **Local Objectives 1 and 7** - Provision of a green buffers and preservation of wildlife corridors.
- ⇒ **Local Objective 2** – Strict compliance with the Flood Management Guidelines.
- ⇒ **Local Objective 3** – provision of a conservation zoning relating to Arklow Marsh.
- ⇒ **Local Objective 4** – Strict monitoring of existing and future quarry activities.
- ⇒ **Local Objective 5** – A strong recognition of the 1000m-restriction zone around the Seveso Site.

¹³ Lands within the Kilbride Action Area have remained in place in this scenario as these lands are located within the Arklow Environs Local Area Plan area and therefore cannot be removed/down zoned, as there is no statutory process in place for this procedure. Lands at Tinahask have been removed from this scenario as they fall within the jurisdiction of the Arklow Town Development Plan where lands can be down zoned under Part II Section 10(8).

- ⇒ **Local Objective 6** – Protection of wildlife corridors in objectives relating to the development of Action Area Plan at Tinahask.
- ⇒ **Local Objective 8** – Strong protection of castle and forest lands to the east of the plan area.

Figure 6.2 – Scenario 1



Scenario 2 Moderate Development Envelope

Characteristics of this scenario are similar to scenario 1 with the following exceptions – The employment lands omitted in scenario 1 (located at Sea Bank to the north and Kish to the south) have been included in the plan area as optional zonings for a stand alone large scale employment development. The plan also includes Action Areas in Tinahask and Kilbride.

The scenario includes the following local objectives:

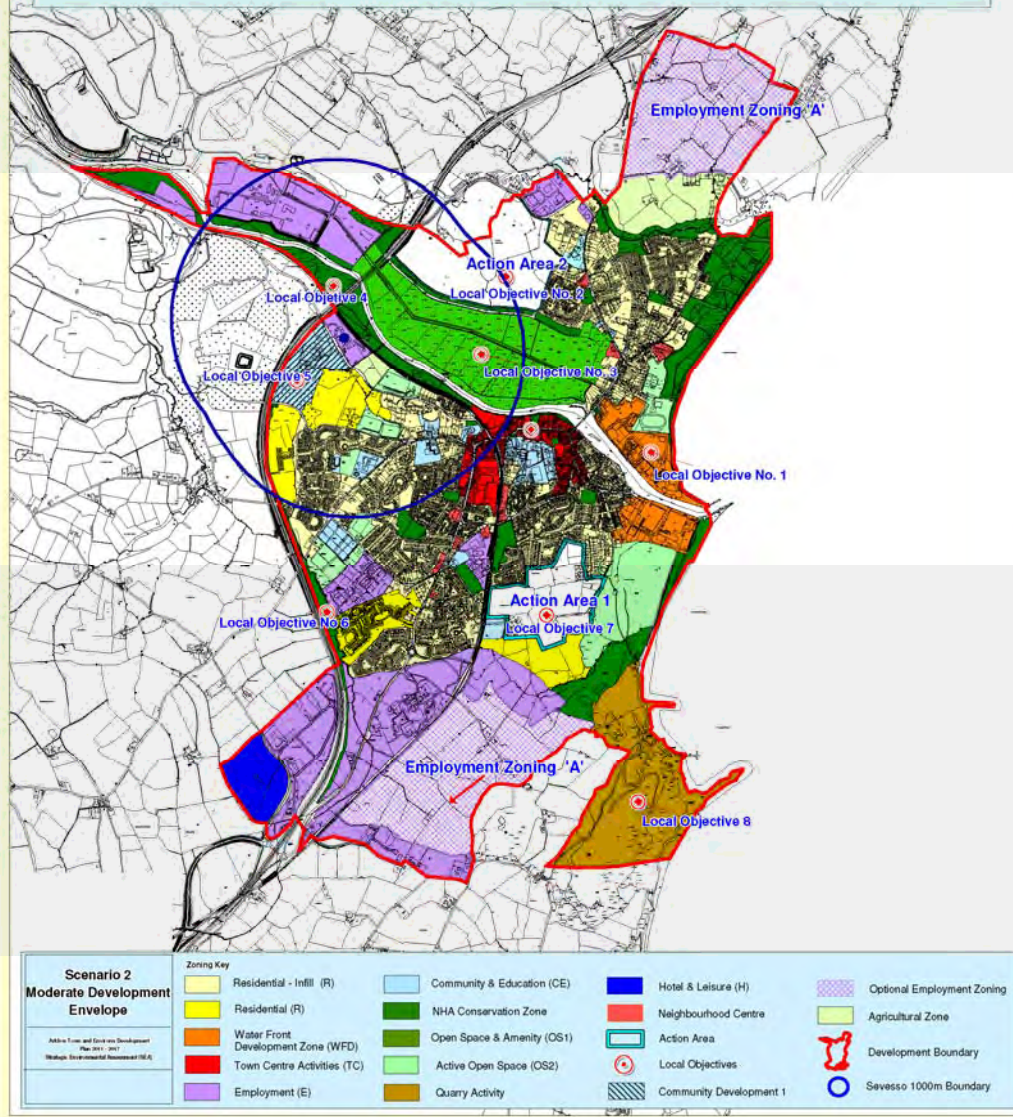
- ⇒ **Local Objectives 1** - Strict compliance with the Flood Management Guidelines
- ⇒ **Local Objective 2** – Development of an Action Area Plan (Kilbride) in a sensitive manner recognizing ecological designations adjoining these lands.
- ⇒ **Local Objective 3** – Provision of a conservation zoning relating to Arklow Marsh.
- ⇒ **Local Objective 4** – Provision of a green amenity corridor along the Avoca River.
- ⇒ **Local Objective 5** – Strong protection of castle and forest lands to the east of the plan area.
- ⇒ **Local Objective 6 & 7** - Protection of wildlife corridors and protection of locally important species and habitats in the objectives set out for the Action Area Plan at Tinahask.
- ⇒ **Local Objective 8** – Strict monitoring of existing and future quarry activities.

Figure 6.3 – Scenario 2

Scenario 2 - Arklow Town and Environs Development Plan - Moderate Development Envelope

Scenario 2 - Moderate Development

- 1) Balanced approach between Social/Economic and Environmental Considerations
- 2) Strict adherence to Flood Management Guidelines throughout plan area (WFD Zone)
- 3) Provision of Green Buffer in Kilbride area protecting pNHA
- 4) Development of action areas in an environmental sustainable manner recognising and enhancing existing flora
- 5) Provision of Green Corridor along Avoca River (Local Objective 4)
- 6) Continuing preservation of forestry to the east of the plan area (Local Objective 5)
- 7) Provision of Green Corridor along the eastern boundary of the N11 (Local Objective 6)
- 8) Monitoring and restriction on Quarry Activities
- 9) No development can take place until such time as adequate infrastructure is in place or where a developer can treat the waste water on site and treat appropriately
- 10) Proposals for development within Action Area 2 must be accompanied by an assessment of the impact on the pNHA
- 11) Provision of Employment lands with 75% headroom
- 12) Recognition of Seveso 1000m Restriction Zone



Action Area 1: Objectives for the development of Residential, Community and Active Open Space facilities.

Scenario 3 Maximum Development Envelope

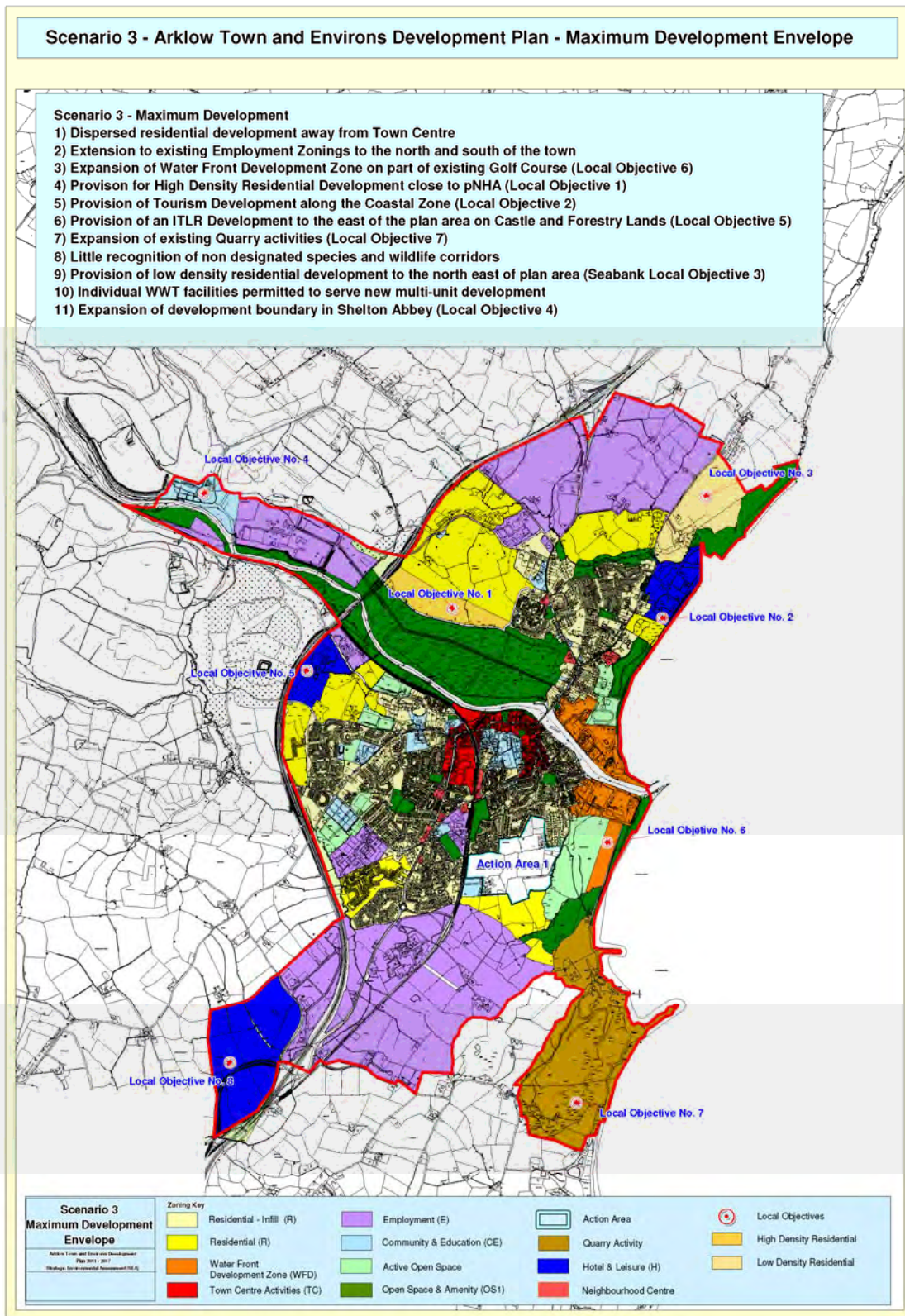
This scenario (see figure 6.4) represents a further intensification of development and associated impacts than those set out in scenario 2 with further encroachment of development onto greenfield lands to the north and south of the plan area. The scenario envisages the development of the coastal zone to the north of the Avoca Estuary at Seabank facilitating residential, hotel and leisure facilities while proposing an extension of the Water Front Development Zone onto the existing golf course lands to the south of the plan area. A high-density zoning is provided for in the Kilbride area bordering the existing Arklow Marsh pNHA. The plan also provides for extensive employment lands with limited restrictions to the north and south of the plan area with low-density development to the northeast at sea bank. Limited protection of existing ecological sites is provided with Arklow Marsh being zoned open space.

Further zoning is proposed beyond the N11 with Shelton Abbey being zoned in recognition of its existing use and included in the plan area. Provision is also made for the expansion of the existing quarry activities at Arklow Rock.

The scenario includes the following local objectives:

- ⇒ **Local Objectives 1** – Provision of high density development bordering Arklow Marsh
- ⇒ **Local Objective 2** – Provision of Tourism and Leisure development alongside residential development in the coastal area.
- ⇒ **Local Objective 3** – Provision of low-density residential development with individual wastewater treatment facilities.
- ⇒ **Local Objective 4** – Extension of plan boundary and inclusion of Shelton Abbey.
- ⇒ **Local Objective 5 & 8** – Zoning for Integrated Tourism and Leisure Facilities.
- ⇒ **Local Objective 7** – Expansion of Quarry activities at Arklow Rock.

Figure 6.4 – Scenario 3



Action Area 1: Objectives for the development of Residential, Community and Active Open Space facilities.

Section 7 Evaluation of Alternative Plan Scenarios

7.1 Introduction

The objective of this section is to determine the relative merits of a range of alternative scenarios under a range of types of plan regimes. This determination seeks to understand whether each alternative is likely to improve, conflict or have a neutral interaction with the provisions of the Plan as well as the certainty of that interaction. A series of Strategic Environmental Objectives were developed based on an understanding of the existing and emerging environmental conditions facing Arklow Town and its Environs. These were then used to assess the likely effect of these different strategic alternatives for the Plan. The SEOs and the Scenarios are then arrayed against each other to identify which interactions – if any – caused impacts on specific components of the environment.

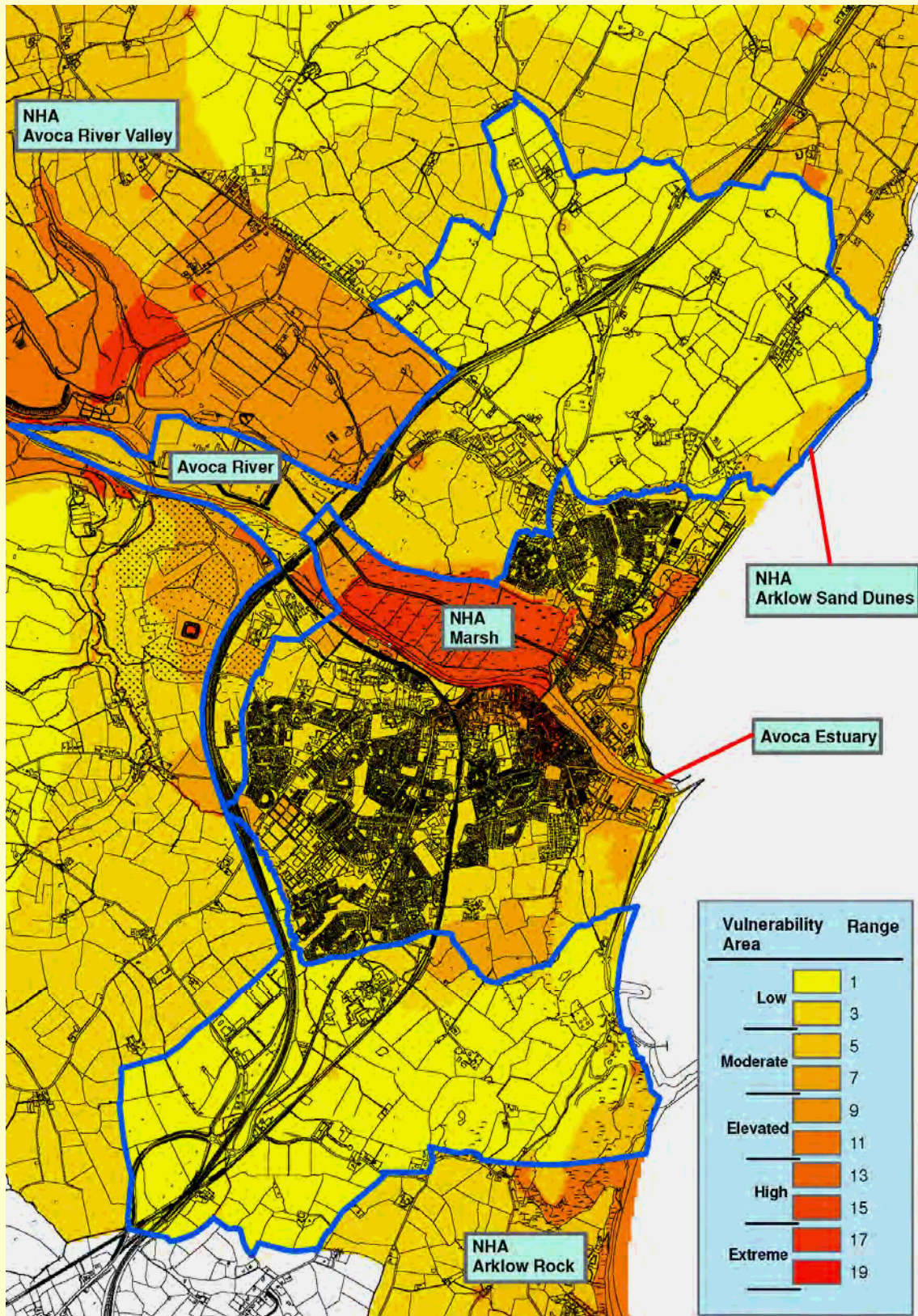
7.2 Methodology

Existing Environment

Use has been made of the description of the environmental baseline, including the maps, which spatially represent components of the environmental baseline (See Section 3) in order to identify how each alternative scenario would impact upon the environment.

The overall sensitivity map used to illustrate the environmental sensitivities of the plan area, places an equal weighting on all environmental sensitivities as set out previously in section 3.12 and as demonstrated in figure 7.1 below. This map was then used to overlay the specific zonings for each alternative plan scenario from which the impacts of each scenario on the existing environment could be evaluated.

Figure 7.1 – Overall Sensitivity Map



7.3 Strategic Environmental Objectives

Based on an understanding of the existing and emerging environmental conditions in the Arklow Town and Environs area, a series of SEOs were developed in order to assess the likely environmental effects, which would be caused by the implementation of each of the three alternative scenarios described and mapped in Section 6. The alternatives are evaluated using compatibility criteria (see Table 7.2) to determine how they are likely to affect the status of these SEOs. The interactions between the SEOs and the alternatives determine the likely significant effects of implementing the Plan. These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 7.1 brings together all the SEOs, which have been developed from international, national and county policies, which generally govern environmental protection objectives.

The SEOs and the alternative scenarios are arrayed against each other in order to identify which interactions - if any - would cause impacts on specific components of the environment.

Where the appraisal identifies a likely conflict with the status of an SEO, the relevant SEO code is entered into the conflict column - **e.g. B2** To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites such as Arklow Marsh, Arklow Rock Askintinny and Arklow Sand Dunnes, by development within or adjacent to these

Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
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Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives

Table 7.1 - Strategic Environmental Codes and Objectives – for the Arklow Town and Environs Development Plan

Code	SEO
B1 B - Biodiversity	To ensure compliance with the Habitats Directive and National Biodiversity Plan with regard to protected species and habitats both within and outside of designated sites in accordance with the provisions of Articles 6 and 10 of the Habitats Directive.
B2	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites such as Arklow Marsh, Arklow Rock Askintinny and Arklow Sand Dunes, by development within or adjacent to these sites
B3	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape – by sustaining, enhancing or - where relevant - preventing the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1 Human Health	To protect human health from hazards or nuisances arising from exposure to incompatible land uses in particular from the re-use of brown field lands in areas where previous uses may have contaminated lands such as the Water front Development Zone in Arklow.
R1 Re-use/Regeneration	Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands
W-S Water Surface	To maintain and improve, where possible, the quality of Rivers, Lakes and other surface waters
W-G Water Ground	To prevent pollution and contamination of ground water
W-F Water Flooding	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
AQ1 Air Quality 1	To reduce travel related greenhouse emissions to air
AQ2 Air Quality 2	To reduce car dependency within the plan area by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
WW Waste Water	To serve new development with appropriate waste water treatment
DW Drinking Water	To serve development within the Plan area with drinking water that is both wholesome and clean
AH1 Archaeological Heritage	To protect the archaeological heritage of Arklow including entries to the Record of Monuments and Places – including the towns Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
AH2 Architectural Heritage	To preserve and protect the special interest and character of Arklow's architectural heritage including entries to the Record of Protected Structures, and their context within the surrounding landscape where relevant
L1	To protect and avoid significant adverse impacts on the landscape of Arklow, including landscape features such as the coastal region, Arklow Sand Dunes and designated views and prospects within the plan area.

7.4 Evaluation of Alternative Scenarios¹⁴

Scenario 1 Minimal Development Envelope

Environmental Effects

- ⇒ Encouraging walking and public transport use over the use of the private car will help to promote sustainable patterns of mobility – with beneficial effects on energy use and emissions to air¹⁵.
- ⇒ Encouraging the development of vacant and under-utilised sites in the Town will have beneficial effects of minimising use of undisturbed lands and consequently will contribute to the protection of multiple environmental components¹⁶.
- ⇒ Consolidation of the existing town centre may increase pressures on concentrations of protected structures and the zone of archaeological potential¹⁷.
- ⇒ Zoning of Arklow Marsh pNHA as a conservation Zone and provision of a green buffer will facilitate appropriate management of this area¹⁸.
- ⇒ A strong recognition of flood management within the Water Front Development Zone objectives and the maintenance of existing open space to the north of the plan will contribute towards preventing increases in flood risk at a number of sites¹⁹.
- ⇒ The provision of a strict objective that no new residential development will be permitted without adequate wastewater treatment infrastructure will significantly benefit existing water resources, human health and flora and fauna in the plan area²⁰.

Critical Planning Evaluation

- ⇒ The efficient re-use/regeneration of lands within the Water Front Action Area Development Zone with strong links to the existing town centre uses.
- ⇒ The facilitation of more efficient use of the town centre and within specific identified opportunities.
- ⇒ Encouragement of more sustainable modes of transport such as walking and cycling.
- ⇒ The promotion of the coastal area for tourism activities
- ⇒ The provision of a more compact plan area closely centred around the town centre activities allowing for more sustainable forms transport.

Planning Effects

- ⇒ Responds to the relevant national/regional planning strategies including the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area.
- ⇒ Requires the provision of wastewater treatment infrastructure in order to facilitate development.
- ⇒ Provides for specific guidance on the density and quality of new development within the town centre opportunity sites.
- ⇒ Requires specific local planning and urban design guidance for the development of the Water Front Development Zone – Action Area.

Scenario 2 Moderate Development Envelope

Environmental Effects

¹⁴ Footnotes like this are used in this section in order to identify instances where interactions between the relevant Scenario and the relevant SEOs occur. The nature of these interactions is identified on Table 7.2.

¹⁵ SEO HH1 AQ1 AQ2

¹⁶ SEO's B1, B2, B3, HH1, R1, W-S, W-G, W-F, AQ1, AQ2, DW, AH1, AH2, L1.

¹⁷ SEO's AH1 & AH2

¹⁸ SEO's B1, B2, B3, W-F,

¹⁹ SEO's HH1, W-F,

²⁰ SEO's B1,B2,B3, HH1, W-S, W-G, WW, DW, L1.

- ⇒ The additional zoning of lands for employment purposes to the north and south will lead to less sustainable patterns of mobility – with attendant increases in energy consumption and emissions to air. This zoning will also lead to an encroachment on undisturbed pastures and this loss of soils will lead to reduction of both species and habitats²¹.
- ⇒ Encouraging the development of vacant and under-utilised sites in the Town will have beneficial effects of minimising use of undisturbed lands and consequently will contribute to the protection of multiple environmental component²².
- ⇒ Zoning of Arklow Marsh pNHA as a conservation zone and provision of a green buffer will facilitate appropriate management of this area²³.
- ⇒ The inclusion of Action Area 1 at Tinahask for development will lead to a reduction in both species and habitats identified in this area through the Urban Habitat Study²⁴.
- ⇒ A strong recognition of flood management within the Water Front Development Zone objectives and the maintenance of existing open space to the north of the plan will contribute towards preventing increases in flood risk at a number of sites²⁵.

Critical Planning Evaluation

- ⇒ The efficient re-use/regeneration of lands within the Water Front Action Area Development Zone with strong links to the existing town centre uses will benefit town centre retailing and encourage the use of more sustainable modes of transport such as walking and cycling.
- ⇒ The inclusion of excessive employment zoned lands for single undivided/stand alone employment purposes will lead to an increased land take and increases in traffic in these areas. The inclusion of the northern employment zone at Killinskyduff is likely to impact on the N11 interchange in this area.
- ⇒ Local Objective within new zonings and strong ecological corridors will encourage the sustainable development of these areas benefiting local flora and fauna.
- ⇒ The promotion of the coastal area for tourism activities

Planning Effects

- ⇒ Provides for a balanced approach between social, environmental and economic factors.
- ⇒ Requires the provision of WWT infrastructure in order to facilitate development.
- ⇒ Provides for specific guidance on the density and quality of new development within the town centre opportunity sites.
- ⇒ Requires specific local planning and urban design guidance for the development of the Water Front Development Zone – Action Area.
- ⇒ Provides for an increased amount of employment lands exceeding the requirements of the projected population but counteracts this to an extent with specific objectives restricting the type of development allowable within these zones.

