

FERMOY

Development Plan 2009 - 2015



Mainistir Fhear Maighe

Volume IV

**Strategic & Environmental Assessment
& Appropriate Assessment**



Fermoy
Town
Council

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NON-TECHNICAL SUMMARY

Background

This document is the Updated 'Amendment Stage Environmental Report' to the draft Fermoy Town Development Plan (Amendment Stage). All material changes within this document since the 'Consultation Environmental Report' are highlighted in yellow.

The Fermoy Town Plan sets out the overall strategy for the development of Fermoy town. The existing Town Development Plan was adopted in 2004 and remains in force until 2010.

Fermoy Town Council is currently preparing a new Town Development Plan under The Planning and Development Act (2000) which requires the Planning Authority to prepare a "Development Plan" every six years for its jurisdiction.

As part of this development plan process, RPS are undertaking a Strategic Environmental Assessment (SEA) which is intended to identify and assess the issues facing the Fermoy Town Council area going forward. This Environmental Report will be made available to the public along with the draft Fermoy Development Plan. The Environmental Report has guided the preparation of objectives, policies and development scenarios for the Development Plan with an ultimate goal of achieving sustainable development within the Fermoy Town Council area.

Project Objectives and Methodology

This Environmental Report provides a Strategic Environmental Assessment (SEA) of the new Fermoy Draft Development Plan, including its main objectives and policies.

The SEA process as illustrated in **Figure 1.1** aims to:

- Integrate environmental factors into the decision making process;
- Improve the updated Plan and enhance environmental protection; and
- Facilitate openness and transparency in the decision making process.

Strategic Environmental Assessment Stages

- **Screening** of Plans and Programmes establishes whether the relevant plan or programmes must undergo an SEA, in this case Fermoy Town Council determined during their screening process in February 2008 that an SEA was warranted.
- **Scoping** of the Environmental Report: The competent authority, in this case Fermoy Town Council, must give notice to the environmental authorities that they are preparing an environmental report on the significant

effects of implementing the Plan. The three statutory consultees were notified in August/September 2008 that the SEA process had started and their views were sought.

- An **Environmental Report** – Fermoy Town Council commissioned RPS in April 2008 to continue the SEA process and prepare an Environmental Report. The Environmental Report investigates, describes and evaluates the likely significant effects on the environmental of implementing the Town Plan.

Specifically, the aim of this Environmental Report is to identify:

- Existing environmental issues in Fermoy Town;
 - The likely significant effects on the environment when the new Town Plan is implemented;
 - How the impact on the environment can be reduced or prevented; and
 - How to monitor environmental impacts over the lifetime of the Town Development Plan.
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- A **Consultation period** on the Draft Plan and associated Environmental Report will be carried out between **December 2008 and February 2009** when the Plan and environmental report will be available for public viewing at Fermoy Town Council's office. The public can submit their written observations/comments on the documents during this time and all submissions must be submitted to the Town Manager, Fermoy Town Council.
-
- An **SEA Statement** – when the Town Plan is adopted, an Environmental Statement identifying how environmental considerations and consultations were integrated into the Final Plan will be made available to the public and to view and purchase at Fermoy Town Council's office.

Environmental Baseline

The following sections describe the baseline, or existing environmental conditions collected and assessed for each of the topics required under the SEA Directive i.e. biodiversity, population and human health, flora and fauna, water, soil, air and climate, material assets, cultural heritage, transportation and landscape. It was considered necessary to combine some topics in order to avoid unnecessary duplication.

As required by the SEA Directive, the environmental report also comments on the likely evolution of the various indicators in the absence of the implementation of the preparation of the Fermoy Development Plan 2009 - 2015.

The key findings of the baseline survey are described below and full details can be found in Chapter 5 of the Environmental report.

Biodiversity Flora Fauna

There are three designated sites within the Fermoy Town Council boundary, namely; *Blackwater Callows* SPA (Site Code: 004094), *Blackwater River (Cork/Waterford)* cSAC (Site Code: 002170) and *Blackwater River Callows*

pNHA (Site Code: 000073). There are also a number of sites designated for biodiversity conservation within 10km of Fermoy town.

There is one site within 10km of the town boundary that is included in the *NGO Special Areas of Conservation Shadow List* (Dwyer, 2000), Blackwater River Callows pNHA, which lies within Fermoy town boundary. Birdlife International (Hunt *et. al.* 2000) classifies the area *River Blackwater Callows* (Republic of Ireland IBA no. 92) as an International Bird Area. The Blackwater River is designated as a 'Salmonid Water'. The objective of the designation is for the maintenance of water quality for salmon and trout. Designated rivers are protected under the European Communities (Quality of Salmonid Waters) Regulations 1998. The *River Blackwater Wildfowl Sanctuary* is designated as a Wildlife Sanctuary under the Wildlife Act of 1976; the precise boundaries of the Wildfowl Sanctuary are not however available. Wildlife Sanctuaries protect certain species of ducks, geese and waders from hunting.

Population and Human Health

The 2006 Census of Population identified a population of 2,275 within the Fermoy Town Council boundary area and the Fermoy Rural area had a population of 3,598 people. Fermoy Town Council has a total area of 132 hectares.

According to the draft Cork County Development Plan 2007 Fermoy is located in the CASP Ring Strategic Planning Area. The draft Cork County Development Plan 2007 projects the population of Fermoy (Urban and Rural) to increase from 5,873 persons in 2006 to 7,314 people by 2020 (p.25). The draft plan contains a number of strategic objectives that influence the proposed pattern of growth for the town within the period of 2009 to 2015 and going forward, these include the following;

- The objective of encouraging the enhancement of the town's economy with particular emphasis on the attraction of growth industries to the town.
- The objective of providing sufficient zoned and serviced lands for residential, recreational and amenity purposes along with a mix of residential densities, including low, medium and high densities, will require attention.
- The objective of liaising with the County Council with a view to encouraging balanced and sustainable development between the Town Council area and the Town environs in the county area.
- It shall be a strategic objective to continue to work towards the alleviation of the flooding problem that has affected the town so severely in the past.
- It shall be a strategic objective to co-operate with Cork County Council in furthering the aims and objectives of the draft Joint Housing Strategy for the county and to develop the balanced provision of appropriate residential developments in the town in a sustainable manner.

The Regional Planning Guidelines, Cork Area Strategic Plan and the draft Cork County Development Plan project the population of Fermoy (Urban and Rural) to increase by 24% from 5,873 persons in 2006 to 7,314 people by

2020. The draft Fermoy Town Development Plan takes account of the population projections as outlined within the above-mentioned policy documents, however much of the land within the town boundary has already been developed and therefore much of the population growth will need to be accommodated within the environs of Fermoy. Cork County Council have undertaken a landuse survey within the town and environs which has identified approximately 6 hectares of available residentially zoned land within the town and 90 hectares of available residentially zoned lands within the environs. Therefore it is envisaged that much of the targeted population growth will take place in the Fermoy environs.

Soil

The North Cork town of Fermoy is situated within a sedimentary geological setting. The underlying rock comprises of bedded sandstone and limestone from the Middle Devonian Period and siltstone of the Middle Carboniferous Period. The Devonian lithologies lie to the south of the town of Fermoy and north of the River Blackwater the underlying geology is made up of middle Carboniferous sediments.

Fermoy town centre generally consists of man-made ground extending over the urban and residential areas of the town. The area generally consists of glacial gravel and tills laid down during the last glaciation period. They are however extensive alluvium soils deposited across the town centre following the direction of the Blackwater River and most likely originated from floodwater and tributary migration and development of the river during the Quaternary Period.

Water

The town of Fermoy lies on the banks of the River Blackwater, which is one of Ireland's largest rivers flowing through five counties including Kerry, Limerick, Cork, Tipperary and Waterford. In order to manage and assess water quality, a River Basin Management plan was put in place in the south west of Ireland. Fermoy lies within the South Western River Basin District (SWRBD) the plan for which is due to be adopted in 2009.

Most rivers/streams within the Fermoy area have received an EPA Q-value rating of 4 (depicted in green) indicating "Good Status", despite this the SWRBD has characterised the water in this area as "At Risk of Not Achieving Good Status". The water quality of the River Blackwater is continually being monitored by the EPA, and a Q-value of 4 has been recorded. The most recent water quality survey was in 2003 at a sampling station near the main bridge in Fermoy.

Groundwater forms an integral part of all ecosystems and within the Fermoy area is a significant resource. A number of private drinking water supplies are taken from groundwater reserves. Aquifer vulnerability within the town is considered Low to High. However aquifer vulnerability within the Grange East area, Rath-Healy area and to the southeast and south west of the town is considered "Extreme" with some rock found near surface, therefore verifying a possible risk.

Towards the northern outskirts of Fermoy town centre lies a regionally important aquifer, which is karstified and diffuse. This aquifer radiates northwards and eastward along the Blackwater valley. The presence of Karstified rock can increase vulnerability through rapid movement of water.

Flooding - The River Blackwater in Fermoy has a long history of flooding and is considered a key problem for the town. It has been reported that flooding occurred in Fermoy four times in 1988. The most recent flood event occurred in July 2008 while another flood occurred on the 11th January 2008 and was the worst recorded flood in the area within 20 years.

Flooding is a major issue in Fermoy Town as floodplains upstream of the River Blackwater in Fermoy Town do not have the ability to cope with any significant rise in the water levels during the event of a flood. For this reason Fermoy Town is susceptible to damage during periods of excess flooding.

Air and Climate

In general the air quality in Ireland is considered to be good and this is primarily as a result of the prevailing Atlantic south-westerly winds crossing the country. The EPA monitors the air quality across the country, dividing the country into regions or zones. There appears to be a small decreasing trend in concentrations in recent years.

Sustainability is a key constraint for future development. Emissions to the atmosphere, energy consumption and climate change are all interlinked. Future developments should give consideration to passive design and clean and energy efficient technologies such as renewables, district heating and co-generation.

The town of Fermoy is promoted as the capital of West Cork and centre of tourist activities for a wide region and an area of high visual amenity. It will be important to ensure that for future energy developments and the associated infrastructure does not impact adversely on the landscape.

Space may also be a constraint in particular when locating vertical ground source heat pumps and district heating plant.

Material Assets

Water Supply - The source of water for the Fermoy Water Supply Scheme is an infiltration gallery on the south bank of the River Blackwater at Deerpark 4 km upstream of Fermoy Bridge. At Coolroe the water is chlorinated and fluoridated prior to distribution Fermoy Town and Environs consumes 4,000 cubic metres of water per day and has spare capacity of some 1,000 to 1,200 cubic metres per day which would allow a population equivalent of c.1,500 people. According to the Cork Strategic Water Plan there is sufficient water supply to cater for projected growth within the town.

According to the Environmental Protection Agency, the River Blackwater is described as being 'at risk of not achieving good status' in terms of water quality under the Water Framework Directive. It is considered that the impacts of flooding on the infiltration gallery on the south bank of the River Blackwater is the reason that Fermoy is at 'risk of not achieving good status' in terms of water quality.

Waste Water Treatment - The wastewater treatment plant serving the town is located to the east of the town on the south bank of the River Blackwater. It was upgraded in 2006 for a Population Equivalent (PE) of 20,000PE and BOD loading of 1,200Kg/day. The wastewater in Fermoy is collected in a partially combined foul and

separated foul sewage drainage network, whereby the old town centre is primarily a combined system. Wastewater drains from the town on both sides of the Blackwater River, while the wastewater on the north side of the river drains to a pumping station at Rathealy Road, which is then pumped across Fermoy Bridge to the main sewer.

Transport - Fermoy Town is situated on the N8 Cork to Dublin National Primary Route, 34 km north east of Cork City. The town is also at the cross road between the N8 and the N72 Killarney to Dungarvan. While the new N8 bypass has removed a significant amount of through traffic out of Fermoy town centre there are still a number of traffic and congestion problems throughout the town as a result of only one bridge crossing within the town.

Fermoy Town is accessed via the N8 National Primary Route, which connects the town to Cork City and Mitchelstown. The town is also accessed via the N72, which connects the town to other important towns such as Mallow, Killarney and Dungarvan. The town is accessed from the rural hinterland via a series of regional routes including the R512, R666 and R639. A number of bus services serving Fermoy, these include the 245 Cork - Fermoy – Mitchelstown route and the 366 Waterford – Dungarvan – Fermoy – Mallow/Cork. The town was connected to the national railway system, on a line from Mallow to Waterford, with a junction near Mitchelstown, however closed in 1967. The town does not benefit from rail connection with the nearest railway station at Kent Station in Cork City 37 kilometres away. Fermoy Town is approx. 42km south west of Cork International Airport.

