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1 INTRODUCTION

1.1 Legal Basis

As part of Kilkenny County Council's settlement strategy adopted in the County Development Plan 2002 it is the policy of the Council to carry out an extensive programme of Local Area Plans for settlements throughout County Kilkenny. This Local Area Plan for Knocktopher is part of that policy initiative.

The legal basis for this plan is provided by the Planning and Development Act 2000 (Sections 18 and 19). The Act provides for the preparation of Local Area Plans for any part of the functional area of a planning authority. A Local Area Plan must be consistent with the objectives of the County Development Plan.

It must contain a written statement and maps indicating the objectives of the planning authority for the proper planning and sustainable development of the area to which it applies including detail on community facilities and amenities and on standards of design of developments and structures.

In the text of this proposed plan the plan itself maybe referred to as "the Plan" or "this Plan". In this Plan "the Council" or "the Planning Authority" shall mean Kilkenny County Council.

The Local Area Plan will remain in statute for a period of six years from the date of adoption, notwithstanding any review of the County Development Plan. The Planning Authority may amend or revoke a Local Area Plan at any time. The Local Area Plan will cease to have effect in respect of the Knocktopher area where it is inconsistent with the provisions of the County Development Plan as reviewed. A Local Area Plan must be reviewed at least six years from the making of the previous Local Area Plan.

1.2 Planning Context

It is an objective of the County Development Plan, 2002, (CDP, 2002) Paragraph 7.8.2.1, to prepare Local Area Plans for particular areas, whether rural, urban or suburban as the need arises and as resources permit during the term of the Development Plan. Knocktopher is a designated centre under the CDP, 2002. It will be a policy of the Council to encourage housing development to locate in the designated towns and villages where infrastructural and social services exist or are planned to be provided.

1.3 Locational Context

Knocktopher is situated on the N10, the National Primary road linking Waterford and Kilkenny.

On approaching from the south, it would appear that the topography gradually rises, with the village of Knocktopher sitting on a plateau like form, which is dissected by a dip that forms the course of a stream running from west to east. This is particularly evident on viewing the village from Knocktopher Abbey. On the northern approach, the topography appears rather flat and level.

A second stream traverses the study area to the south, running in a north-easterly direction. Some marshy, wetland areas adjoin the stream and there is a significant amount of trees in its vicinity, of conifer and deciduous varieties. In general, the fields around the village comprise both arable and grazing lands, some of which are enclosed by strong hedgerows and well developed hedgerow trees, such as ash. In addition, in the vicinity of the southern stream course, there are a number of other areas which contain trees of townscape significance. Particularly noteworthy in this regard is the area around Knocktopher Abbey and the parkland setting of lands between the Abbey and Callan Road.

1.4 Historical Development

Carrigan¹ states that Knocktopher translates as Cnoc an Tochar, or Hill over the Causeway. The tochar, or causeway from which the name is taken, was the part of the old Knocktopher road, which crosses the stream north of Knocktopher graveyard.

The Garrison Castle in Knocktopher was the residence of the Earls of Ormond from the early 1300's. The Carmelite monastery was founded in Knocktopher in 1356, by James, the 2nd Earl of Ormond. In 1365, the town was granted a weekly market and several fairs. In 1661 it was made a Parliamentary Borough, being represented by two Members in the Irish Parliament.

1.5 Urban Structure

The pattern of village development as it occurs today is in the form of a loose linear development, intersected by the Callan-Graiguenamanagh roads. Although linear, the principal street pattern which now forms the route of the National Primary Route (N9), is not straight, but twists, turns and meanders, creating interest and variety along its route. Virtually all development in the village occurs as road frontage development with little or no backland or in-depth development (the one exception are four semi-detached dwellings off the Callan road) and farm outbuildings.

The structure and form of Knocktopher, as it appears today, consists of a somewhat fragmented or dispersed form, with a number of distinctive townscape elements. These could be best described as 'character areas' – of which there are four notable ones – each separated by an intervening area of undeveloped agricultural lands. These can be loosely described as follows:

Character Area 1: Village centre and vicinity

¹ Carrigan, 1905 *The History and Antiquities of the Diocese of Ossory*

The first of these would be in the vicinity of the Church of Ireland and the intersection of the N9 and the Callan road. This is the commercial heart of the village, which includes the service station, Carroll's hotel, a pub and local retail store. It is typified by a tight urban form and near continuous building lines, though is adjoined on the perimeter by freestanding buildings and bungalows.

Character Area 2: Knocktopher Abbey and vicinity

The second area is focused at Knocktopher Abbey and its immediate vicinity, including the old graveyard with the medieval Church Tower, the Catholic Church and the former site of the Garrison Castle. With the exception of the short terrace both opposite and immediately north of the Church, the area is characterised by high stone walls, significant tree groups and important sites such as the Abbey, graveyard and Church grounds. It is bound to the north by the distinctive parkland setting formerly associated with the Abbey.

Character Area 3: School and Vicinity

The third character area is in the vicinity of the Vocational school and the small road that leads to the Carrigshock Memorial. By comparison to the other areas, it appears underdeveloped, with some ribbon development along the national primary road.

Character Area 4: Mill and Vicinity

The fourth and last character area is on the southern edge of the settlement, consisting of the agricultural silos and mill buildings (now Glanbia) and a mix of dwelling types, including two semi-detached traditional stone cottages, an old farmstead and bungalow, all knitted together by a relatively narrow road, overgrown hedgerows and significant tree groups.

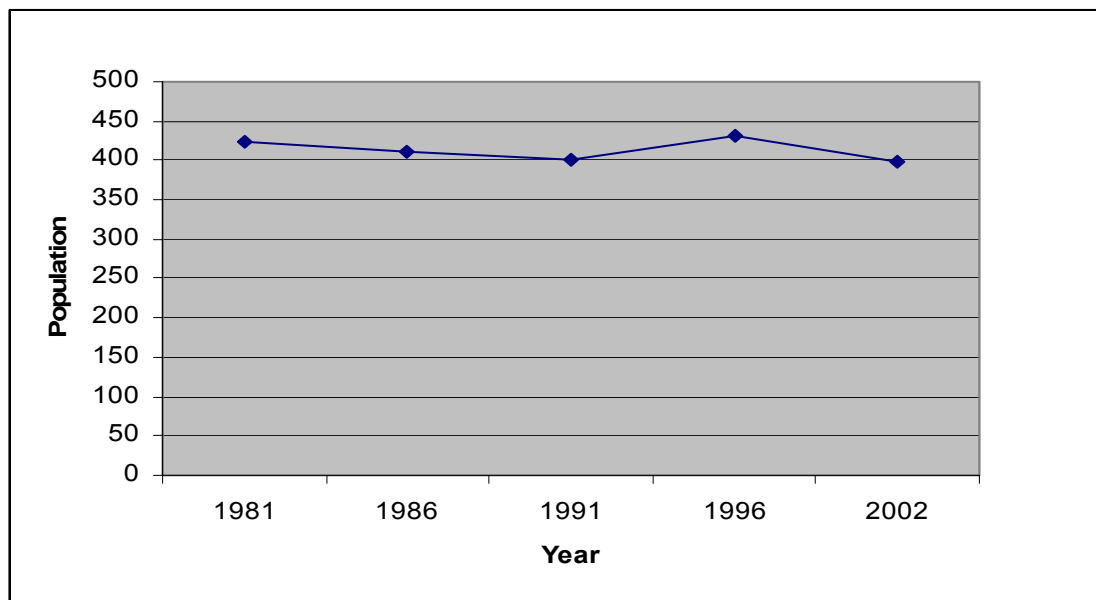
1.6 Population

The village of Knocktopher was not enumerated separately in the Census, but it is situated in the Electoral Division of Knocktopher, which had a population of 399 recorded at the 2002 Census. The recent trends in population are shown in Table 1 below and illustrated in Figure 1.

Table 1: Population in Knocktopher between 1981 and 2002

Year	Population
1981	423
1986	410
1991	402
1996	432
2002	399

Figure 1: Population Change in Knocktopher between 1981 - 2002



From the graph, it can be seen that the population has ranged from the lowest level of 402 in 1991 to the highest level of 432 in 1996 to its present level of 399. Between 1996 and 2002 the population decreased by 7.6%, which contrasts to the trend in the County as a whole, which experienced an increase of 6.7%.

1.7 Planning History

An examination of recent planning history in the town gives some indication of the development trend. A residential development of 42 dwellings was recently refused by An Bord Pleanála. Two applications for residential developments totalling 10 dwellings are currently pending a decision.

1.8 Designations

1.8.1 River Nore/River Barrow Special Area of Conservation

The River Nore/Barrow Special Area of Conservation (site code 002162) is located along the tributary of the Little Arrigle River, see the Conservation Objectives Map. This site is protected under the EU Habitats Directive (9/43/EEC). A full copy of the site synopsis for this SAC is included in Appendix 2.

1.8.2 Record of Protected Structures

Knocktopher has five protected structures recorded in the County Development Plan, 2002, Record of Protected Structures. As part of this plan an architectural assessment of the existing buildings in the village has been carried out, and the Record will be amended in accordance with this assessment under a separate statutory process. The existing Record of Protected Structures is shown in Appendix 1.

1.8.3 Archaeology

Knocktopher is identified in the Urban Archaeological Survey, County Kilkenny, 1993, as having a Zone of Archaeological Potential. These zones have been identified by Department of the Environment, Heritage and Local Government for general protection. Knocktopher appears as an historic town within the Record of Monuments and Places, reference KK031-017, and is protected under the National Monuments (Amendment) Act, 1994.

Details of monuments within the zone of archaeological potential are shown on maps accompanying the Urban Archaeological Survey and these documents can be inspected at the County Council's planning office. The maps (i.e. the sites and Monuments record for County Kilkenny) showing the archaeological sites throughout County Kilkenny are subject to updating. The RMP is not an exhaustive list of all archaeology in existence. The RMP for County Kilkenny is available for inspection at the Planning Department in County Hall. The zone of archaeological potential is illustrated on Map 3.

1.9 National Spatial Strategy

The National Spatial Strategy was published in 2003, and this has set out a strategy for the location of development in the region. This has identified Kilkenny City as a hub, and Waterford City as a gateway².

The Strategy also makes reference to the network of villages that has developed throughout the south east region, with the support of a traditionally prosperous agricultural base. In the context of falling farm-based employment the Strategy states that there is a need to address the development of these villages, and to enhance the attractiveness of them as residential areas and locations for other functions, such as tourism, drawn to the region by the Waterford gateway and the extensive network of larger urban centres throughout the region. Such initiatives could include local infrastructure servicing programmes either by local authorities or in partnership with the private sector, the acquisition of key sites that unlock potential for back-land development and complementary policies to encourage people to live in villages by making them more pleasant places to live.

1.10 Public Consultation

The Planning and Development Act 2000 introduced statutory Local Area Plans and a requirement that planning authorities take whatever steps they considered necessary to consult the public in preparing a Local Area Plan.

The first step undertaken in the public consultation process was the preparation of an information leaflet, which notified the public of the date and time of a consultation

² Gateway – a nationally significant centre, whose location and scale supports the achievement of the type of critical mass necessary to sustain strong levels of job growth

Hub – a town that links the capability of the gateways to other areas

meeting. This leaflet also contained an explanation of the Local Area Plan process and some background information. Leaflets were distributed to local retail outlets and posted to representatives of local community groups and organisations which had been identified through the County Development Board. Statutory bodies and Government agencies were also notified and sent a leaflet. In addition, the meeting was advertised on the Council website, on local radio and in the local press.

A public consultation meeting was held on the 9th April 2003 in Scoil Aireagail, Ballyhale, which was very well attended. This meeting was held in order to obtain local knowledge to assist in compiling a profile of the area, and to learn the views of the participants, which would be an input into the preparation of the Local Area plans. The entire group was divided into six smaller groups, to discuss a number of topics with the aid of a facilitator. Each group dealt with four headings from the following list:

Housing and Population

Infrastructure

Employment and Economy

Education and Training

Transport

Community Facilities – Recreation

Amenity Enhancement

Community Supports – Social Services

Much useful, detailed information was provided at the meeting, which was used to compile a profile of the area, and the views and recommendations raised by the participants in relation to each topic were recorded. These points have been considered in full, and have contributed to the drafting of the objectives and policies within this proposed Local Area Plan.

Following this meeting, a leaflet was drawn up outlining the issues raised and the next steps in the Local Area Plan process. This was circulated to the attendants of the meeting, and copies were also made available in local retail outlets.

Each of the headings is discussed in the next section, with the results of the public consultation being used to devise policies and objectives for Knocktopher.

2 POLICIES AND OBJECTIVES

A total of eight headings were discussed at the public consultation meeting. Each heading is dealt with below, in a structured format. First, the issues raised by the participants at the public consultation are outlined. Second, the existing situation, based on survey, research work and local information gathered, is discussed. These are then used to formulate policies and objectives under each heading.

2.1 Housing and Population

At the public consultation there was general agreement about the need to increase the population to support the schools and services. There were a number of points made in relation to the design and location of any proposed schemes. In general, smaller schemes were favoured, in clusters, with development being spread throughout the village, not concentrated in one particular area. In addition, a better housing mix and a high proportion of open space were advocated.

2.1.1 Development Strategy

The Electoral Division of Knocktopher had a population of 399 recorded at the 2002 Census. The capacity of Knocktopher to accommodate population growth can be examined by assessing the capacity of the services available, such as infrastructural, community and educational services.

With regard to the infrastructural services, at present there is no spare capacity available in either the water supply or sewerage networks. Knocktopher has well developed community and educational services and a large demand for housing.

There are a number of constraints in relation to the development of Knocktopher, particularly the designation of a large area in the centre as a zone of archaeological potential.

Knocktopher's location, only a mile from Ballyhale places it in an inter-dependent relationship with Ballyhale. The primary school and health centre in Ballyhale serve Knocktopher.

Policy:	To ensure the controlled development of Knocktopher which reflects the character of the existing village in terms of structure, pattern, scale, design and materials with adequate provision of open space
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Objectives:
1. To protect the residential amenity of existing dwellings
2. To ensure a high standard in design, layout, provision of open space, landscaping and variation in house type and size in new residential developments

3. To have a good social mix in new residential developments providing a range of unit types/sizes
4. To control development of one off houses on the fringes of the Knocktopher development area in order to maintain a clear line between the built up area and the rural countryside.
5. To encourage the provision of landscaped pedestrian and bicycle links between and within residential areas and the village centre
6. To implement the Housing Strategy contained in appendix A of the County Development Plan 2002
7. To ensure that an adequate amount of land is included in the development boundary of the village to cater for its expansion over the period of the plan
8. To encourage planned housing development of serviced lands within the development boundary. The Planning Authority will require that serviced/serviceable lands will be developed in depth and at sustainable densities. The use of degraded or brown field sites will be preferred and utilised where possible in order to improve the environmental character of the village

2.1.2 Urban Form

The need for any new development to reflect and respect the existing scale and character of Knocktopher, and not to impinge on existing residential amenity, was a view expressed at the public consultation.

Four character areas can be identified in the village, the village centre, Knocktopher Abbey, the school and the mill, as described in Section 1.5.

The streetscape in Knocktopher is not continuous, with significant gaps between each of the character areas. A strong sense of enclosure, spatial containment and individual identity is created in the vicinity of the N9 and the Callan road junction, where the traditional building line is established along the inner side of the footpaths. A similar sense of enclosure is created in the vicinity of the graveyard and the Catholic Church ground, created in part by the position of buildings, stone walls and mature tree groupings.

As one moves through the village the street pattern twists and turns sharply at regular intervals, with views frequently 'stopped' by a significant building or groups of buildings. These 'stops' provide important focal points, but the overall pattern results in a 'serial vision' – a sequence of views unfolding as one moves through the townscape.

Elsewhere, the contribution of buildings and other elements to the streetscape is not as strong, in part created by the former clearance of older and obsolete buildings and/or the position of building facades further from the busy National Primary road (i.e. modern bungalow development). This is understandable and highlights the strong conflict that exists between heavy traffic and the need to protect individual amenity and the goals of

village townscape improvement. Improvements to the streetscape must therefore be considered in the context of traffic calming or a village by-pass.