Scenario 3 Maximum Development Envelope

Environmental Effects

- ⇒ Zoning of lands resulting in the extension of the urban footprint of the plan area will lead to less sustainable patterns of mobility – with attendant increases in energy consumption and emissions to air²⁶, encroachment on undisturbed pastures and loss of soils will lead to a reduction of both species and habitats²⁷. This greenfield development will reduce the protection of a number of other environmental components²⁸.

²¹ SEO's HH1, B1, B2, B3, AQ1, AQ2, L1

²² SEO's B1, B2, B3, HH1, R1, W-S, W-G, W-F, AQ1, AQ2, DW, AH1, AH2, L1.

²³ SEO's B1, B2, B3, W-F,

²⁴ SEO's B1, B3

²⁵ SEO's HH1, W-F,

²⁶ SEO HH1, AQ1, AQ2

²⁷ SEO B1, B2, B3

²⁸ SEO's B1, B2, B3, R1, W-S, W-G, AQ1, AQ2, WW, DW, L1

- ⇒ The provision of extensive zonings along the coastal area will adversely impact on the coastal landscape²⁹.
- ⇒ Provision of individual on site effluent treatment systems to serve development in the absence of adequate WWT infrastructure will cause a significant negative impact on water resources, habitats and species³⁰.
- ⇒ The designation of Arklow Marsh pNHA as 'Open Space' will reduce the amount of protection on these lands³¹.

Critical Planning Evaluation

- ⇒ All forms of development are more likely to take place on the edges of the town, where greenfield land is freely available.
- ⇒ Impacts on the N11 interchange to the north of Arklow arising from increased residential and employment development is likely to create traffic congestion entering the town centre across the 19 arch bridge at Ferrybank.
- ⇒ The development pattern is likely to detract from the town centre with increased vacancies on the existing main street and lack of critical mass resulting in a less vibrant town centre.
- ⇒ The quantum of lands proposed for rezoning is not consistent with any housing need Reduction in agricultural land base on the edge of the existing town.

Planning Effects

- ⇒ Fails to respond to the relevant national/regional planning strategies including the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area.
- ⇒ Leads to an uncoordinated use of lands with disconnected neighbourhoods and isolated areas of employment.
- ⇒ Promotes unsustainable modes of transport such as private car.
- ⇒ Would negatively impact on the character of the coastal zone through extensive tourism and residential zonings.
- ⇒ Further encroachment to the west of the N11 through zoning at Shelton Abbey.

²⁹ SEO's B1, B2, B3 L1

³⁰ SEO's B1, B2, B3, HH1, R1, W-S, W-G, WW, DW.

³¹ SEO's B1, B2, B3, W-F,

7.5 Evaluation Against SEO's

Table 7.2 below provides an evaluation of each of the alternative development scenarios for the Plan against the Strategic Environmental Objectives (SEOs).

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- would be mitigated	No Likely interaction with status of SEOs
Scenario 1	B1, B2, B3, HH1, R1, WS, WG, WF, DW, AH1, AH2, L1 (Protection of various environmental components resulting from minimising greenfield development). AQ1, AQ2 , (reducing travel emissions, energy usage and encouraging sustainable mobility) WW , (strictly no development unless adequate WWT in place)		AH1, AH2 (Consolidation of existing town centre may conflict with Archaeological and Architectural Heritage), HH1 , (Regeneration of potentially contaminated lands within the WFD zone) B1, B2, B3, R1, WS, WG, WF, WW, DW, L1 (Conflicts with various environmental components and projects will have to be mitigated)	
Scenario 2	B2 , (strict protection of pNHA and ecological corridors) HH1 (through appropriate designation of lands for development) R1 (promotion of regeneration of town centre sites.	AQ1, AQ2 , (Expansion of development boundary will lead to increases in travel related emissions, energy usage) B1, B2, B3, L1 (due to direct impacts as a result of limited greenfield development to the north and south of the plan area in Employment Zonings 'A')	B1, R1, W-S, W-G, W-F, DW, L1, AH1, AH2 (Reduced protection of various environmental components resulting from increasing impingement onto greenfield lands). HH1 , (Regeneration of potentially contaminated lands within the WFD zone)	
Scenario 3		AQ1, AQ2 , (Expansion of development boundary will lead to increases in travel related emissions, energy usage) B1, B2, B3, L1 (reduced protection of pNHA and due to direct impacts as a result of greenfield development) WW, HH1, DW (allowance for individual WWTP to serve new developments)	R2, WS, WG, WF, DW, AH1, AH2 , (Reduced protection of various environmental components resulting from increasing impingement onto greenfield lands). HH1 , (Regeneration of potentially contaminated lands within the WFD zone)	

7.6 Overlay Mapping

In order to identify the extent to which environmental sensitivities are likely to be impacted upon by the implementation of the Plan alternatives, overlay mapping (which weighs environmental sensitivities and maps them overlapping proposed zonings as shown under Section 3 and 6) was once again used. As mentioned above Figure 7.1 Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight) was used for this purpose.

7.7 Methodology

To carry this out effectively, each land use type was provided with a weighting, which was carried forward through each of the alternative plan scenarios. The weighting system applied to each type of land use was decided upon in consultation with the plan making team. The weighting system was based on the level of potential impact (on a scale of 1-10) each type of land use was perceived to generally have on the receiving environment. Table 7.3 below sets out the weighting system applied to each zoning type.

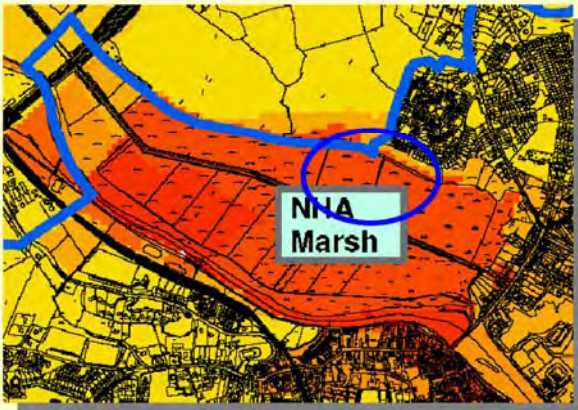
As can be seen from this table, quarry activities were given a weighing of 10, maximum impact as the processes involved in quarrying were deemed to have the most significant impact on the receiving environment. The Conservation zoning applied at Arklow Marsh in Scenarios 1 and 2 was given the lowest impact rating of 0 to 1 as the this type of zoning was deemed to have a negligible impact if any on the receiving environment given its protective purposes.

Table 7.3 – Weightings applied to Land Use Zoning Objectives:

Zonings	Weight	Zonings	Weight	Zonings	Weight
Conservation Zone	0-1	Community Zonings all)	4	WFD Mixed Use	8
Agricultural Zone	1	Town Centre	5	Action Area Plans	8
Open Space	2	Low Density Residential	6	New Residential Medium	9
Active Open Space	3	Hotel and Leisure	6	High Density Residential	10
Existing-Residential	4	Employment	7	Quarry Activity	10

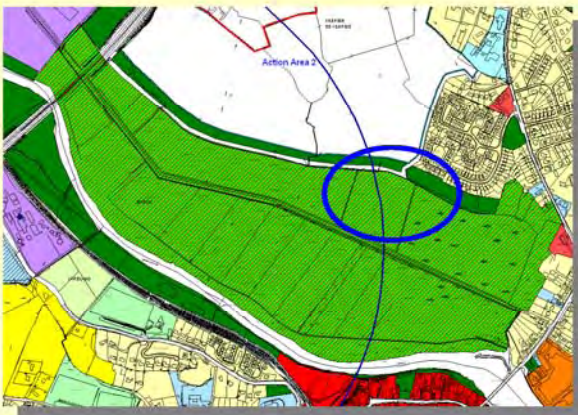
Once the weightings had been applied to each zoning in the alternative plan scenarios Geographical Information Systems (GIS's) was used to overlay the land use scenario map on top of the overall sensitivity mapping. The mapping system was then used to calculate the potential vulnerability of all land within each of the alternative plan scenarios. For each plan scenario a vulnerability range of 2 representing (low vulnerability) to 60+ (high vulnerability) was used. The following provides a visual example of how GIS's was used to calculate and produce the vulnerability maps for each scenario based on the lands highlighted within the Arklow Marsh area.

Example of Overlay Mapping Methodology



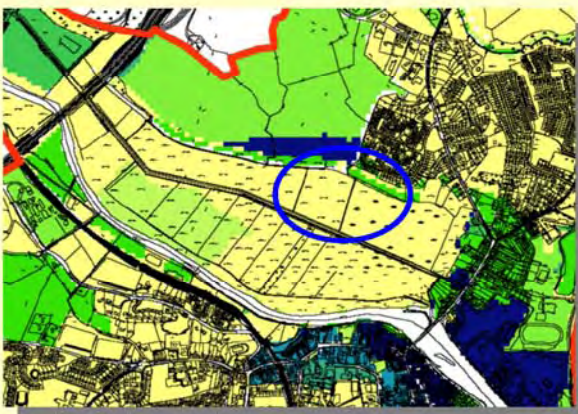
Overall sensitivity Map:

Here Arklow Marsh is shown where an overall sensitivity range of 13 has been derived as set out in section 3.12. This indicates that this area is highly sensitive.



Scenario 2 Map:

Scenario 2 provides for a zoning objective of a "conservation zone" for Arklow Marsh, which has been given a weighting of 1 (impact of zoning on landscape – least impact as set out in the above table)

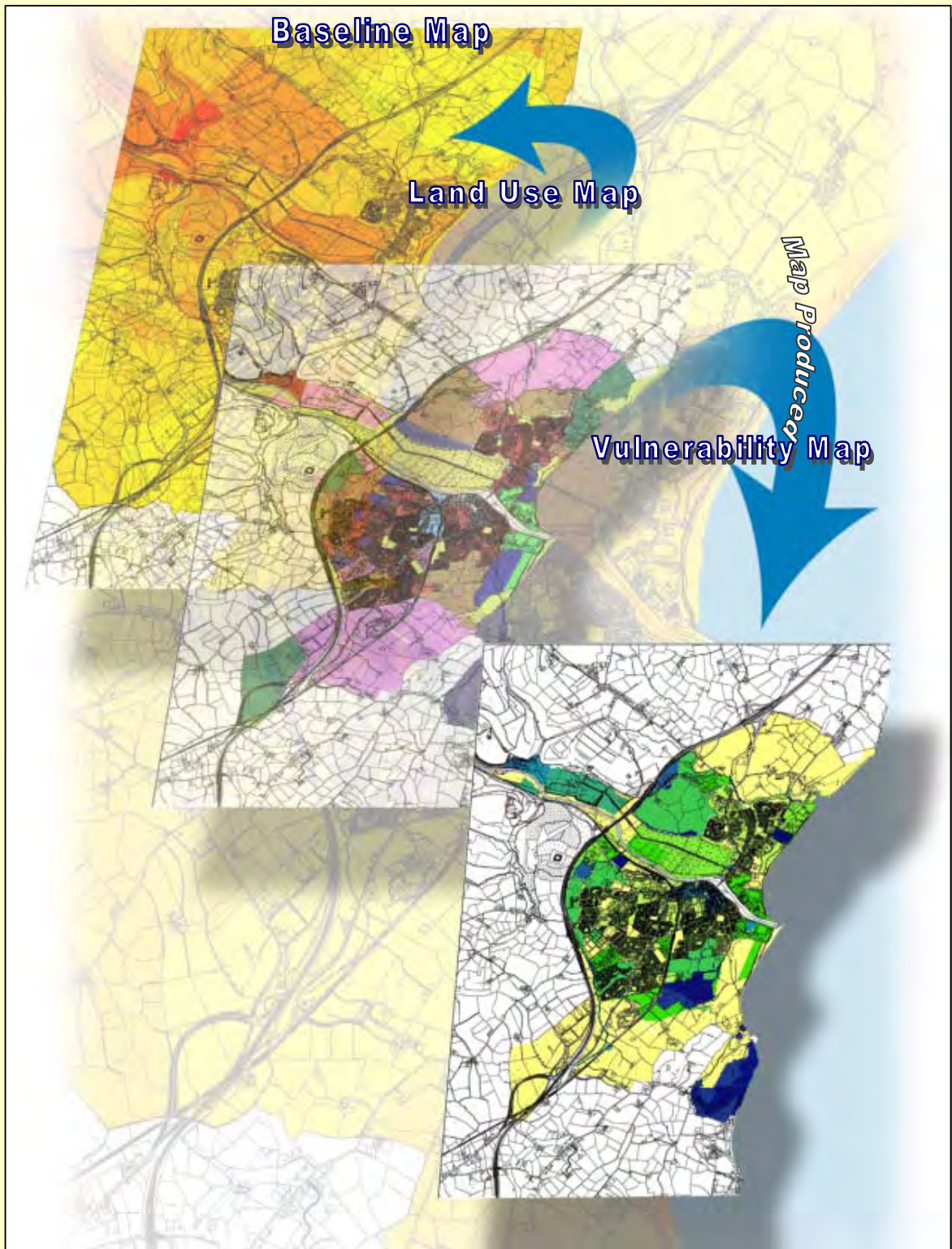


Vulnerability Map:

When the weighting from the overall sensitivity map (13) is multiplied by the weighting applied from the zoning objectives (1) (conservation zone – least impact) a vulnerability rating of 13 is derived.

This indicates that the lands use zoning objective of a conservation zone as proposed in scenario 2 will have a negligible if any impact on the existing Arklow Marsh

Figure 7.2 – Graphic of land use map being overlaid on top of the Baseline Map to derive the impact of each plan scenario on the plan area



7.8 Evaluation against overlay mapping

The following figures illustrate and quantify the areas, which are likely to be impacted upon by the provision of each plan scenario. As set out above each scenario was over layed on top of the overall sensitivity map in order to decipher what impacts each plan scenario was likely to have on the receiving environment.

Figure 7.3 – Scenario 1 Overlay Mapping

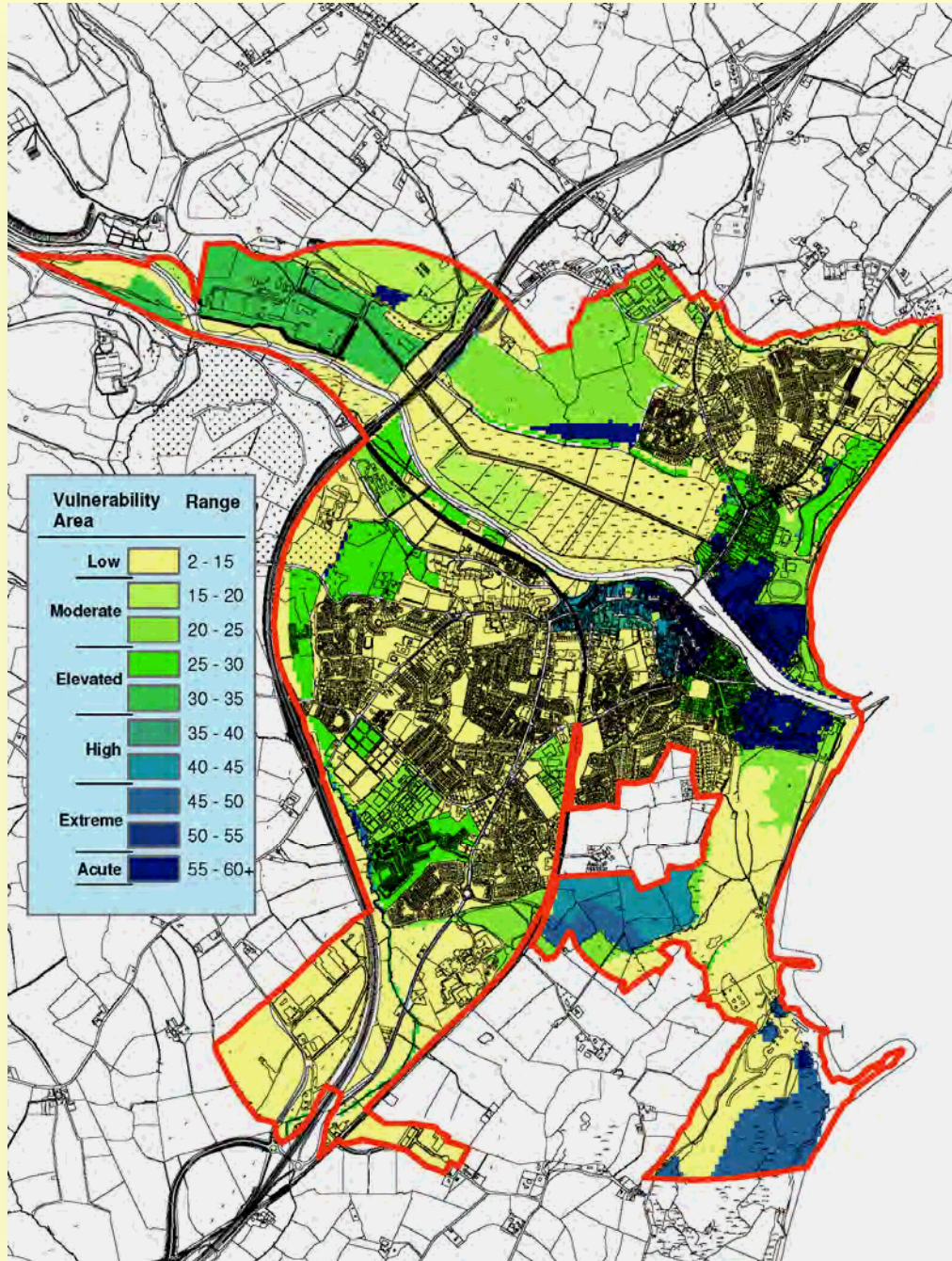


Table 7.4 – Overlay Mapping quantifications of scenario 1

Vulnerability Area	Area (Hectare)	% of Development Pressure Areas covering each Vulnerability Area
1 Low	602.395 Ha	61.8 %
2 Moderate	143.685 Ha	14.74 %
3 Elevated	128.616 Ha	13.19 %
4 High	29.5283 Ha	3.02 %
5 Extremes	29.1835 Ha	2.99 %
6 Acute	40.9497 Ha	4.2 %
Total	974.357 Ha	100%

Environmentally vulnerable areas most likely to be affected by scenario 1

Scenario 1 – (minimal development envelope) covers a smaller land area than scenarios 2 and 3 with 89.69% or 874.69ha falling within the low to elevated vulnerability area. The main areas of high or extreme vulnerability are situated; in and surrounding the town centre area, due to the existing Zone of Archaeological Potential and flooding amongst other factors; to the south of the plan at Tinahask taking into account the Urban Habitats Mapping study findings and the proposed zoning of these lands as an action area and potential use of these lands. The existing quarry activities at Arklow Rock represent a large area of high-extreme vulnerability.

Figure 7.3A – Vulnerability Pie Chart based on land cover area.

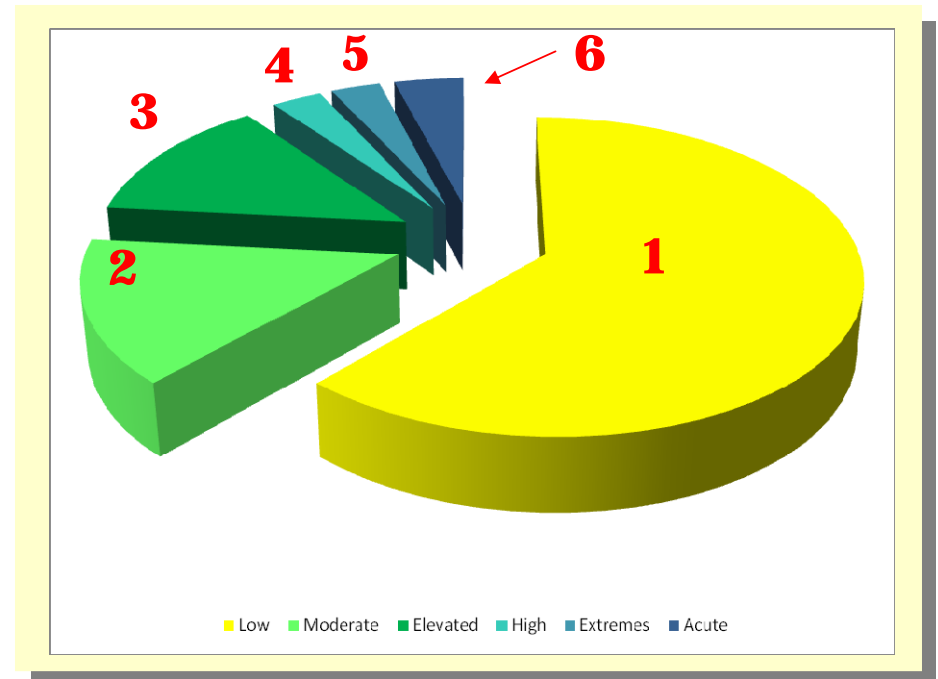


Figure 7.4 – Scenario 2 Overlay Mapping

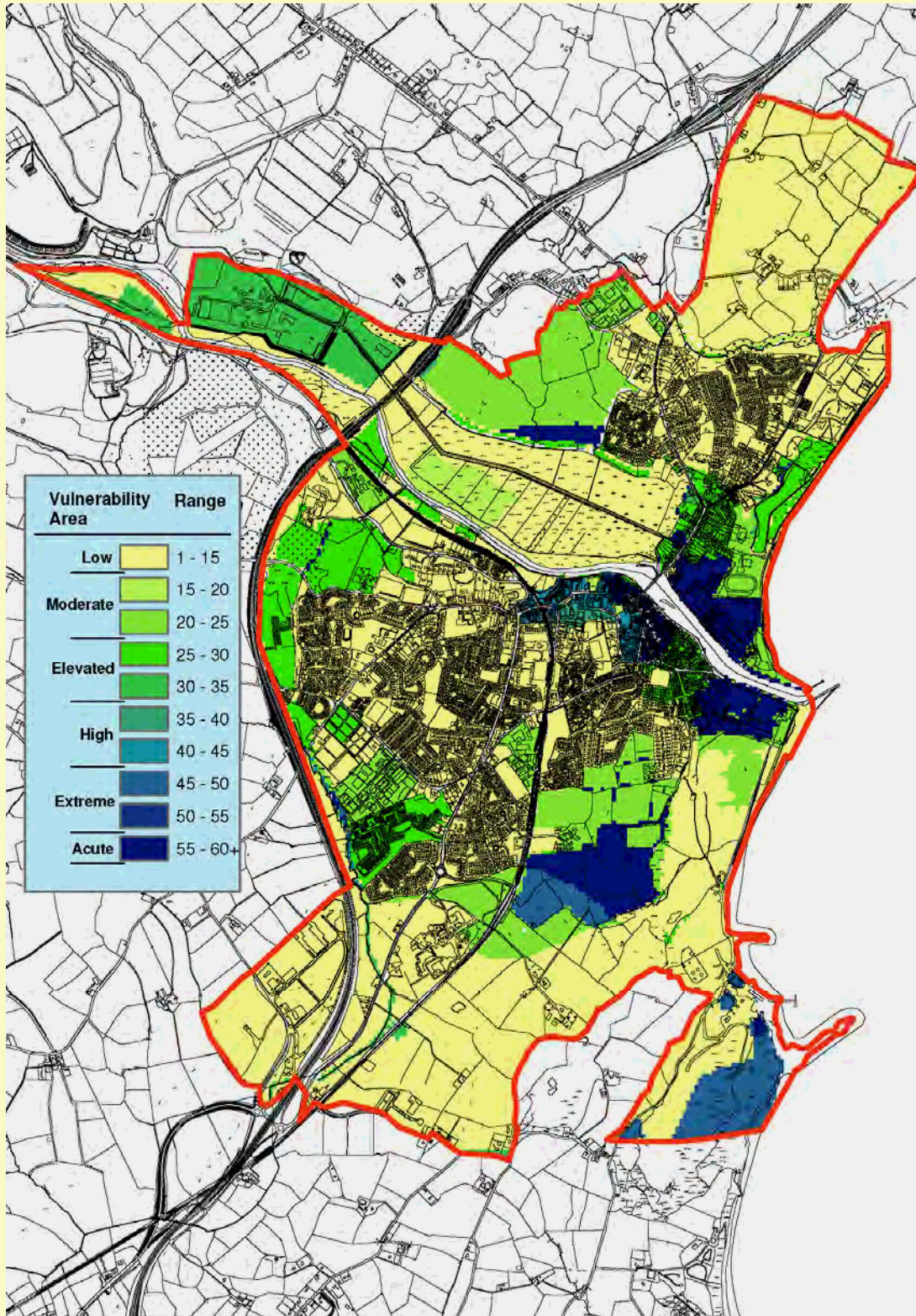


Table 7.5 – Overlay Mapping quantifications of scenario 2

Vulnerability Area	Area (Hectare)	% of Development Pressure Areas covering each Vulnerability Area
1 Low	772.956 Ha	66.24 %
2 Moderate	151.701 Ha	13.00 %
3 Elevated	137.657 Ha	11.79 %
4 High	13.0137 Ha	1.11 %
5 Extremes	31.3854 Ha	2.68 %
6 Acute	60.0967 Ha	5.15 %
Total	1166.81 Ha	100%

Environmentally vulnerable areas most likely to be affected by scenario 2

Scenario 2 – (Moderate Development Envelope) expands into a greater land area, with 1062.3ha or 91.03% of the subject lands falling within the low to elevated vulnerability area or lower. While this represents a slight percentage increase, the increase in development lands should be noted as this plan scenario represents a slight increase in the amount of lands falling between the high-acute zones. The Scenario represents a slight increase in the Extreme vulnerability zone and a significant increase within the Acute vulnerability range indicating that greater environmental consideration is required in these areas.