In April 2007, Cork County Council, in association with Fermoy Town Council, appointed Malachy Walsh and Partners to carry out a traffic management study for Fermoy. This Traffic and Transportation study is due for completion before the plan is adopted.

Cultural Heritage

Fermoy Town has a diverse range of monuments ranging from a number of historic eras. Monuments within the area include an Abbey, holy well, graveyards and corn mill. There are 5 archaeological sites within the town boundary, listed in on Map 6 of the draft Plan. While no state owned National Monuments occur within the boundary of Fermoy Town Council it should be noted that under the National Monuments Acts any monument in the ownership or guardianship of the local authority may be declared a national monument.

There are currently a number of structures listed for protection in the Record of Protected Structures (Fermoy Development Plan 2009). Much of the town is designated as an ACA as indicated on Map 4 of the draft Fermoy Town Development Plan. Within the central core of the town there are significant groupings or concentrations of heritage structures within the draft Fermoy Town Development Plan.

Landscape

The landscape of Fermoy Town comprises primarily of Fertile Plain with Moorland Ridge. This landscape is generally referred to as the “Golden Vale”. This is a low lying landscape, which comprises an extensive area of predominantly flat or gently undulating topography along the River Blackwater, and which is contained in its periphery by low ridges. The Fertile Plain of the “Golden Vale” landscape is valued nationally as an important

agricultural area. According to the draft Cork County Council Landscape Strategy the landscape type of Fermoy town is of very high value and sensitivity. The landscape in this area is also of local and national importance.

The Blackwater River is the main natural amenity feature and has had a strong influence on the historic development of the town. The river bisects the town, with development on its northern and southern banks. The presence of the river represents a major constraint to future growth to both the east and west of the town, as this area comprises mostly low-lying land, which acts as an important flood storage area. The river carves a large meander through the town and has caused flooding in the town on a number of occasions. The town offers valuable amenities in terms of the River Blackwater, which flows through the centre of the town, forming the town's natural setting. Prominent ridges to the southeast and southwest of the town, provide an attractive rural setting to the town, and constrain expansion of the town in these directions. Outside the town boundary the land forms part of the open countryside.

Consideration of Alternatives

Article 5 of the SEA Directive requires the environmental report to consider "*reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme*" and the significant effects of the alternatives selected. Alternatives must be realistic and capable of implementation and should present a range of different approaches within the statutory and operational requirements of the Plan.

Three alternative Alternatives were considered for assessment as part of the SEA process:

Alternative 1 The 'Do-nothing' Alternative;

Alternative 2 Rezone sufficient lands as a natural extension of the town centre;

Alternative 3 Extend new development zonings on remaining undeveloped Greenfield lands within the town boundary.

Under Alternative 1 the 'do nothing' scenario, Fermoy would maintain its current physical and socio-economic characteristics. Development would be market dependent and would occur at a slower pace and in a less co-ordinated manner. Adopting the 'do-nothing' approach would have implications for the proper planning and sustainability of Fermoy Town, as it would mean that development would take place in a haphazard manner.

As a result of the do-nothing approach, policies and objectives of the plan would not be updated and therefore derelict and under-utilised buildings would dilapidate further. Physical, social and economic development would not be planned and promoted within the town. Therefore Alternative 1 would not help to achieve the strategic objectives of the plan, which aims to promote balanced and sustainable development that takes account of the values and concerns of all stakeholders in the town. This Alternative would also not work towards other strategic objectives which aim to protect and enhance the environment including landscape, water quality, nature, archaeology and architecture which are vital components of a high quality of life. Therefore this Alternative is not considered to be very positive in terms of the promotion of quality of life for Fermoy and is therefore not the chosen Alternative for the plan.

Alternative 2 is to rezone sufficient lands as a natural extension of the town centre in accordance with projected growth for the area through the intensification and consolidation of the existing Town Centre. This Alternative would allow for the redevelopment of brownfield sites and Greenfield sites only where there is a natural extension to existing zoning. This scenario allows for the intensification of the town centre and the consolidation and expansion of existing services to accessible lands. This scenario would meet a large number of the objectives of the Town Development Plan, as it would allow the rejuvenation of existing derelict sites, which would improve the town's architectural character and townscape and consequently improve its tourist function. It would also be likely to have a positive impact on existing residents and traders in the town. Therefore Alternative 2 is the preferred Alternative for the Fermoy Town Development Plan 2009 - 2015.

Alternative 3 was to extend new development zonings on the last remaining undeveloped Greenfield lands within the town boundary. Fermoy Town Council is quite limited in its extent and very little greenfield lands remain within the town boundary, however some greenfield lands remain on the northern banks of the River Blackwater and to

the north of the town. However the last remaining greenfield is either quite elevated or is designated open space and/or acts as a protective buffer. Therefore this Alternative would involve extending zonings into the greenfield areas of the Town that is considered to be of high landscape character. Therefore Alternative 3 is considered unsustainable due to the dispersed nature of growth and primarily due to its potential to have an impact on scenic and amenity areas.

Mitigation and Monitoring

Mitigation involves ameliorating significant negative environmental effects. This Environmental Report highlighted several potential adverse effects on the environment as a result of implementing the updated Plan. Specific mitigation measures were identified and are outlined in the Table below.

Monitoring indicators have been devised in order to measure the effectiveness of the Plan and of the mitigation measures prescribed in this Environmental Report, and are also presented in the table below:

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
Biodiversity, Flora and Fauna						
B1	To avoid significant adverse impacts (direct, cumulative and indirect), to protected habitats, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.	Loss of biodiversity and ecological networks and spread of invasive species	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG CCC	Review each planning application as submitted
B2	To protect aquatic biodiversity, flora, fauna and wetland areas within the Plan area.	Loss of aquatic biodiversity, flora and fauna.	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG	Review each planning application as submitted
Population and Human Health						
PH1	To improve the quality of life for the people of Fermoy through high quality residential, working and recreational environments, sustainable travel patterns.	Deterioration in: streetscape quality due to increased litter; in human health and quality of life; Lack of a diversity in employment and accommodation	To improve quality of life, provision of improved physical and social infrastructure, to reduce journey to work times and allow for a better match between place of residence and place of work.	Journey to work times.	CCC	Review during the lifetime of the Plan

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
PH2	To protect human health from hazards or nuisances arising from traffic and incompatible landuses.	Poor Drinking water quality Poor Air quality; deterioration in human health and quality of life.	No spatial concentrations of health problems arising from environmental factors.	Occurrence of a spatially concentrated deterioration in human health.	FTC/CCC	Review during the lifetime of the Plan
Soils						
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment, rather than developing greenfield lands.	Loss of biodiversity and quality soils through over use of greenfield sites instead of brownfield sites	All brownfield lands to be redeveloped at the end of the plan lifespan (subject to availability on the open market and demand for such land).	Area of brownfield land available.	FTC	Review during the lifetime of the Plan
S2	To maintain the quality of soils.	Loss of biodiversity and quality soils	To reduce contamination and safeguard soil quality and quantity.	Cannot specifically monitor at present, however, when soil directive comes into force, will be obliged to consider impacts of policies on soils.	CCC	Review during the lifetime of the Plan
S3	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices.	Negative impacts to groundwater quality and increased litter;	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill.	Volume of waste recycled and volume of waste sent to landfill.	FTC/CCC	Annually
Water						
W1i	Maintain or improve the quality of surface water and groundwater to meet the requirements of the South Western River Basin Management Plan (SW RBMP) and Programme of Measures (POMs)	Negative impacts to surface water , groundwater quality, fisheries and aquatic biodiversity	0 Faecal Coliform Counts per 100ml of groundwater.	Faecal Coliform Counts per 100ml of groundwater.	EPA FTC/CCC	
W1ii			To improve biotic quality ratings, where possible to Q5.	Changes in water quality as identified during water quality monitoring programmes.	EPA FTC/CCC	As per monitoring cycle in accordance with the WFD monitoring programme

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
W2i	To maintain and improve, where possible, the quality of rivers, lakes and surface water.	Negative impacts to surface water quality, fisheries and aquatic biodiversity; Poor water quality	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC	Annually
W2ii			To improve biotic quality ratings, where possible, to Q5.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC	Annually
W3	Promote sustainable water usage	To introduce water measures to reduce water wastage, leakage and over consumption usage and to promote conservation measures at household and Industrial level.	Increase number of water conservation measures implemented during the lifetime of the Plan	Number of water conservation measures implemented during the lifetime of the Plan. Water loss through leakage	EPA FTC/CCC	Annually
Air and Climate						
A 1	To maintain and improve air quality in Fermoy and reduce CO2 Greenhouse Gases (GHGs) to alleviate Climate Change. Promote Flood risk assessment	Poor Air quality and increasing contributions to climate change through greenhouse gas emissions Flooding impacts on the town	Increased use of public transport. Increase numbers of cycle lanes and pedestrian routes in the study area. Increase number of permissions granted for renewable energy projects Reduce flooding impacts within the Plan area	Use of public transport. Provision of cycle lanes and walking routes. Number of permissions granted for renewable energy projects. Results from air quality indicators. Level of impact within town in terms of flooding	FTC/CCC	Review during the lifetime of the Plan
Energy						
E1	Use of renewable energy technology for projected power requirements over the lifetime of the Plan	Poor Air quality and increasing contributions to climate change	Encourage use of renewable energy for domestic and small businesses. Use of renewable energy to supply National Grid	Number and type of renewable energy technologies employed in new developments	FTC/CCC	Review during the lifetime of the Plan

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
			where applicable	developments		
Material Assets						
M1	To serve new development under the plan with appropriate wastewater treatment.	Inadequate WWT for increased population; poor quality water and contamination	No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	CCC EPA	Review during the lifetime of the Plan
M2	To maintain and improve the quality of drinking water supplies.	Overuse of resources potentially resulting in inadequate water supply during the lifetime or post 2016.	To maintain and improve drinking water quality in Fermoy to comply with the requirements of the European Communities (Drinking Water) Regulations 2000.	Drinking water quality standards (Microbiological, Chemical and Indicator parameters).	EPA FTC/CCC	Review during the lifetime of the Plan.
Cultural Heritage						
CH1	To protect the archaeological heritage of Fermoy and; the context of the above within the surrounding landscape where relevant.	Impacts to RPS, RMPs, ACAs and the townscape of Fermoy	No unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	Number of unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	CCC Heritage Section Cork Heritage Forum DoEHLG	Review each planning application as submitted

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
CH2	To preserve and protect the special interest and character of Fermoy's architectural heritage and the context of the above within the surrounding landscape where relevant.	Impacts to RPS, RMPs, ACAs and the townscape of Fermoy; Visual impact to the streetscape of Fermoy	No unauthorised developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	Number of unauthorized developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	CCC Heritage Section Cork Heritage Forum DoEHLG	Review each planning application as submitted
Landscape						
Li			No developments to be conspicuously located within sensitive landscapes or designated scenic landscape.	Number of conspicuous developments located within sensitive landscapes or designated scenic landscape.	FTC/CCC	Review each planning application as submitted.
Lii	To protect Fermoy's sensitive landscapes, landscape features and designated scenic routes and landscape	Visual impacts to the landscape	No developments to adversely impact upon designated scenic views or scenic landscape.	Number of conspicuous developments adversely impacting upon designated scenic views or scenic landscape.	FTC/CCC	Review each planning application as submitted

1 INTRODUCTION

1.1 BACKGROUND

The Fermoy Development Plan sets out the overall strategy for the sustainable development of Fermoy town. The existing Town Development Plan was adopted in 2004 and remains in force until 2010.

Fermoy Town Council is currently preparing its Town Plan under The Planning and Development Act (2000), which requires the Planning Authority to prepare a “Development Plan” every six years for its jurisdiction.

As part of this development plan process, RPS are undertaking a Strategic Environmental Assessment (SEA) which is intended to identify and assess the issues facing the Fermoy Town Council area going forward. This Environmental Report will be made available to the public along with the draft Fermoy Development Plan. The Environmental Report has guided the preparation of objectives, policies and development scenarios for the Development Plan with an ultimate goal of achieving sustainable development within the Fermoy Town Council area.

1.2 STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

Strategic Environmental Assessment (SEA) is a process for evaluating, at the earliest appropriate stage, the environmental quality and consequences of Policy, Plan or Programme initiatives by statutory bodies. The purpose is to ensure that the environmental consequences of plans and programmes are assessed both during their preparation and prior to adoption. The SEA process also gives interested parties an opportunity to comment on the environmental impacts of the proposed plan or programme and to be kept informed during the decision making process.