2.1.2.1 Urban form of New Development

When designing for new infill development, consideration should be given to the existing building fabric, for it is the existing pattern and appearance of these buildings, related to the unique history and morphology of a place that makes one village or town different from the next. The building fabric therefore is a reflection of the character of a place and this character should not be eroded, either through dereliction, decay and/or demolition and replacement with insensitive new build, for then the uniqueness of the place is eroded.

Where possible, consideration should always be given to building conservation. Where conservation is not possible, as in cases where there is already a gap in the streetscape, or where a conservation architect or other specialist in the area considers a building as structurally unsound or prohibitively expensive to merit conservation, then consideration will need to be given to designing a new building. Guidance on this is given in Appendix 1: Urban Design Guidelines on Future Development.

The aim for greenfield sites on the edge of the existing built up area should be for the extension of spaces which are in harmony with the village character, and schemes should mainly be urban in form as opposed to suburban.

Objectives:

9. To ensure that infill development is contextually compatible as is outlined in Appendix 4
10. To redevelop derelict sites for social and affordable housing as the opportunity arises
11. To ensure the maintenance and preservation of housing within the village centre, and to encourage continued residential use of upper floors. To encourage the building of new residential infill development where vacant plots exist
12. To encourage sensitive conversion to residential or tourist accommodation use of historic structures, including old industrial buildings, whose original use has become redundant

2.1.3 Serviced Sites

It will be an objective of this Plan to provide for serviced sites on the edge of Knocktopher which can allow people to design their own homes on their own sites. This would have the potential to alleviate pressure for ribbon development and urban generated rural housing on the approaches into Knocktopher. Maximum recommended densities for this zoning would be in the range of 2 to 5 per acre, depending on the quality of design. Design guidance on this is available in Chapter 4.

Objective:	To zone an area of land for the sale of serviced sites for the development of large, detached, low density dwellings
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2.1.4 Integration of Residential Developments

In assessing any new development in Knocktopher, the Council may have regard to the development potential of adjoining land, and will assess any application with a view to providing for the development of these lands in an integrated manner. This applies to any land parcel, and relates to all aspects of development, including open space provision, access arrangements and pedestrian and cycle links.

The distinction between any residential schemes should be maintained by the use of design and detailing, to give each its own distinct identity.

Objective:	To assess any new development having regard to the development potential of adjoining land
Objective:	To ensure the integration of adjoining residential schemes, where appropriate, in relation to pedestrian and cycleway links, public open space provision and scheme layout

2.2 Infrastructure

For development to proceed within the village, it will be necessary for development proposals to address the effects imposed on existing water services (water supply, foul drainage and storm drainage systems).

The Council will seek to secure the upgrading of the existing water services through agreements with developers and/or landowners as appropriate.

Objective:	To secure the upgrading of all water services through agreements with developers and/or landowners as appropriate
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2.2.1 Sewerage Network

Knocktopher is served by a sewerage scheme with secondary treatment, which is currently operating over its design capacity. During the public consultation the need to increase capacity to cater for future development was discussed.

The sewerage treatment plant is modular, and is capable of extension as required.

Policy:	To ensure that the necessary sewerage facilities to serve the needs of all development within the village and to prevent pollution are provided
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Objective:	To maintain and improve sewerage services
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Objective:	To prohibit the connection to the sewerage system of any proposed development out of phase with the overall development of the village or where the existing services are committed for other development
Objective:	To preserve free from development the way leaves of all public sewers

2.2.2 Surface Water Drainage

It is an objective of the Council to secure the disposal of surface water associated with developments to avoid increase in the risk of flooding. This objective is to be achieved in keeping with modern good practice and having regard to the characteristics and attributes of each site.

Policy:	To seek positive surface water drainage incorporating discharge flow attenuation for all green field site developments other than those that are isolated and small in scale and unlikely to increase the risk of flooding.
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This means that all storm water shall be collected in a storm water pipe network with attenuation and disposed of to a watercourse, and shall not be directed to a soakpit. It will be the responsibility of the developer to prove that the pipe network and/or watercourse into which discharge is proposed has an adequate capacity, and will not give rise to flooding off site.

Ground soakage for roof water from houses may be permitted subject to the developer establishing that site is suitable.

The onus is on the developer to establish that the receiving drainage system and/or watercourse can cater for the discharge without increased risk of flooding off site.

It is important that any development that takes place within the area defined as the SAC does not adversely impact on the SAC which includes water quality. Therefore the nature and extent of development considered within the SAC lands will be determined by its likely environmental impact. The Council will consult with the Heritage Service of the DOEHLG and other relevant bodies with regard to any proposed development within the boundaries of the SAC designation.

2.2.3 Water supply

At the public consultation concerns were expressed with the existing water supply, with issues relating to the quality, the levels of aluminium, limescale and the taste of the water.

Knocktopher is served by the Bennettsbridge Water Supply Scheme. At present, water supply volumes in the scheme are inadequate to meet any further development, and any

new developments will be required to provide a temporary private water supply, which will be maintained indefinitely until the public water supply is upgraded.

Although the issue of water quality was raised at the public consultation, Water Quality Analyses over the years show that water quality in the area is high. However, as outlined in the County Development Plan, 2002, there is a policy of continuous monitoring by the Council of all water sources to ensure that water quality remains high. Limescale (caused by hardness) is not a health issue and for this reason funding for treating water for hardness is not generally made available. Aluminium is not used in the treatment process and there has never been any excess aluminium detected in the supply.

Policy:	To provide water in sufficient quantity and quality to serve the needs of the existing and future population, and future commercial development
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Objective:	To provide sufficient water to serve all lands zoned for development in this plan
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Objective:	To continuously monitor water quality in the area to ensure the maintenance of high water quality standards
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Objective:	To preserve free from development the way leaves of all public water mains
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2.2.4 Flooding

Flooding was an issue identified at the public consultation. According to local sources, flooding occurs at the Newmarket road in the village. The development strategy for the village should be to avoid areas for development which may be subject to flooding.

Policy/ Objective:	To obtain the necessary funding for the completion of an expert study into the ongoing flooding problems being experienced in Knocktopher and the remedial defence works required to prevent its reoccurrence in the future
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2.2.5 Waste

Issues raised at the public consultation included an expression of support for the extension of recycling facilities, and for kerbside facilities. The existing monopoly with only one waste collector serving the area was criticised, and the high cost of waste collection was blamed for an increase in dumping. There were problems identified with dumping at the existing recycling bins.

Kilkenny County Council has adopted the South East Regional Authority Waste Management Strategy, and the policy for Kilkenny is set out in the Waste Management Plan for the period 2000-2004.

Waste collection was privatised by the Council in the 1990's and waste is now collected in Knocktopher by private contractors. European Union environmental policy dictates that the 'Polluter pays principle' be applied, which means that the full costs associated with environmentally sound recovery and disposal of waste are charged to the customer.

With regard to recycling, it is Council and regional policy that bottle banks for clear, green and brown glass and aluminium cans are provided at villages throughout the county. There is a bottle bank in Knocktopher at present, located to the south of the Church, on the side of the road, where glass bottles and drinks cans can be recycled. It is an objective of the Council to relocate these bottle banks to a more suitable location, with the agreement of the local community.

The aim is to have one bottle bank per 1000 head of population by the end of 2005. Kerbside collections for recyclables was introduced in 2003. These collections will cover newspapers, cardboard, magazines, food cans, drink cans and plastic. Glass is still disposed of at the Bottle banks.

The South East Regional Waste Management Plan has an objective to provide a civic amenity site for a full range of household recyclables including hazardous and non-hazardous waste. This will be located in Dunmore, at the existing landfill facility.

The importance of education and awareness in the encouragement of recycling and promoting more sustainable practices is acknowledged by Kilkenny County Council, and endorsed by the appointment of an Environmental Awareness Officer in 2002. This Officer provides regular dissemination of information through group meetings, leaflets and other promotional materials, and any community can access these services. These services will continue to improve the level of environmental awareness throughout the county.

Policy:	To continue to encourage and facilitate recycling and the minimisation of waste in line with the South East Regional Waste Management Plan objectives
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Objective:	To ensure Knocktopher has an adequate solid waste collection system
Objective:	To relocate the recycling bins to a more appropriate location, with the agreement of the local community
Objective:	To continue to work with and encourage the prevention, minimisation, re-use, recycling and safe disposal of waste in line with the South East Regional Waste Management Plan

2.2.6 Telecommunications

Telecommunications have become centrally important to the prospects of any local economy, and their role in the development of Knocktopher is acknowledged. There is an ESAT Digifone telecommunications mast located in Ballyhale Garda Station. A broadband line has recently been installed between Gowran and Mullinavat.

Policy:	To ensure that the necessary telecommunications and electricity supply are available for the existing and future development of Knocktopher
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2.3 Employment and Economy

At the public consultation, the strong employment base and the advantages of Knocktopher as a location for employment were noted. These include its location on the N10, and proximity to both Waterford and Kilkenny.

At present, the largest employer in Knocktopher is Highway Safety Developments Limited, who produce road signage (35 – 40 employees). Other significant employers in the village are Seasons at Knocktopher Abbey and Ease – Educational and Study Equipment Limited.

Any sustainable land-use policy must provide for a balance between the provision of housing and the provision of employment opportunities. If the provision of residentially zoned land exceeds the potential for employment opportunities, this will result in a high level of commuting, which is unsustainable. The creation of employment opportunities should be matched to the growth of the village.

The Council will ensure that sufficient land is zoned to allow for the provision of a suitable employment mix. The zoning of the village centre will include provision for a mix of employment sources and additionally a site specific for the development of industry will be designated.

Objective:	To encourage job/employment creation initiatives on appropriately zoned and serviced land
Objective:	To facilitate, or assist in identifying agencies which can facilitate, community-led job creation schemes
Objective:	To have all new industrial developments appropriately landscaped and screened

2.3.1 Retail

Knocktopher has five commercial premises, the petrol filling station, Carroll's pub, Heaslip's, Lenehan's and the Post Office.

The *Retail Planning Guidelines for Planning Authorities* sets out Government policy in relation to shops in small towns and rural areas³. The vital role that foodstores and supermarkets play in maintaining the quality and range of shopping in smaller rural town centres and assisting in the anchoring of the surrounding local economy is recognised. Planning policies should be supportive of local facilities in small towns and villages which provide an effective and valuable service to the local economy.

The facilitation of additional commercial activities to serve future development will be done through appropriate zoning in accordance with the CDP 2002 and the Retail Planning Guidelines, 2000. There will be a clear presumption in favour of centre locations for new developments, i.e. in the village centre zone.

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. An edge of centre location is one within easy and convenient walking distance from the town centre, and providing parking facilities that serve the centre as well as the new development, thus enabling one trip to serve several purposes.

Out of centre retail developments will not be allowed if their provision is likely to lead to a reduction in the range of local facilities in towns and villages or affect the diversity of shops or lead to the loss of general food retailing from the centre of smaller towns. Out of centre locations are clearly separate from a town centre but within the urban area, including programmed extensions to the urban area.

Policy:	To facilitate the expansion of the retail base to serve the needs of the current and future population, in accordance with the policies as laid out by the County Development Plan 2002 and the Retail Planning Guidelines, 2000
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Objective:	To encourage the upgrading and expansion of existing retail outlets and the development of new outlets in the village centre to serve local need
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2.3.2 Tourism

The many attractions of Knocktopher for tourism development were discussed at the public consultation. These include the large number of historical sites, and the availability of tourist accommodation in Knocktopher Abbey. It was felt that more could

³ Department of the Environment and Local Government, 2000 *Retail Planning Guidelines for Planning Authorities*

be done to exploit this tourist potential. Some suggestions included the development of a historical tour route, based around Kells, Knocktopher and Jerpoint Abbey.

In relation to tourism, the National Spatial Strategy has made reference to the capacity of the areas of the south east to augment their established agricultural strength through specialist tourist attractions, based on the region's attractive coastline, river valleys and uplands.

Policy:	To co-operate in the development of a tourist development strategy for the village and its hinterland in association with Kilkenny City and County Tourism, SERTA, Failte Ireland , The local Development Association, Barrow Nore Suir Development Company , local community groups and business interests
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Objective:	To facilitate and encourage the development of facilities catering for tourists in Knocktopher
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2.4 Education and Training

At the public consultation, the main problem identified related to the lack of physical capacity at the Vocational School and the operation of the schools bus service. In general, there was satisfaction expressed with most of the educational facilities.

2.4.1 Primary Education

Ballyhale National School, or Scoil Phádraig, is the primary school serving both Ballyhale and Knocktopher. At present, the school has 130 pupils, and 6 classrooms, five of which are in use. With its present facilities, the school has capacity for approximately 180 pupils. The school has a grass playing field to the rear, and a hard surfaced area to the side. There is a daily school bus service serving Knocktopher.

The Pre-School also operates from a spare classroom in the National School.

2.4.2 Secondary Education

At secondary level, there is a Vocational School (Scoil Aireagail) located on the south side of Knocktopher, which also serves Ballyhale. At present the school has approximately 327 pupils, with 18 permanent classrooms. Enrolments in the school have been increasing in recent years, and this year 2 prefab classrooms are being used. This school has grass playing pitches located to the north, adjoining the church and graveyard, which are leased from the parish. It also has hard surfaced multi-purpose courts for basketball/volleyball and tennis located to the side of the school, which are leased from a landowner.

One of the problems identified at the public consultation was the operation of the schools bus service. The bus service collects both primary and secondary school children, and this results in very early collection times for the secondary pupils.

Objective:	To co-operate with the Department of Education in the provision of an adequate number of school places to serve the needs of the village's population
Objective:	To support the provision of an appropriate level of service for school transport

2.4.3 Third level Education

A Post Leaving Certificate courses is offered in Scoil Aireagail, for hairdressing. The nearest third level facility is located in Waterford, the Waterford Institute of Technology, which offers a wide range of courses.

2.4.4 Adult Education

Some evening classes are offered in Scoil Aireagail, but the consultees felt that there was not a wide enough range available. A need was also identified for literacy classes. Concern was expressed with proposed cutbacks to the FAS Community Employment scheme.

Scoil Aireagail offers evening classes in computers, woodwork, French and cookery. It also provides Computer classes during the day.

The FAS Community Employment Scheme operating in the area at present, the Newmarket scheme, provides employment for 15 people and has undertaken work with Newmarket Tidy Towns, and maintenance work in Knocktopher.

Objective:	To facilitate the development of educational opportunities and facilities to meet the needs of the existing and future population
Objective:	To support the continuation of the FAS Community Employment Scheme or other equivalent/replacement scheme

2.5 Transport

2.5.1 Roads

The main road running through Knocktopher is the N10, the National Primary route linking Kilkenny to Waterford City. The R699 also runs through Knocktopher, which links Callan to the N9. The other road in Knocktopher is the Newmarket road, which is south of the village, and runs southwest from the N10.

2.5.2 Footpaths and Lighting

The priority areas for footpaths identified at the public consultation were at the Post office (Darcy corner) and between Ballyhale and Knocktopher.

The footpaths in Knocktopher are of varying quality in terms of width and condition. Any new developments in the area should be levied to improve both footpaths and public lighting throughout the village. A preliminary plan for improving the footways and road pavement in Knocktopher has been prepared by Road Design. These improvement works will depend on funding from the National Roads Authority.

Considering the inter-dependency between Ballyhale and Knocktopher, it is appropriate that a pedestrian and cycle linkage should be provided to link the two settlements. To develop a footpath along the N9 would involve land acquisition, public lighting, drainage and road widening. To accomplish this, a significant amount of funding would be required and this would require approval from the NRA. It is unlikely that this will come to fruition until after completion of the N9 Kilcullen to Waterford Scheme.

Policy:	To provide quality lighting and footpaths throughout the village that will secure the safe movement of pedestrians, cyclists and drivers alike
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Objective:	To require appropriate public lighting as part of any new residential development
Objective:	To examine the provision of a safe pedestrian and cycleway linkage between Ballyhale and Knocktopher

2.5.3 Traffic calming

At the public consultation there were a number of issues in regard to traffic calming. These included concerns about the high volume and speed of traffic passing through the village, and the need for a pedestrian crossing.