Figure 7.4A – Vulnerability Pie Chart based on land cover area.

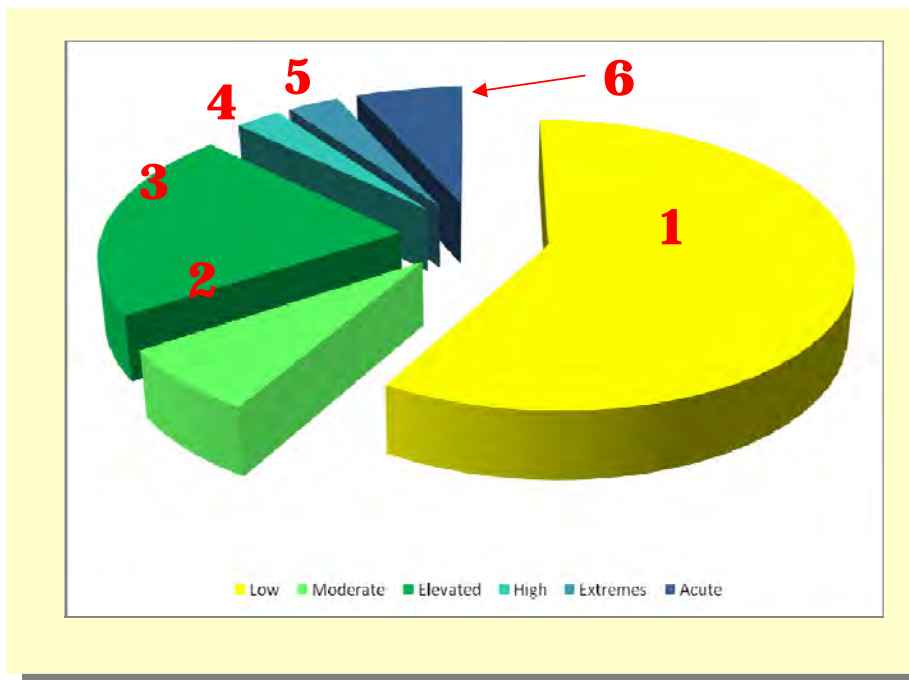


Figure 7.5 – Scenario 3 Overlay Mapping

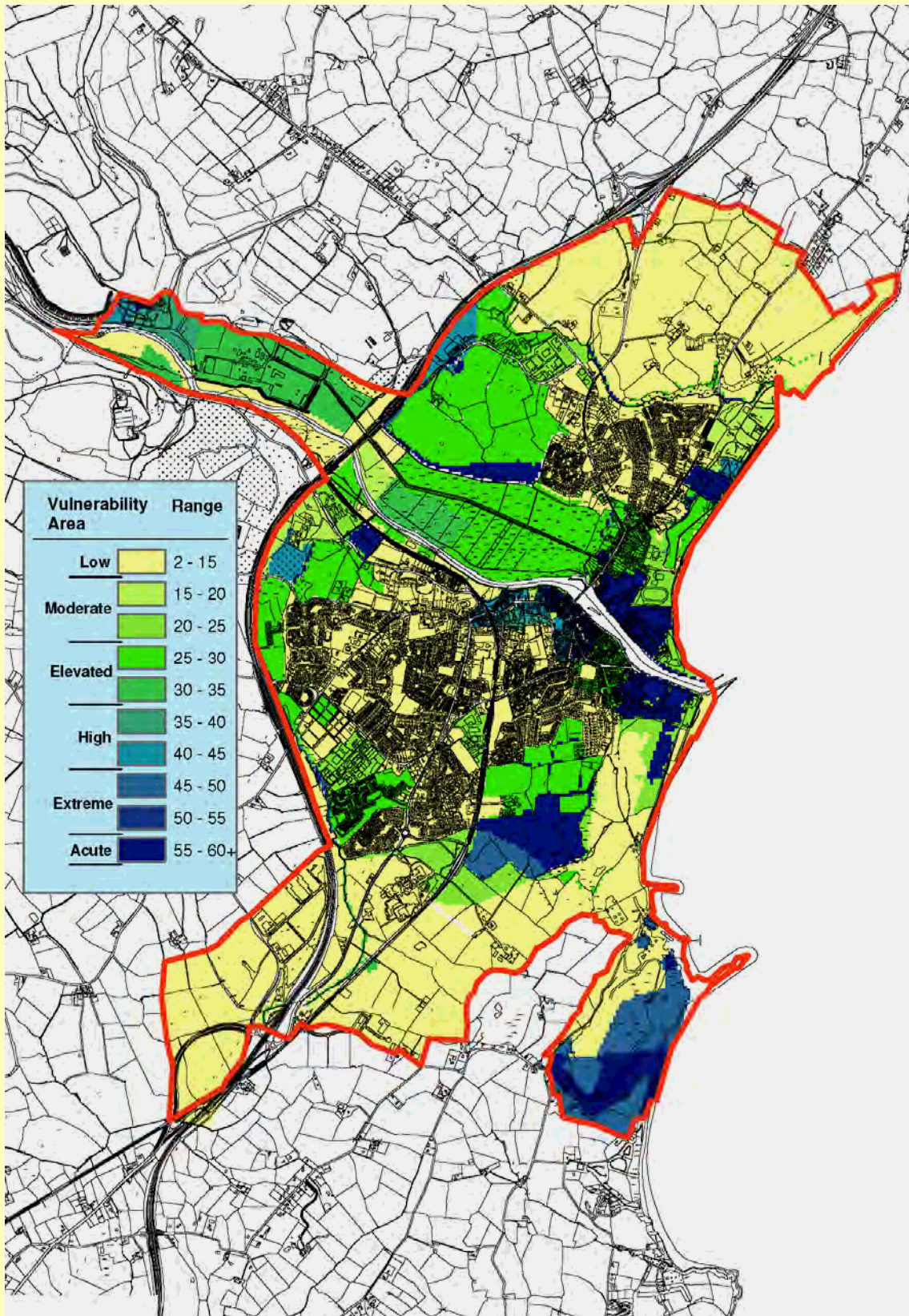


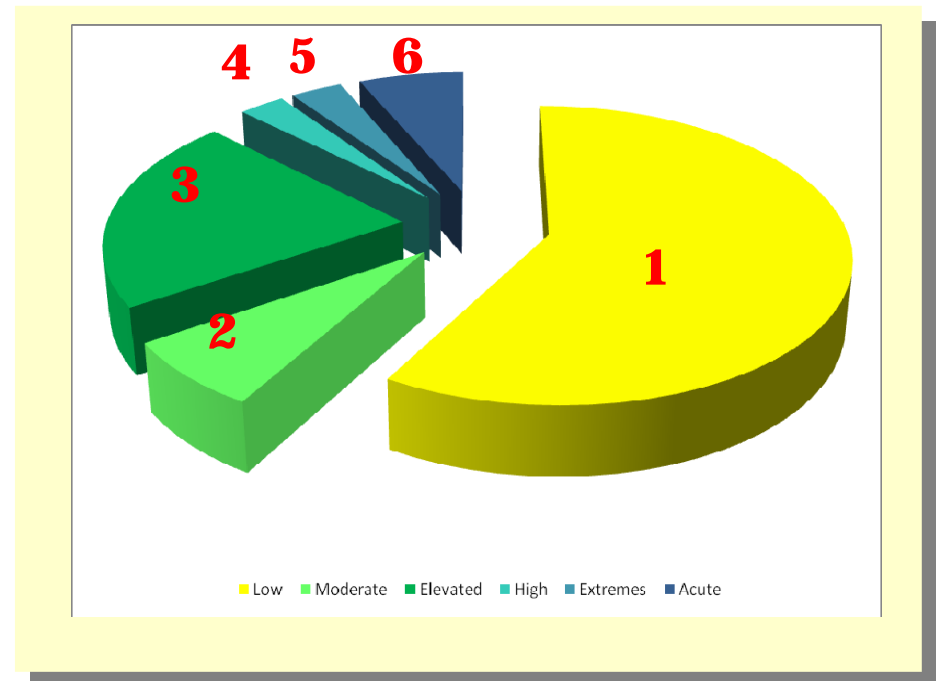
Table 7.6 – Overlay Mapping quantifications of scenario 3

Vulnerability Area	Area (Hectare)	% of Development Pressure Areas covering each Vulnerability Area
1 Low	807.726 Ha	58.37 %
2 Moderate	100.853 Ha	7.28 %
3 Elevated	297.414 Ha	21.49 %
4 High	40.1927 Ha	2.9 %
5 Extremes	45.2518 Ha	3.27 %
6 Acute	92.1382 Ha	6.65 %
Total	1383.58 Ha	100%

Environmentally vulnerable areas most likely to be affected by scenario 3

Scenario 3 – (Maximum Development Envelope) represents a further increased land take, measuring a total of c. 1383.92ha. This scenario also means a greater amount of land falling within the high-acute vulnerability areas, potentially causing significant adverse impacts on the receiving environment. Scenario 3 also represents a 50% increase in the quantity of land falling within the Acute Vulnerability area compared to Scenario 2. The Dark Blue areas on the above map in figure 7.5a highlight these areas of extreme-acute vulnerability emphasising the significant potential impact this plan scenario would have on the receiving environment.

Figure 7.5A – Vulnerability Pie Chart based on land cover area.



7.9 The Measurements indicate the following:

- ⇒ Scenario three would be likely to result in more adverse environmental impacts than each of the other two Scenarios arising from increases; in land take/development of greenfield lands, in air emissions arising from increased car based trips due to the extent of the plan area, loading on infrastructure given the extent of development this scenario provides etc.
- ⇒ If mitigated, Scenarios 1 and 2 would be likely to result in a lesser frequency and magnitude of impacts than Scenario 3.
- ⇒ Scenario 3 is the scenario with the greatest amount of high and acute vulnerability areas covered by development pressure areas and the only scenario for which extremely vulnerable areas are covered by development pressure areas.

7.10 Comparison of Scenarios 1 and 2:

While Scenarios one and two have very similar attributes, scenario 1 represents a more conservative and consolidated plan format with limited expansion to the existing developed area within the plan boundary. This scenario represents the most environmentally friendly plan format with limited development of greenfield lands, preservation and expansion of green corridors and a strict restriction on development in the absence of adequate infrastructure.

While this may appear to be the ideal plan format to follow, the provisions of this scenario fail to adequately provide for a balanced approach towards the future development of Arklow. Restrictions on the future development of greenfield lands will impose serious implications on the plan being capable of meeting its population requirements as set out in the County Development Plan with the knock on effect of limiting the potential for new community/social infrastructure. Failure to facilitate the projected future population may also have implications for the provision of new or improved infrastructure such as roads and public transport.

Scenario 2 on the other hand, extends the development boundary for the plan area to the north and south quite significantly in order to accommodate stand-alone large-scale employment developments and also provides for a new action area at Tinahask facilitating the development of residential, community and recreational uses. The designation of such lands aims to ensure that the plan area is capable of meeting the needs of the projected population with the knock on effect of facilitating the potential for the expansion of existing infrastructure.

While both scenarios represent 'green ideology's for Arklow Town and its Environs by facilitating and aiming to enhance existing green corridors, scenario two through the zoning of additional lands to the north and south of the plan area has the potential to conflict with this overarching theme.

In terms of sustainable development however, while scenario 1 represents the least potential environmental impact, scenario 2 provides for a balanced approach in terms of social economic and environmental sustainability for the future development of the plan area while also meeting the higher overarching national/regional planning strategies including the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area.

7.11 The preferred Alternative:

On the basis of the above analysis Scenario 1 would be likely to improve the status of a number of the SEO's and emerges as the most environmentally friendly option. If unmitigated, Scenarios 2 and 3 would be likely to result in a number of adverse environmental impacts.

Having regard to planning considerations, Scenario 2 provides a better balance between environmental protection and economic and social development while also meeting the higher overarching national/regional planning strategies including the National Spatial Strategy and the Regional Planning Guidelines for the Greater Dublin Area. Under Scenario 2, potential conflicts with environmental objectives can largely be offset by appropriate mitigation measures and therefore this scenario provides for the most sustainable option.

The Development Plan that has emerged from the Plan preparation process most closely corresponds to Scenario 2.

Section 8 Summary of Evaluation of Development Plan Objectives

8.1 Introduction

The Environmental Report is required to include information on the likely significant effects on the environment of the Arklow Town and Environs Development Plan 2011 - 2017. Matrices were used to evaluate each of the proposed Plan aims and objectives once the preferred plan alternative had been identified. This section evaluates the Development Plan provisions. Strategic Environmental Objectives (SEO's) are used for this purpose as outlined under section 7.3. Use has also been made of the environmental baseline descriptions and the maps of the individual environmental components and the overlay of environmental sensitivities provided in Section 3. The interactions between the SEOs and the provisions of the Plan determine the likely significant effects of implementing the Plan. These effects include secondary, cumulative, synergistic, short, and medium and long-terms permanent and temporary, positive and negative effects.

8.2 Assessment of Plan Objectives against SEO's

The following sets out the full assessment and brief commentary on each of the proposed policies.

8.2.1 Vision and Core Strategy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
<p>Vision</p> <p>For Arklow town and its Environs (plan area) to be a cohesive community of people enjoying distinct but interrelated urban and rural environment; where natural surroundings and important resources are protected; where opportunities abound to live and work in a safe atmosphere, allowing people to enjoy the benefits of well paid jobs, a variety of housing choices, excellent public services, ample cultural and leisure opportunities, and a healthy environment.</p>	<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>			
<p><i>Vision - Overall the overall vision for the plan is likely to improve the status of all the SEO's particularly those relating to the direction of development in close proximity to public transport nodes within walking distance of community facilities all of which will act to reduce emissions, car based movements, reduce noise and improve human health. The vision promotes the enhancement of Arklow Town centre as a core facilitating redevelopment where appropriate. Protection and reuse of protected structures/zones of archaeological potential and Natural heritage sites, would be part of the overall requirements of proposed residential environments, as required by heritage policies of the Proposed Development Plan. Important features, which form part of significant habitat networks, are to be retained, or replaced as required under the Habitats Directive. Recognition of the impact, and need for mitigation of larger scale new development on the landscape is important. New residential environments would be required to comply with the requirements of the Habitats Directive and the Water Framework Directive (WFD). Design and layout of new developments will be required to ensure that water quality is maintained and improved, through retaining rivers and streams along with associated buffer zones, providing for SuDS, and restricting development on lands susceptible to flooding.</i></p>				
<p>Key strategic objectives</p> <p>To implement the overarching guidance offered by the National Spatial Strategy 2002 – 2020, the National Development Plan 2007 – 2013, the Regional Planning Guidelines for the Greater Dublin Area, and manage the spatial organisation of the plan area in a sufficient and sustainable manner.</p>	<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>		<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>	

<p><i>The principles of the NSS focus on balanced regional development throughout the regions in Ireland. Balanced regional development is defined as “developing the full potential of each area to contribute to the optimal performance of the state as a whole –economically, socially and environmentally”. The plan implements the overall principles of the NSS providing for the development of the plan area in a sustainable manner. The implementation of such principles facilitates the development and expansion of the plan area in order to meet the projected populations. Such development has the potential to adversely impact on the existing environment of the plan area during construction, operation and expansion of such infrastructure and facilities however, the guidance and principles set out within the plan aim to ensure that such development is carried out in a manner which enables and facilitate the enhancement of the receiving environment (Mitigation).</i></p>				
<p>To facilitate and encourage the growth of employment, enterprise and economic activity in the plan area, across all economic sectors and in all areas.</p>			<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>	
<p><i>The provision of new employment developments has the potential to impact on biodiversity and Human Health arising from increased demands on water infrastructure causing deterioration in Water Quality. The provision of lands for employment uses on the outskirts of the plan area has the potential to increase car-based journeys impacting on air quality. This development on greenfield lands also has the potential to impact on the general landscape of the area. Within the town centre areas conflicts with flooding arise where such development would be permissible while excavations and construction may impact on existing archaeology and architecture. The guidance and principles set out within the plan aim to ensure that such development is carried out in a manner, which enables and facilitate the enhancement of the receiving environment (Mitigation).</i></p>				
<p>To enhance existing housing areas and to provide for high quality new housing, at appropriate locations and to ensure the development of a range of house types, sizes and tenures in order to meet the differing needs of all in society and to promote balanced communities.</p>	<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>		<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>	
<p><i>The Provision of sufficient lands in appropriate locations only is likely to improve the status of SEO’s relating to biodiversity by restricting direct impacts on such areas however the provision of lands in itself for development may during excavations/construction also impact on the status of biodiversity within the plan area through the break up of ecological networks etc. The appropriate zoning of lands in close proximity to existing amenities is likely to improve air quality through reduced emissions and thus human health, potential conflicts occur during the construction phase of such development with increased dust levels, noise etc. In limiting the amount of lands to be zoned within the plan area in accordance with the projected populations the impacts on water quality can reduced through the provision of appropriate infrastructure capable of facilitating such development although potential conflicts do occur if such development was to take place in the absence of such infrastructure. Recognition of sites of Archaeology and protected structures through appropriate zoning helps to facilitate preservation although the zoning of lands in close proximity to such sites or structures may have potential impacts.</i></p>				
<p>To maintain and enhance the viability and vibrancy of Arklow as a major urban centre, to ensure that the town remains at the heart of the wider community and provides a wide range of retail, employment, social, recreational and infrastructural facilities.</p>	<p>R1 AQ1 AQ2 HH1</p>		<p>B1 B2 B3 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>	

<i>The promotion of the existing main street of Arklow as the core for the overall plan area facilitating a wide variety of uses and developments facilitates the regeneration of this area where ease of accessibility to uses can be achieved in close proximity to the resident population and public transport nodes reducing the need for car based travel, reducing emissions and thus improving air quality to the benefit of human health. Given existing constraints within this area the expansion and redevelopment of existing areas has the potential to impact on a number of environmental components where appropriate guidance will be required in order to offset these impacts.</i>				
To protect and improve Arklow Town and Environs transport, water, waste, energy and communications infrastructure, whilst having regard to responsibilities to respect areas protected for their important flora, fauna or other natural features	B1 B2 B3 HH1 WS WG WF WW DW		B1 B2 B3 WS WG WF DW AH1 AH2 L1	R1 AQ1 AQ2
<i>Promotes the sustainable development of the plan area in line with adequate infrastructure benefiting biodiversity, water and water services and human health. The provision and development of such infrastructure however has the potential to impact on biodiversity through habitat disturbance and fragmentation. Impacts on waters and water infrastructure may also occur during construction and development that will be required to mitigated through appropriate guidance within the plan.</i>				
To promote and facilitate the development of sustainable communities through land use planning, by providing for land uses capable of accommodating community, leisure, recreational and cultural facilities, accessible to and meeting the needs of all individuals and local community groups, in tandem with the delivery of residential and physical infrastructure in order to create a quality built environment in which to live.	B3 HH1 AQ1 AQ2 AH1 AH2 L1		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>Aims to provide for adequate open space and community lands capable of serving the resident population of the plan area. The provision of such lands in close proximity to existing residential populations is likely to reduce the need for travel, reducing travel related emissions, improving air quality and thus human health. The provision of open space lands throughout the plan area will facilitate the expansion of ecological networks while also preventing potential impacts on archaeology, local architecture and the landscape of the plan area. While this may be the case the objective to provide for extensive open space and community uses has the potential to impact on biodiversity through the use of lands for amenity and recreational purposes. Such lands can also be located within areas prone to flooding where certain types of development/facilities may impact on surface/ground waters and potentially on drinking water quality arising from increased pressures on infrastructure. Impacts on Archaeological and architectural heritage may arise during the development of active open spaces, which require extensive drainage networks in order to ensure the ability to cater for such uses. The visual impact of such development also has the potential to impact on architecture and the landscape of the area.</i>				
To protect and enhance the diversity of the plan areas natural and built heritage	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1		R1	

<i>The preservation and enhancement of existing areas of natural and built heritage is likely to improve the status of all environmental objectives through strong objectives within the plan aimed at maintaining these existing areas such as Arklow Marsh and sites and buildings of archaeological and architectural merit. The implementation of such objectives has the potential counter the provisions for regeneration where restrictions may be imposed on the development of sites within the town centre making redevelopment unfeasible.</i>				
To address the climate change challenge, as a plan dynamic, throughout the plan area, directly in the areas of flooding and renewable energy, and indirectly by integrating climate change and sustainable development into statements of plan policy, strategies and objectives.	AQ1 AQ2 WF HH1		B1 B2 B3 HH1 WS WG AH1 AH2 L1	
<i>The implementation and expansion of this theme throughout the plan objectives is likely to improve air quality and thus human health while also aiming to reduce the impact and occurrences of flooding within the plan area. Potential conflicts occur where development is provided for throughout the plan in order to meet the provisions of this objective resulting in impacts on biodiversity, human health, waters and local heritage.</i>				