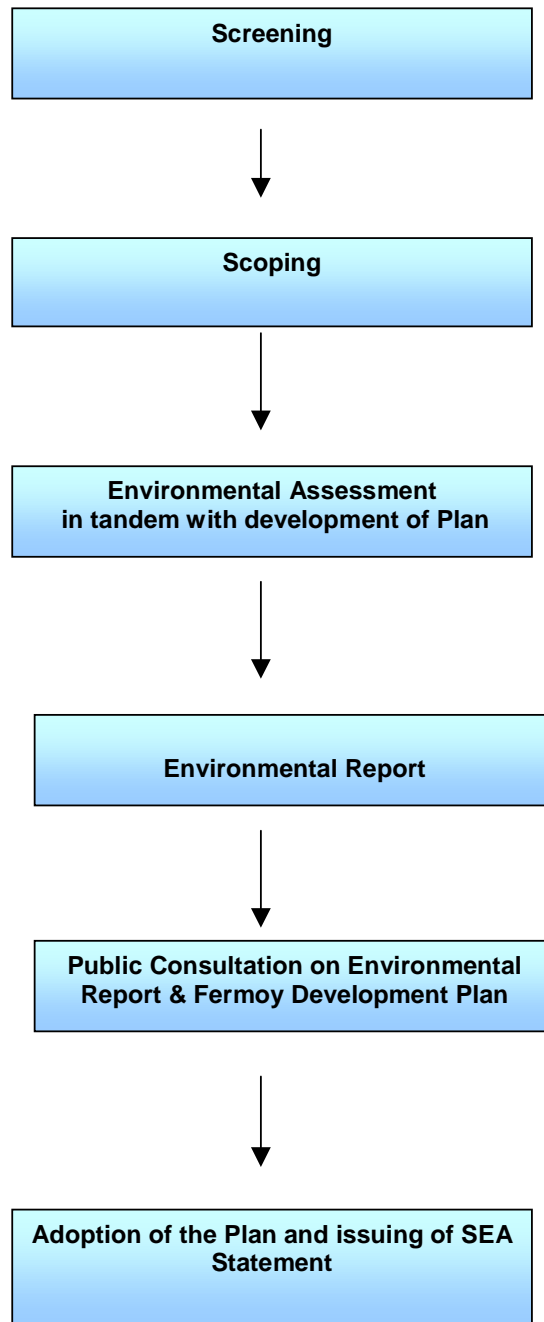
The European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive), was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436/2004).

The stages of the SEA can be seen in Figure 1.1 and comprise the following:

- Screening of Plans and Programmes to establish whether the relevant plan or programmes must undergo an SEA;
- Scoping Report -This Scoping Report forms part of the statutory scoping process as required by Article 11(1) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, S.I. 435 of 2004. The purpose of this report is to present the current understanding of the key environmental issues relating to the Fermoy Development Plan Study Area and to inform the identification and assessment of possible options at a strategic level. It also aims to generate comments from stakeholders on the scope and SEA approach adopted for the Fermoy Development Plan.
- An Environmental Report - containing the findings of the Assessment on the likely significant effects on the environment of the Plan;

- Consultation on the Draft Plan and associated Environmental Report; and
- An SEA Statement - identifying how environmental considerations and consultations have been integrated into the Final Plan.

Figure 1.1: Stages of the SEA Process



1.3 PREPARATION OF THE ENVIRONMENTAL REPORT AND THE FERMOY DEVELOPMENT PLAN

In accordance with the provisions of Article 13A of The Planning and Development (Strategic Environmental Assessment) Regulations 2004, it was determined that the Fermoy Development Plan would be required to be subject to a Strategic Environmentally Assessed in tandem with the preparation of the Fermoy Development Plan 2009 - 2015. The proposed plan was screened in terms of the provisions of Article 13A of The Planning and Development (Strategic Environmental Assessment) Regulations 2004. Taking account of the relevant criteria set out in schedule 2A of the Regulations, it was considered that Fermoy Town Council is required to prepare an Environmental Report in respect of the preparation of the Fermoy Development Plan for the following reasons:

- The plan would set a framework for projects and other activities, with regard to the location, nature, size and operating conditions or by allocating resources to the projects or activities.
- The plan influences non - statutory plans, guidelines and strategies within Fermoy Town Council area. It also influences the Fermoy Electoral Local Area Plan 2005 in terms of provision of development within the Fermoy environs.
- The plan would be relevant in terms of the integration of environmental considerations in particular with a view to promoting sustainable development,
- It is likely that proposals (i.e. new roads) could create environmental problems within the plan area,
- The River Blackwater which is located partially within the Fermoy Town Council boundary is designated as a candidate Special Area of Conservation (pSAC-2170) and it is also designated a Proposed Natural Heritage Area (pNHA-1797). Therefore it is considered that proposals within the plan could pose potential environmental problems relevant to the above-mentioned designations.
- The European Communities (Natural Habitats) Regulations 1999, which is part of European Union legislation on the environment, would be directly implemented within the plan area due to the location of European Sites in the plan area. Therefore, should proposals within the plan impact on a European site, then European Legislation would need to be implemented in the plan area.

The Environmental Report provides a Strategic Environmental Assessment (SEA) of the new Draft Town Plan, including its main objectives and policies.

The Planning and Development Act (2000) as amended requires the Planning Authority to prepare a "Development Plan" every six years for its jurisdiction. The Fermoy Development Plan was adopted in 2004. The Statutory preparation of the Plan began in February 2008 (4 years later), whereby a notice of intention

to prepare the Fermoy Town Development Plan 2009 – 2015 was issued. Submissions and observations were invited from the public. The closing date for submissions was the 4th April 2008. The Town Manager's s.11 Report was adopted on the 15th July 2008. Table 1.3.1 below summarises the timetable for release of documents.

Table 1.3.1 Timetable of Draft Plan and Strategic Environment Assessment

Date	Development Plan	Strategic Environmental Assessment
7 th February 2008 4 th April 2008	Strategic Issues Paper for Public Consultation	Scoping Report (Statutory consultation)
15 th July 2008	s. 11 Manager's Report on submissions to the Issues Paper Adopted	
August/September 2008	Preparation of Draft Fermoy Development Plan	Preparation of Draft Environmental Report
2 nd October 2008	Submission of Draft Town Development Plan to Members	Submission of Draft Environmental Report to Members
December 2008 to February 2009	Public Consultation of Draft Fermoy Development Plan	Public Consultation of Draft Environmental Report
May 2009	Submission of Draft s. 12 Managers Report to Members	
August 2009 September 2009	Public consultation of Draft s. 12 Managers Report	
October 2009	Submission of Draft s. 12(8)a Managers Report on	

	submissions to Members	
November 2009	Final Adopted Fermoy Development Plan	SEA Statement

2 SEA METHODOLOGY

The SEA methodology used to carry out the SEA of the draft Fermoy Development Plan reflects the requirements of the SEA Directive (2001/42/EC) as transposed into Irish law (S.I. No. 436 2004) and also experience drawn from other SEA's carried out in Ireland and the UK. The following documents, in particular, have also been used as guidance:-

- *Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland, Synthesis Report, EPA (2003);*
- *Draft Scoping Checklist as issued by the EPA in Jan 2008;*
- *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment. Guidelines for Regional Authorities and Planning Authorities (DoEHLG, 2004);*
- *Draft Strategic Environmental Assessment (SEA) Checklist. Expected publication date(s) Jan - Mar 2008. Environmental Protection Agency;*
- *Guidelines on SEA. Department of Communications, Energy and Natural Resources. Available at: <http://www.dcmnr.gov.ie/Marine/Environmental+Assessment/Environmental+Assessment.htm>;*
- *A Practical Guide to the Strategic Environmental Assessment Directive. September 2005. Office of the Deputy Prime Minister;*
- *Strategic Environmental Assessment. Services and Standards for Responsible Authorities. Environment and Heritage Service;*
- *Strategic Environmental Assessment Toolkit (Version 1). September 2006. Scottish Executive; and*
- *Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners. June 2004. Countryside Council for Wales, English Nature, the Environment Agency and the RSPB.*

Under consideration is a draft Fermoy Development Plan, which if implemented has the potential to impact on the receiving environment. The main steps taken in this SEA process involved screening, scoping,

baseline study, consideration of alternatives, environmental assessment of the objectives and policies of the proposed variation and the formulation of mitigation and monitoring measures.

2.1 SCREENING

In accordance with the provisions of Article 13A of The Planning and Development (Strategic Environmental Assessment) Regulations 2004, it was determined that the Fermoy Development Plan would be subject to be Strategic Environmental Assessment in tandem with the preparation of the Plan. The proposed plan was screened in terms of the provisions of Article 13A of the Planning and Development (Strategic Environmental Assessment) Regulations 2004. Taking account of the relevant criteria set out in schedule 2A of the Regulations, it was considered that Fermoy Town Council is required to prepare an Environmental Report in respect of the preparation of the Fermoy Development Plan for the following reasons:

- The plan would set a framework for projects and other activities, with regard to the location, nature, size and operating conditions or by allocating resources to the projects or activities.
- The plan influences non - statutory plans, guidelines and strategies within Fermoy Town Council area. It also influences the Fermoy Electoral Local Area Plan 2005 in terms of provision of development within the Fermoy environs.
- The plan would be relevant in terms of the integration of environmental considerations in particular with a view to promoting sustainable development,
- It is likely that proposals (i.e. new roads) could create environmental problems within the plan area,
- The River Blackwater which is located partially within the Fermoy Town Council boundary is designated as a candidate Special Area of Conservation (pSAC-2170) and it is also designated a Proposed Natural Heritage Area (pNHA-1797). Therefore it is considered that proposals within the plan could pose potential environmental problems relevant to the above-mentioned designations.
- The European Communities (Natural Habitats) Regulations 1999, which is part of European Union legislation on the environment, would be directly implemented within the plan area due to the location of European Sites in the plan area. Therefore, should proposals within the plan impact on a European site, then European Legislation would need to be implemented in the plan area.

Therefore, following a screening exercise, Fermoy Town Council determined that a strategic environmental assessment would be warranted in this case. This decision is available in the public file in Fermoy Town Council.

2.2 SCOPING

Once determined that an SEA is required for a given plan or programme, in this case the proposed preparation of the Fermoy Development Plan, an environmental report must be prepared. The content and scope of this environmental report is determined with input from statutory Consultees. In Ireland, three statutory Consultees have been nominated:-

- The Environmental Protection Agency (EPA);
- The Department of the Environment, Heritage and Local Government (DoEHLG); and
- The Department of Communications, Marine and Natural Resources (DCMNR).

RPS, on behalf of Fermoy Town Council, undertook formal scoping of the SEA Environmental Report with the three statutory Consultees between August and September 2008. Responses from all parties consulted were received by RPS in September and October 2008.

The scoping exercise for this SEA determined the potential key environmental impacts and outlined how they should be addressed as part of the Environmental Report (Table 2.1)

During the Scoping Stage Fermoy Town Council also issued an Issues Paper in order to stimulate public consultation/opinion on the planning issues that the 2009-2015 Development Plan should address. Public interest at the start of the plan process is important so that the Development Plan reflects public aspirations and concerns as well as government policy, strategies and guidelines.