In relation to speeding and speed limits, Kilkenny County Council carry out a general review of speed limits every two to three years and Knocktopher's speed limits will be reviewed during the period of the Plan. A 40 mph speed limit including traffic calming was erected in 2003 on the Kilkenny approach.

The provision of a pedestrian crossing should be investigated as part of the overall improvement scheme, as mentioned above.

Policy:	To provide a safe management system in the village that will secure the safe movement of pedestrians, cyclists and drivers alike
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Objective:	To investigate how a safe pedestrian crossing facility can be provided in the village having regard to the need criteria and financing
Objective:	To review the speed limits in Knocktopher during the period of this Plan

2.5.4 Traffic at the Schools

2.5.4.1 Ballyhale National School

One of the main safety concerns raised related to traffic at the primary school in Ballyhale, where there is a need for a designated pick-up/drop-off area. There was also a need identified for a pedestrian crossing on Main street to facilitate the school.

Staff parking at the school is provided within the curtilage, and there is a designated area for buses. However, there is no pick-up/ drop-off area, and this should be provided in the interests of safety. With regard to signage at the school, there are hazard lights and signage to alert drivers to the location of the school.

2.5.4.2 Scoil Aireagail

Parking for the staff is provided within the curtilage of Scoil Aireagail. There is a designated bus parking area also, and buses drive into the school to pick up/drop off. There is no pick up/drop off area for parents, but the road is quite wide at this point, and it does not pose a significant traffic hazard. There is signage in place indicating the location of the school.

Policy:	To provide a safe traffic system at Ballyhale National School that will prioritise and secure the safe movement of children
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Objective:	To implement a safe car-parking system at both Ballyhale National School and Scoil Aireagail
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2.5.5 Linkages within the village

As discussed in Section 2.1.4, in assessing any new development in Knocktopher, the Council may have regard to the development potential of adjoining land. One of the elements of this integration will be the provision of pedestrian and cycle linkages between all new developments, to provide for a pleasant network of routes and walkways interlinking the village.

Policy:	To provide for appropriate pedestrian and cycleway linkages between all new and existing developments
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2.5.6 Public transport

At the public consultation it was discussed that Knocktopher is very poorly served by public transport. The only Bus Eireann route serving Knocktopher is Route 365 which is a local route serving Waterford to Thomastown twice on a Thursday. All other services are run through Ballyhale. A recently launched initiative, the Ring-a-Link bus service, provides a local bus service to parts of Kilkenny and one of the routes serves Knocktopher. This bus service offers a service to customers that ring in to avail of the service.

Policy:	To co-operate with bus operators to review the services to Knocktopher
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2.5.7 Parking

It was considered that parking provision in Knocktopher is inadequate, and that there was a need for road marking. Parking in Knocktopher usually takes place on street. Any development should provide for its own parking off street.

Policy:	The Council will consider proposals for additional car parking on suitable sites and seek appropriate provision of adequate car parking in any new developments
Objective:	To ensure adequate car parking spaces are provided in all new developments
Objective:	To provide disabled car parking spaces at appropriate locations throughout the village

2.6 Community Facilities – Recreation

2.6.1 Open space

At the public consultation the creation of the duck pond and green area along the stream was identified as a positive development. The potential of the stream for amenity purposes was noted.

The development of this green area along the stream provides a good starting point for a pleasant area of open space provision in Knocktopher, along the banks of the stream. A pleasant walk could be provided along the length of the stream through the centre of the village. A large area in the centre of Knocktopher is designated as a zone of Archaeological Potential and this will primarily be reserved free from development. This area will form a large central open space in Knocktopher, and will require an Amenity scheme for its proper development. Further details on this is given in Chapter 4.

The carrying out of amenity or maintenance works could have an adverse impact on the quality of the SAC, and therefore prior to any works being carried out it is advisable to consult with the Wildlife Service.

Policy:

1. The Planning Authority will not normally permit development which would result in the loss of public or private playing fields, parks, children's play space, amenity open space or land zoned for recreational or open space purposes. An exception may be considered where all of the following requirements are demonstrably met:

a) There is a clear excess of playing fields or open space provision within the area. This should take into account the long-term needs of the community, the type and recreational and amenity value and accessibility of such provision.

b) Alternative compensatory provision is made which is both accessible to and of equal or greater quality and benefit to the community.

c) The continued use, proper maintenance and enhancement of the amenity/facility can best be achieved by the redevelopment of a small part of the site that will not adversely affect its overall sporting, recreational and/or amenity value of the facility.

d) The site is indicated for an alternative use in the development plan.

2. It is the policy of the Council to provide, maintain and manage a children's play area in Knocktopher within public open spaces or other suitable locations where it is appropriate and as finance and resources permit.

3. The Council will investigate ways of improving the quality and capacity of existing sporting and recreational facilities.

4. The Council will investigate ways of assisting in the provision of new sporting recreational and leisure facilities through initiatives in both the public and private sector.

Objective: To provide quality open space to meet the needs of the existing and future population

Objective: To ensure that all residential developments address adjoining open space to provide for their passive supervision

Objective: To enhance and protect the quality of the stream, whilst maximising its amenity potential

Objective:	To protect the banks of the stream and develop a river walk along it through the centre of the village, in conjunction with the relevant statutory bodies and voluntary groups
Objective:	To prepare an Amenity scheme for the Park during the period of this plan

2.6.2 Recreation

At the public consultation it was noted that Knocktopher is well served by recreational facilities generally. There is a hall available to the rear of the Church, and it is a well used facility. One of the local organisations who utilise this facility is the Ladies Club. The upgrading and continued use and expansion of uses should be encouraged in the hall. In addition, there is a hall at the School, and a hall in Ballyhale.

The playing field at Ballyhale National School is used occasionally by both Foróige and the GAA Under-8's team. Scoil Aireagail is used by Macra na Feirme and the IFA for evening classes.

Objective:	To ensure the maximisation of the Church hall as a facility for the community
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2.7 Amenity Enhancement

The main issues to emerge at the public consultation with regard to Amenity enhancement related to the stream and to litter.

Policy:	To provide an aesthetically pleasing appearance for both the built and natural environment of the village
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2.7.1 Conservation

There are many features worthy of preservation and protection in Knocktopher. The Record of Protected Structures is set out in Appendix 1. The zone of archaeological potential is illustrated on Map 3.

It is an objective of the Council to preserve Protected Structures. Alterations to Protected Structures normally require planning permission and should be subject to early consultation with Kilkenny County Council's Conservation Officer and/or the National Monuments and Architectural Protection Division of the Department of the Environment, Heritage and Local Government. Generally, all repair and maintenance works should be carried out on a 'like for like' basis and in accordance with the Conservation Guidelines published by the Department of Environment & Local Government, 1996. In addition,

the Council will assess any application for redevelopment or infill for its contribution to the streetscape.

In general, new development should relate closely to the established character of the village, respecting the disciplines of established building form, massing, height, alignment, orientation and window proportions. Further details on this are set out in Chapter 4 and Appendix 1.

Objective:	To seek the conservation and protection of the buildings listed in the Record of Protected Structures
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2.7.2 Archaeology

It is Council policy, in considering development proposals which would affect the sites as outlined in Chapter 1, to have regard to the recommendations of the Department of the Environment, Heritage and Local Government concerning archaeological assessment and the monitoring of excavations during construction.

Objective:	To have regard to the recommendations of the Department of the Environment, Heritage and Local Government, concerning archaeological assessment and the monitoring of excavations during construction, in considering development proposals which would affect any archaeologically designated sites
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2.7.3 Dereliction

The majority of the buildings in Knocktopher are in good condition, with only a few examples of dereliction, or poor maintenance. Guidelines for the redevelopment of sites are outlined in Chapter 4 and Appendix 4.

Policy:	To encourage and provide for the sensitive redevelopment of derelict sites in the village
Policy:	To implement the Derelict Sites Act 1990 in order to ensure the removal of dereliction within the Plan period as resources permit

2.7.4 Litter

Litter was identified as an issue. At present a FAS employee sweeps the street, but the funding for this to be maintained is uncertain. This was discussed under Section 2.4.4 Adult Education.

Some of the litter bins in the village are in need of replacement. Kilkenny County Council recently published its Draft Litter Management Plan, 2003 – 2006, which includes an objective to provide additional and improved litter bins in strategic locations and to maintain, or make arrangements for, the maintenance of existing bins.

Objective:	To improve the quality of bins in the village through maintenance and/or replacement
Objective:	To implement the provisions of the Litter Management Plan

2.7.5 Streetscape

There are three elements which could be enhanced to contribute further to the streetscape. The first is a traditional water pump located on the Thomastown road, and this is an attractive historic feature in the village, which should be maintained.

The second is the use of planters, of which there are a number of types in display at the moment, some of which are poorly maintained. Uniformity in the design of these would add to the streetscape.

In addition, public seating could be well used to enhance the village. There is one street bench in the village at present – at the Thomastown road/N10 junction. Though it is functional and south facing, it does not add much character.

Objective:	To maintain the traditional water pump as a historic feature of interest in the streetscape
Objective:	To ensure the uniformity of planters throughout the village
Objective:	To provide additional and attractive seating in the village
Objective:	To seek the undergrounding of all utility cables in the village centre
Objective:	To preserve the character of the village, with control of shopfronts and advertising

2.7.6 Graveyards

Graveyards are located in Knocktopher Manor and Knocktopher Abbey and are identified in the Record of Monuments and Places, reference KK031-017, and are protected under the National Monuments (Amendment) Act, 1994.

Before work is undertaken in a graveyard, ownership and legal status should be checked carefully. A licence is required from the Heritage Service of the Department of the Environment, Heritage and Local Government prior to undertaking any work on any graveyard that is a Recorded Monument. A useful publication is *“The Care and Conservation of Graveyards”* produced by the Office of Public Works. Contact your local authority heritage officer or conservation officer for further information.

2.7.7 Planting

Appropriate planting can be used to enhance the environment and additional planting would add to the amenity of the village, and would also add to any new developments. Landscaping requirements for new developments are outlined in Chapter 4.

Objective:	To require appropriate planting of semi-mature trees using native species where possible, in any new development and to preserve and augment existing mature trees and hedgerows
Objective:	To retain the trees as identified in the zoning objectives map except where their removal is due to the interests of public safety and good design or the trees are in an unhealthy state
Objective:	To encourage the appropriate planting of semi-mature trees along Main street

2.7.8 Ecology

An Ecological Survey of the Knocktopher area was carried out by an Ecologist as part of this plan process. This report is included as Appendix 2. There were four areas of Ecological Interest identified; at the old Church of Ireland, at Whitescastle lower, at Knocktopher Abbey and at Little Arrigle Valley.

Whitescastle Lower and the Little Arrigle Valley are part of the Nore/Barrow Special Area of Conservation (site code 002162).

Whitescastle Lower contains habitats of considerable ecological interest and supports a significant diversity of wildlife. In addition, there are a number of recorded and potential bat roosting sites within the area. Bats and their habitats are protected under National and European legislation.

It is important that any development that takes place within the area defined as the SAC does not adversely impact on the SAC which includes water quality. Therefore the nature and extent of development considered within the SAC lands will be determined by its likely environmental impact. The Council will consult with the Heritage Service of the DOEHLG and other relevant bodies with regard to any proposed development within the boundaries of the SAC designation.

Objective:	To ensure the protection and/or conservation as appropriate of both the designated and sites outlined as areas of ecological interest in the plan and to control development which would be inimical to the preservation or conservation of their essential character.
Objective:	To ensure the protection of bats and their roost sites

2.8 Community Supports – Social Services

2.8.1 Services

At the public consultation, the main commercial service deficits identified were a credit union, ATM and pharmacy. In addition, there was concern over the possibility of the Post Office closing. In relation to social services, the main deficits identified were a day care centre for the elderly, a nursing home and a crèche.

Ballyhale and Knocktopher are relatively well served by commercial services in proportion to their size. Knocktopher's service base should expand to keep pace with development and to maintain its role in the local rural area.

Objective:	To maintain the role of Knocktopher as a local market centre for its rural catchment area and to enhance its role as a centre to service its anticipated expansion during the period of the Plan
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2.8.2 Elderly

For the elderly, the needs identified were for a day care centre, a nursing home and more sheltered housing. Planning permission has recently been granted for a 60 bedroom nursing home in Ballyhale and for a change of use of the Ballyhale parochial centre to a day care centre.

Objective:	To support the provision of a day care centre for the elderly in Ballyhale
Objective:	To support the provision of a nursing home in Ballyhale

2.8.3 Healthcare

As set out in Section 7.15 of the County Development Plan 2002, it is the policy of the Council to facilitate the development by the South Eastern Health Board of a comprehensive range of health and social care services and in particular services for the elderly including the development of community, hospital, community nursing and day care services throughout the County. There is a modern Health Centre in Ballyhale with three doctors, a public health nurse and a chiropodist available to cover the area.

Objective:	To co-operate with the SEHB in the provision of any health care services for the village
Objective:	To support the provision of a dispensing chemist to cater for the needs of the villages

2.8.4 Childcare

According to the Guidelines for Planning Authorities on Childcare Facilities, “Government policy on childcare is to increase the number of childcare places and facilities available and to improve the quality of childcare services for the community”⁴. Section 3.5.1. of the County Development Plan sets out the policies of Kilkenny County Council in relation to childcare provision. Kilkenny County Childcare Committee, which is a sub-group of the Kilkenny County Development Board have also published a Childcare Strategy 2002-2006, to “inform the development and delivery of quality services for children in the County”⁵ between 2002 and 2006.

There is a private play school available in Ballyhale National School, but there is no full day-care service available. The provision of quality childcare services will be facilitated and encouraged by the Council, in suitable locations. Regard will also be given to the Guidelines for Best Practice in the Design of Childcare Facilities issued by the Department of Justice, Equality and Law Reform.

Policy:	To ensure the provision of an adequate range of quality childcare facilities in appropriate locations
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Objective:	To facilitate the development of a crèche in conjunction with the relevant statutory bodies and the local community on a suitable site within the village in line with the Guidelines for Planning Authorities on Childcare Facilities
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⁴ Department of the Environment and Local Government, 2001, p. 3 *Childcare Facilities – Guidelines for Planning Authorities*, Stationery Office

⁵ Kilkenny County Childcare Committee, 2002 *Childcare Development Plan 2002 - 2006*

3 DEVELOPMENT OBJECTIVES

3.1 Introduction

This section of the Proposed Plan sets out specific objectives for the development of Knocktopher. Some of the objectives can be carried out directly by the County Council, but in others, for which the Council is not directly responsible, the Council will have a facilitative role.

Achievement of the objectives for which the Council is directly responsible, will, in many cases be dependent upon adequate finance being made available to the Council from the Department of the Environment and Local Government and other sources. For many of the other objectives, a co-ordinated approach will need to be taken by both the Council and local community. The Council, through its Planning and Community and Enterprise Departments, intend to facilitate and build the capacity in the community to follow these objectives through.

Where possible, specific objectives are illustrated on the map accompanying this plan. However some objectives are not site specific and therefore cannot be illustrated on the map.

3.2 The Development Boundary

The development boundary for the town has been designated taking into consideration the following factors:

- The need to provide a compact and accessible village in accordance with the principles of sustainable development
- The existing built environment and road structure
- Potential population growth and demand for housing
- The need to offer locational choice and housing mix
- Proximity to existing and potential community and commercial facilities and the need to encourage sustainable growth
- Linkages (transport) to other larger settlements
- The level of provision of existing infrastructure
- Existing planning permissions

3.3 Land Use Zoning

The purpose of zoning is to indicate to property owners and the general public the types of development which the Council considers most appropriate in each land use category. The land use zoning objectives are detailed below and are shown on the Land Use zoning and specific objectives map. It is the intention of the Planning Authority that the zoning

of particular areas for a particular use shall not in itself exclude other uses in that area provided they are compatible with the dominant use.

Zoning is designed to reduce conflicting uses within areas, to protect resources and, in association with phasing, to ensure that land suitable for development is used to the best advantage of the community as a whole.