8.2.2 Settlement and Housing Strategy

	Likely to improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
H1 To ensure sufficient zoned land is available in appropriate locations capable of meeting the housing needs of the projected population of the plan area over the plan period in a sustainable manner.	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>Provision of sufficient lands in appropriate locations only is likely to improve the status of SEO's relating to biodiversity by restricting direct impacts on such areas however the provision of lands in itself for development may during excavations/construction also impact on the status of biodiversity within the plan area through the break up of ecological networks etc. The appropriate zoning of lands in close proximity to existing amenities is likely to improve air quality through reduced emissions and thus human health, potential conflicts occur during the construction phase of such development with increased dust levels, noise etc. In limiting the amount of lands to be zoned within the plan area in accordance with the projected populations the impacts on water quality can reduced through the provision of appropriate infrastructure capable of facilitating such development although potential conflicts do occur if such development was to take place in the absence of such infrastructure. Recognition of sites of Archaeology and protected structures through appropriate zoning helps to facilitate preservation although the zoning of lands in close proximity to such sites or structures may have potential impacts.</i>				
H2 Notwithstanding the zoning of land for residential purposes, the Development Management process shall monitor and implement the 2016 and 2022 population targets and shall phase and restrict, where necessary, the granting of residential planning permissions to ensure these targets are not			B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	

exceeded;				
<i>H2 - This objective relates to the development management process of applications for development within the plan area and potentially conflicts with the status all SEO's given the fact that it manages the actual development of such proposals.</i>				
H3 Housing development shall be managed and phased to ensure that infrastructure and in particular, water services and community infrastructure, is provided to match the needs of new residents;	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW L1			AH1 AH2
<i>Objective H3 facilitates the development of the plan area only where adequate infrastructure capable of facilitating such development is in place. The provision of such infrastructure is likely to improve SEO's such as human health through improved water quality and reduced emissions, limiting impacts on biodiversity and encouraging regeneration where existing infrastructure is in place.</i>				
H4 Encourage in-fill housing developments, the use of under-utilised and vacant sites and vacant upper floors for accommodation purposes and facilitate higher residential densities at appropriate locations, subject to a high standard of design, layout and finish;	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1			
<i>H4 - Promotes the re-development of existing developed areas instead of new Greenfield lands providing for a compact settlement pattern, reducing; landtake, air emissions and the need for significant new infrastructure.</i>				
H5 The development of zoned land shall be phased to ensure lands closest to the centre or to existing transport and / pr community infrastructure is developed prior to more outlying lands, unless exceptional circumstances apply.	B1 B2 B3 HH1 R1 WS AQ1 AQ2 L1		B1 B2 B3 HH1W-S W-G W-F WW DW AH1 AH2 AQ1 AQ2	
<i>H5 –The provision of new developments on a phased basis has the potential to improve the regeneration/re-use of town centres and is likely to improve the status of SEO's relating to biodiversity by restricting direct impacts on such areas however the provision of lands in itself for development may during excavations/construction also impact on the status of biodiversity within the plan are through the break up of ecological networks etc. The appropriate zoning of lands in close proximity to existing amenities is likely to improve air quality through reduced emissions and thus human health, potential conflict occurs during the construction phase of such development with increased dust levels, noise etc. In phasing lands close to town centre the impacts on water quality can be reduced through the provision of appropriate infrastructure capable of facilitating such development although potential conflicts do occur if such development was to take place in the absence of such infrastructure. Recognition of sites of Archaeology and protected structures through appropriate zoning helps to facilitate preservation although the zoning of lands in close proximity to such sites or structures may have potential conflict.</i>				
TC1 To promote the vitality and viability of the town centre area so that it becomes a high quality environment able to accommodate a mix of residential, commercial, retail and tourism uses;	HH1 R1 AQ1 AQ2		AH1 AH2	WS WG WF WW DW L1
<i>TC1 - Likely to improve human health, air quality and regeneration of the town centre by promoting a more compact settlement form within and around the existing town centre areas. Promoting redevelopment within the town centre however may potentially conflict with the zone of archaeological potential and existing protected structures unless they are developed in a sensitive manner.</i>				
TC 2 To reinforce the centre of Arklow as the priority location for new	HH1 R1 AQ1 AQ2		AH1 AH2	WS WG WF WW DW

development with quality of design and integration /linkage with the existing street patterns				L1
<i>TC2 - As per TC1 above</i>				
TC3 To encourage a greater usage of backland areas and to promote the redevelopment of sites in the town centre where development will positively contribute to the commercial and residential vitality of the town centre and areas	HH1 R1 AQ1 AQ2		AH1 AH2	WS WG WF WW DW L1
<i>TC3 - As per TC1 above</i>				
TC4 All new residential developments shall comply with the development standards set out in this plan, unless otherwise agreed by the Planning Authority.	B1 B2 B3 R1 HH1 WS WG WF WW DW AH1 AH2			AQ1 AQ2 L1
<i>TC4 – The implementation and enforcement of such development standards aims to ensure the preservation of biodiversity in new developments within the TC zone. Specific measures aimed at reducing water demands and the separation of surface and foul waters/rainwater harvesting methods ensure reduced demands on infrastructure ensuring it can function more effectively and preventing malfunctions on surface and ground waters. The development standards will apply strict control and conditions on the types of development permissible within the TC zone protecting architecture and archaeological zones.</i>				
WZ1 To support in depth development of the waterfront zone, for a mix of residential, commercial, leisure and tourism uses; Applications for the development of such lands shall include a detailed survey of the existing site conditions, proposals for demolition and remediation of previous site activities and a management plan for the disposal of such materials.	R1 AQ1 AQ2 HH1		B2 B3 HH1 WS WF WW DW L1	B1 WG AH1 AH2
<i>WZ1 - promotes the regeneration of the water front development zone in close proximity to existing amenities and facilities reducing emissions and impacts on air quality. The objective also potentially conflicts with Human Health given the previous uses and the impact of development close to surface waters and areas prone to flooding. The design and scale of development may impact on the surrounding landscape including the coastal area while also placing increased demands on water infrastructure.</i>				
WZ2 To support existing and proposed water related and maritime activities in the area including sailing, fishing, other water sports and commercial shipping activities, including the development of jetties, marinas and other support infrastructure;			B2 B3 HH1 WS WF WW AH2 L1	B1 R1 WG AQ1 AQ2 DW AH1
<i>WZ2 – the development of water based activities has the potential to impact on; Biodiversity, surface water and water based habitats, reducing connectivity between the sea and the Avoca Estuary, Waste water infrastructure through increased loading (impacting on Human Health), Architectural Heritage and landscape through design and layout.</i>				
WZ3 Further retail development in the waterfront zone shall be restricted to	R1			B1 B2 B3 HH1 WS

that required to meet the every day convenience needs of future residents or niche comparison uses such as those related to tourism and the maritime function of the area.				WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>WZ3 – promotes the regeneration of the Town Centre zone as the main retailing area within the plan by restricting the types of development allowable within the Water Front Zone.</i>				
WZ4 To require any new developments to be suitably set back from the water's edge and to provide public routes and places along waterfronts; to support the development of a footbridge across the entrance to south dock	R1		WS WF	B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>WZ4 – As per WZ2 above</i>				
WZ5 To ensure that access to the water, such as steps / slipways / river beaches etc are maintained and improved;			B2 B3	B1 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>WZ5 - Increased accessibility if unmanaged may impact on biodiversity along the coastal and beach areas.</i>				
WZ6 To allow high-density development (up to a plot ratio of 2.5:1), up to 4 storeys in height along water frontages and 3 storeys elsewhere.	R1		WS WF L1	B1 B2 B3 HH1 WG AQ1 AQ2 WW DW AH1 AH2
<i>WZ6 – Promotes higher density development in close proximity to the town centre but may impact on flooding given the location and surface waters during the construction phase. Development of such lands may impact visually on the landscape in particular along the coastal area.</i>				
WZ7 All new residential developments shall comply with the development standards set out in this plan, unless otherwise agreed by the Planning Authority	B1 B2 B3 R1 HH1 WS WG WF WW DW AH1 AH2			AQ1 AQ2 L1
<i>WZ7 – The implementation and enforcement of such development standards aims to ensure the preservation of biodiversity in new developments within the WZ zone. Specific measures aimed at reducing water demands and the separation of surface and foul waters/rainwater harvesting methods ensure reduced demands on infrastructure ensuring it can function more effectively and preventing malfunctions on surface and ground waters. The development standards will apply strict control and conditions on the types of development permissible within the WZ zone protecting architecture and archaeological zones.</i>				
RE1 In the RE zone, house improvements, alterations and extensions and appropriate infill residential development in accordance with principles of good design and protection of existing residential amenity will be permitted. While new developments shall have regard to the protection of the residential and architectural amenities of houses in the immediate environs, alternative and contemporary designs shall be encouraged (including alternative materials, heights and building forms), to provide for visual diversity	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1			

<i>RE1 - Promotes the re-development of existing developed areas instead of new Greenfield lands providing for a compact settlement pattern, reducing; landtake, air emissions and the need for significant new infrastructure.</i>				
RE2 Lands at Tinahask (Action Area's 1 & 2), Kilbride (Action Area 3) shall be developed as comprehensive (not piecemeal) integrated schemes that allow for the sustainable phased and managed development of each action area during the plan period.	HH1		B1 B2 B3 R1 AQ1 AQ2 WW DW L1	AH1 AH2
<i>RE2 - Appropriate designation of lands within actions areas has the potential to improve Human Health reducing potential for development of unsuitable lands. While this may be the case the development of greenfield lands has potential to impact on biodiversity and existing landscape, reduce air quality through increased travel emissions, and increased pressures on infrastructure.</i>				
RE3 All new residential developments shall comply with the development standards set out in this plan, unless otherwise agreed by the Planning Authority.	B1 B2 B3 R1 HH1 WS WG WF WW DW AH1 AH2			AQ1 AQ2 L1
<i>RE3 - The implementation and enforcement of such development standards aims to ensure the preservation of biodiversity in new developments. Specific measures aimed at reducing water demands and the separation of surface and foul waters/rainwater harvesting methods ensure reduced demands on infrastructure ensuring it can function more effectively and preventing malfunctions on surface and ground waters. The development standards will apply strict control and conditions on the types of development permissible within R zones protecting architecture and archaeological zones.</i>				
SH1 To implement the Wicklow Local Authorities Housing Strategy 2010-2016			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>SH1 – The development of lands has potential to impact on biodiversity and existing landscape, reduce air quality through increased travel emissions, and increased pressures on infrastructure. The design of siting of such development also has the potential to impact on existing archaeology, architecture and the landscape of the plan area.</i>				
SH2 To require that 20% of all zoned land developed for residential use, or for a mixture of residential and other uses, shall be devoted to social and affordable housing, in the following manner: (a) Twenty per cent of the land of the site, or (b) Housing units where the total value of the planning gain of the un-serviced site(s) of such units is equivalent in monetary value to the planning gain to the Council on the transfer of 20 per cent of the land of the site, or (c) Fully or partially serviced housing sites where the total planning gain for				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1

<p>the un-serviced element of such sites are equivalent in monetary value to the planning gain on 20% of the land of the site, or</p> <p>(d) A payment of such an amount, which is equivalent to the monetary value of the amount accruing to the Planning Authority, under the provisions of a, b or c above, (i.e. equal in monetary value to the planning gain to the Council on the transfer of 20% of the land of the site) or.</p> <p>(e) The provision of (a), (b), (c) or (d) above at another area within (Wicklow). (the relevant local authority's jurisdiction).</p> <p>Planning gain means the difference between the open market value and the existing use value</p>				
<i>SH2 - No interaction with the status of SEO's.</i>				
<p>SH3 To require all new social and / or affordable housing development (whether Local Authority / Voluntary or Part V schemes) to provide a minimum of 50% of the units at a size of 3 bedrooms or greater. (Change wording)</p>				<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>
<i>SH3 - No interaction with the status of SEO's.</i>				
<p>SH4 To require the highest standard of design in all new social / affordable developments or development containing an element of social / affordable housing, in accordance with the development standards set out in this Town and Environs Development Plan and the DoEHLG social housing guidelines.</p>	<p>AH2 L1</p>			<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1</p>
<i>SH4 - Potential to improve architectural heritage in areas and integrating design into the landscape.</i>				
<p>SH5 To encourage proposals from developers to satisfy Part V obligations which are directed toward special need categories – namely, elderly accommodation, traveller accommodation, specialised accommodation for the homeless and specially adapted accommodation for persons with disabilities – where the proposal is related to an identified local need and is consistent with other policies of the Town and Environs Development Plan.</p>				<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>
<i>SH5 - No interaction with the status of SEO's.</i>				

8.2.3 Main Street Strategy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
VP1 To maintain the Main Street as the principle vehicular route through the town centre, and to exploit any opportunities that arise to improve safety for both vehicles and pedestrians	R1		HH1 AQ1 AQ2	B1 B2 B3 HH1 W-S W-G W-F WW DW AH1 AH2 L1
<i>VP1 – Facilitates and promotes the regeneration of the town centre of Arklow. In placing an emphasis on the main street as the main vehicular route through the town the likelihood of increased or sustained car movements in this area is likely to increase emissions to air with impacts on air quality.</i>				
VP2 To promote the pedestrian use of all 'blue' routes and avail of any opportunities to improve footpaths and pedestrian routes	HH1 R1 AQ1 AQ2			B1 B2 B3 W-S W-G W-F WW DW AH1 AH2 L1
<i>VP2 – The encouragement of pedestrian movements over car-based trips is likely to reduce emissions improving air quality and human health. The facilitation of such routes increasing ease of accessibility to the main street is also likely to influence the regeneration of this area.</i>				
VP3 To facilitate the improvement of existing and the development of new linkages from the Main Street to car parks and amenity areas; in particular to require redevelopment proposals that have frontage on both Main Street and any 'blue' route to include new pedestrian routes through the site.	HH1 R1 AQ1 AQ2		B3 W-S L1	B1 B2 W-G W-F WW DW AH1 AH2
<i>VP3 – As per VP2 above. The provision of car parking within the town centre has potential implications for surface water and the general landscape. Habitat fragmentation arising from development may also arise from the development of such facilities.</i>				
CP1 To maintain existing and provide new car parking options as funding allows, in proximity to the Main Street and along 'blue' routes.	R1 HH1 AQ1 AQ2		B3 WS WG AH1 AH2 L1	B1 B2 HH1 W-F WW DW
<i>CP1 – As per VP2 above. Potential conflict occurs from the development of car parking and the related impacts on surface/ground waters (drainage) and archaeology landscape during construction and excavation. Habitat fragmentation arising from development may also arise from the development of such facilities. The provision of car parking within the town centre may also impact on architectural heritage where development sites are in close proximity to protected developments.</i>				
CP2 To avail of opportunities to remove public car parking on the Main Street and at amenity areas, subject to due consideration of the commercial needs of Main Street, including loading parking.	R1 HH1 AQ1 AQ2		B3 WS WG AH1 AH2 L1	B1 B2 HH1 W-F WW DW

<i>CP2 – As per CP1 above</i>				
CP3 To require new development on the Main Street to incorporate pedestrian links where feasible to existing or new public car parks	R1 HH1 AQ1 AQ2		B3 W-S W-G AH1 AH2 L1	B1 B2 W-F WW DW
<i>CP3 – As per CP1</i>				
CP4 Deviations from the minimum car parking requirement set out in Section X of this plan shall be considered in the Main Street Strategy area as shown on Map 5.1 where a public car park is within 200m walking distance to the site. In such cases, only the needs of long-term users (e.g. employees and residents of the development) will have to be addressed by the developer;	R1 HH1 AQ1 AQ2			B1 B2 B3 W-S W-G W-F WW DW AH1 AH2 L1
<i>CP4 - As per VP2 above.</i>				
PR1 To protect and enhance the streetscape of Arklow Main Street through the appropriate control of alterations to existing buildings and the development of new structures; in particular building lines and heights which diverge from the established form will require to be justified;	R1 AH1 AH2			B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW L1
<i>PR1 – Promotes the regeneration of the main street and adaptation of existing buildings and structures to accommodate new uses protecting existing archaeological and architectural heritage.</i>				
PR2 To strive to improve the appearance of junctions and gateway areas into the Main Street, particularly the Main Street – Bridge Street junction	R1 L1			B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 AH2
<i>PR2 - Promotes town centre regeneration and improvements in visual appearance of the area positively impacting on the local landscape.</i>				
PR3 To appropriately control the design and appearance on building frontages, particularly shopfronts; ‘dead’ frontages, i.e. those with no goods on display to the street or those where views of the interior are completely blocked by non transparent materials etc will not be considered;	AH2 L1		R1	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1
<i>PR3 – Strict control measures on the design and layout of buildings within the town centre ensures the protection and enhancement of existing buildings of architectural merit while also benefiting the appearance of the local landscape.</i>				
PR4 New or extended / refurbished units shall, at all times that the unit is not in active use, provide an attractive temporary display or professionally	R1			B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2

designed artwork affixed to the glass frontage. The temporary use of the space during such times for creative, cultural or community purposes will be encouraged; however, such change of use may require planning permission, and advice will be provided by the Council on a case by case basis in this regard;				WW DW AH1 AH2 L1
<i>PR4 - Promotes town centre regeneration.</i>				
PR5 To support opportunities to create better linkages between the Main Street and the river, in particular access routes and views between the two;	R1 HH1 AQ1 AQ2 L1		B3 L1	B1 B2 W-S W-G W-F WW DW AH1 AH2
<i>PR5 – The provisions of this objective encourages the regeneration of the town centre through increased accessibility reducing the need for car-based movements, reducing emissions positively impacting on human health. The protection of existing views between the town centre and the River will positively impact on the landscape of the area. While this may be the case increased accessibility to the river may impact on existing habitats and networks and the overall landscape of the area.</i>				
PR6 To maintain the existing bandstand and support other possibility for the development of new urban spaces				B1 B2 B3 HH1 R1 W-S W-G W-F AQ1 AQ2 WW DW AH1 AH2 L1
<i>PR6 – No likely interaction with the status of SEO's.</i>				
PR7 To improve footpaths, lighting, seating and other street 'furniture' as funding allows, and require private development providing such features to meet the highest standards of design and siting.	HH1 R1 AQ1 AQ2 AH2 L1			B1 B2 B3 W-S W-G W-F WW DW AH1
<i>PR7 – Promotes and facilitates the regeneration of the town centre area increasing pedestrian accessibility and positively reducing emissions benefiting human health. The provision of street furniture, lighting and features has the potential to impact positively on architectural heritage and the general landscape of the area.</i>				
DV1 To facilitate substantial redevelopment of under-utilised or vacant properties on the Main Street;	R1 HH1 AQ1 AQ2		AH1 AH2	B1 B2 B3 HH1 W-S W-G W-F WW DW L1
<i>DV1 – Facilitates the redevelopment of existing under sites promoting regeneration, reducing the need for car-based trips reducing emissions, positively impacting on air quality and human health. The redevelopment of such buildings has the potential to impact on archaeology and architectural heritage.</i>				
DV2 To facilitate appropriate infill development of vacant backland and private car parking areas along 'blue' routes.	R1 HH1 AQ1 AQ2		AH2	B1 B2 B3 W-S W-G W-F WW DW AH1 L1
<i>DV2 – As per DV1. The provision of infill and backlands development has the potential to impact negatively on architectural heritage.</i>				
BH1 To positively consider proposals to improve, alter, extend or change the use of protected structures so as to render them viable for modern use, subject to suitable design, materials and construction methods	R1 HH1 AH2 AQ1 AQ2			B1 B2 B3 W-S W-G W-F WW DW AH1 L1

<i>BH1 – Promotes the regeneration of the town centre reducing the need for car-based movements, reducing emissions improving air quality and thus human health. This objective also positively impacts on architectural heritage facilitating the adaptation of existing protected buildings in order to make them viable for future use.</i>				
BH2 To strongly resist the demolition of protected structures, unless it can be demonstrated that exceptional circumstances exist.	AH2		R1	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>BH2 – Places significant protection of building of architectural merit, which may, where the re-use of such buildings is not viable, conflict with regeneration of the town centre.</i>				
CA1 To support and facilitate activities and developments that will improve the vitality and vibrancy of the Main Street area	R1 AQ1 AQ2		AH2	B1 B2 B3 HH1 W-S W-G W-F WW DW AH1 L1
<i>CA1 – Facilitates the regeneration of the town centre area reducing the need for car-based trips reducing emissions. The regeneration of the town centre structures may adversely impact on existing areas, or structures of architectural merit.</i>				
CA2 Redevelopment proposals in the town centre shall generally be required to provide commercial use at ground floor / street level;	R1		AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>CA2 – As per CA1 above.</i>				
CA3 All non-residential floors will be required to be designed to be suitable to a range of users;	R1		AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>CA3 – As per CA1 above.</i>				
CA4 To control and restrict where necessary uses at ground / street level to ensure that the town centre is not blighted by an excessive number of single outlet types / formats e.g. bookmakers, off-licences (including off-licences in convenience stores), charity shops, amusements centres and financial institutions;	R1		R1 AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>CA4 – While this objective promotes the sustainable regeneration of the town centre, restrictions placed on the use of ground floor/street levels may make the use of such town centre buildings unusable for certain uses. The regeneration of the town centre area which may adversely impact on existing areas or structures of architectural merit</i>				
CA5 Active 1 st floor uses will be required in all new developments and particular encouragement will be given to 'living over the shop'. Where such use is proposed, a relaxation in density, car parking and open space standards will be considered, where the development meets very high quality of design and accommodation;	R1 HH1 AQ1 AQ2		AH2	B1 B2 B3 W-S W-G W-F WW DW AH1 L1
<i>CA5 - Promotes town centre regeneration/living within the town centre, reducing the need for car based trips, reducing emissions, improving air quality benefiting human health. The regeneration of the town centre area, which may adversely impact on existing areas or structures of architectural merit.</i>				

RC1 To support the function of the Main Street and associated side streets as the principle retail area in Arklow	R1 AQ1 AQ2		AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>RC1 – As per CA1 above</i>				
RC2 To support proposals to merge or assemble buildings / sites in order to develop modern retailing formats, including department stores or malls.	R1 AQ1 AQ2		AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>RC2 – As per CA1 above.</i>				
RC3 To promote and facilitate the conversion of non-retail premises to retail / retail service use and to strongly resist the conversion of existing retail / retail service premises to alternative, less active, uses that would diminish vibrancy and daytime activity in the main street area.	R1 AQ1 AQ2		AH2	B1 B2 B3 HH1 W-S W-G W-F AQ1 AQ2 WW DW AH1 L1
<i>RC3 – As per CA1 above</i>				

8.2.4 Transportation

PT1 Facilitate the use of public transport for travel within the town and external destinations	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>PT1 The development and expansion of public transport within the plan areas is likely to improve the status of SEO's relating to human health through reduced air emissions arising from reduced car based trips.</i>				
PT2 To encourage and co-operate with the statutory bodies responsible for improving the public transport facilities within the town.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>PT2 – As per PT1</i>				
PT3 To encourage the future expansion of the transport interchange at the train station where a number of transport types can interchange with ease. In particular: <ul style="list-style-type: none"> - To improve the bus links within the plan area to the train station; - To promote integrated ticketing between transport types; - To encourage the improvement of bicycle facilities at the transport interchange; To improve existing and provide new footpath/footway linkages to the existing train station.	HH1 R1 AQ1 AQ2			B1 B2 B3 WS WG WF WW DW AH1 AH2 L1

<i>PT3 – As per PT1. The provision of such facilities is likely to improve the potential for regeneration within the town centre close to public transport nodes.</i>				
PT4 To ensure that possibilities for the improvement of the Dublin-Rosslare line are maintained and to ensure that land use adjacent to the station and rail lines are appropriate and would facilitate future improvements. In particular to require any development proposals in the vicinity of the train station to be so designed to facilitate future access to the station and railway lines and to reserve adequate space for future car parking.	HH1 R1 AQ1 AQ2			B1 B2 B3 WS WG WF WW DW AH1 AH2 L1
<i>PT3 – As per PT1. The provision of such facilities is likely to improve the potential for regeneration within the town centre close to public transport nodes.</i>				
PT5 To promote the delivery of improved and new bus services in Arklow and Environs by: - Facilitating the needs of existing or new bus providers with regard to bus stops Require the developers of large-scale new employment and residential developments in Arklow that are distant (more than 2km) from the train station to fund/ provide feeder bus services for an initial period	AQ1 AQ2			B1 B2 B3 HH1 R1 WS WG WF WW DW AH1 AH2 L1
<i>PT5 – Promotes movement away from car based trips – reducing emissions.</i>				
CW1 To enhance the permeability of the town through the facilitation and promotion of opportunities for safe pedestrian, and cycling linkages to and within the town centre, employment areas, schools and public transport nodes that will maximise travel by sustainable modes. In particular, the provision of direct pedestrian access to the rail way station from Abbey Street shall be pursued.	HH1 AQ1 AQ2		B2 B3	B1 R1 WS WG WF WW DW AH1 AH2 L1
<i>CW1 - Promotes walking and cycling through increased linkages reducing the need for car-based trips, reducing emission to air. The provision of linkages has the potential through construction and land take to cause habitat disturbance and impact on connectivity.</i>				
CW2 To facilitate the development of foot and cycleway off road (e.g. through open spaces) in order to achieve the most direct route to the principal destination while ensuring that personal safety, particularly at night time is of utmost priority.	HH1 AQ1 AQ2		B3	B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CW2 – As per CW1. The provision of such infrastructure has the potential to impact on ecological corridors</i>				
CW3 To encourage the provision of secure bicycle parking facilities at strategic locations within Arklow Town centre, community facilities within Arklow and transport nodes.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CW3 – facilitates and encourages walking and cycling through increased parking facilities reducing the need for car-based trips, reducing emission to air.</i>				
CW4 To improve existing or provide new foot and cycleway on existing public	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG

roads, as funding allows				WF WW DW AH1 AH2 L1
<i>CW4 – As per CW2.</i>				
CW5 To promote and encourage the “Safer Routes to School” and Green Schools Programme within Arklow and to liaise with all relevant Departments/agencies involved in the operation of the programme	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CW5 – As per CW2.</i>				
RP1 To facilitate the future improvement of the town’s roads hierarchy to distribute vehicular traffic on appropriate distributor routes whilst minimising the number of car trips through the town centre	HH1 AQ1 AQ2		AQ1 AQ2 B2 B3	B1 HH1 R1 WS WG WF WW DW AH1 AH2 L1
<i>RP1 – The provision of improved road infrastructure in order to alleviate traffic congestion through the town centre is likely to reduce emissions thus improving human health however the provision of such infrastructure may alternatively facilitate greater usage of car based trips once congestion is reduced. During Construction potential impacts on Biodiversity may also occur arising from habitat disturbance and fragmentation of ecological networks.</i>				
RP2 To facilitate the provision of a western distributor route incorporating a new river crossing and linking to a new interchange onto the N11, in order to alleviate future traffic congestion in the town.	HH1 R1 AQ1 AQ2		B1 B2 B3 HH1 WS WG WF AQ1 AQ2 DW AH1 AH2	WW
<i>RP1 – The provision of improved road infrastructure in order to alleviate traffic congestion through the town centre is likely to reduce emissions thus improving human health however the provision of such infrastructure incorporating a new road across the Avoca River has the potential to impact on biodiversity during construction through habitat disturbance, water quality, flooding arising from impact on river bed and Arklow Marsh, air quality by encouraging car based movements and archaeological and architectural heritage.</i>				
RP3 To facilitate the development of a connection road from Wexford Road to the Croghan Industrial Estate in consultation with the owners and developers of the lands.	HH1 R1 AQ1 AQ2		B1 B2 B3 WG L1	WS WF AH1 AH2 WW DW
<i>RP3 – The provision of improved road infrastructure in order to alleviate traffic congestion is likely to reduce emissions thus improving human health however the provision of such infrastructure incorporating a new road has the potential to impact on biodiversity during construction through habitat disturbance, ground water quality. The visual impact of such infrastructure may impact on the landscape of the plan area.</i>				
RP4 To facilitate a new distributor road traversing lands zoned ‘employment’ at Killiniskyduff.	AQ1 AQ2		B2 B3 HH1 R1 WS WG AQ1 AQ2 L1	B1 WF WW DW AH1 AH2
<i>RP4 - The provision of improved road infrastructure in order to alleviate traffic congestion is likely to reduce emissions however the provision of such infrastructure incorporating a new road has the potential to impact on biodiversity during construction through habitat disturbance, water quality. The visual impact of such infrastructure may visually impact on the landscape of the plan area. The provision of this piece of infrastructure may lead to an overall increase in emissions impacting on air quality.</i>				
RP5 To require the development of Action Area 2 (Tinahask/Moneybig) to include distributor road access through to Action Area 1 (Tinahask/Abbeylands) and the Employment zoned lands to the south	AQ1 AQ2		B2 B3 HH1 R1 WS WG AQ1 AQ2 L1	B1 WF WW DW AH1 AH2

of AA2				
<i>RP5- As per RP4 above</i>				
NR1 To Facilitate the Rathnew to Arklow North upgrade, comprising the upgrading of the existing single carriageway route to dual carriageway/motorway standard.	AQ1 AQ2		B2 B3 HH1 R1 WS WG AQ1 AQ2 L1	B1 WF WW DW AH1 AH2
<i>NR1 - As per RP4 Above</i>				
NR2 To facilitate the construction of a new third interchange at Lamberton, providing a connection to the western distributor road as allowed for in the design of the Arkow bypass.	HH1 R1 AQ1 AQ2		B1 B2 B3 HH1 WS WG AH1 AH2 WG WF L1 AQ1 AQ2	WW DW
<i>NR2 – The development of a third interchange at Lamberton has the potential to reduce traffic congestion from other arterial routes reducing travel related emissions and improving air quality. The development of such infrastructure alternatively may increase travel related emission impacting on human health, impact on biodiversity during construction and arising from land take. The development of such infrastructure may also cause visual impacts within the plan area.</i>				
P1 New/expanded developments shall be accompanied by appropriate car parking provision in Table 5.2. Deviations from this table maybe considered in the following cases: <ul style="list-style-type: none"> - In the town centre where it is illustrated that there is sufficient public car parking and there is parking enforcement - In multi-functional developments, where the developer provides a robust model of car-parking usage to show that dual usage will occur and that peak car parking demand at any time of the day will be met - Where a residential development is in close proximity to the transport interchange. <p>In situations where a developer cannot meet necessary car parking requirement on or near the development site, the developer may be allowed to make a special payment in lieu, to be utilised by the Local Authority in providing car parking in the area</p>			B3 HH1 R1 WS WG WF AQ1 AQ2 AH1 AH2 L1	B1 B2 WW DW
<i>P1 – The provision of car parking within the plan area has the potential to impact on ecological corridors through habitat fragmentation while also causing visual impacts on the landscape. The construction of such infrastructure has the potential to impact on archaeology during excavation works and human health by encouraging car usage within the town centre, increasing emissions and reducing air quality.</i>				
P2 Provision shall be made in all new / expanded developments for disabled parking (and associated facilities such as signage, dished kerbs etc), at a suitable and convenient location for users			B3 HH1 R1 WS WG WF AQ1 AQ2 AH1 AH2 L1	B1 B2 WW DW