Table 2.1: Key Environmental Impacts Determined from Screening and Scoping Phases

Environmental Topic	Issues	Mitigation/Recommendations
Biodiversity	<p>Maintaining the quality of sensitive buffers</p> <p>Proximity to designated sites, plan may need an Appropriate Assessment</p> <p>Protection of local biodiversity features – including rivers,</p>	<p>Provision of appropriate buffers between sensitive areas and areas zoned for development (designated ecological sites), consult with NPWS.</p> <p>Consult with NPWS with regard to screening of the plan for Appropriate Assessment, if required should commence in parallel with the SEA.</p> <p>Consideration given to the inclusion of a plan objective for the conservation of non-designated habitats and species.</p> <p>Promotion of linkages between local biodiversity features and ecological networks e.g. stone walls, hedgerows, watercourses etc. and sufficient buffer zones from areas zoned for development.</p>

Environmental Topic	Issues	Mitigation/Recommendations
	wetlands, hedgerows, individual trees, streams, grasslands, etc.	<p>zones from areas zoned for development.</p> <p>Enhancement of local features of biodiversity where opportunities arise (possible policy).</p> <p>The plan should have regard to the EU Protected Habitats and Species in Ireland and Alien species and Noxious Weeds.</p> <p>Objective in the Plan to protect wetlands, and associated surface and groundwater systems within the Town Plan area.</p>
Flooding	Flooding is a significant issue within the Town.	<p>The OPW flood maps and Flood Studies conducted on the area should be referenced as part of the SEA baseline.</p> <p>OPW and Flood Study maps should be referred to in planning applications</p> <p>A specific objective should be included to provide for appropriate flood risk assessments to be undertaken, where proposed development(s) and proposed zoning in areas within the floodplain or on lands liable to flooding.</p> <p>Provision and promotion of Sustainable Urban Drainage Systems.</p> <p>Reference and recommendations from the new DoE/OPW Flood Risk Management Guidelines should be made.</p>
Water	<p>According to the Environmental Protection Agency, the River Blackwater is described as being 'at risk of not achieving good status' in terms of water quality under the Water Framework Directive.</p> <p>Areas within the Development Plan with Extreme groundwater vulnerability ratings and areas with Rock near Surface or Karst.</p> <p>Due to excessive levels of Aluminium in treated water, there is a need for the provision of a safe and secure water supply in Fermoy.</p>	<p>Policies and Objectives and conditions attached to planning authorisations should ensure that the ongoing development of the Town is undertaken in such a way so as not to compromise the quality of surface water (and associated habitats and species) groundwater within the zone of influence of the Development Plan area.</p> <p>New objective for a Groundwater Protection Plan for groundwater resources in the Fermoy area in accordance with the Groundwater Protection Scheme for Cork County.</p> <p>The Plan should implement and include, as appropriate, the relevant recommendations set out in The Provision and Quality of Drinking Water in Ireland –A Report for the Years 2006-2007, (Office of Environment Enforcement- EPA, 2007) as included in Section 4 of the SEA Pack. You are referred to this Report at: http://www.epa.ie/downloads/pubs/water/drinking/</p>

Environmental Topic	Issues	Mitigation/Recommendations
	<p>If additional lands for residential development is being proposed in the Plan, consideration should be given, to the adequacy of the existing water supply in terms of both quality and quantity and the potential risk to human health.</p> <p>Waste Water Treatment provision to meet projected growth.</p>	<p>http://www.epa.ie/downloads/pubs/water/drinking/</p> <p>Plan should include specific objectives for the Fermoy Drinking Water Supply See http://www.epa.ie/downloads/data/water/name,24319,en.html.</p> <p>Include specific objective for the preparation of a Water Conservation Strategy for Fermoy town and surrounding area as appropriate.</p> <p>The plan should include the specific provisions of the Urban Waste Water Discharges in Ireland, A report for the Years 2004 and 2005 http://www.epa.ie/downloads/pubs/water/wastewater/name,13978,en.html</p> <p>Include relevant policies and objectives for the provision and promotion of adequate and appropriate Sustainable Urban Drainage Systems (SUDS).</p>
Waste Water Treatment Plant Water Quality	Ensure sufficient WW provision for future population of the town.	<p>The Plan should include a policy to ensure that all developments currently served by septic tanks should be connected to the proposed WWTP where possible.</p> <p>Ensure that zoning for development is linked to the availability of WWTP infrastructure i.e. review servicing map in relation to zoning provision</p>
Population and Health	<p>Population Statistics</p> <p>Employment/unemployment</p> <p>Human Health - The following should be assessed in the town plan; Provision of adequate and appropriate amenity to serve both existing community and likely future increases in population; Provision of education and health services; Provision of adequate and appropriate cycleway and footpath networks along with adequate relevant signage; Promotion of the protection of existing natural and cultural heritage resources in the area as a local amenity and an educational resource; Protection of the air quality in the Fermoy area; Provision of broadband (for work at home); Provision of childcare facilities near work places; Localised campaigns to encourage exercise and healthy living for all ages.</p>	<p>Review population figures giving new percentages from NSS and CDP 2003 and Draft CDP2007.</p> <p>Ensure the mentioned issues are referred to in the draft plan.</p> <p>(Many of the other issues i.e. WWTP are also relevant to population and Human Health, however these will be dealt with under their particular remit in order to avoid overlapping).</p>
Material Assets	New buildings should consider use of renewable material	<p>Sustainable building practice policy</p> <p>Consideration should be given to the implementation of an integrated approach to waste management for any proposed development(s)</p>

Environmental Topic	Issues	Mitigation/Recommendations
		within the Town.
Landscape	<p>Protection of scenic landscapes, scenic views, scenic routes and landscape in the vicinity of the town</p> <p>Key views, vistas, prospects, sensitive landscapes, river corridors etc all need to be addressed.</p>	<p>Ensure appropriate density and height restrictions to ensure no adverse impacts on adjacent mentioned features within the vicinity of the town</p> <p>Recommend detailed landscape and visual impact assessments where appropriate.</p> <p>Promotion and where possible enhancement of key linkages between established land marks and landscape features and views, including recognition of these features when zoning land and when considering individual planning applications.</p>
Cultural Heritage	Zone of Archaeological Importance and undiscovered sub-surface archaeological sites/monuments	<p>There may be undiscovered sub-surface archaeological sites/monuments within the town. It is recommended that these issues be investigated within the Environmental Report.</p> <p>The archaeological potential of the coastal and inter-tidal zone, where relevant, should be carefully considered.</p> <p>Ensure to distinguish between National Monuments, Recorded Monuments and Places (RMPs) in Fermoy and Record of Protected Structures (RPS). Refer to www.archaeology.ie</p> <p>Any potential impacts on archaeological heritage should be subject to full archaeological assessment.</p> <p>Industrial Heritage should be addressed.</p> <p>Promotion of linkages between significant features of archaeological/architectural significance.</p> <p>Protection of important trees in the town.</p>
Soil	Soil and groundwater contamination and the risks associated with site development work, where Brownfield development is proposed in Fermoy.	A policy/objective should be included in the Plan to ensure adequate and appropriate investigation of the nature and extent of any soil and groundwater contamination and the risks associated with site development work, where Brownfield development is proposed in Fermoy.
Transport	Traffic congestion, public transport, cycleways and pedestrian facilities all need to be addressed in the draft plan.	<p>Consideration should be given to the inclusion of a Target relating to the improvement of the current transport network in the Fermoy area.</p> <p>Development of traffic management measures to reduce the potential for traffic congestion and</p>

Environmental Topic	Issues	Mitigation/Recommendations
		<p>associated vehicular emissions should be considered for Fermoy Town.</p> <p>Improved pedestrian and cycle facilities</p> <p>Good quality public transport</p> <p>Pedestrian facilities, public transport and cycle lanes will need to be addressed in the plan in a balanced and sustainable manner.</p> <p>Traffic, parking and mobility issues will require particular attention, as will consideration of a northern bypass.</p> <p>Considerations should be given in including specific objectives in the Plan in relation to the protection and improvement, as appropriate, of air quality in Fermoy, particularly in areas zoned for increased urban development and transport related development.</p> <p>Consideration should also be given to the inclusion of specific policies and objectives with respect to climate change.</p>
Other	<p>Objectives, Indicators and Targets</p> <p>The Plan should include relevant policies and objectives for the Promotion of energy conservation measures in buildings and Promotion, where appropriate, of the use of renewable energy systems (e.g. solar, wind, geothermal etc.) within the community.</p> <p>EPA have requested that the plan should be implemented in a strategic sustainable manner in terms of appropriate zoning of land while also taking the requirements of for drinking water supply, waste water treatment, flood risk and biodiversity protection into account.</p>	<p>Use similar indicators, and targets as used within the Draft CDP 2007. Provide for consistency in monitoring across the county.</p>

2.3 ENVIRONMENTAL REPORT

The Environmental Report contains an assessment of the likely significant effects (on biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors) of implementing the proposed plan.

The content of the Environmental Report is broadly defined in Article 12 (1) of the Regulations.

Chapter Title	Reference to Table 4A of the PG (Planning Guidelines)
Non-Tech summary	Ref. J
Introduction	
SEA Background and Methodology	
Key Objectives of the Plan	Ref. A
Planning and Policy Context	Ref. A and Ref. E
Summary of Baseline Environment	Ref. B
Key Environmental Issues	Ref. C and Red. D
Do Nothing Scenario	Ref. B
Strategy Options Alternatives	Ref. B
Environmental Assessment	Ref. F
SEA Objectives, Targets and Indicators	Ref. F
Mitigation	Ref. G
Monitoring	Ref. I

2.4 CONSULTATION

The draft Fermoy Town Development Plan and Environmental Report went on public display between December 2008 and February 2009 and again between August and September 2009 and submissions were invited from the public, from the relevant statutory bodies and the Environmental Authorities.

In order to document the SEA process the proposed amendments and their associated strategic environmental assessments are documented within this report in chapter 8.

At each of the two stages of consultation responses were received by Fermoy Town Council from the Department of the Environment, Heritage and Local Government (DoEHLG) and the Environmental Protection Agency (EPA) and suggestions and recommendations were included within the draft Plan, Environmental Report and Appropriate Assessment where possible.

As a result of the two-consultation periods a number of amendments were proposed to the draft Plan. Each of the proposed amendments as set out in the s.12 (4) Manager's Report and the s.12 (8) Manager's Report of the draft Fermoy Town Development Plan were assessed in terms of SEA and are documented in Assessment matrix table 8.3 and 8.4 of this report.

3 THE FERMOY DEVELOPMENT PLAN 2009-2015 OVERALL STRATEGY

The Fermoy Development Plan 2009 outlines the Council's policies for the development of Fermoy Town to 2015.

The plan has been prepared and developed against a backdrop of consultations by means of public meeting, individual meetings, and written submissions. The plan's main purpose, as the main public statement of the town Council is to take a long-term view of the future development of Fermoy in order to manage change in the physical environment and provide for new development that contributes to and enhances the existing qualities of the town thereby ensuring that development is planned in a comprehensive and coordinated manner. The priority objective of the Fermoy Town Development Plan 2009 to 2015 is the 'promotion of balanced and sustainable development that takes account of the values and concerns of all stakeholders in the town.'

The strategy underlying the Plan specifically aims to address the following matters:

1. The objective of encouraging the enhancement of the town's economy with particular emphasis on the attraction of growth industries to the town.
2. The objective of rejuvenating and extending the retail and service function of the town.
3. The objective of conserving and developing the unique and extraordinary potential of the town's location on the Blackwater.
4. The objective of developing the town's tourist potential.
5. The objective of developing a heritage and tourism led public realm regeneration plan.
6. The objective of addressing pedestrian facilities, public transport and cycle lanes in a balanced and sustainable manner.
7. The objective of addressing traffic, parking and mobility issues in a balanced and sustainable manner.
8. The unique heritage of the town needs to be protected and leveraged in a balanced manner for the benefit of all stakeholders in the town.

9. Fermoy's unique architectural heritage is noted and a detailed inventory in respect of same is included. These heritage items are an asset to the town and it is an objective to continue to develop a heritage strategy that will enable the preservation of these structures for their intrinsic conservation value, their potential for enhancing the towns urban quality and their economic value enhancing role with respect to the tourist industry.
10. It shall be a strategic objective to maintain and enhance a vibrant town core and to improve the streetscape and public realm in the central area.
11. The objective of providing sufficient zoned and serviced lands for residential, recreational and amenity purposes along with a mix of residential densities, including low, medium and high densities, will require attention.
12. The objective of liaising with the County Council with a view to encouraging balanced and sustainable development between the Town Council area and the Town environs in the county area.
13. It shall be a strategic objective to continue to work towards the alleviation of the flooding problem that has affected the town so severely in the past.
14. It shall be a strategic objective to co-operate with Cork County Council in furthering the draft Retail Strategy for the county and to develop the retail facilities in the town in a sustainable manner.
15. It shall be a strategic objective to co-operate with Cork County Council in furthering the aims and objectives of the draft Joint Housing Strategy for the county and to develop the balanced provision of appropriate residential developments in the town in a sustainable manner.

4 RELATED PLANS

The SEA Directive requires that the SEA process should include the review of other Plans/Programmes, which are related to the Plan/Programme being assessed i.e. the Fermoy Development Plan. Any identified actions from this study will need to comply with relevant international and national legislation such as the Water Framework Directive (WFD) and the Habitats and Bird's Directives that stringently protect Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) within the catchment. The requirements will be expressed in the environmental objectives.

Tables 4.1 to 4.3 below provide an overview of the relevant legislation, plans, policies that apply to the various environmental topics to be addressed in this Environmental Report.