It is important that any development that takes place within the area defined as the SAC does not adversely impact on the SAC which includes water quality. Therefore the nature and extent of development considered within the SAC lands will be determined by its likely environmental impact. The Council will consult with the Heritage Service of the DOEHLG and other relevant bodies with regard to any proposed development within the boundaries of the SAC designation.

In the following paragraphs:

- **Permissible uses** means a use, which is acceptable in the relevant zone. However, it is still the subject of the normal planning process.
- **Open for consideration** means a use which may be permitted where the Council is satisfied that the individual proposal or development will be compatible with the policies and objectives for the zone, and will not conflict with the permitted uses and also conforms with the proper planning and development of the area.

3.3.1 Residential

Objective: To protect and improve residential amenities and to provide for new residential development appropriate to the scale and character of Knocktopher.

Permissible Uses: Dwellings, open spaces, places of worship, community centres, halting sites, public service installations, playgroup or crèche, Nursing home.

Open for Consideration: Bed and breakfast establishments and guesthouses, lock up garages, retail shop of local convenience not more than 100m sq in gross area, hotel, public house, restaurant, use by owner or occupier of part of a private residence as a studio, for a light industrial activity, a clinic or surgery, professional office, or as a playgroup or crèche.

3.3.2 Low density residential

Objective: To provide for low density residential development appropriate to the scale and character of Knocktopher.

The maximum residential density to be permitted here shall be 5 dwellings to the acre with a minimum of 2 acres being made available as serviced sites.

Permissible Uses: Dwellings, open spaces

Open for Consideration: Places of worship, community centres, halting sites, public service installations, playgroup or crèche, Nursing home, Bed and breakfast establishments and guesthouses, lock up garages, retail shop of local convenience not more than 100m sq in gross area, hotel, public house, restaurant, use by owner or occupier of part of a private residence as a studio, for a light industrial activity, a clinic or surgery, professional office, or as a playgroup or crèche.

3.3.3 Village Centre

Objective: To provide for the development and improvement of appropriate village centre uses and allow for the development of Knocktopher as a focus for local services, sustaining and strengthening its role as a population centre.

The purpose of this zone is to protect and enhance the centre of Knocktopher and to provide for and improve retailing, residential, commercial, office, cultural and other uses appropriate to the centre of a village. It will be an objective of the Council to encourage the development of backlands. Generally two storey buildings will be preferred.

Permissible Uses: Dwellings, retailing, retail warehousing, wholesale outlets, offices, public buildings or places of assembly, cultural or educational buildings, recreational buildings, halting sites, hotels, motels, guest houses, clubs, private garages, open spaces, public service installations, medical and related consultants, restaurants, public houses, car parks, halls or discotheques, and other uses as permitted and open for consideration in residential zoning.

Open for Consideration: workshop or light industry

3.3.4 Recreation, Amenity and Open Space

Objective: To preserve, provide and improve recreational open space.

Permissible Uses: Open space

Open for Consideration: Sports clubs, recreational buildings, stands, pavilions, agricultural uses, public service installations.

3.3.5 Community Facilities

Objective: To protect, provide and improve community facilities.

Permissible Uses: Educational, religious and cultural facilities, public buildings, crèches, schools, churches, hospitals, convents, community centres and halls, school playing fields, colleges, orphanages, hostels, halting sites, cemeteries, libraries and medical centres, nursing homes

Open for Consideration: Public service installations, Village Centre uses which would not conflict with the other objectives of the Plan and which would be in accordance with the proper planning and sustainable development of the area.

3.3.6 Industrial/Warehousing

Objective: To provide for industrial and related uses.

Permissible Uses: Industrial premises and ancillary offices, open spaces, warehouses, car and heavy vehicle parks.

Open for Consideration: Petrol filling stations, service stations, car showrooms, advertisement structures, wholesale premises, public service installations, play school/creche.

3.3.7 Integrated Tourism and Leisure

Objective: To facilitate the development of an integrated tourism and leisure development whilst securing the conservation of Knocktopher Abbey as a protected structure.

Permissible Uses: Tourist accommodation and associated facilities, equestrian uses, leisure development

Open for Consideration: Limited residential accommodation linked to the integrated tourism and leisure facilities

3.3.8 Transitional Areas

While the zoning objectives indicate the different uses permitted in each zone, it is important to avoid abrupt transitions in scale and use at the boundary of adjoining land uses zones. In these areas, it is necessary to avoid developments, which would be detrimental to the amenities of the more environmentally sensitive zone. For instance, in zones abutting residential areas particular attention must be paid to the uses, scale and density and appearance of development proposals and to landscaping and screening proposals in order to protect the amenities of these residential areas.

3.4 Specific Objectives

As a result of the discussion under each of the eight headings as outlined in Section 2, certain objectives have been formulated. The objectives under each heading are set out below, in table form, in addition to the expected time frame for their realisation and the agencies responsible for their implementation.

3.4.1 Housing and Population

Specific Objective	Map Ref	Action By	Funding and Support Services	Time scale
To protect the residential amenity of existing dwellings	H1	Local Authority through the development control process	Developers, landowners and local authority through the development control process	Ongoing from adoption of plan
To ensure a high standard in design, layout, provision of open space, landscaping and variation in house type and size in new residential developments	H2	Developers, Landowners and Local Authority	Developers, Landowners and Local Authority through development control process	Ongoing from adoption of plan
To have a good social mix in new residential developments providing a range of unit types/sizes	H3	Developers, landowners and local authority	Developers, landowners and Local Authority through development control process	Ongoing from adoption of plan
To control development of one off houses on the fringes of the Knocktopher development area in order to maintain a clear line between the built up area and the rural countryside	H4	Local Authority	Local Authority	Ongoing
To encourage the provision of landscaped pedestrian and bicycle links between and within residential areas and the village centre	H5	Developers, landowners and local authority	Developers, landowners and local authority	Ongoing from adoption of plan
To implement the Housing Strategy contained in appendix A of the County Development Plan 2002	H6	Local Authority	N/A	Ongoing from adoption of plan
To ensure that an adequate amount of land is included in the development boundary of the village to cater for its expansion over the period of the plan	H7	Local Authority	N/A	Ongoing from adoption of plan
To encourage planned housing development of serviced lands within the development boundary. The Planning Authority will require that serviced/serviceable lands will be developed in depth and at sustainable densities. The use of degraded or brown field sites will be preferred and utilised where possible in order to improve the environmental character of the village	H8	Developers, Landowners and local authority	Developers, landowners and local authority through the development control process	Ongoing from adoption of plan
To ensure that infill development is contextually compatible as is	H9	Developers, landowners and local	Developers, landowners and	Ongoing from

outlined in Appendix 4		authority	local authority	adoption of plan
To redevelop derelict sites for social and affordable housing as the opportunity arises	H10	Local authority, landowners	Local authority	Ongoing from adoption of plan
To ensure the maintenance and preservation of housing within the village centre, and to encourage continued residential use of upper floors. To encourage the building of new infill development where vacant plots exist	H11	Developers, landowners and local authority	Developers, landowners and local authority through the development control process	Ongoing from adoption of plan
To encourage sensitive conversion to residential or tourist accommodation use of historic structures, including old industrial buildings, whose original use has become redundant	H12	Local authority and developers, community organisations, Dúchas, DoELG	Local authority and developers, community organisations, Dúchas, DoELG	Ongoing from adoption of plan
To zone an area of land for the sale of serviced sites for the development of large, detached, low density dwellings	H13	Local authority	Landowners and developers	Ongoing from adoption of plan
To assess any new development having regard to the development potential of adjoining land	H14	Local authority	Landowners and developers	Ongoing from adoption of plan
To ensure the integration of adjoining residential schemes, where appropriate, in relation to pedestrian and cycleway links, public open space provision and scheme layout	H15	Local authority, landowners and developers	Developers, landowners and local authority through the development control process	Ongoing from adoption of plan

3.4.2 Infrastructure

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To secure the upgrading of all water services through agreements with developers and/or landowners as appropriate	I1	Local Authority, developers and landowners	Local Authority and DoEHLG	Ongoing from adoption of plan
To maintain and improve sewerage services	I2	Local Authority	Local Authority & DoEHLG	Ongoing from adoption of plan
To prohibit the connection to the sewerage system of any proposed development out of phase with the overall development of the village or where the existing services are committed for other development	I3	Local authority through the development control process	Local authority	Ongoing from adoption of plan
To preserve free from development the way leaves of all public sewers	I4	Local authority through the	Local authority, developers,	Ongoing from

		development control process	landowners	adoption of plan
To provide sufficient water to serve all lands zoned for development in this plan	I5	Local authority	Local authority, DoELG	Ongoing form adoption of plan
To continuously monitor water quality in the area to ensure the maintenance of high water quality standards	I6	Local authority	Local authority	Ongoing form adoption of plan
To preserve free from development the way leaves of all public water mains	I7	Local authority through the development control process	Local authority, developers, landowners	Ongoing form adoption of plan
To obtain the necessary funding for the completion of an expert study into the ongoing flooding problems being experienced in Knocktopher and the remedial defence works required to prevent its reoccurrence in the future	I8	Local authority, Office of Public works	Office of Public works	Medium term
To ensure Knocktopher has an adequate solid waste collection system	I9	Local authority	Local authority, private waste collectors	Ongoing form adoption of plan
To relocate the recycling bins to a more appropriate location, with the agreement of the local community	I10	Local authority	Local authority, local community	Short term
To continue to work with and encourage the prevention, minimisation, re-use, recycling and safe disposal of waste in line with the South East Regional Waste Management Plan	I12	Local authority	Local authority	Ongoing form adoption of plan

3.4.3 Employment and Economy

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To encourage job/employment creation initiatives on appropriately zoned and serviced land	E1	Local Authority, BNS, Enterprise Ireland, IDA, Landowners, developers	Local authority, BNS, Enterprise Ireland, IDA, CEB, landowners and developers	Ongoing from adoption of plan
To facilitate, or assist in identifying agencies which can facilitate, community-led job creation schemes	E2	Local authority, BNS, Enterprise Ireland, IDA, Landowners and developers	Local Authority, BNS, Enterprise Ireland, IDA, CEB, landowners and developers	Ongoing from adoption of plan
To have all new industrial developments appropriately landscaped and screened	E4	Local authority in conjunction with developers	Developers	Ongoing from adoption of plan

To encourage the upgrading and expansion of existing retail outlets and the development of new outlets in the village centre to serve local need	E5	Local authority, landowners and developers	Local authority, landowners and developers	Ongoing from adoption of plan
To facilitate and encourage the development of facilities catering for tourists in Knocktopher	E6	Kilkenny Tourism, SERTA, Local authority, local community, developers	Kilkenny Tourism, SERTA, CEB, Local authority, local community	Ongoing from adoption of plan

3.4.4 Education and Training

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To co-operate with the Department of Education in the provision of an adequate number of school places to serve the needs of the village's population	E & T 1	Local authority, school, in conjunction with the Department of Education	Department of Education	Ongoing from adoption of plan
To support the provision of an appropriate level of service for school transport	E & T2	Ballyhale National School, community, Department of Education, Scoil Aireagail	Department of Education/ Private bus operator, local authority, Ballyhale School, Scoil Aireagail	Ongoing from adoption of plan
To facilitate the development of educational opportunities and facilities to meet the needs of the existing and future population	E & T3	Local authority, school, in conjunction with Department of Education	Department of Education	Ongoing from adoption of plan
To support the continuation of the FAS Community Employment Scheme or other equivalent/replacement scheme	E & T 4	FAS, Department of Enterprise, Trade and Employment	FAS, Department of Enterprise, Trade and Employment	FAS, Dept. of Enterprise, Trade and Employment

3.4.5 Transport

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To require appropriate public lighting as part of any new residential development	T1	Local authority through development control process	Developers	Ongoing from adoption of plan
To examine the provision of a safe pedestrian and cycleway linkage between Ballyhale and Knocktopher	T2	Local authority, landowners, Tidy Towns, Development	Local authority, landowners, Tidy towns,	Medium term

		association	Development Association	
To investigate how a safe pedestrian crossing facility can be provided on the Main road in the village having regard to the need criteria and financing	T3	Local authority, NRA	Local authority and NRA	Medium term
To review the speed limits in Knocktopher during the period of this Plan	T4	Local authority, NRA	Local authority, NRA	Medium term
To implement a safe car-parking system at both Ballyhale National School and Scoil Aireagail	T5	Local authority, Ballyhale National school, Scoil Aireagail	Ballyhale National School, Scoil Aireagail	Medium term
To provide for appropriate pedestrian and cycleway linkages between all new and existing developments	T6	Local authority, developers through development control process	Local authority and developers	Ongoing from adoption of plan
To co-operate with bus operators to review the services to Knocktopher	T7	Local authority and bus operators	Bus operators	Medium term
To ensure adequate car parking spaces are provided in all new developments	T8	Local authority and developers through the development control process	Local authority	Ongoing from adoption of plan
To provide disabled car parking spaces at appropriate locations throughout the village	T9	Local authority and developers through the development control process	Local authority	Ongoing from adoption of plan

3.4.6 Community Facilities – Recreation

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To provide quality open space to meet the needs of the existing and future population	R1	Local authority, landowners and Developers	Local authority and Developers	Ongoing from adoption of plan
To ensure that all residential developments address adjoining open space to provide for their passive supervision	R2	Local authority, developers through development control process	Local authority and developers	Ongoing from adoption of plan
To enhance and protect the quality of the stream, whilst maximising its amenity potential	R3	Local authority, Tidy Towns, Residents' associations, development Associations	Local authority, Tidy Towns, Residents' associations, development Associations	Ongoing from adoption of plan
To protect the banks of the stream and develop a river walk along it, in conjunction with the relevant statutory bodies and voluntary groups	R4	Local authority, Tidy Towns, Residents' associations, development Associations	Local authority, Tidy Towns, Residents' associations, development	Ongoing from adoption of plan

			Associations	
To prepare an Amenity scheme for the Park during the period of this plan	R5	Local authority, development association	Local authority, BNS	Long term
To ensure the maximisation of the Church hall as a facility for the community	R6	Local authority, local community	Local community	Ongoing from adoption of plan

3.4.7 Amenity Enhancement

Specific Objective	Map Ref	Action By	Funding and Support services	Time scale
To seek the conservation and protection of the buildings listed in the Record of Protected Structures	A1	Local Authority, Dúchas, DoEHLG, Landowners	Local authority, Dúchas, DoEHLG, landowners	Ongoing from adoption of plan
To have regard to the recommendations of the DoEHLG, concerning archaeological assessment and the monitoring of excavations during construction, in considering development proposals which would affect any archaeologically designated sites	A2	Local Authority, Dúchas, DoEHLG, Landowners	Local Authority, Dúchas, DoEHLG, Landowners	Ongoing from adoption of plan
To improve the quality of bins in the village through maintenance and/or replacement	A3	Local authority, Tidy Towns, Residents' associations, Development Association	Local Authority, Tidy Towns, Residents' associations, Development Association	Ongoing from adoption of plan
To implement the provisions of the Litter Management Plan	A4	Local authority, Tidy Towns, Residents' associations, Development Association	Local authority, Tidy Towns, Residents' associations, Development Association	Ongoing from adoption of plan
To maintain the traditional water pump as a historic feature of interest in the streetscape	A5	Local authority, Residents' association, Tidy Towns, Development Association	Local authority, Residents' association, Tidy Towns, Development Association	Ongoing from adoption of plan
To ensure the uniformity of planters throughout the village	A6	Local authority, Residents' association, Tidy Towns, Development Association	Local authority, Residents' association, Tidy Towns, Development Association	Ongoing from adoption of plan
To provide additional and attractive seating in the village	A7	Local authority, Residents' association, Tidy	Local authority, Residents' association, Tidy	Medium term