<i>P2 – As per P1</i>					
P3	Provision shall be made for off street loading/unloading facilities in all new/expanded developments, which are to receive regular deliveries.			B3 HH1 R1 WS WG WF AQ1 AQ2 AH1 AH2 L1	B1 B2 WW DW
<i>P3 – As per P1</i>					
P4	To facilitate the operation and free flow of traffic in a safe manner by means of appropriate parking mechanisms in particular key town centre sites-such as schools, health and community facilities by appropriately controlling car parking at such locations.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>P4 – The provision of such measures is likely to reduce traffic congestion reducing emission to air and thus improving air quality.</i>					
AHMP1	To facilitate the construction of a Port Access Road linking the Wexford Road to the employment areas of Action Area 2 (Tinahask/Moneybig), the Roadstone Quarry and the Waterfront Development Zone, incorporating a link to form a primary distributor route for HGV traffic to the existing port. The design of the road including its alignment and boundary treatment will be carried out in such a manner as to ensure minimal impact on Arklow Golf Club. The design of the road will be subject of full consultation with Arklow Golf Club.	HH1 R1 AQ1 AQ2 L1		B1 B2 B3 HH1 WS WG WF AQ1 AQ2 AH1 AH2 L1	WW DW
<i>AHMP1 – The provision of such infrastructure is likely to improve accessibility to lands without impacting on town centre, reducing traffic and emissions. The objective also includes the sensitive locating of the new road and facilitates further regeneration of Urban Area/WFD zone. The potential impact of construction is likely to affect biodiversity and could potentially increase car-based trips increasing emissions and impacting on human health. The construction phase and design of the road scheme also has the potential to impact on archaeology, the general landscape and local architecture.</i>					
AHMP2	To promote and facilitate through appropriate transport planning and land-use zoning the expansion or development of recreational facilities and marinas at the harbour in Arklow.			B1 B2 B3 HH1 R1 WS WF AQ1 AQ2 AH1 AH2 L1	WG WW DW
<i>AHMP2 - The potential impact of construction is likely to affect biodiversity and could potentially increase car-based trips increasing emissions and impacting on human health. The construction phase and design may also have the potential to impact on archaeology, the general landscape and local architecture. The development of this area could potentially conflict with the regeneration of the existing town centre.</i>					
AHMP3	To promote Arklow as a location for a new international airport and to generally facilitate the development of the aviation sector, in particular aerodromes, air strips and airports, subject to clear demonstration of the		HH1 R1 WW WS WG AQ1 AQ2 L1	B1 B2 B3 WF AH1 AH2 DW	

need and viability of such developments and due regard to environmental and residential impacts of such development, particularly in the coastal area.				
<p><i>AHMP3 - The development of aerodromes, air strips or airports in the Plan area would have to be accompanied by significant amounts of infrastructure - including supporting public and private transport infrastructure and services and water services. Significant amounts of greenfield lands, away from the town would be required with significant residual impacts likely on the landscape. Potential conflicts would arise between such projects and ecology. The operation of such projects would generate significant amounts of greenhouse gas emissions and energy usage and would result in significant noise emissions, which would be likely to conflict with human health. Runway, taxi areas and aprons typically produce significant surface water contamination due to de-icing procedures thus the location of any aerodrome, air strip or airport would require careful prior observance of the significance and vulnerability of local receiving waters. This may have significant implications for the assimilative capacity of water bodies, which are used by local settlements.</i></p> <p><i>Such projects would be required to undergo Environmental Impact Assessment through which both the need for the project and alternatives for its location would have to be thoroughly examined. Consideration would have to be given to flight paths utilised by flights to and from existing airports.</i></p>				
AHMP4 To support and facilitate the development of marine and shipping activity in Arklow, particularly the recreational use of the existing harbour/marina and the development of a roll on-roll off port at the existing Roadstone jetty.			B1 B2 B3 HH1 WS WG WF AQ1 AQ2 DW L1	R1 WW
<p><i>AHMP4 – The development of such marine and shipping activities would require significant amounts of infrastructure in order to function including significant private transport infrastructure. Potential conflicts would arise between such a project and ecology. The operation of such a project would also generate significant amounts of greenhouse gas emissions and energy usage and would result in significant noise emissions, which would be likely to conflict with human health. The development of roll-on roll-off activities has the potential to adversely impact on surface waters and water quality during construction and operation and therefore procedures for the development of such infrastructure require careful consideration.</i></p>				

8.2.5 Economic Development, including Retail and Tourism

	Likely to improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
ED1 To facilitate and support the growth of Arklow as an attractive location for employment development.			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW	

			AH2AH1 L1	
<i>ED1 – The provision of new developments has the potential to impact on biodiversity and Human Health arising from increased demands on water infrastructure causing deterioration in Water Quality. The provision of lands for employment uses on the outskirts of the plan area has the potential to increase car-based journeys impacting on air quality. This development on greenfield lands also has the potential to impact on the general landscape of the area. Within the town centre areas conflicts with flooding arise where such development would be permissible while excavations and construction may impact on existing archaeology and architecture.</i>				
ED2 To promote employment in Arklow in order to reduce the need to travel and the dependence on private transport.	HH1 AQ1 AQ2		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED2 – As per ED1 above.</i>				
ED3 To promote economic development at strategic locations on appropriately zoned land throughout the plan area, especially at or in close proximity to transport nodes.	HH1 R1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED3 – The promotion for the regeneration of the town centre facilitating employment uses is likely to reduce travel related emissions, improving air quality benefiting human health. This regeneration has the potential to impact on archaeological sites and architectural features within the town centre area while also conflicting with area prone to flooding. In addition the development of areas of land on the outskirts of the plan boundary may conflict with a number of SEO's through land take and excavation etc. The development of such lands may counteract the provisions of R1 where lands can be more easily developed. Increased loading on existing infrastructure impacting on water and water quality also forms a potential conflict.</i>				
ED4 To facilitate and encourage the exploration and exploitation of minerals in the plan area in a manner, which is consistent with the principal of sustainability and protection of residential, environmental tourism amenities.			B1 B2 B3 HH1 R1 WS WG AQ1 AQ2	
<i>The development of Quarry activities within the plan area is likely to impact on biodiversity arising from the excavation of minerals within the plan area with implications for surface waters and ground water quality. The operation and processing of materials has the potential to impact on air quality from dust emissions and increased traffic movements. Increased loading on existing water and wastewater infrastructure arising from surface water run-off may also be an issue. The physical excavation of lands is likely to adversely impact on the landscape of the plan area unless landscape restoration measures are carried out.</i>				
ED5 To promote and facilitate the development of larger scale employment generating developments to the north and south of the town and other appropriately zoned locations.			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED5 – As per ED1 above.</i>				
ED6 To facilitate and support the development of knowledge-intensive and			B1 B2 B3 HH1 R1	

technology development and innovation facilities to support enterprise and employment.			WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED5 – As per ED1 above.</i>				
ED7 To support the development of a high quality built environment to attract and sustain enterprise and employment.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>ED7 - No Likely interaction with the status of SEO's.</i>				
ED8 To promote innovative economic sectors and encourage business clusters that take advantage of one another.	HH1 R1 AQ1 AQ2		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED8 - The clustering of developments may result in a reduction in travel related emission within the plan area improving air quality and benefiting human health. The development of such enterprise on brownfield lands has the potential to impact on areas prone to flooding and may impact on existing archaeology and architectural heritage. The development of greenfield lands facilitating such development alternatively counters the promotion of regeneration within the town centre. The physical development and operation of such facilities may also impact on surface and ground waters, increase loading on existing infrastructure and impact on the landscape of the plan area.</i>				
ED9 To actively encourage the redevelopment of brownfield sites and the re-use of disused buildings for enterprise and employment creation, when such developments are in compliance with the objectives of this plan.	HH1 R1 AQ1 AQ2		WS WG WF WW DW AH1 AH2	B1 B2 B3 L1
<i>ED9 - The development of employment units within the town centre/on brown field sites may result in a reduction in travel related emission within the plan area improving air quality and benefiting human health. The development of such enterprise on brownfield lands has the potential to impact on areas prone to flooding and may impact on existing archaeology and architectural heritage. The physical development and operation of such facilities may also impact on surface and ground waters, increase loading on existing infrastructure.</i>				
ED10 To encourage and facilitate the development of “green” industries, including those relating to renewable energy and energy-efficient technologies.	HH1 WS WG AQ1 AQ2 WW DW		B1 B2 B3 WW WF L1	R1 AH1 AH2
<i>ED10 - The development of green industries in the plan area is likely to result in reduced emissions, improving air quality and thus human health. The provision and development of new technologies is likely to positively impact on surface and groundwater's, drinking water demand and effluent disposal. The development of such facilities within the town centre zone also has the potential to impact upon existing archaeology and areas of architectural merit. In contrast to this the physical development of such facilities on greenfield lands has the potential to impact on biodiversity through habitat disturbance and fragmentation of ecological networks, flooding where developed in or close to areas prone to flood, existing infrastructure through increased demand where distant from town centre or areas already serviced and the general landscape of the plan area.</i>				
HW1 To facilitate home-working and innovative forms of working, which reduce the need to travel but are subordinate to the main residential use of the dwelling and do not result in a disamenity in an area.	HH1 AQ1 AQ2			B1 B2 B3 HH1 R1 WS WG WF WW DW AH1 AH2 L1

<i>HW1 – Home working facilitates employment uses likely to reduce travel related emissions, improving air quality benefiting human health.</i>				
HW2 To encourage the provision of live-work units as part of mixed-use developments in appropriate locations	HH1 AQ1 AQ2			B1 B2 B3 HH1 R1 WS WG WF WW DW AH1 AH2 L1
<i>HW2 - As per HW1 above</i>				
MA1 To have regard to the following in assessing applications for new developments (including extensions): <ul style="list-style-type: none"> • Major Accidents Directive (Seveso II-96/082/EEC); • The potential effects on public health and safety; • The need to ensure adequate distances between such developments and residential areas, areas of public use and any areas of sensitivity; • The advice of HSA. 	B1 B2 B3 HH1 W-S W-G DW			R1 W-F AQ1 AQ2 WW AH1 AH2 L1
<i>MA1 - Places strict measures to be adhered to in relation to the development of such employment facilities within the plan area.</i>				
RT1 Applications for new retail development shall accord with “Retail Planning Guidelines for Planning Authorities”, (DOEHLG 2005) and any subsequent Ministerial Guidelines or directives.	R1 HH1 AQ1 AQ2		B1 B2 B3 WS WG WF WW DW AH1 AH2 L1	
<i>RT1 - The provisions of the retail planning guidelines generally aim to ensure that core retailing areas are located primarily within the town centre in so far as possible benefiting the regeneration of the town centre area and reducing the need for car based trips, reducing emissions, improving air quality and thus human health. The development of such enterprise on brownfield lands has the potential to impact on areas prone to flooding and may impact on existing archaeology and architectural heritage. The potential development of edge of centre retail activities where no viable site can be found within the plan area has the potential to impact on biodiversity, surface and ground waters and increase loading on existing infrastructure. The physical development of such outlets also has the potential to impact on the landscape of the plan area.</i>				
RT2 Applications for new retail development shall accord with the County Retail Strategy and where appropriate shall be accompanied by a Retail Impact Assessment	R1 HH1 AQ1 AQ2		B1 B2 B3 WS WG WF WW DW AH1 AH2 L1	
<i>RT2 – As per RT1 above.</i>				
RT3 The preferred location for new retail development where practicable and viable, is within the town centre. Where it is not possible to provide the form and scale of development that is required on a site within the town centre, then consideration can be given to a site on the edge of the town centre so as to encourage the possibility of one journey serving several purposes. An edge of centre site is taken to be one, which is within an easy and convenient walking distance from the primary shopping core of a town centre. The distance considered to be convenient will vary according to local circumstances but typically is unlikely to be much more than 300-400m from the edge of the prime	R1 HH1 AQ1 AQ2		B1 B2 B3 AQ1 AQ2 WW DW AH1 AH2 L1	

shopping area.				
<i>RT3 – As per RT1 above</i>				
RT4 There will be a presumption against large retail centres located adjacent, close to, or on a high-speed route directly to existing, new or planned national roads/motorways. Such centres can lead to an inefficient use of costly and valuable infrastructure and may have the potential to undermine the regional/national transport role of the roads concerned.	HH1 R1 AQ1 AQ2		B1 B2 B3 WS WG WF WW DW AH1 AH2 L1	
<i>RT4 – Restricting development in such areas indirectly promotes the re-development of brownfield lands reducing the need for car-based trips, reducing emissions to the benefit of human health. The development of such retail centres on brownfield lands has the potential to impact on areas prone to flooding and may impact on existing archaeology and architectural heritage. Development in greenfield areas has the potential to impact on biodiversity while also having the potential to impact on surface and ground waters and increase loading on existing infrastructure. The physical development of such outlets also has the potential to impact on the landscape of the plan area.</i>				
RT5 The ‘sequential approach’ to the location of new retail development will be applied i.e. having assessed the size, availability, accessibility, and feasibility of developing both new sites and existing premises, firstly within a town centre and secondly on the edge of a town centre, alternative out of centre sites should be considered only where it can be demonstrated that there are no town centre or edge of centre sites which are suitable, viable and available.	HH1 AQ1 R1 AQ2		B1 B2 B3 HH1 WS WG AQ1 AQ2 WW DW AH1 L1	AH2 WF
<i>RT5- As per RT5 above.</i>				
RT6 Where an application for new retail development is made within the defined core retail area of Arklow town centre it will not always be necessary to demonstrate the quantitative need for retail proposals in assessing such proposed developments. In setting out the retail impact of the development the report should focus on how the scheme will add/detract from the vitality of the town centre - both in relation to improving retail, urban design, integration with the built fabric and quality of life in the town/centre.	R1 HH1 AQ1 AQ2		WS WW DW WF AH1 AH2 L1	B1 B2 B3 WG

<i>RT6 - The development of retailing units within the town centre/on brown field sites may result in a reduction in travel related emission within the plan area improving air quality and benefiting human health. The development of such enterprise on brownfield lands has the potential to impact on areas prone to flooding and may impact on existing archaeology and architectural heritage. The physical development and operation of such facilities may also impact on surface and ground waters, increase loading on existing infrastructure while the visual impact of such developments may impact on the general landscape of the area.</i>				
TP1 To support opportunities to improve the tourist product in Arklow and to co-operate with the appropriate statutory agencies, private tourism sector and community groups				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>TP1 – No likely interaction with the status of SEO's.</i>				
TP2 To promote and facilitate improvements to tourism and recreation infrastructure in the Arklow and environs area. Favourable consideration will be given to proposals for developments that place a particular emphasis on improving traffic flow, sign posting, car parking facilities, service/rest facilities etc., subject to the proper planning and sustainable development of the area, and the objectives of this plan.			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>TP2 – Facilitating the development of tourism and recreational infrastructure has the potential to impact on a number of SEO's arising from increased development pressures, increased accessibility to existing sites of heritage value, increased loading on existing infrastructure. While the provisions of this objective aim to improve traffic flow the development of new tourist attractions is likely to increase tourist numbers, traffic flow and therefore impact on air quality and human health through increased emissions.</i>				
TP3 To support the development of new / improved tourist facilities, including accommodation and attractions, particularly those taking advantage of the existing assets of the town, subject to such assets being protected from any adverse impacts arising from new development.			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>TP3 – As per TP1 above.</i>				
TP4 To improve, as funding allows, the principle access routes into the town centre from surrounding tourism locations, particularly the Coast Road north of the town, the Clogga Road and the Vale Road.	AQ1 AQ2 HH1		B3 HH1 AQ1 AQ2	B1 B2 R1 WS WG WF WW DW AH1 AH2 L1
<i>TP4 – Improved accessibility to the town centre from existing tourist locations aims to reduce the impacts of traffic congestion reducing emission and improving human health. The development of such routes however is likely to conflict with ecological connectivity arising from construction while also potentially encouraging greater car usage in these areas.</i>				
TP5 To facilitate the erection of standardised signage for tourism facilities and tourist attractions throughout the town.			AH1 AH2	B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW L1
<i>TP5 - The provision of such infrastructure has the potential to impact on existing archaeology and architecture within the plan area particularly the town centre area.</i>				
TP6 To encourage tourism and leisure related uses in the Waterfront Zone	R1		B2 L1 HH1 WS WG	B1 B3 AQ1 AQ2 AH1

including hotel / accommodation facilities and leisure uses to complement the marina and associated boating uses and activities.			WF WW DW	AH2
<i>TP6 - While this objective promotes the re-use of existing brownfield lands within the plan area potential conflicts arise from the physical development and construction of such developments impacting on biodiversity, human health from excavation of potentially contaminated lands, surface waters and water infrastructure. The location of development within this area also has the potential to impact on flooding and the existing landscape of the area.</i>				
TP7 To promote, in co-operation with the various relevant organisations, the more extensive use of the coastal strip for such activities as touring, sight-seeing, walking, pony trekking, etc. as a tourism and recreational resource.			B2 B3 WS DW L1	B1 HH1 R1 WG WF AQ1 AQ2 WW AH1 AH2
<i>TP7 - Potential impacts arise relating to existing habitats within the coastal zone from increased usage impacting on biodiversity through habitat fragmentation, surface water and the general landscape of the area.</i>				
TP8 To recognise the importance of local golf courses and other sports clubs to tourism in the town.	B1 B2 B3			HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>TP8 – Likely to help preserve existing habitats and ecological networks in and surrounding the golf course lands.</i>				
TP9 To support and encourage improvement to access to river banks and towpaths to facilitate walking and cycling.	HH1 AQ1 AQ2		B2 B3 WS L1	B1 R1 WG WF WW DW AH1 AH2
<i>TP9 – Encourages non-car based movements within this area improving air quality through reduced emission and human health. The provision of such facilities is likely to increase usage of such lands alongside improvements to such areas has the potential to impact on existing biodiversity, surface waters and the landscape of the area.</i>				
TP10 To ensure that new / improved tourist facilities are designed to the highest standard with particular emphasis on ancillary features (such as leisure facilities, bars, restaurants etc.), and to high quality external and internal finishes.	AH2 L1			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1
<i>TP10 – Likely to improve the architectural heritage of the area and the general landscape through appropriate design and finishing.</i>				

8.2.6 Natural and Built Heritage

	Likely to improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
BD1 To ensure that consideration is given to the impact of proposals for new developments on bio-diversity, and that appropriate mitigation schemes are	B1 B2 B3 WS WG WW DW HH1 L1			R1 WF AQ1 AQ2 AH1 AH2

proposed as relevant				
<i>BD1 – The inclusion of such an objective aims to ensure all proposals for new development take into consideration the implications of such development on all aspects of biodiversity.</i>				
BD2 To maintain the conservation value of all proposed and future Natural Heritage Areas (NHAs) in the plan area in particular the Arklow Marsh, which has been, designated Conservation Zone.	B2 B3 HH1 WS WG WF L1			B1 R1 WW DW AQ1 AQ2 AH1 AH2
<i>BD2 – Ensures that development within the plan area will not cause any adverse impacts to existing natural heritage areas and their sustaining resources ensuring the preservation and maintenance of biodiversity, human health, water quality, preventing additional impacts on flood prone lands and the landscape in general.</i>				
BD3 To protect features such as native hedgerows, trees and watercourses, and the locally important biodiversity areas as included on map 07.01 from inappropriate development, and to strengthen through development management, the role of these sites as green corridors to enhance overall biodiversity	B3 HH1 WS WG L1			B1 B2 R1 WF AQ1 AQ2 WW DW AH1 AH2
<i>BD3 – Aims to ensure the preservation of ecological corridors and water courses, mitigating against adverse impacts on water bodies and water quality positively impacting on human health and the general landscape of the plan area.</i>				
BD4 To ensure that appropriate consideration is given to the protection of trees of amenity and environmental value in the design of new developments, and discourage the felling of mature trees to facilitate development.	B3 L1			B1 B2 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2
<i>BD4 – Facilitate the preservation of ecological corridors positively enhancing the landscape of the plan area.</i>				
BD5 To require the planting of native and locally characteristic species of trees and shrubs in all new developments	B3 L1			B1 B2 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2
<i>BD5 – Encourages the provision of additional species enhancing ecological corridors and the landscape of the plan area.</i>				
BD6 To encourage the retention and enhancement of hedgerows and traditional stone walls in the plan area.	B3 L1			B1 B2 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2
<i>BD6 Facilitate the preservation of ecological corridors positively enhancing the landscape of the plan area.</i>				
BD7 Any programme, plan or project carried out on foot of this development plan, including any variation thereof, with the potential to impact upon a Natura 2000 site(s) shall be subject to Appropriate Assessment in accordance with Article 6 (3) and (4) of the EU Habitats Directive 1992 and 'Appropriate Assessment of plans and projects in Ireland – Guidance for Planning Authorities' DoEHLG 2009.	B1 B2 B3 HH1 WS WG WW DW L1			R1 WF AQ1 AQ2 AH1 AH2