Table 4.1: Overview of International Legislation, Plans, Policies and Programmes

Topic	Title	Summary of Objectives
Biodiversity	UN Convention on Biological Diversity (1992)	Objectives include the maintenance and enhancement of Biodiversity.
	The Ramsar Convention The Convention on Wetlands of International Importance (1971 and amendments)	Objectives include protection and conservation of wetlands, particularly those of importance to waterfowl as Waterfowl Habitat.
Climate	UN Kyoto Protocol The United Nations Framework Convention on Climate Change (UNFCCC) Kyoto Protocol 1997	Objectives seek to alleviate the impacts of climate change and reduce global emissions of GHGs.
Environment	Agenda 21	Local Agenda 21 is a process which facilitates sustainable development at community level. It is an approach based on participation which respects social, cultural, economic and environmental needs of the present and future citizens of a community in all its diversity and how the community relates to the future of the regional, national and international community of which it is part.
	The 6 th EU Environmental Action Programme 1998.	The Environment Action Programme takes a broad look at the challenges of environmental policy and provides a strategic framework for the Commission's environmental policy up to 2012. It identified four environmental areas for priority actions: <ul style="list-style-type: none"> • Climate Change • Nature and Biodiversity • Environment and Health and Quality of Life • Natural Resources and Waste
	The MARPOL Convention International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).	Objectives to protect the marine environment.

Topic	Title	Summary of Objectives
	The OSPAR Convention The Convention for the Protection of the Marine Environment of the North-East Atlantic (22 September 1992).	Objectives to protect the marine environment.
	COMAH (Seveso II) Directive- European Communities (Control of Major Accident Hazards involving dangerous Substances) Regulations 2000	Requirements for the storage of relatively large quantities of substances classified as dangerous.
Human Health / Air	World Health Organisation (WHO) Air Quality Guidelines (1999) and Guidelines for Europe (1987)	Objectives seek the elimination or minimisation of certain airborne pollutants for the protection of human health.

Table 4.2: Overview of EU Legislation, Plans, Policies and Programmes

Topic	Title	Summary of Objectives
Air	The Air Framework Directive Directive on Air Quality Assessment and Management (Framework Directive) (1996/62/EC)	Objectives include the prevention and/or reduction of airborne pollutants for the protection of human health and environment.
	Directive on National Emission Ceilings for Certain Atmospheric Pollutants (2001/81/EC)	Objectives seek to limit the national emissions of certain airborne pollutants for the protection of human health and the environment.
Biodiversity	The EU Biodiversity Strategy Communication on a European Community Biodiversity Strategy	Objectives seek to prevent and eliminate the causes of biodiversity loss and maintain and enhance current levels of biodiversity.
	The EU Habitats Directive (92/43/EEC)	Objectives seek to prevent and eliminate the causes of habitat loss and maintain and enhance current levels of biodiversity.
	The EU Birds Directive (as modified) (EC/79/409)	Objectives seek to prevent and eliminate the causes of bird species loss and maintain and enhance current levels of biodiversity.
	The EU Shellfish Directive (79/923/EEC)	Objectives seek to maintain those coastal and brackish waters, which need protection or improvement, in order to allow shellfish to develop and to contribute to the high quality of shellfish products intended for human consumption.
	The EU Freshwater Fish Directive (78/659/EEC)	Objectives seek to protect those fresh water bodies identified by Member States as waters suitable for sustaining fish populations. For those waters it sets physical and chemical water quality objectives for salmonid waters and cyprinid waters
Climate	Second European Climate Change Programme (ECCP II) 2005.	Objectives seek to develop the necessary elements of a strategy to implement the Kyoto protocol.
Human Health	The EU Environment and Health Strategy 2004-2009 (first period)	Objectives seek to prevent and reduce the impacts of pollution on human health.
	The EU REACH Initiative Registration, Evaluation and Authorisation of Chemicals (REACH)	Objectives seek to limit the harmful effects to the environment and human health from certain chemicals through improved analysis and data collection.

Topic	Title	Summary of Objectives
	Laying down the Health Conditions for the production and placement on the market of live bi-valve molluscs (91/492/EEC)	Objectives seek to ensure a suitable environment for shellfish growth and protect consumers of shellfish. It classifies shellfish harvesting areas according to the quality of shellfish populations. The classification determines the conditions under which shellfish harvested from those waters can be offered for sale.
Sustainable Development	The Gothenburg Strategy (2001) Communication from the Commission on "a Sustainable Europe for a Better World"	Objectives seek to make the future development of the EU more sustainable.
	The Sixth Environmental Action Programme (EAP) of the European Community 2002- 2012	Objectives seek to make the future development of the EU more sustainable.
	The SEA Directive (2001/42/EC)	Under the SEA Directive, the RBDMP requires an SEA.
Water	The Water Framework Directive EU Water Framework Directive (2000/60/EC)	Objectives seek to maintain and enhance the quality of all surface waters in the EU. The RBMPs are a requirement of this directive.
	The Groundwater Directive (1980/68/EC)	Objectives seek to maintain and enhance the quality of all groundwater in the EU.
	EU Floods Directive (2007/60/EC)	The Floods Directive applies to river basins and coastal areas at risk of flooding. With trends such as climate change and increased domestic and economic development in flood risk zones, this poses a threat of flooding in coastal and river basin areas.
	Bathing Water Directive 2006/7/EC	The overall objective of the revised Directive remains the protection of public health whilst bathing, but it also offers an opportunity to improve management practices at bathing waters and to standardise the information provided to bathers across Europe.
	Nitrates Directive 91/676/EEC	This Directive has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution.
	Urban Wastewater Treatment Directive 91/271/EEC. Amended under Directive 98/15/EEC	The primary aim is to protect the environment from the adverse effects of discharges of urban wastewater, by the provision of urban wastewater collecting systems (sewerage) and treatment plants for urban centres. The Directive also provides general rules for the sustainable disposal of sludge arising from wastewater treatment.
	Natura 2000 sites designated under Directive 92/43/EC and 79/409/EEC	The purpose is to enable Habitats Directive Annex I habitats or Annex II species to be maintained, or restored to a favourable conservation status over their natural range. Also, to conserve habitats for bird species under the Birds Directive Annex I.
	Groundwater Directive (2006/118/EC)	This new directive establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater.
	Drinking Water Directive (DWD) Council Directive 98/83/EC	The primary objective is to protect the health of the consumers in the European Union and to make sure the water is wholesome and clean.
Cultural Heritage	The European Convention on Protection of the Archaeological Heritage (The Valletta Convention of 1992)	Requires that appropriate consideration is given to archaeological issues at all stages of the planning and development process.
Landscape	European Landscape Convention 2000	Requires a commitment from Ireland to introduce policies to effect landscape protection and management.

Table 4.3: Overview of Irish Legislation, Plans, Policies and Programmes

Topic	Title	Summary of Objectives
Air	Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002)	Objectives include the reduction of certain airborne pollutants for the protection of human health and the environment.
	Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004).	Objectives include the reduction of certain airborne pollutants for the protection of human health and the environment.
	The Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999	Objectives include the reduction of certain airborne pollutants for the protection of human health and the environment.
Biodiversity	The National Biodiversity Plan (2002)	Objectives include the enhancement and conservation of biodiversity.
	The Wildlife Act 1976. The Wildlife (Amendment) act 2000	The Wildlife Act, 1976 and the Wildlife Amendment Act, 2000 are the principal statutory provisions providing for the protection of Wildlife (both Flora and Fauna) and the control of activities which may impact adversely on the conservation of Wildlife.
	National Heritage Plan 2002-2007	The purpose of the National Heritage Plan is to set out a clear and coherent strategy and framework for the protection and enhancement of Irish heritage over the five year period.
	European Communities (Natural Habitats) Regulations, SI 94/1997, as amended SI 233/1998 and SI 378/2005	These Regulations give effect to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and the Minister to designate special areas of conservation (endangered species and habitats of endangered species) as a contribution to an EU Community network to be known as NATURA 2000.
	Flora Protection Order 1999	Objectives include it being illegal to alter, damage or interfere in any way with their habitats. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation.
	Quality of Shellfish Waters Regulations 1994 (SI 200/1994) and amendments	Give effect to Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters and prescribe quality standards for shellfish waters and designate the waters to which they apply, together with sampling and analysis procedures to be used to determine compliance with the standards.
	Quality of Salmonid Waters Regulations 1988 (SI 293 of 1988)	Prescribe quality standards for salmonid waters and designate the waters to which they apply, together with the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Also, give effect to Council Directive No. 78/659/EEC on the quality of fresh waters needing protection or improvement in order to support fish life
Climate	National Climate Change Strategy (2000) and National Climate Change Strategy 2007-2012	Objectives include the reduction of national GHG emissions (including those from the water sector)
Human Health	Quality of Bathing Waters Regulations 1988 (SI 84 of 1988) and amendments	Prescribe bathing water quality standards and the bathing areas to which they apply, together with the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Give effect to Council Directive No. 76/160/EEC concerning the quality of bathing water.
Energy	Green Paper on Sustainable Energy (1999)	Objectives include the increased utilisation and development of renewable energies to meet EU targets
	Wind Energy Development Guidelines 2006	Objectives to promote wind energy where relevant

Topic	Title	Summary of Objectives
	Delivering a Sustainable Energy Future for Ireland The Energy Policy Framework 2007-2020 (White Paper)	This White Paper sets out the Government's Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland. It is set firmly in the global and European context which has put energy security and climate change among the most urgent international challenges. The White Paper sets out the actions to be taken in response to the energy challenges facing Ireland. The objective is to deliver a sustainable energy future, starting now, with a time horizon of 2020 but also looking beyond that.
	Grid 25 - A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future	The Grid 25 strategy proposes to upgrade the National Electricity Grid over the next 15 to 20 years. This strategy is currently having SEA undertaken on the Strategy. GRID25 will bring new levels of wind generation, both on and off-shore and an introduction of commercial ocean technology-based generation to Ireland. It proposes to support growth in the regions and ensuring continued reliability and security of supply. It will provide high-quality, high voltage bulk power supply for Ireland that will enable the different regions to attract in future industry and boost existing industry by exploiting Ireland's natural renewable sources of energy (wind and wave). It proposes to reduce Ireland's carbon emissions by transmitting renewable energy in line with Government policy. It also proposes to increase Ireland's connectivity to the European Grid, allowing for both bulk exports of electricity and imports of electricity when appropriate.
Planning	National Spatial Strategy 2002-2020 (2002)	Objectives of the NSS are to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning.
	National Development Plan from 2007 to 2013	Objectives of the NDP are to promote more balanced spatial and economic development.
	Planning and Development Act 2000	Revised and consolidated the law relating to planning and development by repealing and re-enacting with amendments the Local Government (Planning and Development) Acts, 1963 to 1999; to provide, in the interests of the common good, for proper planning and sustainable development including the provision of housing; to provide for the licensing of events and control of funfairs; to amend the Environmental Protection Agency Act 1992, the Roads Act 1993, the Waste Management Act 1996, and certain other enactments.
	National Anti Poverty Strategy (NAPS)	The National Anti-Poverty Strategy (NAPS) is the government strategic initiative to place the needs of the poor and the socially excluded at the top of the national policy agenda. The NAPS recognises the unacceptable scale of poverty and its impact on those directly affected and on the wider society and it particularly notes the distinct spatial aspects of poverty in urban and rural areas. The strategy emphasises the importance of a cross-departmental policy response in dealing with the problem.
	Retail Planning Guidelines 2005	The Retail Planning Guidelines provide a comprehensive framework to guide local authorities in preparing development plans, assessing applications for planning permission, and guiding retailers and developers in formulating development proposals. Retail functions reflect four broad tiers of urban development. Fermoy Town is defined in the fourth tier of towns. Fourth tier centres are described as providing basic convenience shopping and in some cases, lower order comparison-shopping such as hardware, pharmaceutical products and clothes.