		Towns, Development Association	Towns, Development Association	
To seek the undergrounding of all utility cables in the village centre	A8	Local authority, service providers	Local Authority, service providers	Medium term
To preserve the character of the village, with control of shopfronts and advertising	A9	Local authority through development control process	Local authority, developers, shop owners, businesses	Ongoing from adoption of plan
To require appropriate planting of semi-mature trees, using native species where possible, in any new development and to preserve and augment existing mature trees and hedgerows	A10	Local authority, developers	Local authority, Tidy Towns, Residents' associations, Development Associations	Ongoing from adoption of plan
To retain the trees as identified in the zoning objectives map except where their removal is due to the interests of public safety and good design or the trees are in an unhealthy state	A11	Local authority, developers, landowners, Tidy Towns, Development Association	Local authority	Ongoing from adoption of plan
To encourage the appropriate planting of semi-mature trees along Main street	A12	Local authority, developers, Tidy towns, development association	Local authority, developers, Tidy Towns, Development association	Medium term
To ensure the protection and/or conservation as appropriate of the non designated sites outlined as areas of ecological interest in the plan and to control development which would be inimical to the preservation or conservation of their essential character	A13	Dúchas, local authority, landowners, developers	Dúchas, Kilkenny tourism, SERTA, An Bord Fáilte, BNS	Ongoing from adoption of plan
To ensure the protection of bats and their roost sites	A13	Dúchas, local authority, landowners, developers	Wildlife service, Local authority	Ongoing from adoption of plan

3.4.8 Community Supports – Social Services

Specific Objective	Map Ref	Action By	Funding and support services	Time scale
To maintain the role of Knocktopher as a local market centre for its rural catchment area and to enhance its role as a centre to service its anticipated expansion during the period of the Plan	S1	Local authority, local retailers	Local authority, local retailers	Ongoing from adoption of plan
To support the provision of a day care centre for the elderly in Ballyhale	S2	Local authority, SEHB, developers	Local authority, SEHB	Long term
To support the provision of a nursing home in Ballyhale	S3	Local authority, SEHB, developers	Local authority, SEHB	Long term
To co-operate with the SEHB in the	S4	Local authority,	SEHB	Ongoing

provision of any health care services for the village		SEHB		from adoption of plan
To support the provision of a dispensing chemist to cater for the needs of the villages	S5	SEHB, local authority, local community	SEHB, local community	Long term
To facilitate the development of a crèche in conjunction with the relevant statutory bodies and the local community on a suitable site within the village in line with the Guidelines for Planning Authorities on Childcare Facilities	S6	Local authority, local development association, County childcare committee	NDP, County childcare committee, local authority, Department of Justice	Short term

3.5 Implementation

The realisation of these objectives over a period of time will, it is felt, significantly benefit the village, ensuring its orderly development and improvement.

The achievement of the objectives will be dependent on the availability of finance and the inclusion of the objectives in the work programmes of the County Council and the responsible agencies. The local community, through local associations such as Residents Associations and Tidy Towns, can play a huge role in contributing to the achievement of some of the objectives above. Kilkenny County Council's policy will be to facilitate and aid local organisations in this capacity.

This is intended to be an integrated plan, and the progression of formulating objectives from issues identified in the public consultation is the first step in enabling an integrated approach to implementation. Kilkenny County intends to fully participate in an Inter-Agency Working Group and to co-operate with other development and community agencies, such as Barrow Nore Suir Development to secure the implementation of this plan.

4 DEVELOPMENT CONTROL

4.1 Introduction

The purpose of this section of the Proposed Plan is to ensure a high standard of design, layout and function for all new development, to conserve what is good in the existing built and natural environment, and to protect the amenities of the village.

In general, the development standards as outlined in Chapter 10 of the County Development Plan, 2002 will be adhered to in Knocktopher with the following stipulations attached. Where there is a conflict between the County Development Plan standards and the Knocktopher Plan the latter shall take precedence.

4.2 Design Guidance Principles

The aim for new development should be to enhance the traditional character of the village streetscape. This section of the plan, combined with Appendix 1, Urban Design Guidelines on Future Development is aimed at giving landowners, developers and their architects a clear view as to how the design of new development should be considered. It will also be used by the Planning Authority when judging planning applications in the village.

When designing for new building, consideration should be given to the existing building fabric, for it is the existing pattern and appearance of these buildings, related to the unique history and morphology of a place, that makes one village or town different from the next. The building fabric therefore is a reflection of the character of a place and if we permit this character to be eroded, either through dereliction, decay and/or demolition and replacement with insensitive new build, then we erode the uniqueness of the place.

Therefore, where possible, consideration should always be given to building conservation. Where conservation is not possible, as in cases where there is already a gap in the streetscape, or where a conservation architect or other specialist in the area considers a building as structurally unsound or prohibitively expensive to merit conservation, then consideration will need to be given to designing a new building. Detailed design guidance on new development is given in Appendix 1.

4.3 Design Elements in Knocktopher

Streetscape refers to the look of a particular road, regarding the arrangement and design of plots, buildings and materials, roads and footpaths, street furniture, open spaces and planting. Attractive and coherent streetscapes happen when all of these features reinforce and work with one another.

4.3.1 Building line and Boundary Treatment

The streetscape in Knocktopher is not continuous, with significant gaps between each of the 'character areas' as described in Paragraph 1.5. A strong sense of enclosure, spatial containment and individual identity is created in the vicinity of the N9 and the Callan Road junction, where the traditional building line is established along the inner side of footpaths. A similar sense of enclosure is created in the vicinity of the graveyard and the Catholic Church ground, created in part by the position of buildings, tall stone walls and mature tree groupings. Elsewhere, the contribution of buildings and other elements to the streetscape is not as strong, in part created by the former clearance of older and obsolete buildings and/or the position of building facades further from the busy National Primary road (i.e. modern bungalow development).

Where the building line is consistent and almost perfectly straight, new infill development will be expected to conform with the established building line. New infill development should avoid disrupting established building lines, as it reduces the sense of enclosure and composition of the streetscape. In instances where the building line is almost continuous, but is also continuously deflecting with subtle twists and turns, new development should respect this pattern and acknowledge it in its design. Where a new infill opportunity spans across two traditional plots (as a result of plot amalgamation), the new design should consider re-introducing a deflection (See Appendix 4).

Traditionally a set-back in building lines was reserved only for important civic buildings, such as Churches, libraries and other institutional buildings, and occasionally important town houses. The preferred option for infill development will be where the building line is re-established and backlands opened up for more comprehensive development, such as residential townhouses, apartments and/or offices.

4.3.2 Building Height and Roofs

Most buildings within the centre of the village are two storey in height, although actual heights can vary considerably within the range. The number of storeys is not a good judge of building heights. This is a very important principle of the Irish streetscape, as reflected in Kilkenny's villages. This feature and the chimneys introduce a strong rhythm in the streetscape and should be acknowledged in new designs. This diversity does not disrupt the harmony of the streetscape because of the consistency in the other elements. The variety of rooflines convey a feeling of diversity, but unity is provided by their common domestic scale and common characteristics.

Roofs are mainly of a traditional pitch, made of slate, though a few buildings have red ridge tiles.

4.3.3 Materials

Most buildings in Knocktopher are rendered, and most of these have a painted finish. Most of the buildings have a simple, traditional finish and do not tend to be decorated or detailed to any great degree. New development should be contextually compatible with adjacent buildings, and this includes in the use of materials.

4.3.4 Proportions

A typical street consists of a series of vertically proportioned units linked together. Large developments should be subdivided into a series of bays, especially at ground floor level, to be more in keeping with the pattern of the existing street frontage. Traditionally, plots in towns and villages are relatively long and narrow, reflecting medieval burgage plots. This is reflected in the facades of buildings and their narrow widths along the street front. Development that extends over more than one historic plot should address the plot through design, with variations in façade composition that echo the historical plot pattern. (See Appendix 4).

Long horizontal lines look out of place and should be avoided; a fascia which extends across several bays should be broken up by pilasters or other vertical divisions. Strong emphasis at fascia level to form a distinct divide between ground and upper storeys is an important feature of streetscapes and should be included in any new development.

4.4 New Residential Development

The aim for greenfield sites on the edge of the existing built up area should be for the extension of spaces which are in harmony with the village character, and schemes should mainly be urban in form as opposed to suburban.

Regard should be had to the amenities of existing properties when new developments are being designed. This should include consideration of factors such as scale, orientation, fenestration, boundary treatment and landscaping.

Where land is being developed for housing the following will be required to be incorporated:

- *All new buildings should be in harmony with existing old buildings in terms of architectural style and should reflect the style and materials of the older character of buildings within the town.*
- *The pattern of existing forms within the area where development is to be located should be used as a stimulus for creative adaptation so that it will fit more appropriately with the overall character of the town.*
- *Careful consideration shall be given to the design of components (such as doors, windows and the height, pitch and ridges of roofs) which should have regard to those already present in the vicinity of the site. This is particularly important with regard to the redevelopment and alterations to existing buildings which should strictly reflect the original building's characteristics in proportions of windows to walls and in the design of the roof.*

New development shall seek to:

- *Reflect the local development patterns*
- *Avoid substantial repetition of one house type*
- *Respect the local characteristics and context of the site*
- *Respond to typical setting and garden forms of the town*
- *Refer to local buildings and variety of proportions and design.*
- *Refer to local distinctive details and materials*
- *Provide adequate privacy for individual houses, flats etc*
- *Provide adequate provision for car parking, open space, landscaping and planting*
- *integrate with existing development and the preservation of features on site*

4.4.1 Building Layout and Orientation

It is intended to create a coherent and environmentally comfortable public realm throughout Knocktopher. Accordingly, proposed layouts shall optimise solar orientation to both adjoining buildings and outdoor spaces. Layouts shall also have careful regard to prevailing wind direction with a view to reducing wind speeds in outdoor areas.

It is an aim to discourage the enclosure and isolation of individual housing estates and to promote the physical and social connectivity in a permeable network of streets and public spaces. Layouts shall promote this connectivity between phases of development. Large residential areas shall be broken into small functional and visual groups, which fulfil a social and aesthetic need for identity.

Long straight roads are not desirable in residential estate developments. Estate roads should incorporate gentle curves and physical traffic calming measures within the estate should be included at the planning application stage.

The provision of services and road layout of the development must have regard to 'Recommendations for Site Development Works for Housing Areas', Department of the Environment and Local Government.

All new residential development should take full account of the characteristics of the natural and built environment of the site, the views and vistas to and from the site, and its surrounding areas. Building layout and orientation of new development should have regard to the amenities of existing properties in their design

Passive supervision of the Public Realm is the most consistent and effective means of preventing anti-social behaviour. All public open spaces (hard and soft landscaped) shall be overlooked by adjoining accommodations to ensure passive surveillance. Back-land spaces, rear access lanes, blind corners and long side-garden walls shall be avoided so as to minimise the risk of anti-social activity.

Layouts, which give priority to the pedestrian and cyclists, will be encouraged. This can be achieved in smaller developments through shared surfaces for pedestrians and

vehicles. Well-lit pedestrian links, separate from the main carriageways should be provided within the estate. These links should be overlooked as far as possible by dwellings and right angled bends should be avoided for security reasons.

Where large residential schemes are proposed, they shall be broken into small functional and visual groups, which fulfil a social and aesthetic need for identity. These shall be designed to create safety for young children, facilitate social interaction and introduce a variety into the visual environment whilst avoiding a monotonous repetitive type development. Each group of houses should have its own visual identity, variation being achieved by layout, including building lines, house design, colour and hard and soft landscaping. New development designs should avoid monotonous repetition by inclusion of subtle variation.

4.4.2 Density

There is no set maximum or minimum density recommended. A high standard of architectural design and layout will be required in residential developments. The Council will seek to ensure that new developments have an individuality and a sense of place which is generated by the interaction between the physical characteristics and features of the site and its surroundings and the layout, landscaping and design of the new housing. It is the policy of the County Council that this high standard should not be diluted in newly constructed developments and that designs and layouts will be welcome which pay regard to the qualities and appearance of the existing area.

In determining suitable density, the character and amenities of the site and of the surrounding area will be considered along with the need for a variety of site sizes and house designs to encourage social mix and choice. In infill sites or in areas adjacent to the village centre, higher densities will be permitted subject to exceptional quality of design and finishes, proper provision for active and passive recreation and good living conditions, including privacy and adequate natural light, within each accommodation unit.

Regard should be had to 'Residential Density – Guidelines for Planning Authorities', Department of the Environment and Local Government, September 1999. This states (Par. 3.6.2) that on serviced lands in towns or villages not served by quality public transport, increased densities would be acceptable if they contributed to the enhancement of town or village form such as by reinforcing street patterns or assisting in the re-development of backlands.

As there will be no set minimum or maximum density specified in the Plan, the emphasis will be on providing a quality housing environment based on innovation and a design led approach.

In preparing applications for housing developments, designers and developers alike are advised to consult relevant publications for guidance such as

- *Guidelines for Planning Authorities*, Department of the Environment and Local Government, September 1999,

- *Essex Design guidelines for Residential and Mixed use areas* by Essex County Council and Essex Planning Officers Association, 1997.

4.4.3 Design

A variety of house types in developments of multiple housing will be encouraged with variations in house size, colour, materials, and designs.

In support of the Council's policy of reducing social exclusion, the Council will encourage developers to have regard to the requirements of people with disabilities, the elderly, and children in the supply, design and layout of residential development.

The design of dwellings should bear a relationship to the existing fabric of the settlement of Knocktopher. Natural features or landmarks such as mature trees or vistas should help to determine the layout and orientation of the housing. The creation of 'land marks' within the estate, whether through retention of existing features or by the introduction of new features will be encouraged.

4.4.4 Ecology & Bio-diversity

Design layouts should aim to enhance and protect the biodiversity resources of the village. This can be achieved through the following:

- i. Retain and enhance existing vegetation including trees, shrubs and hedgerows, wherever possible and incorporate into the development. Under the Wildlife (Amendment) Act, 2000, it is prohibited, with certain exemptions, to remove or cut hedgerows during the bird breeding season of March 1st to 31st August.
- ii. Networks of wildlife sites are more ecologically valuable than isolated wildlife areas. Where possible create linking corridors of habitats.
- iii. Where possible, use native species. Trees and shrubs that grow naturally in the surrounding countryside are often the best choice for your town or village. A list of native trees and shrubs, with planting guidelines is contained in Appendix 3.
- iv. Where possible, use plants of local provenance (i.e grown locally rather than imported)
- v. Tree and shrub species with berries are important for wintering birds
- vi. Trees and shrubs which support a high biomass of insects in summer are important for breeding birds
- vii. Where appropriate avoid the culverting of watercourses and provide new water areas.
- viii. Where possible, set aside maintenance free areas and avoid or limit the use of herbicides and pesticides

It is important that any development that takes place within the area defined as the SAC does not adversely impact on the SAC which includes water quality. Therefore the nature and extent of development considered within the SAC lands will be determined by its likely environmental impact. The Council will consult with the Heritage Service of

the DOEHLG and other relevant bodies with regard to any proposed development within the boundaries of the SAC designation.

4.4.5 Car Parking

Car parking shall be carefully designed to integrate successfully into its location in terms of layout, surface treatment and screen planting. New development will normally be required by the Planning Authority to provide adequate off-street car parking facilities.

Communal car parking arrangements will also be acceptable in residential developments. For security reasons, car parking should always be overlooked by housing. There should not be an excessive amount of car parking grouped together. The visual impact of large areas of car parking can be reduced by the judicious use of screen planting, low walls and the use of textured or coloured paving for car parking bays.

4.4.6 Public Open Space

Public open space is one of the key elements in defining the quality of the residential environment. It provides passive as well as active amenity and has important ecological and environmental aspects. In calculating the area of open space, the area of roads, grass margins, roundabouts, footpaths, left over area, backlands, and visibility splays shall not be taken into account.