<i>BD7 – The provision of BD7 contributes towards the protection of biodiversity, flora and fauna by placing restrictions on development, which may have an impact on a Natura 2000 sites. This objective also ensures that the provision of water services infrastructure will be provided without any adverse impact occurring on the receiving environment.</i>				
WS1 To co-operate with statutory bodies and all stakeholders to reduce the pollution of the Avoca River and facilitate the Eastern Regional Fisheries Board in implementing the recommendations of the “Restoring the Avoca River” Report.	B1 B2 B3 HH1 WS WG WW DW			WF AQ1 AQ2 AH1 AH2 L1
<i>WS1 aims to facilitate the implementation of the ERFB report on reducing pollution to the Avoca River with positive benefits for biodiversity, water services and human health.</i>				
WS2 To implement the EU Water Framework Directive and associated River Basin and Sub-Basin Management Plans and the EU Groundwater Directive to ensure the protection, improvement and sustainable use of all waters in the plan area, including rivers, lakes, ground water, coastal and estuarine waters, and to restrict development likely to lead to deterioration in water quality	B1 B2 B3 HH1 WS WG WF WW DW			AQ1 AQ2 AH1 AH2 L1
<i>WS2 – Ensure the implementation of EU frameworks relating to water quality, preserving biodiversity, preventing adverse impacts on water quality and thus human health and ensuring measures are taken in order to alleviate the potential for flooding to arise.</i>				
WS3 To resist development that would interfere with the natural water cycle to a degree that would interfere with the survival and stability of natural habitats	B1 B2 B3 HH1 WS WG WF WW DW L1			AQ1 AQ2 AH1 AH2
<i>WS3 – Restricts the development of lands likely to impact negatively on biodiversity and water quality including flooding within the plan area.</i>				
WS4 To prevent development that would pollute water bodies and in particular, to regulate the installation of effluent disposal systems in the vicinity of water bodies that provide drinking water or development that would exacerbate existing underlying water contamination.	B1 B2 B3 HH1 WS WG WW DW			WF AQ1 AQ2 AH1 AH2 L1
<i>WS4 – Restricts the development of lands likely to impact negatively on biodiversity and water quality.</i>				
WS5 To minimise alterations or interference with river/stream beds, banks and channels, except for reasons of overriding public health and safety (e.g. to reduce risk of flooding); a buffer of 10m along watercourses should be provided free of built development with riparian vegetation generally being retained in as natural a state as possible. In all cases where works are being carried out, to have regard to Regional Fisheries Board “Requirements for the protection of fisheries habitat during the construction and development works at river sites.”	B1 B2 B3 HH1 WS WG WF WW DW L1			AQ1 AQ2 AH1 AH2
<i>WS5 – Regulates the development of lands in close proximity to existing water corridors reducing the impact on biodiversity and water quality including flood prone areas within the plan area.</i>				
WS6 To promote the development of riparian walks and parks, subject to the			B1 B2 B3 HH1 WS	R1 WG WF AQ1 AQ2

sensitivity and /or designation of the riverside habitat, particularly within 10m of the watercourse.			DW L1	WW AH1 AH2
<i>WS6 Potential conflict with biodiversity, potential pollution from facilitating access increasing the potential for impacts on surface waters/drinking waters = impacts on human health</i>				
RN1 To facilitate the use of natural areas for active outdoor pursuits, subject to the highest standards of habitat protection and management and all other normal planning controls	B2 B3 HH1 WS L1			B1 R1 WG WF AQ1 AQ2 WW DW AH1 AH2
<i>RN1 – Ensure the protection of the landscape and natural habitats while also facilitating the use natural resources (water) in a sustainable manner protecting human health.</i>				
RN2 The Council shall seek to promote access to amenity areas of the plan area for the benefit of all, on the basis of co-operation with landowners, recreational users and other relevant stakeholders groups to promote “agreed access” on public and privately owned land in the plan area on the basis of sustainability, consultation and consensus	B2 B3 HH1 WS L1		B2 B3	B1 R1 WG WF AQ1 AQ2 WW DW AH1 AH2
<i>RN2 – Ensure the protection of the landscape and natural habitats while also facilitating the use natural resources (water) in a sustainable manner protecting human health. Potential impacts on heritage areas and fragmentation of ecological networks arising from increased accessibility and usage.</i>				
VP1 Protect and preserve the prospect of special amenity from the R750 towards the sea from the coast road.	B2 B3 L1			B1 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2
<i>VP1 – Preserves the existing prospect along the R750 ensuring landscape preservation and preventing development in this area, which potentially could impact on natural heritage areas and ecological connectivity.</i>				
AG1 Single residential Development on these lands will be strictly controlled, the applicant will be required to illustrate housing and local need and where residential development is permitted the applicant will be subject to an occupancy clause (duration of 7 years).	B1 B2 B3 HH1 WG AQ1 AQ2 AH1 L1			R1 WS WF WW DW AH2
<i>AG1 - Strictly controls the development of single dwellings on the landscape benefiting local habitats, species and preserving ecological corridors. The restrictions placed on the development of lands within this zone impact positively on human health limiting the potential for ground water contamination. Limited development of rural housing also acts positively towards reducing the need for car-based trips reducing emissions to air.</i>				
AG2 To encourage sustainable agricultural activities, protect the rural character of these lands and prevent developments, which would cause environmental pollution or injury to general amenities.	B1 B2 B3 HH1 WS WG AH1 DW L1			R1 WF AQ1 AQ2 WW AH2
<i>AG2 - Strictly controls the nature of agricultural activities to be carried out on the landscape benefiting local habitats, species and preserving ecological corridors. The protection placed on maintaining the rural character of the area within this zone impact positively on human health limiting the potential for ground water contamination.</i>				
AG3 To ensure that the agricultural development complies with the measures set out in the Easter River Basin Management Plan.	B1 B2 B3 HH1 WS WG AH1 DW L1			R1 WF AQ1 AQ2 WW AH2

AG2 - Strictly controls the nature of agricultural activities to be carried out on the landscape benefiting local habitats, species and preserving ecological corridors. The protection placed on maintaining the rural character of the area within this zone impact positively on human health limiting the potential for ground water contamination.				
AH1 To consolidate and safeguard the historical and architectural character of Arklow Town Centre through the protection of individual buildings, structures, shopfronts and elements of the public realm that contribute greatly to this character.	R1 AH1 AH2 L1		R1	B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW
<i>AH1 – Promotes the regeneration of the town centre whilst recognising the importance of the existing landscape, archaeology and architecture of the area, which in turn may restrict the achievement of a complete regeneration of this area.</i>				
AH 2 To conserve buildings and features of historical and vernacular interest through ensuring that adequate consideration is given to their protection as part of development proposals and that mitigation measures are put in place as required	AH2 L1		R1	B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH1
<i>AH2 – Ensures the preservation of existing architectural landscape of the area, which may restrict the achievement of a complete regeneration of the town centre area.</i>				
RPS 1 To safeguard the character of Protected Structures and encourage appropriate alterations to these buildings to render them viable for modern use, subject to best conservation practice (in accordance with Architectural Heritage Protection guidelines produced by the DOEHLG). (Arklow RPS set out in Appendix 1 of the Plan)	R1 AH2 L1			B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH1
<i>AH2 – Ensures the preservation and sustainable re-use of existing architectural buildings facilitating the regeneration of the town centre area.</i>				
AR1 To safeguard archaeological heritage by ensuring that development in the vicinity of a recorded monument which are listed in table 7.1 below shall be permitted only where it can be demonstrated that there will be no damage to the monument itself, its setting or its cultural and educational value	AH1 L1		R1	B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH2
<i>AH2 – Aims to ensure the preservation of existing archaeological heritage of the area, which may restrict the achievement of a complete regeneration of the town centre area.</i>				
AR2 Any development that may due to its size, location or nature have implications for archaeological heritage shall be subject to an archaeological assessment	AH1 L1		R1	B1 B2 B3 HH1 WS WG WF AQ1 AQ2 WW DW AH2
<i>AH3 – As per AH2 above</i>				
AR 3 To ensure that provision is made through the development management process for the protection of previously unknown archaeological sites and features where they are discovered during	AH1 L1			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH2

development works.				
<i>AH3 – Aims to ensure the preservation of unknown archaeological heritage sites within the landscape of the area preventing impacts arising from new development.</i>				
MH1 To support facilities such as the Arklow Maritime Museum which increase public awareness and appreciation of the town's maritime heritage.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>MH1 – No likely interaction with status of SEO's.</i>				
MH2 To support initiatives to highlight Arklow's Maritime heritage in the public realm.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>MH1 – No likely interaction with status of SEO's.</i>				
MH3 To ensure that any development projects in and around the Arklow quays respect any valuable structures or items of Arklow's maritime heritage	AH1 AH2 L1		B1 B2 B3 HH1 R1 WS WG WF WW DW	AQ1 AQ2
<i>MH3 – provides that developments within this area respect the landscape and existing items of archaeological and architectural heritage. The development of such projects has the potential however to impact on biodiversity, may restrict the potential for regeneration of certain sites within the town centre, could impact on water quality during construction and by placing increased loading on infrastructure, impacting on human health and potentially on flood prone areas.</i>				

8.2.7 Services Infrastructure – Waste, Water and Energy

Water				
W1 To ensure that all waste water generated is collected and discharged after treatment in a safe and sustainable manner, Strictly in accordance with the standards and requirements set out in EU and national legislation and guidance documents including the provisions of the Eastern River Basin Management Plan and the Habitats Directive.	B1, B2, B3, HH1 W-S, WG, WW, DW			R1, WF, AQ1, AQ2, AH1, AH2, L1
<i>W1 promotes the sustainable disposal of all waste waters ensuring water quality is maintained facilitating improvement and preventing impacts on human health. The provision of such measures is also likely to improve and enhance existing biodiversity within the plan area in particular water based habitats.</i>				
W2 To provide for a town sewerage system that meets the needs of the existing and future population of the town, comprising - New trunk and interceptor sewers - Pumping stations as required	B1 B2 B3 HH1 W-S, WG, WW, DW		B2 B3 AH1 L1	R1, WF, AQ1, AQ2, , AH2,

<ul style="list-style-type: none"> - A wastewater treatment plant at Seabank, with sea outfall - Upsizing of existing network where identified in the Sewer Model Study (2009). 				
<p><i>W2 – As per W1 above. The construction phase of development involving excavation and installation of new infrastructure has the potential to impact on Biodiversity through habitat disturbance and fragmentation of ecological networks. Excavation may also impact on existing archaeology and the landscape of the plan area.</i></p>				
<p>W3 Proposed developments within the plan area will only be permitted where it can be adequately demonstrated that sufficient waste water treatment infrastructure with adequate capacity is available or proposed to be available, capable of servicing the proposed development without causing any adverse impacts on human health and water quality or other environmental impacts.</p>	<p>B1 B2 B3 HH1 R1 WS WG WW DW</p>			<p>WF AQ1 AQ2 AH1 AH2 L1</p>
<p><i>W3 – As per W1 above. The implementation of this objective promotes the regeneration of the town centre where existing infrastructure exists and development can be readily accommodated.</i></p>				
<p>W4 Private wastewater treatment plants to serve new development will only be considered where it can be shown that no net overall increase in potential pollution to receiving waters will result and the location and design of the plant meets all current EU and national environmental standards.</p>	<p>B1, B2, B3, HH1, WS, WG, WW, DW</p>			<p>R1, WF, AQ1, AQ2, AH1, AH2, L1</p>
<p><i>W4 – As per W3 above.</i></p>				
<p>W5 To ensure the separation of foul and surface water effluent through the provision of separate sewerage networks.</p>	<p>B1 B2 B3 HH1 WS WG WW DW</p>			<p>R1 WF AQ1 AQ2 AH1 AH2 L1</p>
<p><i>W5 – Aims to ensure the sustainable disposal of foul and surface waters ensuring water quality is maintained facilitating improvement and preventing impacts on human health. The provision of such measures is also likely to improve and enhance existing biodiversity within the plan area in particular water based habitats and reduce the loading and demands on existing infrastructure.</i></p>				
<p>W6 To ensure the implementation of Sustainable Urban Drainage Systems (SUDS) and in particular, to ensure that all surface water generated in a new development is disposed of on-site or is attenuated and treated prior to discharge to an approved surface water system.</p>	<p>B1 B2 B3 HH1 WS WG WF WW DW</p>			<p>R1 AQ1 AQ2 AH1 AH2 L1</p>
<p><i>W6 - As per W4 above. In addition the implementation of SUDS is likely to help prevent the impacts of flooding.</i></p>				
<p>W7 To provide a town water supply and distribution scheme that meets the needs of the existing and future population of the town</p>	<p>B1 B2 B3 HH1 WS WG WW DW</p>			<p>R1 WF AQ1 AQ2 AH1 AH2 L1</p>

<i>W7 – Ensure water is supplied to meet the projected population in a sustainable manner reducing the impacts on biodiversity, water quality and waste water infrastructure.</i>					
W8	To protect existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the Groundwater Protection Scheme and source protection plans for public water supplies.	B1 B2 B3 HH1 WS WG WF WW DW		B1 B2 B3 HH1 WS WG DW	R1 AQ1 AQ2 AH1 AH2 L1 S1
<i>W8 – Likely to improve as per W6 above. The development of the plan area has the potential to impact on biodiversity (unless adequate infrastructure is in place) directly conflicting with biodiversity and surface, ground and drinking water quality.</i>					
W9	To require new developments to connect to public water supplies where services are adequate or where they will be provided in the near future.	HH1 DW			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW AH1 AH2 L1
<i>W9 – Aims to ensure development is served by adequate infrastructure impacting positively on Human Health and Drinking Water Quality.</i>					
W10	To seek to minimise wastage and demand for water, through - Ongoing monitoring and improvement of the Local Authority controlled water supply system; - Requiring new developments to integrate water efficiency measures	B1 B2 B3 WS WG DW			HH1 R1 WF AQ1 AQ2 WW AH1 AH2 L1
<i>W10 – Positive impacts on biodiversity, surface, ground and drinking water quality arising from reduced demands on natural resources and infrastructure.</i>					
Flooding					
FL1	To require where appropriate that developments of a type that maybe considered sensitive to flooding are subject to a “justification test”. Where a justification test is required it shall demonstrate to the satisfaction of the Council that; a). Such proposals include a sequential assessment demonstrating that there are no alternative sites available at a more suitable location within the town that would meet the requirements of the development; b). The area comprises significant previously developed and/or underutilised lands within the town plan area; c). The development of the area is essential to facilitate the regeneration and rejuvenation or town centre expansion; d). Environmental/hydrological assessment has been undertaken to identify the impact of flood risk as a result of development and that the development would not result in increased or new flood risk elsewhere and if possible will reduce the overall flood risk;	HH1 WF			B1 B2 B3 R1 WS WG AQ1 AQ2 WW DW AH1 AH2 L1

<p>e). The proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as is reasonable possible;</p> <p>f). Residual risk to the area and/or the development can be managed to an acceptable level by design, incorporated flood risk measures.</p>				
<p><i>FL1 - Requirements likely to reduce human health risks associated with flooding and prevents unsuitable development in flood prone areas.</i></p>				
<p>FL2 Applications for significant new developments or developments in high or moderate flood risk areas shall follow the sequential approach as set out above.</p>	<p>HH1 WF</p>			<p>B1 B2 B3 R1 WS WG AQ1 AQ2 WW DW AH1 AH2 L1</p>
<p><i>FL2 – As per FL1 above</i></p>				
<p>FL3 To limit or break up large areas of hard surfacing in new developments and to require all surface car parks to integrate permeability measures such as permeable paving.</p>	<p>HH1 WF</p>			<p>B1 B2 B3 R1 WS WG AQ1 AQ2 WW DW AH1 AH2 L1</p>
<p><i>FL3 – As per FL1 above</i></p>				
<p>FL4 Excessive hard surfacing shall not be permitted for new, or extensions to residential or commercial developments and all applications will be required to show that sustainable drainage techniques have been employed in the design of the development.</p>	<p>HH1 WF</p>			<p>B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>
<p><i>FL4 – As per FL1 above</i></p>				
<p>FL5 To require all new developments to include proposals to deal with rain and surface water collected on site and where deemed necessary, to integrate attenuation and SUDS measures</p>	<p>B1 B2 B3 HH1 WS WG WF WW DW</p>			<p>AQ1 AQ2 AH1 AH2 L1</p>
<p><i>FL5 – Positively impact on biodiversity through the development of measures aimed at reducing flooding and overloading of infrastructure also benefiting surface, ground and drinking water supplies.</i></p>				
<p>FL6 Flood assessments shall be required with all planning applications proposed in flood risk areas to ensure that the development itself is not at risk of flooding and the development does not increase the flood risk in the relevant catchment (both up and down stream of the application site). Generally a Flood Impact Assessment will be required with all significant developments and a certificate (from a competent person with adequate indemnity insurance stating that the development will not</p>	<p>B1 B2 B3 HH1 WS WG WF WW DW</p>			<p>AQ1 AQ2 AH1 AH2 L1</p>

contribute to flooding within the relevant catchment) will be required with all small developments of areas of 1 hectare or less.				
<i>FL6 – As per FL5 above.</i>				
FL7 For developments adjacent to all watercourses of a significant conveyance capacity or where it is necessary to maintain the ecological or environmental quality of the watercourse, any structures (including hard landscaping) must be set back from the edge of the watercourse to allow access for channel clearing/ maintenance/ vegetation. A minimum setback of up to 10-15m will be required either side depending on the width of the watercourse.	B1 B2 B3 HH1 R1 WS WG WF WW DW			AQ1 AQ2 AH1 AH2 L1
<i>FL7 – Applies restrictions on developments adjoining existing surface waters and ecological corridors in order to preserve and maintain existing species and habitats. Likely to improve the status of Human Health by ensuring the status of water quality is maintained.</i>				
Solid waste management objectives				
WM1 To facilitate the development of sites, services and facilities necessary to achieve implementation of the objectives of the Wicklow Waste Management Plan.	HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AQ1 AQ2 AH1 AH2 L1	R1 WW
<i>WM1 – Aimed at reducing emissions and the occurrence of illegal dumping positively impacting on human health. The development of such facilities however is likely if unmitigated to conflict with biodiversity through development, processes. The potential for increased emissions is likely to impact negatively on Human Health and water quality. The development of amenity centres and bring banks has the potential to impact on archaeology and architecture and general landscape within the town centre.</i>				
WM2 To have regard to the Council's duty under Section 38 (1) of the 1996 Waste Management Act, to provide and operate, or arrange for the provision and operation of, such facilities as may be necessary for the recovery and disposal of household waste arising within its functional area.	HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AQ1 AQ2 AH1 AH2 L1	R1 WW
<i>WM2 – As per WM1 above</i>				
WM3 To require all developments likely to give rise to significant quantities of waste, either by virtue of the scale of the development or the nature of the development (e.g. one that involves demolition) to submit a construction management plan, which will outline, amongst other	HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AQ1 AQ2 AH1 AH2 L1	R1 WW

things, the plan for the safe and efficient disposal of waste from the site.				
<i>WM3 – As per WM1 above.</i>				
WM4 To require all new developments, whether residential, community, agricultural or commercial to make provision for storage and recycling facilities	HH1 AQ1 AQ2		HH1	B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>WM4 – Aimed at reducing emissions and the occurrence of illegal dumping positively impacting on human health. Potential impacts on Human Health arising from storage of waste.</i>				
WM5 To facilitate the development of existing and new waste recovery facilities and in particular, to facilitate the development of 'green waste' recovery sites.	HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AQ1 AQ2 AH1 AH2 L1	R1 WW
<i>WM 5 – Aims to ensure the appropriate disposal of waste and reduction in emissions to air. The development of such facilities may however impact on air and water quality, archaeological and architectural heritage and landscape through the location and development processes involved in the operation of such facilities. The location of such developments may impact areas prone to flooding while the operation of such facilities may impact on water infrastructure.</i>				
WM6 To have regard to the "Major Accidents Directive" (European Council Directive 96/82/EC). This Directive relates to the control of major accidents involving dangerous substances with an objective to prevent major accidents and limit the consequences of such accidents. This policy will be implemented through Development management, through specific control on the siting of new establishments and whether such a siting is likely to increase the risk or consequence of a major accident.	B1 B2 B3 HH1 W-S W-G DW			R1 W-F AQ1 AQ2 WW AH1 AH2 L1
<i>WM6 - Recognition of the Seveso Directive and the consultation distance required by the HSA ensuring appropriate measures are taken in the development of such sites within the plan area.</i>				
Litter & illegal dumping objectives				
LT1 To facilitate the implementation of the County and local Litter Management Plan.	HH1 W-S W-G L1			B1 B2 B3 R1 W-F AQ1 AQ2 WW DW AH1 AH2 L1

<i>LT1 – Aims to prevent littering, providing for increased waste recycling and disposal points.</i>				
LT2 To proactively pursue enforcement and legal action against perpetrators of illegal dumping and ‘fly tipping’.	HH1 W-S W-G L1			B1 B2 B3 R1 W-F AQ1 AQ2 WW DW AH1 AH2
<i>LT2 – As per LT1 above.</i>				
LT3 To require all new potentially litter generating developments (such as shops, takeaways, pubs etc) to provide litter / cigarette bins on or directly adjoining the premises and to provide for the cleaning of the adjoining streetscape in accordance with the provisions of Part II Section 6 of the Litter Pollutions Act 1997 and 2003.	HH1 L1			B1 B2 B3 R1 W-S W-G W-F AQ1 AQ2 WW DW AH1 AH2
<i>LT3 – Ensures adequate collection facilities are in place for the disposal of waste reducing the potential for impacts on the landscape and human health from littering.</i>				
Air emissions objectives				
AE1 To regulate and control activities likely to give rise to emissions to air (other than those activities which are regulated by the EPA).	B1 B2 B3 HH1 WS WG DW			R1 WF AQ1 AQ2 WW AH1 AH2 L1
<i>AE1 – aims to ensure control measures are in place in order to prevent emissions to air preventing impacts on biodiversity, human health and water quality.</i>				
AE2 To require proposals for new developments with the potential for the accidental release of chemicals or dust generation, to submit and have approved by the Local Authority construction and/or operation management plans to control such emissions.	B1 B2 B3 HH1 WS WG DW			R1 WF AQ1 AQ2 WW AH1 AH2 L1
<i>AE2 – As per AE1</i>				
AE3 To require activities likely to give rise to air emissions to implement measures to control such emissions, to install air quality monitors and to provide an annual air quality audit.	B1 B2 B3 HH1 WS WG DW			R1 WF AQ1 AQ2 WW AH1 AH2 L1
<i>AE3 – As per AE1</i>				
Noise pollution objectives				
NP1 To enforce, where applicable, the provisions of the Environmental Protection Agency (EPA) Acts 1992 and 2003, and EPA Noise Regulations 1994.	HH1			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>NP1 – Measures aimed at reducing noise pollution aim to protect human health from such nuisances.</i>				
NP2 To regulate and control activities likely to give rise to excessive noise (other than those activities which are regulated by the EPA).	HH1			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1

<i>NP2 – As per NP1</i>				
NP3 To require proposals for new developments with the potential to create excessive noise to prepare a construction and/or operation management plans to control such emissions.	HH1			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>NP3 – As per NP1</i>				
NP4 To require activities likely to give rise to excessive noise to install noise mitigation measures and monitors. The provision of a noise audit may also be required as appropriate.	HH1			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>NP4 – As per NP1</i>				
Light pollution objectives				
LP1 To require proposals for new developments with the potential to create light pollution or light impacts on adjacent residences / public roads to mitigate impacts.	HH1			B1 B2 B3 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>LP1 – aims to reduce the occurrence and mitigate against light pollution, which can have potential impacts on human health.</i>				
Energy Objectives				
E1 To encourage the development of alternative and renewable energy sources, including wind, solar, hydro, bio energy sources	HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AH1 AH2 L1	R1 AQ2
<i>E1 – The development of alternative renewable energy sources prevents the depletion of existing sources of energy with potential benefits to air quality and human health. The development of such sources of energy can also have potential negative impacts through land take/construction/excavation, which may have the knock on effect on water quality, architecture and the general landscape in the area concerned.</i>				
E2 To encourage the development of wind energy at suitable locations in the plan area, in accordance with the County Wicklow Wind Strategy and in particular to allow wind energy exploitation subject to: <ul style="list-style-type: none"> - The maintenance of a suitable buffers between any wind turbine and any existing residential areas and detailed evaluation and mitigation of potential impacts on any residence within 600m of any wind turbine; - Consideration of any designated nature conservation areas (SACs, NHAs, SPAs etc) and any associated buffers; - Impacts on visual, residential and recreational amenity; - Impacts on ‘material assets’ such as towns, infrastructure and 	B1 B2 B3 HH1 AQ1		B1 B2 B3 HH1 WS WG WF DW AH1 AH2 L1	R1 AQ2