Topic	Title	Summary of Objectives
	Residential Density Guidelines for Planning Authorities	These Guidelines are aimed at addressing the high levels of suburban housing development at low densities on Green field sites over the last few decades. This has led to an increase in the demand for travel, greater traffic congestion and high infrastructure costs. The Guidelines recognise that higher densities should not be achieved at an unacceptable amenity cost to the surrounding dwellings and the residents of the proposed development. A high quality of design and layout and a good quality living environment, including the availability of adequate shopping, social, transport and leisure infrastructure, are essential if increased residential densities are to be acceptable.
Sustainable Development	Sustainable Development: A Strategy for Ireland (1997) (DoEHLG)	Objectives are to ensure that future development in Ireland occurs in a sustainable manner.
	European Communities (Environmental Assessment of Certain Plans and Programmes Regulations 2004 (S.I. 435 of 2004))	The EU SEA Directive was transposed into Irish Law under S.I. 435 in 2004.
	Sustainable Rural Housing Guidelines 2005	<p>These guidelines set out in detail how the Government's policies on rural housing are to be implemented by Planning Authorities in making their development plans and in the operation of the development control system to ensure a vibrant future for all rural areas. In supporting housing development patterns in rural areas that are sustainable, policies and practices of planning authorities should seek to:</p> <ul style="list-style-type: none"> • Ensure that the needs of rural communities are identified in the development plan process and that policies are put in place to ensure that the type and scale of residential and other development in rural areas, at appropriate locations, necessary to sustain rural communities is accommodated. • Manage pressure for overspill development from urban areas in the rural areas closest to the main cities and towns such as the gateways, hubs, and other large towns. <p>A strong theme in the Sustainable Rural Housing Guidelines is the need to strengthen villages and towns. Planning authorities need to ensure that cities, towns and villages offer attractive and affordable housing options to meet the housing needs of urban communities and persons wishing to live in urban areas.</p>
	Making Ireland's Development Sustainable	This document focuses on the link between economic activity and pressures on the environment. Sustainable development emerged as an idea in the late 1980s and led to the Earth Summit in Rio de Janeiro in 1992. At the Summit, world leaders agreed to implement an action programme for sustainable development called, Agenda 21. The Irish Government published <i>Sustainable Development: A Strategy for Ireland</i> in 1997, which applies Agenda 21 in Irish circumstances. <i>Making Ireland's Development Sustainable</i> reviews the progress made in terms of sustainable development in Ireland since Rio, assesses the challenge we now face and sets out policies and actions to meet that challenge.
Transport	Transport 21	Transport 21 is a strategy that will see €34.4 billion invested over the next 10 years in Irish transport. Connecting communities and promoting prosperity is the core aim of this strategy. The programme seeks to meet the transport needs of the country's citizens and also underpin our competitiveness into the future. A comprehensive and efficient transport network is essential if we are to continue to improve our living standards while remaining competitive in the global market place. Transport 21 recognises that quality integrated transport is critical for competitiveness, return on investment and regional development.

Topic	Title	Summary of Objectives
Environment	The Environmental Protection Agency Act 1992	Objectives include the better protection of the environment and the control of pollution through improved licensing and monitoring.
	The Protection of the Environment Act 2003	Objectives include for better protection of the environment and the control of pollution through improved licensing and monitoring.
Water	Drinking Water Regulations SI 439 of 2000	Prescribe quality standards to be applied in relation to certain supplies of drinking water, including requirements as to sampling frequency, methods of analysis, the provision of information to consumers and related matters. Give effect to provisions of EU Council Directive 98/83/EC on the quality of water intended for human consumption.
	Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations 1998 (SI 258 of 1998)	Provide for specified improvements in water quality conditions in rivers and lakes based on phosphorus concentrations or related water quality classifications and give effect to certain requirements arising under Council Directive 76/46/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.
	Water Quality in Ireland 2001-2003	This document assesses the quality of Ireland's aquatic ecosystems concentrating on ambient water quality indicators.
	Water Quality in Ireland 2005: Key indicators of the Aquatic Environment	The quality of rivers, lakes, estuaries, coastal waters, ground waters and canals is discussed in this report.
	Towards setting guideline values for the protection of groundwater in Ireland (2003)	Proposals for setting environmental quality objectives and standards for groundwater through use of guideline values.
	Groundwater Monitoring Programme	The information on which a national groundwater quality programme is based.
	European Communities (Water Policy) Regulations (SI 722 of 2003)	Provide for the transposition into Irish national law of the provisions of the EU Water Framework Directive.
	European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2005 (S.I. No. 378 of 2006)	Provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources. Give further effect to several EU Directives including Directives in relation to protection of waters against pollution from agricultural sources ("the Nitrates Directive"), dangerous substances in water, waste management, protection of groundwater, public participation in policy development and water policy (the Water Framework Directive).
	Arterial Drainage Act, 1945	Makes provision for the drainage and improvement of land by the execution of works of arterial drainage, to provide for the maintenance of those works and make further and better provision for the maintenance of existing drainage works, and to provide for matters incidental to or connected with the matters aforesaid or relating generally to the drainage of land.
	OPW Guidelines on Flood Risk 2005	The OPW provide guidance on Planning Policy in relation to flooding. The policy which the Planning Authority should adopt is "Development should not itself be subject to an appropriate risk of flooding nor should it cause or exacerbate such a risk at other locations". This provides for run-off areas and the provision of appropriate drains. There should be set-back zones from the edge of watercourses. Minimum design standards should be applied, flood impact assessments to be required in certain developments and certification from a competent person that a development will not contribute to flooding within the relevant catchment.

Topic	Title	Summary of Objectives
Material Assets	Quarries and Ancillary Activities Guidelines 2004	Aggregates are a significant natural resource. The extractive industries make an important contribution to economic development in Ireland. However, the operation of quarries can give rise to land use and environmental issues which should be mitigated and controlled through the planning system. These Guidelines seek to identify those issues and to suggest best practice in dealing with them. It is important that Planning Authorities recognise that quarries (including sand-and-gravel pits) vary greatly in size, with varying environmental impacts, and that the planning response to proposed developments should be tailored accordingly.
	EPA Wastewater Treatment Manual 2000	The Waste Water Treatment Manual for single houses details the basic mechanism of the waste water treatment system, various types of systems, suitable site characteristics and treatment options. This document will be referred to by the Planning Authority, though may be replaced by updated versions.
	Irish National Forest Standard 2000	In 1996, the Irish Government published Growing for the Future: A Strategic Plan for the Development of the Forestry Sector in Ireland. The aim of this strategy is to develop forestry to a scale and in a manner which maximises its contribution to national economic and social well-being on a sustainable basis and which is compatible with the protection of the environment. In Growing for the Future, a commitment was made to promote quality in all aspects of Irish forestry and to provide the instruments to achieve this. The Irish National Forest Standard is the result of a consultative process initiated in 1999. Working parties were set up to consider environmental, economic, social and legal aspects of forestry and sustainable forest management. The groups were charged with developing indicators for Sustainable Forest Management.
Waste	The Waste Management Act 1996 and amendments	Objectives include (amongst others) the more effective and environmentally sensitive management of wastes in Ireland.
Cultural Heritage	National Heritage Plan 2002	Core objective is to protect our heritage. In this regard the "polluter pays" principle and the precautionary principles are operable.
	Framework and Principles for the protection of the archaeological heritage	Sets out archaeological policies and principles that should be applied by all bodies when undertaking or authorising development.
	Architectural Heritage Protection, Guidelines for Planning Authorities, 2004	Outlines policies for protection of Architectural Conservation Areas.
	National Inventory of Architectural Heritage (NIAH)	Involves identifying and recording the architectural heritage of Ireland, from 1700 to the present day

4.1.1 EU Environmental Plans and Other Guidance

EU Habitats Directive (92/43/EEC): The provisions of the Directive requires Member States to introduce a range of measures including the protection of species listed in the Annexes; and to undertake surveillance of habitats and species and produce a report every six years on the implementation of the Directive. The habitats listed in Annex 1 of the Directive and the species listed in Annex II, are to be protected by means of a network of sites and are afforded protection as Special Areas of Conservation (SACs). Special Areas of Conservation and Special Protection Areas (SPAs) classified under the EC Birds Directive, form a network of protected areas known as Natura 2000.

The EU Water Framework Directive (2000/60/EC) came into force in December 2000 and was written into Irish Law in 2003. The Directive clarifies, collects and updates previous pieces of water legislation and provides for water management on the basis of River Basin Districts. The Water Framework Directive (WFD) sets a framework for comprehensive management of water resources in the European Community, within a common approach and with common objectives, principles and basic measures. The WFD addresses inland surface waters, estuarine and coastal waters and groundwater. The fundamental objective of the WFD aims at maintaining “high status” of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least “good status” in relation to all waters by 2016.

The main objectives of the WFD are to protect and enhance the status of all our waters, encourage sustainable water use, provide for sufficient supply of good quality surface water and groundwater, reduce or phase out discharges of dangerous substances to water, protect territorial and marine waters and to establish and maintain a register of “protected areas”.

EU Birds Directive (79/409/EEC) 1979 seeks to protect, manage and regulate all bird species naturally living in the wild within the European territory of the Member States, including the eggs of these birds, their nests and their habitats and to regulate the exploitation of these species. Special Protection Areas (SPAs) for the protection of birds were established following the Birds Directive.

EU Urban Waste-Water Treatment Directive (91/271/EEC) 1991 seeks to protect the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors and concerns the collection, treatment and discharge of domestic waste-water, the mixture of waste-water, the mixture of waste-water and waste-water from certain industrial sectors.

EU Floods Directive was adopted on the 18th January 2006 when the European Commission proposed a directive on the assessment and management of floods. Its aim is to reduce and manage the risks that floods pose to human health, the environment, infrastructure and property.

The **Groundwater Directive 80/68/EEC** requires Member States to apply a system of investigation and authorisation to waste disposal and other activities in order to ensure that groundwater is not polluted by dangerous substances.

The **Surface Water Directive 75/440/EEC** aims to protect public health by ensuring that surface water abstracted for use as drinking water reaches certain standards before it is supplied to the public. The directive lays down nonbinding “guide” values and binding “imperative” values and requires Member States to monitor the quality of surface waters from which drinking water is abstracted and to take measures to

ensure that it complies with the minimum quality standards. The Directive has been integrated into the proposed Water Framework Directive.

The **Environmental Impact Assessment Directive 85/337/EEC** (amended as Directive 97/11/EC), requires Member States to carry out environmental impact assessments (EIA) on certain public or private projects, before they are authorised, where it is believed that the projects are likely to have a significant impact on the environment. The EIA procedure is an integral part of the planning process and the public can provide input and express environmental concerns with regard to the project. The results of this consultation must be taken into account during the authorisation process.

The aim of the **European Convention on Protection of the Archaeological Heritage 1992** is to “protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study”. The Convention provides the basic framework for policy on the protection of the archaeological heritage in Ireland. The obligations on the State under the Convention have been summarised by the Department of Arts, Heritage, Gaeltacht and the Islands and included the following:

- Providing for statutory protection measures, including the maintenance of an inventory of the archaeological heritage and the designation of protected monuments and areas:
- The authorisation and supervision of excavations and other archaeological activities;
- Providing measures for the physical protection of the archaeological heritage including acquisition or protection by other means;
- Providing for consultation between archaeologists and planners in relation to the drawing up of development plans and development schemes so as to ensure that full consideration is given to archaeological requirements.
- Facilitating the study of archaeological discoveries by making and bringing up to date surveys, inventories and maps of archaeological sites and taking practical measures to ensure the drafting, following archaeological operations, of a publishable scientific record before the publication of comprehensive studies;
- Educating the public in relation to the value of the archaeological heritage and the threats to it, promoting public access to important elements of this heritage, and encouraging public display of selected archaeological objects.

The Fermoy Development Plan is informed by the following plans at National and Regional Level.

4.1.2 National Plans

National Development Plan 2007-2013

The 2000 National Development Plan was prepared to underpin the development of a dynamic competitive economy to 2006. The subsequent NDP published this year will guide the development of the country in the period 2007-2013. The Plan sets out a strong framework for the promotion of regional development with a particular focus on investment in the National Spatial Strategy (NSS) Gateway centres. Strong urban centres are directly related to regional growth and development, affecting employment, incomes and quality of life throughout the regions.

The Plan has four basic objectives: to continue sustainable national economic and employment growth, to strengthen and improve Ireland's international competitiveness, to foster balanced regional development and to promote social inclusion.

The NDP is the largest and most ambitious investment plan ever drawn up for Ireland, where over €52 billion was invested between 2002-2006 and a predicted € 184 billion of Public, Private and EU funds will be invested between 2007 and 2013 in economic and social infrastructure, enterprise, science, agriculture sectors, education, training and environmental services.

The 2007 National Development Plan includes a number of strategic investment objectives for the southwest region including major road improvement schemes, waste management, enterprise, social infrastructure programmes etc.

The National Spatial Strategy, 2002-2020

The National Spatial Strategy (NSS) is a twenty year planning framework which sets out a national context for spatial planning which informs regional planning guidelines, as well as county and city development plans and strategies. It aims to achieve more balanced regional development.

The NSS is essentially a planning framework designed to deliver a more balanced social, economic and physical development between the regions. The successful aspects of the growth of the Greater Dublin Area over recent years need to be emulated in other areas to deliver a more even distribution of successful economic development. The growing strengths of Cork, Limerick/Shannon, Galway, and Waterford suggest that a coordinated development of these cities has the potential to offer a counterweight to the pull of the Dublin Region.