The Council will normally expect all open space provision to take account of the following principles:

- Open space should be provided in a comprehensive and linked way, designed as an integral part of the development.
- Areas should be of a demonstrated recreational or amenity value. Small dysfunctional open spaces should be avoided.
- Wherever possible, the majority of open space should be multi-functional. Areas for informal amenity and children's play should be combined.
- Areas should be easily and safely accessible from all dwellings which the space is designed to serve
- The design, location and appearance of open space areas should have regard to the amenities of nearby dwellings, for example, areas where children may play should normally be overlooked by the fronts of nearby dwellings to provide for maximum surveillance and overlooking
- Public open space areas should not be located so close to adjoining dwellings so as to cause undue noise or nuisance to existing or proposed residents
- Attractive natural features should be protected and incorporated into open space areas. Tree planting should normally form an integral part of such open space areas. The use of native species, appropriate to the area should be used where possible. A list of native trees and shrubs, with planting guidelines is contained in Appendix 3.
- Existing trees and hedgerows should be retained wherever possible and incorporated into the development

To ensure implementation of open space provision the Council will attach appropriate planning conditions to permissions, and where necessary will enter into agreements with developers. These will provide for the laying out and landscaping of open space areas in accordance with a detailed scheme to be agreed with the Council.

Reduced provisions may only be acceptable in urban locations where there are more sustainable patterns of development and maximum use can be made of urban land or redevelopment schemes where open space is already available. With relatively high densities such as flats, townhouses or apartments, good quality landscaped open space should be provided.

Open space provision for smaller residential developments and schemes catering for special needs such as accommodation for the elderly will be considered more flexibly on its merits and having regard to the requirements of likely future residents.

Developers may also be required to provide an equipped children's playground in association with open space provision where a development scheme would be greater than 800 metres from an existing easily accessible equipped children's playground.

Adequate areas of open space should be an integral part of any new residential development to meet the needs generated by that development. The overall standard of 2.4 hectares per 1000 population will normally be applied in assessing proposals for open space for children's play and informal amenity. In developments which are adjacent to and provide for easy access to significant areas of existing public open space a lesser standard of provision may be acceptable. This relaxation will only be considered where the developer pays a financial contribution towards the improvement of the existing public open space so as to improve its quality and carrying capacity.

It is an objective of the Council to secure a high quality of design, layout and landscaping in all new residential developments consistent with the Residential Density Guidelines.

Integrated, pleasant, attractive and landscaped open space should form an intrinsic element of new residential development. The precise location, type and design of open space should be negotiated with developers according to the specific characteristics of the development, the sites and its context. All open spaces proposed by developers should be designed and set out by suitably qualified landscape architects or similar design professionals so as to ensure a high standard and consistency with good design and layout practice.

Developers should consider providing a variety of open spaces. Both formal and informal semi-natural areas should be provided, such as wetlands, woodlands, meadows, green corridors as well as formal gardens and seating areas. These elements work best as part of a structure to the provision of open space.

4.4.6.1 Management plan for Public Open Space

Developers will be required to make suitable provision for the future management and maintenance of open space required under this policy, where spaces and facilities are not taken in charge by the Council, either through management companies or agreements with the planning authority.

4.4.7 Private Open Space

An adequate amount of private open space should be provided within the curtilage of each dwelling. In general the requirement will be 60 to 75 sq.m minimum for 3/4/5 bedroomed houses in order to ensure that most household activities are accommodated and at the same offers visual delight, receive some sunshine and encourage plant growth. A standard of 22 metres will normally be required between directly opposing first floor windows. However where adequate levels of privacy are provided this depth may be reduced.

The boundaries of rear gardens should generally be provided with a permanent durable barrier with a minimum height of 1.4 metres. Where rear gardens back onto public areas, excluding a public roadway, this height should be increased to 1.8 metres.

4.4.8 Integration of Residential Developments

In assessing any new development in Knocktopher, the Council may have regard to the development potential of adjoining land and will assess any application, with a view to providing for the development of these lands in an integrated manner.

This applies to any land parcel, and relates to all aspects of development including open space provision, access arrangements and pedestrian and cycle links. The distinction between residential schemes should be maintained by the use of design and detailing, to give each its own distinct identity.

4.4.9 Serviced sites

A site has been designated in the village for the development of serviced sites. This site would provide for the development of sites for individuals seeking to build their own homes on large plots, and should provide for a range of house types and sizes. Maximum recommended densities for this zoning would be in the range of two to five to the acre, depending on the quality of design. The applicant for site development will be required to produce a house design brief in consultation with the Council which should be prepared by a qualified architect (RIAI or equivalent). The applicant for site development will also be required to seek permission for “other relevant works” which will include works additional to roads and services – i.e. common landscaping, building platform formation etc.

For any such development, there should be a continuity of design in terms of scale, compatibility and general harmony. Applicants will also be expected to employ the services of qualified architects (RIAI or equivalent) when applying for individual houses. No house should exceed 7.5 metres in height.

4.4.10 Road and Estate Names

The naming of residential developments shall be approved by the County Council. The names of residential developments shall reflect local and Irish place names for the locality as far as possible. No development work or advertising of housing schemes shall be allowed until the name has been agreed with the Planning Authority.

4.4.11 Services

All services including electricity, public lighting cables, telephone and television cables shall be provided underground in new housing developments. Provision should be made for the unobtrusive siting of transformer stations, pumping stations and other necessary service buildings.

4.4.12 Apartments/Duplex Style

In general apartments will be required to have the following minimum floor areas

Apartment Type	Minimum Floor Area
One Bed	46 m2
Two Bed	65 m2
Three Bed	93sq.m

The internal dimensions of all rooms should be proportioned to allow for an adequate space for normal living purposes. The shape and layout of rooms should maximise the amenity of residents.

All living room, kitchens and bedrooms should minimise overlooking of adjoining/adjacent residences and should be so located so to avoid facing towards nearby high boundary or gable walls.

4.4.13 Access for People with Disabilities

Access requirements for physically disabled persons should be incorporated into the design of buildings and layouts of developments likely to be used by the general public and will be a material consideration of the Planning Authority in assessing applications.

Developers should have regard to the criteria set out in the following in the preparation of development proposals

- Access for the disabled – minimum design criteria, published by the National Rehabilitation Board
- Part M of the Building Regulations 1997 to 2000
- Buildings for Everyone – Access and uses for all the citizens, by the National Rehabilitation Board, 1998.

The needs of people with disabilities should be taken into account in the design and construction of footpaths and parking areas. Footpaths in private commercial and housing

developments and public housing developments shall be dished at junctions. Parking areas should make provision for spaces for disabled drivers and such spaces should be located in the most convenient locations for ease of use.

Tactile indicators are becoming increasingly more common. Tactile paving surfaces can be used to convey important information to visually impaired pedestrians about their environment. The provision of tactile surfaces for the visually impaired in all developments will be encouraged.

4.5 Car parking and Loading

New development will normally be required by the Planning Authority to provide adequate off-street car parking facilities. Such facilities shall cater for the immediate and anticipated future demands of the development, and shall be located within the site or in close proximity to such development. Car parking facilities shall generally be provided behind in a manner that reduces its visual impact to a minimum such as behind the building line and the use of screening.

The dimension of car parking bays shall be a minimum of 4.8m by 2.4m.

Where parking space is proposed in front of existing premises, existing railings or boundary walls shall be retained. They should be provided with proper public lighting facilities and shall be clearly demarcated. Car parking areas should be properly landscaped by the provision of trees, shrubs and grassed areas in order to ensure that damage to the visual amenities is avoided. Parking bays shall be adequately delineated.

Where the developer is unable to comply with the car parking standards for the development set out in the table below, a financial contribution may be acceptable in lieu of car parking provision, which will be related to the cost of providing such facilities.

In developments of an industrial or commercial nature, developers will be required to provide loading or unloading facilities sufficient to meet the demand of such development

Kilkenny County Council may modify the requirements of loading and unloading facilities in any particular case where it considers it would be in the interests of proper planning and sustainable development of the area to do so. Parking and service spaces must be located on site so as to prevent street obstruction and should be located where possible to the rear and side of the buildings and in such a manner to ensure minimal impact on the amenity of adjoining properties.

Where a number of uses are contained within one development, the various uses shall be separated and the overall parking requirements for the development shall be assessed relative to each separate use in order to compute the overall parking requirement for the development (e.g. in a hotel the function rooms, bars etc. shall be assessed as separate from the bedroom provision).

In addition to the above requirements, developers will be required to provide and maintain loading and circulation facilities sufficient to meet the likely demand of each development.

Car Parking Standards for Various Land Uses

<i>Land Use</i>	<i>Parking Spaces per Unit</i>
Dwelling House	A minimum of 1 car space per dwelling unit
(Residential areas)	0.25 per dwelling for visitor parking
Flat or Bed-sitter	1.25 spaces per unit
Schools	1 space for every classroom plus 4 additional spaces
Churches, theatres, Public halls	1 car space per 10 seats.
Hotels, hostels and guesthouses	1 car space per bedroom
Hotel function rooms	1 space per 10 sq. metres
Public houses, inc. hotel bar	1 car space for every 5 sq. m of bar and lounge floor area.
Shopping centres, supermarkets, department stores	5 car spaces for every 93 m ² of gross floor area.
Shops	1 car space per 10sq. metres
Restaurants, cafes	1 car space per 20 m ² gross floor area
Banks and offices	1 car space per 15m ² of gross floor area and additional space to be determined by the Planning Authority.
Industry	1 car space for every 60m ² of gross industrial floor area and operational space to be determined by the Planning Authority.
Warehousing	1 car space for every 100m ² of gross floor area and additional parking space to be determined by the Planning Authority for each individual development.
Retail Warehousing	1 car space for every 35 sq. meters of net retail floor space
Golf or Pitch and Putt courses	4 car spaces per hole.
Golf driving ranges, shooting ranges	1 space per 2m of base line/ per trap
Sports grounds and sports clubs	1 car space for every 15m ² of floor area and 6 spaces for each pitch and additional operational space to be determined by the Planning Authority.
Hospital	1.50 spaces per bed
Clinics/Medical practices	2 spaces per consulting room

In the case of any use not specified above, the Planning Authority will determine the parking requirements, having regard to the traffic levels likely to be generated as a result of the development.

In implementing the car parking standards, the Council will reserve the right to alter the requirements having regard to each particular development.

4.6 Public Utilities

The Planning Authority will require that all wires and cables for the provision of public utility services shall be ducted underground to preserve the amenity and visual character of an area, and in the interests of public safety.

4.7 Shopfronts and Advertising

The over-riding principle for the design of shopfronts and the design and placement of advertisements and signs should be restraint. Chapter 10 of the County Development Plan lays down specified standards, which will be adhered to in Knocktopher.

4.8 The Likely Significant Effects on the Environment of Implementing the Proposed Knocktopher Local Area Plan

The Planning and Development Act 2000 requires that a Local Area Plan shall include information on the likely significant effects on the environment of implementing the plan.

4.8.1 Description of the Proposed Local Area Plan

The Local Area Plan lands comprise approximately 11.2 hectares (27.6 acres) of residentially zoned land, in addition to other lands designated for mixed use development.

4.8.2 Identification of likely significant effects on the environment

The likely significant effects on the environment of implementing the proposed Knocktopher Local Area Plan are categorised as follows:

- Human beings (includes population, economic and social activity)
- Material assets (includes infrastructure)
- Flora and fauna
- Archaeology and cultural heritage
- Landscape

Information on each likely significant effect together with proposed mitigation measures is outlined below.

4.8.2.1 Human beings

Environmental baseline: The population of Knocktopher ED was recorded as 399 at the 2002 Census. The lands identified for development are all contiguous to the existing built up area of Knocktopher and are within walking distance of the Main Street. There is limited employment associated with the current agricultural use of much of the zoned lands.

Likely significant effects:

- Development of additional residential units
- Population increase
- Greater demand for retailing, services, leisure and community facilities and amenities
- Increased demand for transport and travel

Proposed mitigation measures:

- Objectives to ensure the provision of adequate supporting services, facilities and amenities in association with new residential development.
- Objectives for the provision of an adequate traffic management system to cater for increased traffic.
- Objectives for high quality architectural design, layout and landscape treatment of all buildings and spaces.

4.8.2.2 Material Assets

Traffic:

Environmental baseline: There are a number of roads existing in Knocktopher at present, most significantly the N10.

Likely significant effects:

- The development of additional lands will increase the amount of local traffic

Proposed mitigation measures:

- Provision of an integrated network of walking and cycling routes
- Traffic calming – pedestrian crossings, footpath provision

Water Supply:

Environmental baseline: Knocktopher is served by the Bennettsbridge Water supply scheme. This scheme is at capacity.

Likely significant effects:

- Increased demand for water supply

Proposed mitigation measures:

- New water sources will be accessed and utilised to serve the area

- New developments will be required to provide a temporary private water supply, which will be maintained indefinitely until the public water supply is upgraded, or will only be permitted subject to adequate capacity in water supply being available

Foul and Surface Water Drainage:

Environmental baseline: The development of additional lands will lead to an increase in the demand for foul water and surface water drainage. Knocktopher is currently served by a secondary sewerage treatment system, which is modular.

Likely significant effects:

Infrastructure will be improved through additional development

Proposed mitigation measures:

Improved foul drainage facilities to cater for new housing developments

4.8.2.3 Flora and fauna

Environmental baseline: Consultants carried out a Flora & fauna study in order to survey and compile an inventory of the flora and fauna of the area.

Likely significant effects:

The principal effect will be the loss of habitat and biodiversity arising from developments on previously agricultural /rural lands.

Proposed mitigation measures:

- Identification of the significant areas of interest for flora and fauna.
- Objectives for the preservation of these areas through the zoning objectives of the plan.
- Much of any new development will occur on lands which are considered less important in terms of flora and fauna diversity.

4.8.2.4 Archaeology and cultural heritage

Environmental baseline:

There are a number of protected structures and sites of archaeology in the village.

Likely significant effects:

- Possible impact on sites of archaeological interest.
- Possible degradation of buildings of architectural interest.

Proposed mitigation measures:

- Policies and objectives to protect the archaeological heritage
- Archaeological assessment prior to the commencement of development, where required.

- The inclusion in the List of protected structures of the buildings of architectural and historic interest

4.8.2.5 Other possible effects

Other possible effects on the environment include those on air, water soils and climate. These are considered to be less significant in the context of the Local Area Plan than those outlined above.

Consideration of Alternatives: Could Development Take Place Elsewhere

The development of Knocktopher will have a significant impact as a result of the change of use of areas from agricultural and fallow use to residential, employment and social uses. It is a policy of the Council to encourage development within such designated towns and villages where the infrastructure and services exist. Development in such settlements constitutes a more efficient use of existing resources.

The development of land locally must however be seen in the context of providing for local development demands, and ensuring that realistic alternatives exist to the development of one off houses in the country side. The development of lands locally and in a centralised location is more sustainable type of development than the development of many individual houses in an uncoordinated manner.

APPENDIX 1 – PROTECTED STRUCTURES

Existing Protected Structures in Knocktopher

Protected Structure	Description	Location	Map Ref. No.	RPS No.
Catholic Church	1840 – large, single cell with a rectangular plan. Gable-ended, pitched roof with natural slates.	East side of	4	C197
Church of Ireland	Good example of First Fruits type with a west tower complete with pinnacles and crenallations, the nave rendered with panted windows		1	C198
Old Inn	Probably mid C18th, yellow rendered, with 3 bays, 2 storeys with a gabled porch	Facing the Kilkenny Road	2	C199
Knocktopher Abbey	Mid C19th house, being a rebuilding of a much earlier house. Complex plan. High pitched roof with natural slates.	West side of Main street, opposite Church	3	C360
Glebe House				C361

APPENDIX 2 – ECOLOGICAL SURVEY

Ecological Survey of the Area
to be Included in the
Knocktopher Local Area Plan

Prepared for

Kilkenny County Council

By:

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1 INTRODUCTION

CAAS (Environmental Services) Ltd. have been commissioned by Kilkenny County Council to undertake a number of ecology studies for specific areas within the County, namely:

Ballyhale / Knocktopher;
Ballyragget;
The Grove, Graiguenamanagh;
Urlingford.

These reports have been prepared as base studies to inform the preparation of Local Area Plans in these areas. Based on fieldwork undertaken in July 2003 and previous knowledge of the areas concerned, they describe habitats within the environs of each of the villages and assess their ecological importance. All investigations were carried out after the breeding season for birds but at a time when most plants are recognisable. This report therefore outlines the ecological importance or interest of each area and, where appropriate, make comments on the existing or future land-use zoning of those lands.