<p>heritage sites;</p> <ul style="list-style-type: none"> - Consideration of grid connection issues; - Best practice in the design and siting of wind turbines, and all ancilliary works including access roads and overhead cables. 				
<p><i>E2 – While the provision of such development has the potential to negatively impact on biodiversity, water quality and landscape features the restrictions imposed by the wording of the above aim to protect biodiversity in so far as is possible while the objective itself promotes and encourages the development of renewable energy technologies which is positive for human health and air quality.</i></p>				
<p>E3 To facilitate the development of off-shore wind energy projects insofar as onshore facilities may be required, having regard to the provisions of the National Offshore Renewable Energy Development Plan.</p>			<p>B1 B2 B3 WS AH1 AH2 L1</p>	<p>HH1 R1 WG WF AQ1 AQ2 WW DW</p>
<p><i>E3 - The development of such facilities may impact on biodiversity, surface water and the general landscape including archaeology and architecture.</i></p>				
<p>E4 To facilitate the development of solar generated electricity and to positively consider all applications for the installation of PV cells at all locations, having due regard to architectural amenity and heritage.</p>			<p>AH2 L1</p>	<p>B1 B2 B3 HH1 R1 WS WG AQ 1 AQ2 WW DW AH2</p>
<p><i>E4 – The development of such installations may visually impact on Architectural heritage and the landscape of the plan area.</i></p>				
<p>E5 To facilitate the development of expanded or new river / lake based hydroelectricity plants, subject to due consideration of ecological impacts, in particular, the free flow of fish and maintenance of biodiversity corridors and the development of off shore hydroelectricity projects insofar as onshore facilities may be required</p>			<p>B1 B2 B3 WS WF AH1 AH2 L1</p>	<p>HH1 R1 W-G AQ1 AQ2 WW DW AH1 AH2</p>
<p><i>E5 – The provision of such developments has the potential to impact on biodiversity, surface waters and the general landscape including archaeology and architecture during construction and operation processes. The potential impacts of such developments also has the potential to impact on areas prone to flooding.</i></p>				
<p>E6 To facilitate the development of small-scale electricity generation installations such as PV cells (solar panels), single stand-alone or wall mounted wind turbines and biomass converters</p>			<p>AH1 AH2 HH1 L1</p>	<p>B1 B2 B3 HH1 R1 W-S W-G AQ1 AQ2 WW DW AH1 AH2</p>
<p><i>E4 – The development of such installations may visually impact on Architectural and archaeological heritage and the landscape of the plan area. Impact on Human Health may arise from nuisances such as noise or smell.</i></p>				
<p>E7 To require all new buildings during the design process to incorporate sustainable technologies capable of achieving a Building Energy Rating in accordance with the provisions S.I. No. 666 of 2006 European</p>				<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>

Communities (Energy Performance of Buildings) Regulations 2006.					
<i>E7 – No likely interaction with SEO's.</i>					
E8	To support the development and expansion of the electricity transmission and distribution grid, including the development of new lines, pylons and substations as required; to suitably manage development within 35m of existing 110KV/220kV transmission lines and to support and facilitate the development of landing locations for any cross channel power interconnectors.			B1 B2 B3 HH1 W-S W-G AH1 AH2 L1	R1 W-F AQ1 AQ2 WW DW
<i>E8 – Impact of development during construction and operation on human health, Archaeology, water quality and visually on the landscape of the plan area and on site of architectural merit.</i>					
E9	To facilitate the development of alternative transport fuels and the development of services and utilities for alternative vehicles types	HH1 AQ1		B1 B2 B3 WS WG AQ1 AQ2 L1	R1 WF WW DW AH1 AH2
<i>E9 - The production of such alternatives has the potential to positively impact on air quality reducing emission benefiting human health however the actual development and production of such technologies has the potential to impact negatively on biodiversity, water and air quality and the landscape of the plan area.</i>					
Telecommunications Objectives					
ICT1	To facilitate the development and expansion of communication, information and broadcasting networks, including mobile phone networks, broadband and other digital services			B2 B3 AH2 L1	B1 HH1 R1 W-S W-G W-F AQ1 AQ2 WW DW AH1
<i>ICT 1 - The development and production of such technologies has the potential to impact negatively on biodiversity, architectural heritage (visual impacts) and the landscape of the plan area.</i>					

8.2.8 Community Infrastructure – Recreation, Amenity and Education

	Likely to improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
CD1 To ensure sufficient zoned land is available to meet the community needs of the projected population of the plan area over the plan period.	HH1 AQ1 AQ2 B3		B1 B2 B3 HH1 R1 WS WG WF WW DW AH1 AH2 L1	
<i>CD1 – Aims to ensure the provision of adequate open space lands capable of serving the resident population of the plan area. The provision of such lands in close proximity to existing residential populations is likely to reduce the need for travel, reducing travel related emissions, improving air quality and thus human health. The provision of open space lands throughout the plan area will facilitate the expansion of ecological networks. While this may be the case the objective to provide for extensive open spaces has the potential to impact on biodiversity through the use of lands for amenity and recreational purposes. Such lands can also be located within areas prone to flooding where certain types of development/facilities may impact on surface/ground waters and potentially on drinking water quality arising from increased pressures on infrastructure. Impacts on Archaeological heritage may arise during the development of active open spaces requiring extensive drainage networks in order to ensure the ability to cater for such uses. The visual impact of such development also has the potential to impact on architecture and the landscape of the area.</i>				
CD2 The Council will promote and facilitate the delivery of community facilities in accordance with the Hierarchy Model of community facilities prepared under Strand 3 of the Development Levy Scheme (under Section 48 of the Planning and Development Acts) (as set at the end of this chapter).	AQ1 AQ2 HH1		B1 B2 B3 HH1 R1 WS WG WF WW DW AH1 AH2 L1	
<i>CD2 – The provision of such facilities has the potential to reduce the need for car based trips to other areas thereby reducing emissions benefiting air quality and human health. In providing for extensive open spaces potential impacts on biodiversity arise from the use of lands for amenity and recreational purposes. Such lands can also be located within areas prone to flooding where certain types of development/facilities may impact on surface/ground waters and potentially on drinking water quality arising from increased pressures on infrastructure. The visual impact of such development also has the potential to impact on the landscape of the area.</i>				
CD3 Unless otherwise specified by the Planning Authority, new significant residential developments ³² will be required to carry out a social infrastructure audit, to determine if social and community facilities in the area are sufficient to provide for the needs of the future residents. Where deficiencies are identified,	AQ1 AQ2 HH1		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	

³² This is determined to be any application that would increase the housing stock in a settlement by more than 10%.

proposals will be required to either rectify the deficiency, or suitably restrict or phase the development in accordance with the capacity of existing or planned services.				
<i>CD3 – As per CD2 above.</i>				
ED1 To co-operate with the Department of Education & Skills, the Vocational Education Committee for Co.Wicklow and school management Boards in the provision of school places.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>ED1 – No likely interaction of with status of SEO's</i>				
ED2 Where lands are zoned for educational use, to promote and facilitate the development of facilities that provide for linkages between schools types. For example, particular encouragement will be given to primary and secondary school campuses, the linking of pre-school services with primary schools and the linking of secondary schools with vocational training facilities.	AQ1 AQ2 HH1		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	
<i>ED2 – The provision of pedestrian linkages and ease of accessibility is likely to reduce the need for car based trips to and from educational facilities reducing emission to air and benefiting Human Health. The provision of such linkages could however impact on biodiversity during construction causing habitat disturbance with land take also causing fragmentation of ecological networks. The concentration of such campus type facilities will also require large areas of lands impacting on the landscape through development greenfield lands while also increasing the loading on existing infrastructure. Impacts on archaeology arising from the development of lands and impacts on architecture and the landscape of the plan area may also arise.</i>				
ED3 Where lands are zoned for employment use, to promote and facilitate the development of employment training facilities (privately and/or publicly funded).	AQ1 AQ2 HH1		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	
<i>ED3 – The provision of on site training facilities in close proximity to existing employment areas will reduce the need for car based journeys reducing emissions, Improving air quality to the benefit of human health. The development of such facilities requires an increased land take however with the potential to impact on local biodiversity and archaeology during excavation/construction. Development and operation of such facilities also creates increased loading pressures on infrastructure and a visual impact on the landscape. In facilitating training facilities on such lands the potential for such facilities to be located in the town centre area may be impacted upon conflicting with regeneration proposals in this area while also impacting on sites and buildings of architectural merit. The development of such facilities may occur within and around the town centre area potentially impacting on flooding.</i>				
ED4 Where practicable, education, community, recreational and open	AQ1 AQ2 HH1		B1 B2 B3 R1 WS	

space facilities shall be clustered. However schools shall continue to make provision for their own recreational facilities as appropriate.			WG WF WW DW AH1 AH2 L1	
<i>ED4 – As per ED3 above.</i>				
ED5 To promote the provision of dedicated facilities for adult and community education in recognition of the growing demand for life-long learning opportunities and the perceived shortage of such facilities at present.			B1 B2 B3 R1 HH1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	
<i>ED5 – The development of such facilities in and surrounding the town centre zone has the potential to impact on archaeology and architecture within this area while also have the potential to impact on areas prone to flooding. Where development of this nature cannot be facilitated on existing brownfield lands, new greenfield lands will be required to be developed impacting on the general landscape. The development of such lands has the potential to impact on local biodiversity and ecological networks. Increased loading on existing infrastructure is also likely arising from the development and operation of such facilities with potential impacts on surface and ground waters. The use of lands on the outskirts of the plan boundary is likely to require car based trips where public transport is not available increasing emissions, reducing air quality and impacting on human health.</i>				
ED6 To promote the use of education facilities after school hours / weekends for other community and non-school purposes, where possible.	AQ1 AQ2 HH1			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>ED6 – The usage of existing facilities for educational uses in close proximity to existing residential areas is likely to reduce the need for car based journeys, reducing emissions, improving air quality and human health.</i>				
<p>HC1 To facilitate the development of healthcare uses at suitable locations, in liaison with the appropriate health authorities. Health facilities will be considered on appropriately zoned lands where the following can be demonstrated</p> <ul style="list-style-type: none"> • The location is readily accessible to those availing of the service, with a particular presumption for facilities close to services. Locations distant of services will not generally be considered except where it can be shown that the nature of the facility is such that it demands such a location; • The location is generally accessible by means other than private car, in particular by public transport services, or by walking / cycling • The location is accessible to those with disabilities. 	AQ1 AQ2 HH1		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1	

<i>HC1 – The criteria to be met relating to the development of healthcare facilities within the plan area has the potential to reduce travel related emissions benefiting human health. Such development within and immediately surrounding the core area of the plan may also impact on areas prone to flooding and existing architecture. Developments located distant from existing facilities require the use of green lands and has the potential to impact on local biodiversity and archaeology during excavation/construction. Development and operation of such facilities also creates increased loading pressures on infrastructure and a visual impact on the landscape. The facilitation of such facilities on greenfield lands reduces the potential for such facilities to be located on brownfield lands causing potential impacts on the regeneration.</i>				
HC2	To support the establishment of centres of medical excellence, hospices, respite care facilities or facilities for those with long term illness.			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>HC2 – As per ED5 above.</i>				
HC3	To allow for the change of use of all or part of an existing dwelling in a residential zone to health care usage, subject to normal planning considerations, paying particular regard to car parking availability, impacts on traffic flow and obstruction and impacts on residential amenities.	AQ1 AQ2 HH1		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>HC3 – Promotes the use of part or all of an existing building within a residential area for health care ensuring facilities can be located in close proximity to the resident population reducing the need for car based trips during visits, reducing travel related emissions benefiting human health.</i>				
NH1	To encourage the development and improvement of new and existing residential and day care facilities in appropriate locations located close to shops and other community facilities required by the occupants and easily accessible to visitors, staff and servicing traffic.	R1 AQ1 AQ2 HH1		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>NH1 – The provision of such facilities is likely to promote the re-use of existing brownfield lands, reducing emissions improving air quality and benefiting human health. The development of such facilities within and surround the core of the plan area has the potential to impact on areas prone to flooding while also impacting potentially impacting on existing buildings and sites of architectural merit. Developments located distant from existing facilities require the use of green land and has the potential to impact on local biodiversity and archaeology during excavation/construction. Development and operation of such facilities also creates increased loading pressures on infrastructure and a visual impact on the landscape. The facilitation of such facilities on greenfield lands reduces the potential for such facilities to be located on brownfield lands causing potential impacts on the regeneration.</i>				
NH2	'Retirement villages', made up of a number of independent housing units, with limited / no on site care facilities will be required to locate on residentially zoned lands	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1

<i>NH2 - The provision of such facilities promotes the use of existing developed areas where existing facilities and amenities are located in close proximity. Locating such facilities in these areas is likely to reduce travel related emissions improving air quality and benefiting human health.</i>				
NH3	Edge of centre locations at the fringe of plan area (e.g. AG zone) will only be considered for residential or day care facilities where: <ul style="list-style-type: none"> • There are good vehicle and pedestrian linkages available to town facilities; • The site is within the built 'envelope' of the settlement and would not comprise of an isolated, stand alone development; • The design and scale of the facility is reflective of the semi rural location. 	HH1 AQ1 AQ2		B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>NH3 - As per HC1 above.</i>				
CC1	To facilitate the provision of childcare in a manner, which is compatible with land-use and transportation policies and adheres to the principles of sustainable development.	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CC1 – As per HC1 above.</i>				
CC2	To require the provision of childcare facilities in all residential developments comprising 75 houses or more (including local authority and social housing schemes). In accordance with Department of Environment, Heritage & Local Government guidelines, childcare places shall be provided at a ratio of 20 places per 75 residential units, having regard to cumulative effects of permitted development, (unless it can be demonstrated that having regard to the existing geographic distribution of childcare facilities and the emerging demographic profile of the area that this level of childcare facilities is not required). Without substantial cause, it is the policy of the Council not to allow a change of use of these premises within five years.	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1

<i>CC2 – As per HC1 above.</i>				
CP1 To facilitate opportunities for play and support the implementation of the County Council Play Policy and its objectives, including the collection of development levies.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CP1 – The promotion of such facilities is likely to reduce the need for car based trips to such areas, reducing travel related emissions benefiting human health.</i>				
CP2 In all new residential development in excess of 75 units, the developer shall provide, in the residential public open space area, a dedicated children's play zone, of a type and with such features to be determined following consultation with the local authority.	HH1 AQ1 AQ2			B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>CP2 – As per CP1 above.</i>				
CP3 All new estates, streets, open spaces/parks and community facilities shall be designed with the needs and safety of children as a priority.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>CP3 – No likely interaction with the status of SEO's.</i>				
CP4 Subject to safety considerations, natural features (trees, streams etc) shall be retained in new developments.	B1 B2 B3 WF L1			HH1 R1 WS WG AQ1 AQ2 WW DW AH1 AH2
<i>CP4 – Aims to ensure the preservation of existing natural features of the landscape preventing further impacts on the existing landscape, areas prone to flooding and existing biodiversity within the plan area.</i>				
TY1 In accordance with Objective CD3, where a deficiency in facilities for teenagers / young adults is identified in an area, the developer of any significant new residential estate shall submit proposals to address the deficiency.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>TY1 - Encourages development of facilities close to proposed developments reducing the necessity for car-based trips, reducing emissions, improving air quality and thus human health.</i>				
TY2 All new neighbourhood parks or active open space zones shall include a MUGA of a size and nature to be agreed following consultation with the Local Authority.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>TY2 – As per TY1</i>				
TY3 New community buildings / facilities shall be designed to facilitate the operation of youth clubs and youth services (see Objective CC2 to follow).	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>TY3 – As per TY1</i>				

CC1	In accordance with Objective CD4, where a deficiency in indoor community space is identified in an area, the developer of any significant new residential estate shall submit proposals to address the deficiency.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CC1 – As per TY1.</i>					
CC2	New community buildings / facilities shall be designed to facilitate a wide range of uses including active uses (e.g. basketball, badminton, gymnastics / dance, martial arts etc) and meeting / club use.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>CC2 – As per TY1.</i>					
SR1	To contribute to the improvement of the health and well being of the inhabitants of the plan area and to facilitate participation in sport and recreation.	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	
<i>SR1 - Encourages development of facilities close to the resident population reducing the necessity for car-based trips, reducing emissions, improving air quality and thus human health. The provision of such facilities however has the potential to require the development of greenfield lands conflicting with R1 and impacting on local biodiversity and archaeology during excavation/construction. The development of ancillary facilities such as changing rooms, club houses, associated all weather pitches etc is likely to give rise to increased loading on existing infrastructure and cause a visual impact on the landscape of the plan area. In Arklow large areas of open space are located on lands prone to flooding (to the north of the Avoca river) where further expansion and development of such lands may adversely impact on flood extents in the area with potential implications for waters.</i>					
SR2	To be guided by the Sports & Recreation Policy in the provision and expansion of sport and recreation opportunities in the plan area. In addition the policy will inform the development levy scheme for community facilities, in particular the provision of sport and recreation facilities.	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	
<i>SR2 – As per SR1 above.</i>					
SR3	Facilities for sports shall normally be located close to areas with a high concentration of population, on designated Active Open Space land. All efforts will be required to be made to locate new sports facilities close to existing community facilities, schools or areas of dense residential development. The Council may consider providing sites for these purposes or may be prepared to make financial or	HH1 AQ1 AQ2		B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1	

other assistance available, subject to reasonable access being made available to the public and to reasonable safeguards for the continued use of the land as open space.				
<i>SR3 – As per SR1 above.</i>				
SR4 The redevelopment for alternative uses of open space and recreational lands whether owned by private recreational clubs or publicly owned, will normally be resisted by the Council unless suitable alternative recreational facilities can be provided in a convenient location.	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>SR4 – Promotes the protection of existing areas of open spaces within the plan areas which are mostly located in close proximity to the existing residential population reducing the need for car based trips, reducing emissions improving air quality and benefiting human health.</i>				
SR5 The development of new sports or active open space zones shall be accompanied by appropriate infrastructure including car parking and changing rooms.	HH1 WS WG AQ1 AQ2 WW DW		B1 B2 B3 R1 WF AH1 AH2 L1	
<i>SR5 – The provision of such infrastructure in accordance with the previous objectives (location) in close proximity to the existing residential population reduces the need for car-based trips, reducing emissions improving air quality and benefiting human health. The requirement for appropriate infrastructure to be in place in order to facilitate such development is likely to prevent impacts arising on the existing network and surface/ground waters. The development of such infrastructure however has the potential to impact on biodiversity through habitat fragmentation and disturbance, flooding, archaeology and the landscape of the plan area through inappropriate design. The design scale and form of such development may also impact on sites and buildings of architectural merit.</i>				
CA1 To maximise the opportunities for the Arts and support the implementation of the Wicklow County Arts Plan and its policies.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>CA1 – No likely interaction with the status of SEO's.</i>				
CA2 To encourage and support the creation and display of works of art in public areas, including appropriate locations within the streetscape, provided no unacceptable environmental, amenity; traffic or other problems are created.				B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1
<i>CA2 – No likely interaction with the status of SEO's.</i>				
CA3 To support the implementation of the Wicklow Library Development Plan	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>SR4 – Promotes the development of library facilities in close proximity to the existing residential population reducing the need for car-based trips, reducing emissions improving air quality and benefiting human health.</i>				
CA4 To facilitate the development of new, improved or expanded places of	HH1 AQ1 AQ2		B1 B2 B3 AH1 L1	R1 WS WG WF WW

worship and burial grounds at appropriate locations in the plan area, where the demand for the facility has been demonstrated.				DW AH2
<i>CA4 The development of such facilities in close proximity to the resident population is likely to reduce the need for car-based visitor trips, reducing emissions improving air quality and benefiting human health. The expansion and further development of such facilities is likely to impact on local biodiversity, local archaeology and the landscape of the plan area during construction/excavation.</i>				
OS1 To encourage the provision of open space for both passive and recreation to serve the needs of the plan areas existing and future population concurrent with new residential development.	B3 HH1 AQ1 AQ2		R1 AH1 L1	B1 B2 WS WG WF WW DW AH2
<i>OS1 – The provision of areas of open space and green corridors within the plan area in close proximity to the resident population is likely to reduce the need for car-based visitor trips, reducing emissions improving air quality and benefiting human health. The maintenance and expansion of open space areas is likely to improve the status of ecological networks and habitats within the plan area. In maintaining such areas potential conflict occurs relating to regeneration where the development potential of certain areas may be limited due to the presence of such areas. The provision of routes within the town centre area or on Greenfield lands may impact on archaeology and the natural landscape of the area.</i>				
OS2 To develop and facilitate the provision of public open space generally in accordance with “Sustainable Residential development in Urban Areas-Guidelines for Planning Authorities” (DOEHLG 2009).	HH1 AQ1 AQ2		R1	B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1
<i>Improve – Encourages development of facilities close to proposed developments reducing need for car based trips – reducing emissions – improving air quality and thus human health.</i>				
<i>Potential impact restricting development of town centre and regeneration.</i>				
OS3 Prohibit non-community uses on areas of lands permitted or designated as public open space in existing residential developments.	HH1 AQ1 AQ2		R1	B1 B2 B3 WS WG WF WW DW AH1 AH2 L1
<i>OS3 - The provision of areas of open space and green corridors within the plan area in close proximity to the resident population is likely to reduce the need for car-based visitor trips, reducing emissions improving air quality and benefiting human health. Potential conflict occurs relating to regeneration where the development potential of certain areas may be limited due to the presence of such areas. .</i>				
OS4 To facilitate and encourage a series of high quality open spaces throughout the town, preferably as part of a larger linked network that is available to all ages and accessible to everyone, including people with mobility impairments.	HH1 AQ1 AQ2		R1 AH1 L1	B1 B2 B3 WS WG WF WW DW AH2
<i>OS4 – As per OS1 above.</i>				
OS5 To retain open space lands with established recreational uses	HH1 AQ1 AQ2			B1 B2 B3 R1 WS WG WF WW DW AH1 AH2 L1

<i>OS5 - Promotes the retention of open space lands within the plan area. Within the plan area these lands are located close proximity to the existing residential population reducing the need for car-based trips, reducing emissions improving air quality and benefiting human health.</i>					
OS6	To preserve, manage and maintain to a high standard in the existing parks and open spaces in the town.	B1 B2 B3 HH1 AQ1 AQ2 AH1 AH2 L1		R1	WS WG WF WW DW
<i>OS6 – The preservation and management of such facilities benefit biodiversity and ecological connectivity within these areas while also preventing potential impacts on archaeology, local architecture and the landscape of the plan area. The retention of open space lands within the plan area which are in the majority of cases are located in close proximity to the existing residential population reducing the need for car-based trips, reducing emissions improving air quality and benefiting human health.</i>					
OS7	To facilitate the development of allotments of an appropriate scale on lands which meet the following criteria:- <ul style="list-style-type: none"> • Lands situated within or adjacent to the edge of plan area; • Lands that are easily accessible to the residents of the plan area; • Where an adequate water supply can be provided; • Where adequate parking facilities can be provided. 	B3 HH1 AQ1 AQ2		B1 B2 AH1 L1	R1 WS WG WF WW DW AH2
<i>OS7 – The development of such facilities has the potential to preserve and enhance ecological connectivity in and surrounding the area of such development. The location of such facilities in close proximity to areas of higher population is likely to reduce the need for car-based trips, reducing emissions improving air quality and benefiting human health. The use of greenfield lands for allotment development if unmanaged has the potential to impact on habitats and biodiversity while the excavation of soils may impact on archaeology and the landscape of the plan area.</i>					
OS8	To reserve lands at church view (c. 3ha) for a town park, which will include areas for both sports and activities (such as a MUGA) and passive enjoyment.	B1 B2 B3 HH1 AQ1 AQ2		B1 B2 B3 AH1 L1	R1 WS WG WF AQ1 AQ2 WW DW AH2
<i>OS8 – The provision of a large area of open space on the one hand has the potential to maintain and enhance existing biodiversity through the provision of large areas of open space and natural heritage however the development of hard landscaping features and active open space facilities may have potential impacts for such networks and habitats, archaeology and the general landscape. The location of this park in close proximity to existing residential areas is likely to reduce the need for car based trips, reducing emission to air benefiting human health.</i>					

8.2.9 Action Area Plans 1-3

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	No Likely interaction with status of SEOs
<p>AA1 Tinahask</p> <p>This Action Area is located in the townlands of Abbeylands and Tinahask Upper as shown on Map 1. This Action Area measures c. 32.5ha and is bounded to the north by the residential development, to the east by the golf club, to the south by undeveloped lands and to the west by the railway line. This Action Area shall be developed as a mixed residential, community and open space zone in accordance with the following criteria:-</p> <ul style="list-style-type: none"> ▪ Principal vehicular access to this Action Area shall be provided from Action Area 2; other, secondary access routes from the adjacent road network shall also be provided as may be possible; ▪ A number of cycling / pedestrian access routes into the action area shall be provided from adjacent developed areas and in particular to the railway station; ▪ A maximum of 500 residential units shall be provided, in a range of development formats, densities, unit sizes and designs. To achieve a sense of place and allow for visual diversity any residential application should provide for a number of identifiable and distinct housing estates (not exceeding 200 units) each containing materially different house designs within an overall unified theme; ▪ A minimum of 7ha shall be reserved for the provision of primary and post primary schools, which may be located on a single campus, subject to consultation and agreement with relevant stakeholders, including the Department of Education and Skills; ▪ A local service centre (including retail and non-retail services), of scale commensurate with the needs of the future population of the Action Area shall be provided, on a site of c. 1ha; ▪ A minimum area of 4.5ha shall be developed as public open space, of which a minimum area of 3.5ha shall be laid for active sports uses; remaining open areas shall be laid out as informal parks and walks, and shall include at least 1 equipped children's play area; 	B3 HH1 AQ1 AQ2		B1 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 L1	B2 AH2

<ul style="list-style-type: none"> Any development proposals shall have regard to the setting and curtilage of structures and sites of heritage value, and habitats of biodiversity value and appropriate buffer zones-/mitigating measures shall be provided as required. 				
<p><i>AA1 – Provides for the development of a number of land uses on greenfield lands conflicting with the objectives for the regeneration of the town centre of Arklow however given the necessity to facilitate such development in order to meet the demand of the projected population for the area this area is required to be zoned. The provisions of the action area likely to improve ecological connectivity through strong objectives aimed at preserving and enhancing existing ecological network within this area. A strong emphasis is placed on pedestrian and cycling linkages to the main street through existing developments reducing the need for car movements, reducing emissions improving air quality and thus human health.</i></p> <p><i>The development of this area does however conflict with a number of SEOs with impacts such as noise from construction impacting on human health, the increased loading such development would place on water services potentially impacting on surface, ground and drinking water quality. Potential increases in traffic movements from large-scale development may impact on air quality through increased emissions. The potential for impacts on Archaeological Heritage from excavation during construction may impact on the site and general landscape.</i></p>				
<p>AA2 Tinahask</p> <p>This action area is located on the south side of the town, the townlands of Tinahask Upper and Money Big as shown on Map 1. The site is bounded to the north by Action Area 1, to the east by the golf club and Roadstone site, to the south by open farmlands and to the west by the railway line. Access to this land is currently provided by an access road and railway bridge from the Knockmore roundabout. This action area measures c. 38.5ha and shall be developed as a mixed use residential, employment and community zone in accordance with the following criteria:</p> <ul style="list-style-type: none"> The development of this action area shall be contingent on the provision of the following roads infrastructure as part of any development project: <ul style="list-style-type: none"> provision of a Port Access Road along the indicative alignment shown in this plan; improvement of the existing link road from the Knockmore roundabout to the site as required; new area distributor roads through this action area to both AA1 and employment zoned lands to the south of AA2. 	<p>B3</p>		<p>B1 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 L1</p>	<p>B2 AH2</p>

<p>Such road provision and improvements shall be subject to detailed design and phasing, based on the quantum of development that is planned to occur in each phase of the development.</p> <ul style="list-style-type: none"> ▪ This action area shall principally be developed as an employment zone, and not less than 20ha shall be devoted to employment uses; ▪ Not more than 350 residential units shall be provided, in a range of sizes and formats. To achieve a sense of place and allow for visual diversity any residential application should provide for a number of identifiable and distinct housing estates (not exceeding 200 units), each containing materially different house designs within an overall unified theme; ▪ A minimum area of 2.15ha shall be developed as public open space, of which a minimum area of 1.6ha shall be laid for active sports uses; remaining open areas shall be laid out as informal parks and walks, and shall include at least 1 equipped childrens play area; ▪ A retail and services zone, on a maximum site area of 5ha to service both the future resident and working population of the action area, of scale commensurate with the needs of the future population shall be provided. This centre shall include such retail and non-retail services as shall be determined as warranted following the carrying out of a Retail Impact Assessment, as well as hotel / leisure facilities, education / training & community facilities; ▪ Any development proposals shall have regard to the setting and curtilage of structures and sites of heritage value, and habitats of biodiversity value and appropriate buffer zones-/mitigating measures shall be provided as required. 				
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AA2 – Provides for the development of a number of land uses on greenfield lands conflicting with the objectives for the regeneration of the town centre of Arklow however given the necessity to facilitate such development in order to meet the demand of the projected population for the area this area is required to be zoned. The provisions of the action area likely to improve ecological connectivity through strong objectives aimed at preserving and enhancing existing ecological network within this area.