According to the NSS, the best prospects for establishing critical mass of the type and scale capable of competing with that of the Greater Dublin Area are dependent on point to developing Cork, Galway,

Limerick/Shannon and Waterford as an increasingly inter-connected and developed network of co-operating and complementary cities. Models for activating such polycentric development approaches are evolving in other European countries.

The strategic roles which cities, towns, villages, communities and rural areas will have in delivering a more spatially balanced Ireland can be summarised as follows:

- Consolidation- the Greater Dublin Area;
- Strengthening the South, South East, West and North West to complement Dublin;
- Revitalisation the West and South West;
- Reinforcing central parts of Ireland and the South East; and
- Co-operating in an all-island context.

The strategy notes that within the South West region, there are medium sized towns, of 1,500 to 5,000 population. Towns such as Listowel, Kanturk, Charleville, Mitchelstown and Fermoy have historically developed to serve strong rural and agricultural hinterlands. Capitalising on the location and attractions of such centres on or near important transport corridors will become an important part of diversifying these towns as their reliance on traditional economic activities lessens.

National Climate Change Strategy 2007-2012

The National Climate Change Strategy 2007-2012 follows on from the first national strategy, published in 2000 and reviewed in 2002, and takes account of the public consultation process which followed the further review in Ireland's Pathway to Kyoto Compliance (2006). The purpose of this Strategy is to show clearly the measures by which Ireland will meet its 2008-2012 commitments; and to show how these measures position us for the post-2012 period, and to identify the areas in which further measures are being researched and developed to enable us meet our eventual 2020 commitment. Through innovation, energy efficiency and more sustainability in our personal choices, we can achieve the necessary lowering of the carbon intensity of our economy without sacrificing competitiveness, economic performance or quality of life.

National Biodiversity Plan 2002

The National Biodiversity Plan 2002 comprises a set of 91 Actions to halt the current and continuing loss of plant species, as well as the vegetation and habitats they compose by the year 2009. The Plan pays special attention to the need for the integration of the conservation and sustainable use of biological diversity into all relevant sectors. The full and effective integration of biodiversity concerns into the development and implementation of other policies, legislation, and programmes is of crucial importance. The overall objective

of the Plan is to secure the conservation, including where possible the enhancement, and sustainable use of biological diversity in Ireland and to contribute to conservation and sustainable use of biodiversity globally. The objectives of the National Biodiversity Plan include to;

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

Sustainable Development – A Strategy for Ireland 1997

Sustainable Development – A Strategy for Ireland, published in 1997, stresses the Government's commitment to sustainable forms of transport and the need to strengthen and improve such forms in the interests of the promotion of sustainable development. An emphasis is given to the need to produce an efficient, cost effective and customer focused development of the rail network. The Strategy reflects Ireland's commitment to the principles and agenda for sustainable development agreed at the Earth Summit in Rio de Janeiro in 1992 and also responds to the EU Fifth Action Programme for the Environment.

The general aim of the Strategy is to *“ensure that economy and society in Ireland can develop to their full potential within a well protected environment, without compromising the quality of that environment and with responsibility towards present and future generations and the wider international community”*.

To achieve the aims of the Strategy, the Government has adopted the following principles, the implementation of these being specific objectives of this Plan:

- The Precautionary Principle which aims to deal with causes rather than results of environmental pollution; and
- Integration: illustrates the importance of integration at all levels of society – government, sectoral and policy levels, to enable environmental concerns to be addressed in an effective and comprehensive manner.
- The Polluter Pays Principle, which allocates the costs of pollution to producers and consumers rather than to society at large.

The Strategy recognises that the primary responsibility for the proper management of hazardous waste lies with the holder or generator of the waste. Other international policies/legislation that should be adhered to include:

- European Union (EU) Habitats Directive (92/43/EEC) 1992;
- EU Water Framework Directive (2000/60/EC);

- European Landscape;
- Birds Directive;
- Air Framework Directive;
- Waste Framework Directive; and
- Phosphorous Regulations.

National Heritage Plan 2002

The National Heritage Plan 2002 sets out a clear and coherent strategy and framework for the protection and enhancement of our heritage over the next five years. The concept of “placing heritage at the heart of public life” is intended to be all-embracing and to encompass the actions of individuals, communities, the private sector, non-governmental organisations, and regional and local bodies – all or which have a critical role to play in the protection and promotion of our heritage. The priorities for the National Heritage Plan include the following key actions:

- Local Heritage Plans, supported by enhanced levels of heritage expertise within Local Authorities;
- Increased levels of assistance for the protection of the archaeological and architectural heritage;
- Implementation of the National Biodiversity Plan and addressing the conservation of habitats, species, genetic diversity and the natural heritage;
- Initiation of a heritage inventory programme and establishment of a central heritage archive and library;
- Establishment of new structures in Dúchas, the Heritage Service of the Department of Arts, Heritage, Gaeltacht and the Islands, to provide a more efficient, integrated and regionalised service;
- Provision of total additional financial allocations of €123.16 m (£97 m) on a phased basis over the life of the Plan; and
- The deployment of a total of 102 additional staff to enhance existing heritage programmes and to operate the new structures proposed in the Plan.

The Energy White Paper – Delivering a Sustainable Future for Ireland

The White Paper entitled “Delivering a Sustainable Future for Ireland” is an action based strategy for achieving specific energy targets for Ireland in a timeframe between 2007 and 2020. The White Paper sets out strategic goals for the security of energy supply, sustainability and competitiveness. The main provisions of the White Paper are:

- Sustainable transport action plan due late 2007 will consider 100% plant oil in captive fleets in Local Authorities;
- Public sector will lead the way in bio-energy heating, electricity, CHP and biofuels;

- Electricity demand site management will be addressed this year and there are plans to install smart metering for all new and existing housing stock.
- Review part L (Conservation of fuel and energy) of building regulations in 2008 to reduce energy demand by 40% relative to current standards, look for funding mechanisms for smart metering, set target of 33% energy saving across public sector, introduce energy efficiency programmes (targets and standards) for LA's, publish green public procurement action plan, update existing social housing design guidelines; and
- Allocate significant amounts of resources towards remedial works Scheme and LA major refurbishment works.

Transport 21

In 2005 the Government launched Transport 21, a capital investment framework through which the transport system in Ireland will be developed, over the period 2006 to 2015. This framework includes for the development of the N15/N17/N18/N20/N25 Atlantic Corridor from Letterkenny to Waterford via Sligo, Tuam, Ennis, Limerick, Mallow and Cork. The road for the Atlantic Corridor is to be dual carriageway or 2+1. The current NRA policy is that 2+1 should only be used in retrofit situations therefore the cross section for new build sections of the Atlantic Corridor will be dual carriageway.

The scheme objectives are set out in Transport 21 as part of the strategy for National Roads as follows:

“Transport 21 is the capital investment framework through which the transport system in Ireland will be developed, over the period 2006 to 2015. This framework will address the twin challenges of past investment backlogs and continuing growth in transport demand. The projects and programmes that make up Transport 21 will aim to:

- *increase accessibility;*
- *ensure sustainability;*
- *expand capacity;*
- *increase use; and*
- *enhance quality.*

Towards Sustainable Local Communities: Guidelines on Local Agenda 21, 2001

Local Agenda 21 was the result of the first UN Conference on the Environment and Development (Earth Summit) in Rio de Janeiro in 1992, where Ireland was amongst 150 nations, which endorsed Agenda 21, a major blueprint for how the world's nations can work individually and collectively towards sustainable development by the 21st century. Local Agenda 21 and the EU's Fifth Environment Action Programme

underlined the fact that traditional policies must be replaced by an integrated approach to environment and development issues, if growth is to be achieved in parallel with, rather than at the expense of, environmental quality.

Local Agenda 21 is intended to translate sustainable development principles and objectives into practical action at the local level. Some of the major aims of Agenda 21 include:

- Reducing the amount of energy and raw materials society consumes, as well as the pollution and waste it produces;
- Protecting fragile ecosystems and environments; and
- Bringing about a fairer distribution of wealth, both between countries and between different social groups within countries.

Local Agenda 21 also encourages consultative processes which involve the whole community, its elected members and other community and representative groups through means of information awareness, public consultation and feedback, partnerships between authorities, businesses and communities, and a continuing monitoring of progress towards sustainability. The principles of Agenda 21 are being met through the process of SEA.

EU Sixth Environment Action Programme, 2002-2012

The EU Sixth Environment Action Programme sets out objectives in the shape of Europe's future environment at the start of the 21st century. It provides a framework for adopting and implementing sustainable development policies in Europe. This vision "Environment 2009: Our Future, Our Choice" seeks the following aims:

- To decouple the generation of waste from economic growth by establishing more sustainable consumption patterns;
- For waste generated, these should represent very low risks to the environment and our health;
- We should maximise recycling and bring "final disposal to an absolute minimum"; and
- Waste should be treated as close as possible to where it is generated ("proximity principle").

Seven 'Thematic Strategies' were introduced as a way to tackle seven key environmental issues, which require a holistic approach because of: their complexity, the diversity of actors concerned and the need to find multiple and innovative solutions. The Seven Thematic Strategies are:

- Clean Air For Europe (CAFE);
- Soil protection;
- Sustainable use of pesticides;
- Protect and conserve the marine environment;
- Waste prevention and recycling;
- Sustainable use of natural resources; and
- Urban environment.

Draft Planning System and Flood Risk Management Guidelines

Mr. John Gormley, T.D., Minister for the Environment, Heritage and Local Government, and Dr. Martin Mansergh, T.D., Minister of State at the Department of Finance with responsibility for the OPW, on 22nd September 2008 jointly published for public consultation the Draft Planning System and Flood Risk Management Guidelines which are aimed at ensuring a more consistent, rigorous and systematic approach to fully incorporate flood risk assessment and management into the planning system.

As part of the guidelines Planning Authorities will introduce a new flood risk assessment system, which will be aligned with the existing Strategic Environmental Assessment (SEA) process, introducing processes for screening for flood risk, scoping any flood risk assessment required and carrying out such assessments similar to the overall system for screening and scoping under SEA provision.

Furthermore city and county development plans will establish the overall flood risk assessment context for their functional areas, which may be supplemented by any more detailed site-specific flood risk assessment required to comply with these guidelines at town plan/LAP level.

Planning authorities will assess planning applications for development in accordance with the provisions of these guidelines following the guidance of their own or any OPW strategic flood risk assessment and the application of the sequential approach and, if necessary, the justification test required by these guidelines.

Retail Planning Guidelines for Planning Authorities, 2005

Published in January 2005 the *Retail Planning Guidelines for Planning Authorities* provide a comprehensive framework to guide local authorities in preparing development plans and assessing applications for planning permission as well as retailers and developers in formulating development proposals.

These guidelines are a revision of the 2001 guidelines with a specific focus on changes regarding retail warehousing. It was recognised that there is evidence of consumer demand in Ireland for large-scale retail warehousing units which are capable of displaying a very wide range of goods within one store. Accordingly, the Minister has determined that the 6,000sqm floorspace cap on individual retail warehouses will not apply in those areas which are subject to Integrated Area Plans under the Urban Renewal Act, 1998 in National Spatial Strategy, Gateways of Athlone/Tullamore/Mullingar, Cork, Dublin, Dundalk, Galway, Letterkenny, Limerick/Shannon, Sligo and Waterford and within the functional areas of the four Dublin local authorities.

Residential Density Guidelines for Planning Authorities, 1999

These Guidelines promote increased residential densities in order to ensure the most efficient use of zoned and serviced housing land, provide a more varied range of dwelling types and sizes, optimise the use of existing services, facilities and infrastructure, encourage more sustainable commuting patterns and facilitate improved public transport. It is considered that the settlement strategy proposed in the variation reflects those in the Guidelines.

Guidelines for Planning Authorities: Architectural Heritage Protection, 2004

The Planning and Development Act 2000, required additional development objectives relating to the protection of structures which are deemed to be of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest and to preserve the character of architectural conservation areas.

In this context, these Guidelines aim to assist local authorities/town councils in the adoption of suitable policies for protecting architectural heritage in their development plans and to ensure they have practical effect through development control measures. The guidelines aim to assist planning authorities in their role to protect the architectural heritage of their area. The Fermoy Development Plan is considered to be consistent with these Guidelines.

4.1.3 Regional Plans

Regional Planning Guidelines for the Southwest Region, 2004

The Regional Planning Guidelines for the Southwest provide a broad canvas, which aims to steer the growth and prosperity of the region and its people, up to 2020. The Guidelines contain statements and analysis of key economic objectives, together with a set of planning guidelines to be incorporated in the statutory development plans of the local authorities in the region and are seen as an important link between NSS and the draft of local county and city development plans. The Strategy covers an area determined by a journey time of about 45 minutes from Cork City and encompasses a spatial zone that includes principal towns such as Youghal, Fermoy, Mallow, Fermoy, Bandon and Fermoy.