2 DESCRIPTION OF THE AREA

Knocktopher and Ballyhale create linear settlements along the Kilkenny-Waterford road, north-west and south-east of the Little Arrigle River. They lie on flat land for the most part but on the geological divide between the limestone of north Kilkenny and the sandstone of the south. Bedrock appears south-east of Ballyhale and rises into low hills crossed by the railway line.

The greater part of the land is intensively farmed with tillage and grass depending on soil drainage. The presence of large trees is notable in hedgerows and around the older houses though a considerable amount of woodland has been felled since the O.S. survey (of 1920). Examples are the small roadside plot in Bowersacre and the larger stand west of Knocktopher Abbey. Today the remaining items of ecological interest generally occur along the waterways, in small field corners or in some cases associated with the older buildings. Most of the river floodplains (see maps) are included in the candidate SAC - River Barrow and River Nore (Code No. 2162) as nursery streams for their fish populations.

3 SPECIFIC AREAS OF INTEREST (see Map attached)

3.1 Knocktopher Church (Church of Ireland)

This disused church at the northern entrance to the town contains a large bat roost including long-eared and pipistrelles (P.Comerford, NPWS). Although isolated without nearby trees, there are comparatively large numbers - which would probably be increased further by additional planting in the vicinity.

3.2 Whitescastle Lower

The northern branch of the Little Arrigle retains some interesting habitat below Knocktopher, particularly on its northern side. Parts of the area have been raised by filling but in between there are belts of willows and alder growing above such plants as wild angelica *Angelica sylvestris*, bindweed *Calystegia sepium* and marsh woundwort *Stachys palustris*.

Two adjacent fields support unusually well developed wet grassland with a flora of considerable interest. Both of these were probably cut for hay in the past and one continues to be grazed. The vegetation is typical of the habitat with a dominance of large species such as sedges (*Carex riparia*, *C.cf acutiformis*, *C.disticha* and *C.hirta*), meadowsweet *Filipendula ulmaria* and reed grass *Phalaris arundinacea*. In addition there is:

<i>Potentilla anserina</i>	silverweed
<i>Anthoxanthum odoratum</i>	sweet vernal grass
<i>Lotus pedunculatus</i>	greater birdsfoot trefoil
<i>Leontodon autumnalis</i>	autumn hawkbit
<i>Pulicaria dysenterica</i>	fleabane
<i>Festuca arundinacea</i>	tall fescue
<i>Valeriana officinalis</i>	marsh valerian
<i>Iris pseudacorus</i>	yellow flag

The eastern field retains large sedges at its upper edge and they would spread through the rest if there was a reduction in grazing levels.

Associated wildlife includes pheasant, redpoll, long-tailed tit and in summer willow and possibly, sedge warbler. The trees are also likely to be used by feeding bats, which have relatively good flyways along the length of the valley.

3.3 Knocktopher Abbey

Estate planting around the Abbey has been much thinned in comparison with the old 6" map but sufficient trees survive near the entrance to create excellent bat habitat and a striking visual amenity. Tall conifers (redwoods, Douglas fir) and broad-leaved trees (oak, ash, sycamore, horse chestnut and beech) grow amongst grass and gardens and form the habitat for a number of associated birds, for example spotted flycatcher, chiffchaff, stock dove, coal tit, treecreeper and, in winter siskin. The conditions suit long-eared bats in particular but pipistrelles are also very likely to occur. The adjacent hotel may provide space for some breeding roosts while the tower of the monastery on the eastern side is a potential hibernation site.

A number of trees are dying or dead (especially a large pine) and it is essential to stimulate some replanting.

3.4 Little Arrigle Valley

The section included in the study area is much overgrown by willows, some of which were planted for harvesting. The willows *Salix cinerea*, *S. fragilis* and *S. viminalis* are frequent, occurring with elm *Ulmus procera*, oak and ash. The understorey includes hazel, blackthorn *Prunus spinosa*, field rose *Rosa arvensis*, bramble *Rubus fruticosus*, dewberry *R. caesius* and the introduced plants privet *Ligustrum vulgare* and red currant *Ribes rubrum*.

The ground surface is a mixture of open grassy places, shaded seasonal pools and small river channels. Plant species seen here include:

<i>Carex remota</i>	distant sedge
<i>Ranunculus ficaria</i>	celandine
<i>Chrysosplenium oppositifolium</i>	golden saxifrage
<i>Primula vulgaris</i>	primrose
<i>Filipendula ulmaria</i>	meadowsweet
<i>Angelica sylvestris</i>	wild angelica
<i>Anthriscus sylvestris</i>	cow parsley
<i>Phyllitis scolopendrium</i>	hartstongue
<i>Polystichum setiferum</i>	shield fern
<i>Oenanthe crocata</i>	hemlock water dropwort
<i>Ranunculus penicillatus</i>	water crowfoot
<i>Apium nodiflorum</i>	fool's watercress
<i>Berula erecta</i>	water parsnip

Above the bridge there are traces of a former quarry on the eastern side and here hazel, bluebell *Hyacinthoides non-scriptus*, violet *Viola riviniana*, wood avens *Geum urbanum*, false brome *Brachypodium sylvaticum* and great brome *Bromopsis ramosa* grow with much elder *Sambucus nigra*. Corn mint *Mentha arvensis* grows in an adjacent hedge: it is a declining species generally (Preston *et al.* 2002).

The habitat seems ideal for blackcap, dunnoek, blackbird and song thrush and could support some woodcock in winter.

3.5 Ballyhale Stream

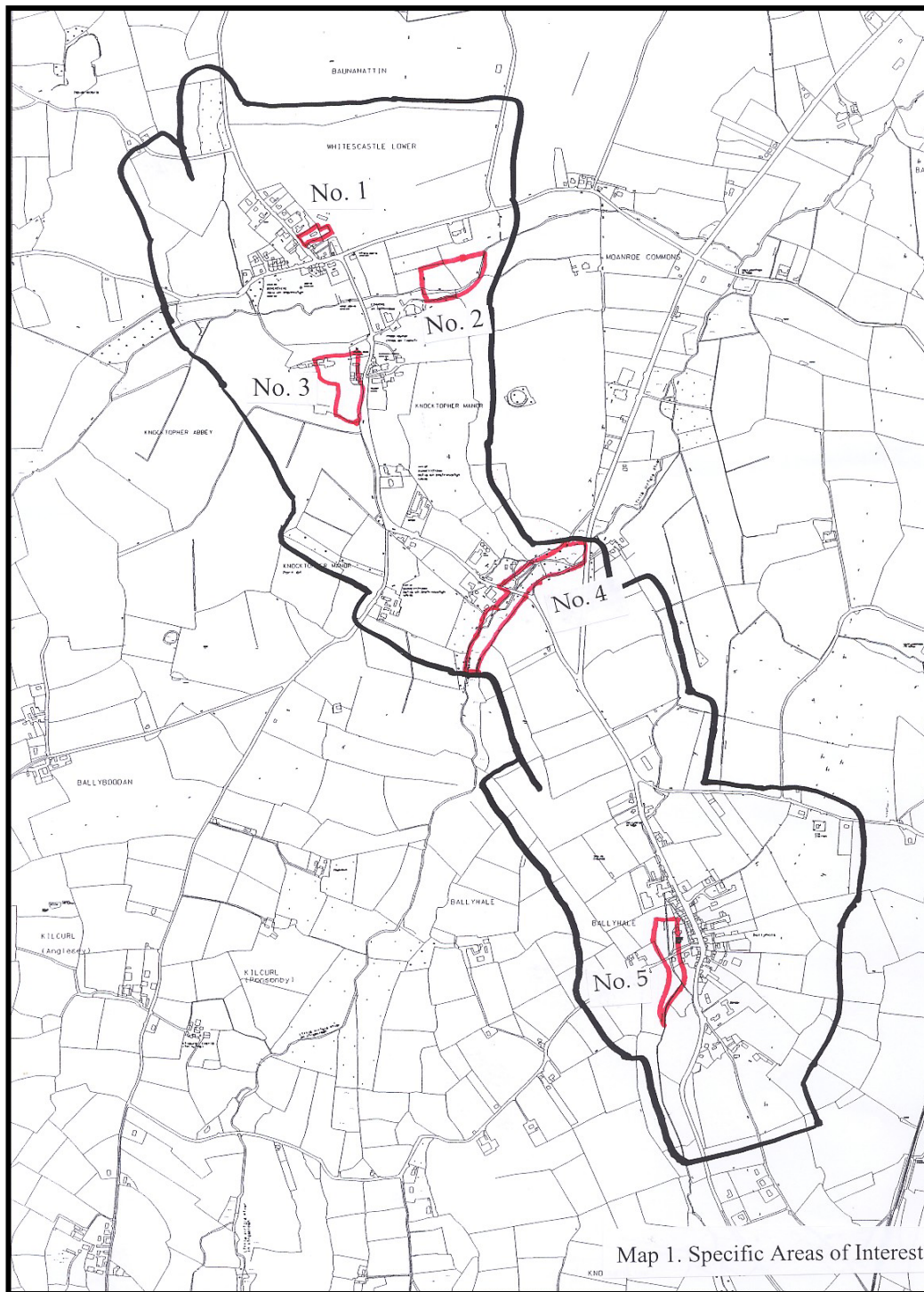
A small stream flows north through Ballyhale behind the church to join the Little Arrigle at an old corn mill. The latter part of its course, east of the main road, is included in the designated area but the more southerly part is outside it. Though small, it is of ecological interest for its good quality and associated fauna. Being undrained it also flows at or near field level which is unusual and attractive in itself. The frequent plants are water dropwort *Oenanthe crocata*, brooklime *Veronica beccabunga*, watercress *Nasturtium officinale* and water crowfoot *Ranunculus penicillatus* and there are grey wagtails and kingfishers also.

The juxtaposition of tall lime and other trees, the stream and Ballyhale Castle, now a bell tower for the church, produces good bat habitat and this fauna should be investigated if any changes are planned for the area.

4 CONCLUSION

The area around Knocktopher Church and Abbey is an important area for bats with large numbers present, additional planting to compensate for dead trees would protect and further increase numbers. The habitat around Whitecastle Lower contains habitats of considerable ecological interest supporting a significant diversity of wildlife. A reduction in grazing levels would improve the ecological characteristics of this area. The trees, stream and buildings around Ballyhale Castle produces good bat habitat and this fauna should be investigated if any changes are planned around this area.

Map Areas of Interest in Knocktopher and Ballyhale



SITE SYNOPSIS

SITE NAME: RIVER BARROW AND RIVER NORE

SITE CODE: 002162

This site consists of the freshwater stretches of the Barrow/Nore River catchments as far upstream as the Slieve Bloom Mountains and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. Major towns along the edge of the site include Mountmellick, Portarlinton, Monasterevin, Stradbally, Athy, Carlow, Leighlinbridge, Graiguenamanagh, New Ross, Inistioge, Thomastown, Callan, Bennettsbridge, Kilkenny and Durrow. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains before passing through a band of Carboniferous shales and sandstones. The Nore, for a large part of its course, traverses limestone plains and then Old Red Sandstone for a short stretch below Thomastown. Before joining the Barrow it runs over intrusive rocks poor in silica. The upper reaches of the Barrow also runs through limestone. The middle reaches and many of the eastern tributaries, sourced in the Blackstairs Mountains, run through Leinster Granite. The southern end, like the Nore runs over intrusive rocks poor in silica. Waterford Harbour is a deep valley excavated by glacial floodwaters when the sea level was lower than today. The coast shelves quite rapidly along much of the shore.

The site is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, *Salicornia* mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter, *Vertigo moulinsiana* and the plant Killarney Fern.

Good examples of Alluvial Forest are seen at Rathsnagadan, Murphy's of the River, in Abbeyleix estate and along other shorter stretches of both the tidal and freshwater elements of the site. Typical species seen include Almond Willow (*Salix triandra*), White Willow (*S. alba*), Grey Willow (*S. cinerea*), Crack Willow (*S. fragilis*), Osier (*S. viminalis*), with Iris (*Iris pseudacorus*), Hemlock Water-dropwort (*Oenanthe crocata*), Angelica (*Angelica sylvestris*), Thin-spiked Wood-sedge (*Carex strigosa*), Pendulous Sedge (*C. pendula*), Meadowsweet (*Filipendula ulmaria*), Valerian (*Valeriana officinalis*) and the Red Data Book species Nettle-leaved Bellflower (*Campanula trachelium*). Three rare invertebrates have been recorded in this habitat at Murphy's of

the River. These are: *Neoascia obliqua* (Diptera: Syrphidae), *Tetanocera freyi* (Diptera: Sciomyzidae) and *Dictya umbrarum* (Diptera: Sciomyzidae).

A good example of petrifying springs with tufa formations occurs at Dysart Wood along the Nore. This is a rare habitat in Ireland and one listed with priority status on Annex I of the EU Habitats Directive. These hard water springs are characterised by lime encrustations, often associated with small waterfalls. A rich bryophyte flora is typical of the habitat and two diagnostic species, *Cratoneuron commutatum* var. *commutatum* and *Eucladium verticillatum*, have been recorded.

The best examples of old Oak woodlands are seen in the ancient Park Hill woodland in the estate at Abbeyleix; at Kyleadohir, on the Delour, Forest Wood House, Kylecorragh and Brownstown Woods on the Nore; and at Cloghristic Wood, Drummond Wood and Borris Demesne on the Barrow, though other patches occur throughout the site. Abbeyleix Woods is a large tract of mixed deciduous woodland which is one of the only remaining true ancient woodlands in Ireland. Historical records show that Park Hill has been continuously wooded since the sixteenth century and has the most complete written record of any woodland in the country. It supports a variety of woodland habitats and an exceptional diversity of species including 22 native trees, 44 bryophytes and 92 lichens. It also contains eight indicator species of ancient woodlands. Park Hill is also the site of two rare plants, Nettle-leaved Bellflower and the moss *Leucodon sciurioides*. It has a typical bird fauna including Jay, Long-eared Owl and Raven. A rare invertebrate, *Mitostoma chrysomelas*, occurs in Abbeyleix and only two other sites in the country. Two flies *Chrysogaster virescens* and *Hybomitra muhlfeldi* also occur. The rare Myxomycete fungus, *Licea minima* has been recorded from woodland at Abbeyleix.

Oak woodland covers parts of the valley side south of Woodstock and is well developed at Brownsford where the Nore takes several sharp bends. The steep valley side is covered by Oak (*Quercus* spp.), Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*) and Birch (*Betula pubescens*) with some Beech (*Fagus sylvatica*) and Ash (*Fraxinus excelsior*). All the trees are regenerating through a cover of Bramble (*Rubus fruticosus* agg.), Foxglove (*Digitalis purpurea*) Wood Rush (*Luzula sylvatica*) and Broad Buckler-fern (*Dryopteris dilatata*).

On the steeply sloping banks of the River Nore about 5 km west of New Ross, in County Kilkenny, Kylecorragh Woods form a prominent feature in the landscape. This is an excellent example of a relatively undisturbed, relict Oak woodland with a very good tree canopy. The wood is quite damp and there is a rich and varied ground flora. At Brownstown a small, mature Oak-dominant woodland occurs on a steep slope. There is younger woodland to the north and east of it. Regeneration throughout is evident. The understorey is similar to the woods at Brownsford. The ground flora of this woodland is developed on acidic, brown earth type soil and comprises a thick carpet of Bilberry (*Vaccinium myrtillus*), Heather (*Calluna vulgaris*), Hard Fern (*Blechnum spicant*), Cow-wheat (*Melampyrum* spp.) and Bracken (*Pteridium aquilinum*).

Borris Demesne contains a very good example of a semi-natural broad-leaved woodland in very good condition. There is quite a high degree of natural re-generation of Oak and Ash through the woodland. At the northern end of the estate Oak species predominate. Drummond Wood, also on the Barrow, consists of three blocks of deciduous woods situated on steep slopes above the river. The deciduous trees are mostly Oak species. The woods have a well established understorey of Holly (*Ilex aquifolium*), and the herb layer is varied, with Brambles abundant. Whitebeam (*Sorbus devoniensis*) has also been recorded.