The development of this area does however conflict with a number of SEO's with impacts such as noise from construction impacting on human health, the increased loading such development would place on water services potentially impacting on surface, ground and drinking water quality. Potential increases in traffic movements from large-scale development may impact on air quality through increased emissions and thus human health. The potential for impacts on Archaeological Heritage from excavation during construction may impact on the site and general landscape also exist.

<p>Action Area 3 Kilbride</p> <p>This Action Area is located in the townlands of Kilbride as shown on Map 1. This Action Area measures c. 60.8ha and is bounded to the north by Local secondary road L-6179 Ticknock – Kilbride (the Kilbride – old IFI plant road) to the east by existing developed areas mainly in residential and community / educational use, to the south by Arklow Marsh and to the west by the M11. This Action Area shall be developed as a mixed residential, community and open space zone in accordance with the following criteria:-</p> <ul style="list-style-type: none"> ▪ Vehicular access to the Action Area shall be provided L-6179, with the roads configuration of the development providing / facilitating a possible future third Avoca river crossing; other, secondary access routes from the adjacent road network shall also be provided as may be possible; ▪ A number of pedestrian access routes into the action area shall be provided where possible from adjacent developed areas; ▪ A maximum of 1,500 residential units shall be provided, in a range of development formats, densities, unit sizes and designs. To achieve a sense of place and allow for visual diversity any residential application should provide for a number of identifiable and distinct housing estates (not exceeding 200 units), each containing materially different house designs within an overall unified theme.; ▪ A minimum of 7ha shall be reserved for the provision of primary and post primary schools, which may be located on a single campus, subject to consultation and agreement with relevant stakeholders, including the Department of Education and Skills; ▪ A neighbourhood centre, of scale commensurate with the needs of the future population of the Action Area shall be provided, on a site of c. 1.2ha. Such a centre may provide for one supermarket / discount retailer of up to 1,500sqm and a number of smaller local shops and services, including non-retail and professional services, in the order to 1,000sqm; ▪ A minimum area of 9ha shall be developed as public open space, of which a minimum area of 6.75ha shall be laid for active sports uses in a range of track, pitch and court types suitable for a variety of sports and shall include necessary car parking, lighting and changing facilities; 	<p>AQ1 AQ2</p>		<p>B1 B2 B3 HH1 R1 WS WG WF AQ1 AQ2 WW DW AH1 AH2 L1</p>	
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<p>remaining open areas shall be laid out as informal parks and walks, and shall include a number (minimum 2) of equipped children's play areas;</p> <ul style="list-style-type: none"> ▪ Any development proposals shall have regard to the setting and curtilage of structures and sites of heritage value, and habitats of biodiversity value and appropriate buffer zones-/mitigating measures shall be provided as required. 				
<p><i>AA3 – Provides for the development of a number of land uses on greenfield lands conflicting with the objectives for the regeneration of the town centre of Arklow however given the necessity to facilitate such development in order to meet the demand of the projected population for the area this area is required to be zoned. The provisions of the action area likely to improve ecological connectivity through strong objectives aimed at preserving and enhancing existing ecological network within this area.</i></p> <p><i>The development of this area does however conflict with a number of SEO's with impacts such as noise from construction impacting on human health, the increased loading such development would place on water services potentially impacting on surface, ground and drinking water quality. Potential increases in traffic movements from large-scale development may impact on air quality through increased emissions and thus human health. Impacts on Archaeology from excavation during construction and architectural Heritage in the design of such new development may adversely impact on the site and surrounding buildings of architectural merit including the general landscape.</i></p>				

Section 9 Mitigation Measures

9.1 Introduction

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Arklow Town and Environs Development Plan.

Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration is given in the first instance to preventing such effects or, where this is not possible for stated reasons, to lessening or offsetting those effects.

Mitigation measures can be roughly divided into those that: avoid effects; reduce the magnitude or extent, probability and/or severity of effects; repair effects after they have occurred, and; compensate for effects, balancing out negative impacts with other positive ones.

The mitigation measures may be incorporated into the briefing of design teams as well as the subsequent design, specification and development management of the land uses to be accommodated within the Arklow Town and Environs area.

Additional detailed mitigation measures to those listed below and those integrated into the Development Plan would be likely to be required by the development management and EIA processes of individual projects.

9.2 SEA Recommendations

The mitigation measures detailed under section 9.3 were recommended by the SEA for inclusion in the Development Plan for Arklow Town and its Environs.

Accordingly mitigation measures contained hereafter were recommended to be incorporated in their entirety - or omitted. The degree of undertaking should remain as that the measure 'shall' or 'will' be implemented. The substitution of these words with the words 'should', 'ought' or 'may' is not in accordance with best practice and should be avoided.

9.3 Mitigation Measures

9.3.1 Biodiversity Flora and Fauna

BD3 To protect features such as native hedgerows, trees and watercourses, and the locally important biodiversity areas as included on map 07.01 from inappropriate development, and to strengthen through development management, the role of these sites as green corridors to enhance overall biodiversity

BD7 Any programme, plan or project carried out on foot of this development plan, including any variation thereof, with the potential to impact upon a Natura 2000 site(s) shall be subject to Appropriate Assessment in accordance with Article 6 (3) and (4) of the EU Habitats Directive 1992 and 'Appropriate Assessment of plans and projects in Ireland – Guidance for Planning Authorities' DoEHLG 2009.

WS5 To minimise alterations or interference with river/stream beds, banks and channels, except for reasons of overriding public health and safety (e.g. to reduce risk of flooding); a buffer of 10m along watercourses **shall** be provided free of built development with riparian vegetation generally being retained in as natural a state as possible. In all cases where works are being carried out, to have regard to Regional Fisheries Board "Requirements for the protection of fisheries habitat during the construction and development works at river sites."

E5 To facilitate the development of expanded or new river / lake based hydroelectricity plants, subject to due consideration of ecological impacts, in particular, the free flow of fish and maintenance of biodiversity corridors and the development of off shore hydroelectricity projects insofar as onshore facilities may be required

FL7 For developments adjacent to all watercourses of a significant conveyance capacity or where it is necessary to maintain the ecological or environmental quality of the watercourse, any structures (including hard landscaping) must be set back from the edge of the watercourse to allow access for channel clearing/ maintenance/ vegetation. A minimum setback of up to 10-15m will be required either side depending on the width of the watercourse.

CP4 Subject to safety considerations, natural features (trees, streams etc) shall be retained in new developments.

AA1, 2 and 3 - Any development proposals shall have regard to the setting and curtilage of structures and sites of heritage value, and habitats of biodiversity value and appropriate buffer zones - mitigation measures shall be provided as required.

9.3.2 Water

Water Protection and Supply

WS2 To implement the EU Water Framework Directive and associated River Basin and Sub-Basin Management Plans and the EU Groundwater Directive to ensure the protection, improvement and sustainable use of all waters in the plan area, including rivers, lakes, ground water, coastal and estuarine waters, and to restrict development likely to lead to deterioration in water quality

WS3 To resist development that would interfere with the natural water cycle to a degree that would interfere with the survival and stability of natural habitats

W8 To protect existing and potential water resources of the plan area, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the Groundwater Protection Scheme and source protection plans for public water supplies.

Waste Water Infrastructure

W1 To ensure that all waste water generated is collected and discharged after treatment in a safe and sustainable manner, strictly in accordance with the standards and requirements set out in EU and national legislation and guidance documents including the provisions of the Eastern River Basin Management Plan and the Habitats Directive.

W4 Private wastewater treatment plants to serve new development will only be considered where it can be shown that no net overall increase in potential pollution to receiving waters will result and the location and design of the plant meets all current EU and national environmental standards

Flooding

FL1 To require where appropriate that developments of a type that maybe considered sensitive to flooding are subject to a “justification test”. Where a justification test is required it shall demonstrate to the satisfaction of the Council that;

- a). Such proposals include a sequential assessment demonstrating that there are no alternative sites available at a more suitable location within the town that would meet the requirements of the development;
- b). The area comprises significant previously developed and/or underutilised lands within the town plan area;
- c). The development of the area is essential to facilitate the regeneration and rejuvenation or town centre expansion;
- d). Environmental/hydrological assessment has been undertaken to identify the impact of flood risk as a result of development and that the development would not result in increased or new flood risk elsewhere and if possible will reduce the overall flood risk;
- e). The proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as is reasonable possible;
- f). Residual risk to the area and/or the development can be managed to an acceptable level by design, incorporated flood risk measures.

FL5 To require all new developments to include proposals to deal with rain and surface water collected on site and where deemed necessary, to integrate attenuation and SUDS measures

9.3.3 Soil

WZ1 To support in depth development of the waterfront zone, for a mix of residential, commercial, leisure and tourism uses; applications for the development of such lands shall include a detailed survey of the existing site conditions, proposals for demolition and remediation of previous site activities and a management plan for the disposal of such materials.

ED4 To facilitate and encourage the exploration and exploitation of minerals in the plan area in a manner, which is consistent with the principal of sustainability and protection of residential, environmental tourism amenities.

9.3.4 Landscape

VP1 Protect and preserve the prospect of special amenity from the R750 towards the sea from the coast road.

9.3.5 Air and Climatic Factors

WM6 To have regard to the “Major Accidents Directive” (European Council Directive 96/82/EC). This Directive relates to the control of major accidents involving dangerous

substances with an objective to prevent major accidents and limit the consequences of such accidents. This policy will be implemented through Development management, through specific control on the siting of new establishments and whether such a siting is likely to increase the risk or consequence of a major accident.

AE2 To require proposals for new developments with the potential for the accidental release of chemicals or dust generation, to submit and have approved by the Local Authority construction and/or operation management plans to control such emissions.

NP3 To require proposals for new developments with the potential to create excessive noise to prepare a construction and/or operation management plans to control such emissions.

NP4 To require activities likely to give rise to excessive noise to install noise mitigation measures and monitors. The provision of a noise audit may also be required as appropriate.

9.3.6 Archaeological Heritage:

AR1 To safeguard archaeological heritage by ensuring that development in the vicinity of a recorded monument which are listed in table 7.1 below shall be permitted only where it can be demonstrated that there will be no damage to the monument itself, its setting or its cultural and educational value

AR2 Any development that may due to its size, location or nature have implications for archaeological heritage shall be subject to an archaeological assessment

9.3.7 Architectural Heritage:

AH1: To consolidate and safeguard the historical and architectural character of Arklow Town Centre through the protection of individual buildings, structures, shopfronts and elements of the public realm that contribute greatly to this character.

RPS 1 To safeguard the character of Protected Structures and encourage appropriate alterations to these buildings to render them viable for modern use, subject to best conservation practice (in accordance with Architectural Heritage Protection guidelines produced by the DOEHLG). (Arklow RPS set out in Appendix 1 of the Plan)

9.3.8 Transport

PT2 To encourage and co-operate with the statutory bodies responsible for improving the public transport facilities within the town.

PT5 To promote the delivery of improved and new bus services in Arklow and Environs by:

- Facilitating the needs of existing or new bus providers with regard to bus stops
- Requiring developers of large-scale new employment and residential developments in Arklow that are distant (more than 2km) from the train station to fund/ provide feeder bus services for an initial period

9.3.9 Waste Management

WM3 To require all developments likely to give rise to significant quantities of waste, either by virtue of the scale of the development or the nature of the development (e.g. one that involves demolition) to submit a construction management plan, which will outline, amongst other things, the plan for the safe and efficient disposal of waste from the site.

Section 10 Monitoring

10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This environmental report puts forward proposals for monitoring the development plan, which are adopted alongside the Development Plan. Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

In addition to this, monitoring can also play an important role in assessing whether the Development Plan is achieving its environmental objectives and targets - measures which the Development Plan can help work towards - whether these need to be re-examined and whether the proposed mitigation measures are being implemented.

10.2 Indicators and Targets

Monitoring is based around the indicators, which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives used in the evaluation. Focus will be given to indicators, which are relevant to the likely significant environmental effects of implementing the Development Plan and primarily to existing monitoring arrangements in order to monitor the selected indicators. Each indicator to be monitored will be accompanied by the relevant target(s) - measures which the Development Plan can help work towards - which were identified with regard to the relevant legislation. The table below shows the indicator and targets, which have been selected with regard to the monitoring of the plan.

10.3 Sources

In compliance with the SEA Directive and the DEHLG Guidelines, measurements for indicators come from existing monitoring sources and no new monitoring should be required to take place. Existing monitoring sources exist for many of the indicators and include those maintained by Arklow Town Council and Wicklow County Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

The Development Management Process in Arklow Town Council and Wicklow County Council will provide additional monitoring of certain indicators and targets on an application-by-application basis. Where significant adverse effects - including positive, negative, cumulative and indirect - are likely to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances will be identified and recorded and will feed into the monitoring evaluation.

10.4 Excluded Indicators and Targets

As noted on Table 10.1 below, monitoring data on Indicator W2 (Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC) may not be available for the preliminary monitoring evaluation as the groundwater threshold values to which this indicator relates have not yet been identified by the EPA.

In addition, future-monitoring data for Indicators AQ1 (Percentage of population within the County travelling to work or school by public transport or non-mechanical means) and AQ2 (Average distance travelled to work or school by the population of the County) will not be available until the results of the next CSO Census are made available. It is recommended that data for these indicators be sourced for the SEA of the next review of the Plan.

10.5 Reporting

A preliminary monitoring evaluation report on the effects of implementing the Development Plan will be prepared to coincide with the Manager's report to the elected members on the progress achieved in securing Development Plan objectives within two years of the making of the plan (this Manager's report is required under section 15 of the 2000 Planning Act). Indicators, targets and corrective and remedial actions will be reviewed during the preparation of the preliminary monitoring evaluation report.

10.6 Responsibility

Arklow Town Council and Wicklow County Council are responsible for collating existing relevant monitored data, the preparation of a monitoring report, the publication of this report and, if necessary, the carrying out of corrective action. It is recommended that a Steering Committee be established to oversee the monitoring process.

10.7 Thresholds

Thresholds at which corrective action will be considered are as follows:

- ⇒ Boil notices on drinking water;
- ⇒ Fish kills;
- ⇒ Court cases taken by the DEHLG regarding impacts upon archaeological heritage including entries to the Record of Monuments and Places; and,
- ⇒ Complaints received from statutory consultees regarding avoidable impacts resulting from development, which is granted permission under the CDP.

Table 10.1 Monitoring Measures

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Biodiversity Flora and Fauna	<p>B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive</p> <p>B2: Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the DP</p> <p>B3: Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the DP</p>	<p>B1: Maintenance of favourable conservation status for all habitats and species protected under national and international legislation</p> <p>B2: No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the DP</p> <p>B3: No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the DP</p>	<p>Designated ecological sites mapping, CORINE Mapping, National Parks and Wildlife Service Records & Development Management Process in Arklow TC and Wicklow CoCo.</p> <p>Designated ecological sites mapping, Development Management Process in ATC & WW County Council & Consultation with the National Parks and Wildlife Service.</p> <p>Primary ecological corridors mapping, CORINE mapping and Development Management Process in Arklow TC and Wicklow CoCo.</p>
Population and Human Health	<p>HH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors as identified by the Health Service Executive (HSE) and Environmental Protection Agency (EPA)</p>	<p>HH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan</p>	<p>Arklow TC and Wicklow County Council, EPA³³, HSA</p>

³³ Environmental Protection Agency

	<p>R1: Area of brownfield lands developed over the Development Plan's lifespan</p>	<p>R1: Reduced availability of brownfield land (subject to availability on the open market, the demand for such land and the ability for such lands to be sustainably re-used) at the end of the Development Plan lifespan</p>	<p>Development Management Process of Arklow TC and Wicklow County Council.</p>
<p>Water</p>	<p>WS1: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p> <p>WS2: Poor, Sufficient, Good and Excellent classifications of bathing water as set by Directive 2006/7/EC</p> <p>WG1: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>WF: Number of developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</p>	<p>WS1: To achieve 'good status'³⁴ in all bodies of surface waters by 2015 and to not knowingly allow deterioration in the status of any surface water</p> <p>WS2: To achieve - as a minimum - the 'Sufficient' classification as set by Directive 2006/7/EC, and where possible to achieve the 'Good' or 'Excellent' classifications</p> <p>WG1: Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>WF: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines</i> for Planning Authorities</p>	<p>EPA</p> <p>EPA</p> <p>Data may not be available for this indicator when the monitoring evaluation is being prepared.</p> <p>Development Management Process of Arklow TC and Wicklow County Council.</p>

³⁴ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA

- Q4 in the biological classification of *rivers*;
- *Mesotrophic* in the classification of *lakes*; and,
- *Unpolluted* status in the Assessment of Trophic Status of *Estuaries and Bays* in Ireland (ATSEBI).

Material Assets	<p>Waste Water Infrastructure</p> <p>WW1: Number of new developments granted permission which can be adequately served with waste water treatment over the lifetime of the Plan</p> <p>WW2: Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for Arklow and its Environs</p> <p>Drinking Water Quality</p> <p>DW1: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health</p> <p>DW2: Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for the functional area of the Council</p>	<p>WW1: All new developments granted permission to be connected to and adequately served by waste water treatment over the lifetime of the Plan</p> <p>WW2: For the Council to prepare a Water Services Strategic Plan in compliance with the Water Services Act</p> <p>DW1: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan</p> <p>DW2: For the Council to prepare a Water Services Strategic Plan in compliance with the Water Services Act</p>	<p>Development Management Process of Arklow TC and Wicklow County Council.</p> <p>Wicklow County Council</p> <p>EPA, EPA Remedial Action List and the Council.</p> <p>Wicklow County Council</p>
Air and Climatic Factors	<p>AQ1: Percentage of population within the Town travelling to work or school by public transport or non-mechanical means</p> <p>AQ2: Average distance travelled to work or school by the population of the Town</p>	<p>AQ1: An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means</p> <p>AQ2: A decrease in the average distance travelled to work or school by the population of the Town</p>	<p>Central Statistics Office</p>
	Archaeological Heritage		

<p>Cultural Heritage</p>	<p>AH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential - (and their context of the above within the surrounding landscape where relevant) protected</p> <p>Architectural Heritage</p> <p>AH2: Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected</p> <p>AH2B: Number of additions to the Record of Protected Structures and the number of additional ACAs</p>	<p>AH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential - (and their context of the above within the surrounding landscape where relevant)</p> <p>AH2: Protect entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant)</p> <p>AH2B: Make Additions to the Record of Protected Structures and make additional ACAs, where appropriate</p>	<p>Development Management/ Enforcement Process in the Council; Complaints from statutory consultees.</p> <p>Arklow Town Council and Wicklow County Council.</p>
<p>Landscape</p>	<p>L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape resulting from development which is granted permission under the Plan</p>	<p>L1: No developments permitted which result in avoidable impacts on the landscape resulting from development which is granted permission under the Plan</p>	<p>Development Management/ Enforcement Process in the Council; Complaints from statutory consultees</p>

Section 11 SEA Summary Table

Below is a summary table outlining how likely significant effects (if unmitigated) are linked to relevant mitigation measure(s) (as set out in section 9 above) - which have been integrated into the Plan - and indicator(s), which will be used for monitoring.

Table 11.1

Likely Significant effect, if unmitigated	Mitigation Measure reference(s) from the plan included following SEA as set out in section 9	Primary Indicator(s) for Monitoring
Loss of biodiversity with regard to Natura 2000 Sites	BD7	B1 Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive
Loss of biodiversity with regard to ecological connectivity and stepping stones	BD3, WS5, E5, FL7, CP4, AA1, AA2, AA3,	B3 Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the DP.
Spatially concentrated deterioration in human health arising from exposure to incompatible land uses	WM6, AE2, NP3, NP4, WZ1	HH1 Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors as identified by the Health Service Executive (HSE) and Environmental Protection Agency (EPA)
Pollution and/or contamination of soils	WZ1, ED4, WM3	R1 Area of brownfield lands developed over the Development Plan's lifespan
Adverse impacts upon the quality of surface waters	WS2, WS3, W8, W1, W4, FL5, WS5, E5, FL7, WM3	WS Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)
Adverse impacts upon ground water quality	WS2, WS3, W8, WM3	WG Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Flooding	FL1, FL5	WF Number of developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Inadequate waste water treatment for new populations	W1, W4, FL5	WW To serve new development with appropriate waste water treatment
Reduction in water quality which would present a potential danger to human health & Inadequate drinking water supply for new populations	WS2, WS3, W8, W1, W4, FL5, AE2,	DW1 Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health DW2 Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for the functional area of the Council

Increases in greenhouse gas emissions and increases in car dependency	PT2, PT5, WM6, AE2,	<p>AQ1 Percentage of population within the Town travelling to work or school by public transport or non-mechanical means</p> <p>AQ2 Average distance travelled to work or school by the population of the Town</p>
Effects on entries to the Record of Monuments and Places	AR1, AR2	<p>AH1 Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential - (and their context of the above within the surrounding landscape where relevant) protected</p> <p>AH2 Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected</p>
Effects on entries to the Records of Protected Structures and Architectural Conservation Areas	AH1, RPS1,	AH1 Number of additions to the Record of Protected Structures and the number of additional ACAs
Visual impacts on the landscape or on 'views and prospects to be preserved	VP1	AH2 Number of complaints received from statutory consultees regarding avoidable impacts on the landscape resulting from development which is granted permission under the Plan