Eutrophic tall herb vegetation occurs in association with the various areas of alluvial forest and elsewhere where the flood-plain of the river is intact. Characteristic species of the habitat include Meadowsweet (*Filipendula ulmaria*), Purple Loosestrife (*Lythrum salicaria*), Marsh Ragwort (*Senecio aquaticus*), Ground Ivy (*Glechoma hederacea*) and Hedge Bindweed (*Calystegia sepium*). Indian Balsam (*Impatiens glandulifera*), an introduced and invasive species, is abundant in places.

Floating River Vegetation is well represented in the Barrow and in the many tributaries of the site. In the Barrow the species found include Water Starworts (*Callitriche* spp.), Canadian Pondweed (*Elodea canadensis*), Bulbous Rush (*Juncus bulbosus*), Milfoil (*Myriophyllum* spp.), *Potamogeton x nitens*, Broad-leaved Pondweed (*P. natans*), Fennel Pondweed (*P. pectinatus*), Perfoliated Pondweed (*P. perfoliatus*) and Crowfoots (*Ranunculus* spp.). The water quality of the Barrow has improved since the vegetation survey was carried out (EPA, 1996).

Dry Heath at the site occurs in pockets along the steep valley sides of the rivers especially in the Barrow Valley and along the Barrow tributaries where they occur in the foothills of the Blackstairs Mountains. The dry heath vegetation along the slopes of the river bank consists of Bracken (*Pteridium aquilinum*) and Gorse (*Ulex europaeus*) species with patches of acidic grassland vegetation. Additional typical species include Heath Bedstraw (*Galium saxatile*), Foxglove (*Digitalis purpurea*), Common Sorrel (*Rumex acetosa*) and Bent Grass (*Agrostis stolonifera*). On the steep slopes above New Ross the Red Data Book species Greater Broomrape (*Orobanche rapum-genistae*) has been recorded. Where rocky outcrops are shown on the maps Bilberry (*Vaccinium myrtillus*) and Wood Rush (*Luzula sylvatica*) are present. At Ballyhack a small area of dry heath is interspersed with patches of lowland dry grassland. These support a number of Clover species including the legally protected Clustered Clover (*Trifolium glomeratum*) - a species known from only one other site in Ireland. This grassland community is especially well developed on the west side of the mud-capped walls by the road. On the east of the cliffs a group of rock-dwelling species occur, i.e. English Stonecrop (*Sedum anglicum*), Sheep's-bit (*Jasione montana*) and Wild Madder (*Rubia peregrina*). These rocks also support good lichen and moss assemblages with *Ramalina subfarinacea* and *Hedwigia ciliata*.

Dry Heath at the site generally grades into wet woodland or wet swamp vegetation lower down the slopes on the river bank. Close to the Blackstairs Mountains, in the foothills associated with the Aughnabriskey, Aughavaud and Mountain Rivers there are small

patches of wet heath dominated by Purple Moor-grass (*Molinia caerulea*) with Heather (*Calluna vulgaris*), Tormentil (*Potentilla erecta*), Carnation Sedge (*Carex panicea*) and Bell Heather (*Erica cinerea*).

Saltmeadows occur at the southern section of the site in old meadows where the embankment has been breached, along the tidal stretches of in-flowing rivers below Stokestown House, in a narrow band on the channel side of Common Reed (*Phragmites*) beds and in narrow fragmented strips along the open shoreline. In the larger areas of salt meadow, notably at Carrickcloney, Ballinlaw Ferry and Rochestown on the west bank; Fisherstown, Alderton and Great Island to Dunbrody on the east bank, the Atlantic and Mediterranean sub types are generally intermixed. At the upper edge of the salt meadow in the narrow ecotonal areas bordering the grasslands where there is significant percolation of salt water, the legally protected species Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*) (Flora Protection Order, 1987) are found. The very rare Divided Sedge (*Carex divisa*) is also found. Sea Rush (*Juncus maritimus*) is also present. Other plants recorded and associated with salt meadows include Sea Aster (*Aster tripolium*), Sea Thrift (*Armeria maritima*), Sea Couch (*Elymus pycnanthus*), Spear-leaved Orache (*Atriplex prostrata*), Lesser Sea-spurrey (*Spergularia marina*), Sea Arrowgrass (*Triglochin maritima*) and Sea Plantain (*Plantago maritima*).

Salicornia and other annuals colonising mud and sand are found in the creeks of the saltmarshes and at the seaward edges of them. The habitat also occurs in small amounts on some stretches of the shore free of stones.

The estuary and the other Habitats Directive Annex I habitats within it form a large component of the site. Extensive areas of intertidal flats, comprised of substrates ranging from fine, silty mud to coarse sand with pebbles/stones are present. Good quality intertidal sand and mudflats have developed on a linear shelf on the western side of Waterford Harbour, extending for over 6 km from north to south between Passage East and Creadaun Head, and in places are over 1 km wide. The sediments are mostly firm sands, though grade into muddy sands towards the upper shore. They have a typical macro-invertebrate fauna, characterised by polychaetes and bivalves. Common species include *Arenicola marina*, *Nephtys hombergii*, *Scoloplos armiger*, *Lanice conchilega* and *Cerastoderma edule*.

The western shore of the harbour is generally stony and backed by low cliffs of glacial drift. At Woodstown there is a sandy beach, now much influenced by recreation pressure and erosion. Behind it a lagoonal marsh has been impounded which runs westwards from Gaultiere Lodge along the course of a slow stream. An extensive reedbed occurs here. At the edges is a tall fen dominated by sedges (*Carex* spp.), Meadowsweet, Willowherb (*Epilobium* spp.) and rushes (*Juncus* spp.). Wet woodland also occurs. This area supports populations of typical waterbirds including Mallard, Snipe, Sedge Warbler and Water Rail.

The dunes which fringe the strand at Duncannon are dominated by Marram grass (*Ammophila arenaria*) towards the sea. Other species present include Wild Sage (*Salvia verbenaca*), a rare Red Data Book species. The rocks around Duncannon ford have a rich flora of seaweeds typical of a moderately exposed shore and the cliffs themselves support a number of coastal species on ledges, including Thrift (*Armeria maritima*), Rock Samphire (*Crithmum maritimum*) and Buck's-horn Plantain (*Plantago coronopus*).

Other habitats which occur throughout the site include wet grassland, marsh, reed swamp, improved grassland, arable land, quarries, coniferous plantations, deciduous woodland, scrub and ponds.

Seventeen Red Data Book plant species have been recorded within the site, most in the recent past. These are Killarney Fern (*Trichomanes speciosum*), Divided Sedge (*Carex divisa*), Clustered Clover (*Trifolium glomeratum*), Basil Thyme (*Acinos arvensis*), Hemp nettle (*Galeopsis angustifolia*), Borrer's Saltmarsh Grass (*Puccinellia fasciculata*), Meadow Barley (*Hordeum secalinum*), Opposite-leaved Pondweed (*Groenlandia densa*), Autumn Crocus (*Colchicum autumnale*), Wild Sage (*Salvia verbenaca*), Nettle-leaved Bellflower (*Campanula trachelium*), Saw-wort (*Serratula tinctoria*), Bird Cherry (*Prunus padus*), Blue Fleabane (*Erigeron acer*), Fly Orchid (*Ophrys insectifera*), Broomrape (*Orobanche hederæ*) and Greater Broomrape (*Orobanche rapum-genistæ*). Of these the first nine are protected under the Flora Protection Order 1999. Divided Sedge (*Carex divisa*) was thought to be extinct but has been found in a few locations in the site since 1990. In addition plants which do not have a very wide distribution in the country are found in the site including Thin-spiked Wood-sedge (*Carex strigosa*), Field Garlic (*Allium oleraceum*) and Summer Snowflake (*Leucojum aestivum*). Six rare lichens, indicators of ancient woodland, are found including *Lobaria laetevirens* and *L. pulmonaria*. The rare moss *Leucodon sciuroides* also occurs.

The site is very important for the presence of a number of EU Habitats Directive Annex II animal species including Freshwater Pearl Mussel (*Margaritifera margaritifera* and *M. m. durrovensis*), Freshwater Crayfish (*Austropotamobius pallipes*), Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax fallax*), three Lamprey species - Sea (*Petromyzon marinus*), Brook (*Lampetra planeri*) and River (*Lampetra fluviatilis*), the marsh snail *Vertigo moulinsiana* and Otter (*Lutra lutra*). This is the only site in the world for the hard water form of the Pearl Mussel *M. m. durrovensis* and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river. The Barrow/Nore is mainly a grilse fishery though spring salmon fishing is good in the vicinity of Thomastown and Inistioge on the Nore. The upper stretches of the Barrow and Nore, particularly the Owenass River, are very important for spawning.

The site supports many other important animal species. Those which are listed in the Irish Red Data Book include Daubenton's Bat (*Myotis daubentoni*), Badger (*Meles meles*), Irish Hare (*Lepus timidus hibernicus*) and Frog (*Rana temporaria*). The rare Red Data Book fish species Smelt (*Osmerus eperlanus*) occurs in estuarine stretches of the

site. In addition to the Freshwater Pearl Mussel, the site also supports two other freshwater Mussel species, *Anodonta anatina* and *A. cygnea*.

The site is of ornithological importance for a number of E.U. Birds Directive Annex I species including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit, Peregrine and Kingfisher. Nationally important numbers of Golden Plover and Bar-tailed Godwit are found during the winter. Wintering flocks of migratory birds are seen in Shanahoe Marsh and the Curragh and Goul Marsh, both in Co. Laois and also along the Barrow Estuary in Waterford Harbour. There is also an extensive autumnal roosting site in the reedbeds of the Barrow Estuary used by Swallows before they leave the country.

Landuse at the site consists mainly of agricultural activities – many intensive, principally grazing and silage production. Slurry is spread over much of this area. Arable crops are also grown. The spreading of slurry and fertiliser poses a threat to the water quality of the salmonid river and to the populations of Habitats Directive Annex II animal species within the site. Many of the woodlands along the rivers belong to old estates and support many non-native species. Little active woodland management occurs. Fishing is a main tourist attraction along stretches of the main rivers and their tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place on the rivers. There is net fishing in the estuary and a mussel bed also. Other recreational activities such as boating, golfing and walking, particularly along the Barrow towpath are also popular. There is a golf course on the banks of the Nore at Mount Juliet and GAA pitches on the banks at Inistioge and Thomastown. There are active and disused sand and gravel pits throughout the site. Several industrial developments, which discharge into the river, border the site. New Ross is an important shipping port. Shipping to and from Waterford and Belview ports also passes through the estuary.

The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants, overgrazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel and Rhododendron (*Rhododendron ponticum*). The water quality of the site remains vulnerable. Good quality water is necessary to maintain the populations of the Annex II animal species listed above. Good quality is dependent on controlling fertilisation of the grasslands, particularly along the Nore. It also requires that sewage be properly treated before discharge. Drainage activities in the catchment can lead to flash floods which can damage the many Annex II species present. Capital and maintenance dredging within the lower reaches of the system pose a threat to migrating fish species such as lamprey and shad. Land reclamation also poses a threat to the salt meadows and the populations of legally protected species therein.

Overall, the site is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively. Furthermore it is of high conservation value for the populations of bird species that use it. The occurrence of

several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the Pearl Mussel which is limited to a 10 km stretch of the Nore, add further interest to this site.

16.1.03

APPENDIX 3 – LIST OF NATIVE TREES AND SHRUBS

Choosing the right species of tree and shrub is very important in urban areas where there are restrictions on space. Where possible, always use native species. Below is a list of the trees and shrubs native to Ireland, and advice on the locations to which they are suited.

Common name	Latin name	Height (max)	Suitable for public open spaces	Suitable for streets and confined spaces	Suitable for tubs, containers, raised beds etc.	Guide to planting: see key below
Alder	<i>Alnus glutinosa</i>	22m	Yes	No	Yes	ADPS
Alder buckthorn	<i>Frangula alnus</i>	6m	Yes	No	Yes	D
Arbutus (strawberry tree)	<i>Arbutus unedo</i>	8m	Yes	No	Yes	Not frost hardy
Ash	<i>Fraxinus excelsior</i>	28m	Yes	No	No	ADIPS
Aspen	<i>Populus tremula</i>	24m	Yes	No	No	DPSV Not close to buildings or any services
Bird cherry	<i>Prunus padus</i>	14m	Yes	Yes	Yes	P
Bramble	<i>Rubus fruticosus</i>	2m	No	No	No	C/H note: tends to be invasive
Broom	<i>Cytisus scoparius</i>	2m	Yes	No	Yes	*
Burnet rose	<i>Rosa pimpinellifolia</i>	2m	Yes	No	Yes, but vigorous	C/H
Common (or European) gorse	<i>Ulex europeaus</i>	2.5m	Yes	No	In a rural setting	HV
Crab apple	<i>Malus sylvestris</i>	6m	Yes	No	No	AHIP
Dog rose	<i>Rosa canina</i>	2m	Yes	No	Yes. Vigorous	C/H
Downy birch	<i>Betula pubescens</i>	18m	Yes	Yes	Yes	ADIP
Elder	<i>Sambucus nigra</i>	6m	In hedge	No	No	V
Guelder rose	<i>Viburnum opulus</i>	4.5m	Yes	No	No	DH
Hawthorn	<i>Crataegus monogyna</i>	9m	Yes	Yes	Yes	AHIPS

Common name	Latin name	Height (max)	Suitable for public open spaces	Suitable for streets and confined spaces	Suitable for tubs, containers, raised beds etc.	Guide to planting: see key below
Hazel	<i>Corylus avellana</i>	6m	Yes	No	No	AHS
Holly	<i>Ilex aquifolium</i>	15m	Yes	Yes	Yes	AHPS
Honeysuckle	<i>Lonicera periclymenum</i>	climber	Yes	On walls	No	C
Ivy	<i>Hedera helix</i>	climber	Yes	Yes	Yes	C
Juniper	<i>Juniperus communis</i>	6m	Yes	No	No	S
Pedunculate oak	<i>Quercus robur</i>	30m	Yes	No	No	AI only suitable for large spaces
Privet	<i>Ligustrum vulgare</i>	3m	Yes	Yes	Yes	No
Purging buckthorn	<i>Rhamnus cathartica</i>	4.5m	No	No	No	AHPV
Rowan or mountain ash	<i>Sorbus aucuparia</i>	9m	Yes	Yes	Yes	ADHIP
Scots pine	<i>Pinus sylvestris</i>	24m	Yes	No	No	AI
Sessile oak	<i>Quercus petraea</i>	30m	Yes	No	No	AI only suitable for large spaces
Silver birch	<i>Betula pendula</i>	18m	Yes	Yes	Yes	ADIP
Sloe, blackthorn	<i>Prunus spinosa</i>	3m	Yes	No	No	AHPV
Spindle	<i>Euonymus europaeus</i>	7.5m	Yes	No	No	H
Western (or mountain) gorse	<i>Ulex gallii</i>	1.5m	Yes	No	Yes	*
Whitebeam spp.	<i>Sorbus aria/S. anglica/S. devoniensis/S. hibernica/S. latifolia/S. rupicola</i>	12m	Yes	Yes	Yes	IPS
Wild cherry	<i>Prunus avium</i>	15m	Yes	Yes	Yes	AHI
Willow spp.	<i>Salix spp.</i>	6m	Some	No	No	V Not suitable near buildings or services
Wych elm	<i>Ulmus glabr</i>	30m	Yes		No	PS
Yew	<i>Taxus baccata</i>	14m	Yes	No	Yes	AIPS

- A – Grows in a wide variety of soils**
- C – Climber**
- H – Suitable for hedging**
- I – Suitable as an individual tree**
- D – Tolerates or prefers damp conditions**
- P – Tolerates smoke or pollution**
- S – Tolerates shade**
- V – Invasive**
- * - Tolerates dry conditions**

APPENDIX 4 – URBAN DESIGN STUDY

and

**Urban Design Guidelines for
Future Development**

For Knocktopher

Prepared for
Kilkenny County Council

By

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