The guidelines identify Fermoy as one of the largest towns outside the metropolitan area. Fermoy is located within Zone 1 of the Regional Development Zones. Other towns that are important in this Zone include Youghal, Fermoy, Bandon and Fermoy. These towns play a dual role, in that they have a relationship with Cork, but also play an important role as employment and services centres for much of the remainder of County Cork. The towns have the potential to attract FDI as well as developing a stronger indigenous sector. It is envisaged that growth in these towns will be employment-led and that they will not merely become dormitory towns for the Metropolitan area. Commuting to the Gateway will obviously continue, but should not become the prime basis of growth.

The guidelines also note that care needs to be taken that this growth is directed to the towns and villages to maximise the economic and social benefits, reduce infrastructural costs, to avoid urban sprawl, and to protect the amenities of the area for agriculture, amenity and tourism.

South Western River Basin District (SWRBD)

The South Western River Basin District (SWRBD) “A Future for Our Waters” and “Water Matters” outline the requirements of the EU Water Framework Directive, and detail the main issues of investigation to date. These include wastewater and industrial discharges, landfills, quarries, mines and contaminated lands, agriculture, wastewater from unsewered properties, forestry, usage and discharge of dangerous substances, physical modifications, abstractions and local issues. The booklet “Water Matters” also outlines the next steps in the process of preparing a River Basin Management Plan, which is due to be adopted for the SWRBD in 2009. The document “A Future for Our Waters” indicates the findings of Risk Assessments that have been carried out on water bodies within the SWRBD.

4.1.4 Local Plans

Cork County Waste Management Plan 2004-2009

The Waste Management Plan was formulated by Cork County Council to address the on-going challenge of waste management in County Cork. The Plan addresses all areas of waste management – from waste prevention and minimisation, to its collection, treatment, recovery and final disposal. The Plan is guided by international, EU and Irish legislation and policy on waste management.

The Waste Management Plan for County Cork envisages a single, central regional landfill to accept residual waste. National recycling targets for household wastes will be met by provision of a high number of civic amenity and bring sites, combined with a central integrated materials recovery and composting facility to segregate and recover recyclable and biodegradable household wastes. Thermal treatment will be retained as an option, should waste growth necessitate its introduction at a later date.

The previous Waste Management Plan (1999 to 2004) confirmed the decision to proceed on the basis of Scenario 2 of the Waste Management Strategy, which resulted in a number of actions being taken by the Council including:

- Bottlehill identified as the most suitable site for a landfill.
- Application to the Environmental Protection Agency for a waste management licence and to An Bord Pleanála for approval. The EPA had issued a proposed decision to grant a licence and a decision was currently awaited. An Bord Pleanála granted approval in February 2004.
- Progress on the acquisition of sites for the provision of materials recovery and residual landfill facilities.
- Entering into tender negotiations for the provision of a materials recovery facility by public private partnership.
- Progress in the provision of civic amenity sites and transfer stations.

Having regard to the above, the Council proposes to continue to implement scenario 2 for the management of municipal waste in the county until 2009.

The Cork Strategic Retail Study 2008

The Cork Strategic Retail Study 2008 (CSRS) identifies Fermoy as a ring town to Cork City. It points out that the town serves a well-defined catchments area. According to the 2007 figures, the town centre supports

4,855m² of comparison goods floorspace and 1,420m² of convenience goods floorspace. Since 2002, there has only been one new development, a Lidl store. There is demand for more retail warehousing, but there is a lack of commercially owned land for new development.

According to Table 6.3, the overall retail strategy for Fermoy is for expansion and potential for town centre regeneration. The CRSR 2008 recognises that expansion towns should be the principal locations for both convenience and comparison retail development in the rural areas of the County.

Rents in Fermoy are €300-345 / sqm and have gone up by around 20% since 2002. There has been a recent slowdown in the market and there are several vacancies in the town. However, the bypass that opened last year has improved the shopping environment, and a new hotel, which is planned to open in 2009, will bring in more visitors.

Cork County Heritage Plan 2005 – 2010

The Cork County Heritage Plan aims to secure benefits for local heritage and to increase awareness, appreciation and enjoyment of this heritage for all of the people in County Cork. It aims to develop and encourage best practice in relation to the management and care of heritage in County Cork and to deliver practical actions to achieve this, as well as to gather and disseminate information about heritage in the County.

Joint Housing Strategy

Cork County Council, in conjunction with Cork Corporation and the nine Urban District Councils in the county produced a Joint Housing Strategy to address the housing needs of the existing and future population of Cork to 2011. The policies and objectives of the strategy are enshrined in the Cork County Development Plan 2003 (as amended).

A draft Joint Housing Strategy has developed looking forward to the year 2020. It is a review of the previous Joint Housing Strategy 2001 and once adopted, will replace the previous Strategy. The primary purpose of the draft Strategy is to ensure that the overall supply of housing is sufficient to meet the planned population of Cork. The draft strategy was on consultation until February 2008 and is due to be adopted in time to inform future development plans.

Draft Cork County Development Plan 2008

The draft Cork County Development was published in December 2007 by the Planning Policy Unit of Cork County Council and was on public consultation until February 2008. Amendments to the Draft plan were published in August 2008 and the draft plan is due to be adopted in January 2009.

Planning policy in the draft County Development Plan 2007 advocates the concentration of development in locations where it is possible to integrate employment, community services, retailing and public transport in conjunction with population growth.

Fermoy is identified within the 'CASP Ring' Strategic Planning Area. The policy and objectives of the Plan for this Area are based on planning and sustainable development goals, which include:

To establish an appropriate balance in the spatial distribution of future population growth, broadly in line with the Cork Area Strategic Plan, so that Bandon, Fermoy, Fermoy and Youghal can accelerate their rate of growth and achieve a critical mass of population to enable them to maximise their potential to attract new investment in employment, services and public transport (p.26).

The draft Cork County Development Plan 2007 sets population projections for the town and environs to increase from 5,873 persons in 2006 to 7,314 people by 2020 (p.25).

Section 5.2.23 of the Plan outlines that in relation to the 'CASP Ring' strategic plan area, Fermoy has been designated as a District Employment Centre, which is a centre that serves the employment needs of urban areas as well as large rural hinterlands. The draft Plan states that;

'It is important for these strategic towns to retain a sufficient critical mass of population in order to attract new investment and employment and develop and modernise the range of services and facilities that they offer. In order to establish an appropriate balance in the spatial distribution of growth, these centres will provide additional employment for the population expected in the towns as well as providing an improved service for the large rural hinterlands in the area.' (p.107)

Objective SET 1-17 for Fermoy outlines that *'It is an objective of the Plan to promote urban renewal within the town centre particularly along the River Blackwater, expand its commercial base and strengthen its function as a district employment centre'* (p.50). Section 3.3.8

Section 3.3.8 of the draft Plan outlines that the CASP Update will give guidance on the scale of future growth and the *Fermoy Electoral Area Plan* will make provision for enhanced services and social infrastructure. The completion of the bypass has reduced the volume of through traffic in Fermoy, which has created opportunities for rejuvenation of the town centre. The setting of Fermoy within the Blackwater Valley provides an attractive backdrop for the town and should be protected.

North and West Cork Strategic Plan 2002 to 2020

The core purpose of the North and West Strategic Plan is to make North and West Cork an attractive place for young adults to live in and encourage inward migration. The strategy plan identifies groups of towns that lend themselves to closely linked and complimentary development whereby Fermoy is part of the North Cork

group, which consists of Charleville, Kanturk, Fermoy, Mallow, Millstreet, Mitchelstown and Newmarket. According to the Strategy Plan, this group could be characterised as 'urban development nodes', capable of carrying an important range of services and employment in order to sustain their immediate population and the rural-based population within their hinterland. The strategy sets a target to double the household numbers of Fermoy by 2020, in a planned incremental fashion.

The strategy outlines that targets for growth in towns such as Fermoy should be set in conjunction with residents and the towns' representative bodies. In achieving sustainable settlement patterns the strategy outlines that the emphasis of the access strategy, associated with the proposed settlement pattern is on linking these towns with good connecting roads and with public transport and promoting the development of small towns and villages along these public transport corridors. It is recommended that there should be an emphasis on concentric rather than radial routes, which would support complementary and co-operative development between towns and villages and enhance the viability of local services.

Cork Area Strategic Plan 2001 to 2020

The Cork Area Strategic Plan (CASP) provides a vision and strategy for the development of the Cork region up to 2020. The strategy was recently reviewed to take account of population and economic growth since the 2001 strategy.

CASP promotes sustainable forms of spatial development for the Cork area by creating a sustainable mixture of land uses with efficient transport so that movement growth is facilitated and optimised. It also promotes the reduction of peripherality by creation of multi-modal movement corridors and enhancement and the enhancement of 'gateway' functions. CASP identifies Fermoy as a ring town and outlines that within the Ring Towns and Rural areas it is anticipated that the vast proportion of the growth in employment will occur in Mallow Town with further considerable growth in Fermoy town also.

In terms of infrastructure and transport, CASP acknowledges that Fermoy is strategically situated on the Dublin Road, which has helped to attract substantial inward investment in the past. The Plan outlines that the bypass will allow Fermoy to accommodate substantial new growth to the north and the south without adversely affecting the town's attractive setting and historic townscape. It also identifies the need to improve a high quality bus service connecting the town to Cork City.

CASP envisages that minor retail centres are expected to develop at Fermoy, Youghal, Bandon, Carrigaline, Hollyhill and Cobh. However it is important to stress the need for in-depth study, and that phasing of retail development in relation to housing growth should be directed in a sensitive way and regularly reviewed.

CASP identifies that lands to the south of the town has land due south of the town is well served by way of strategic infrastructure and should therefore be developed in the earlier stages of the CASP plan, while

lands to the north of the town should be developed at a later stage on the completion of the bypass and adequate provision of sanitary services.

Fermoy Electoral Area Local Area Plan 2005

The Fermoy Electoral Area comprises approximately 746 km². It is located to the North East of Cork City. The Electoral Area is bordered to the south by Midleton and Blarney Electoral Areas, to the west by Mallow Electoral Area, to the north by Counties Limerick and Tipperary and to the East by County Waterford. The plan acknowledges that the majority of the built up area of Fermoy is administered by Fermoy Town Council, who are a separate planning authority, and prepare their own development plan for their jurisdiction.

The Fermoy Electoral Area Local Area Plan governs the environs of Fermoy. In this Local Area Plan, Fermoy is identified as a Main Settlement in the Fermoy Electoral Area, while retaining its status as a Ring Town to Cork City in the overall strategy of the Cork County Development Plan 2003 (as varied), as detailed in Chapter 2, Volume 1 of that Plan.

It outlines that the strategic aims for Fermoy are to promote Fermoy as a significant location for residential development to complement its important employment and commercial functions (p. 35).

Eleven parcels of land for residential development have been reserved in two main areas to the north and south of the town, respectively. In terms of industry and enterprise, three parcels of land have been reserved for industry and enterprise development. To the north of the town a large area is reserved mainly for high technology development and allows some flexibility in the terms of the specific zoning objective to allow for limited non-retail commercial development. Areas to the south of the town have been reserved for a variety of industrial uses while lands to the west of the town is intended to facilitate future expansion of existing industrial uses.

5 EXISTING ENVIRONMENT

5.1 INTRODUCTION

This section of the report describes the current state of the environment in the Fermoy Development Plan area as an entire site. Sections 5.2 to 5.10 below describe the baseline conditions for each topic. As set out in the SEA guidelines (e.g. Population, Material Assets etc) are fully addressed in accordance with the SEA Guidelines. Figure 5.1a presents the boundary of the study area subject to this SEA.

In accordance with the SEA guidelines no primary research was carried out in the collection of data. Existing and available information sources were used. These include the following:-

- Central Statistics Office;
- National Parks and Wildlife Service data base;
- Planning and Policy documents;
- Geological Survey of Ireland;
- South Western Regional Fisheries Board
- The Environmental Protection Agency; and
- Ordnance Survey of Ireland.
- Office of Public Works

Baseline data was collected relating to the indicators described in the SEA directive: biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between these factors.

5.2 BIODIVERSITY, FLORA AND FAUNA

5.2.1 Existing Policies

5.2.2 Baseline

The term 'biological diversity', often abbreviated to 'biodiversity' refers to the variety of living things. In the same way as a rich diversity of cultures enhances the quality of our lives, so does a rich diversity of plants and animals. Biological diversity is known to be important to the proper functioning of the planet's life support system. Conservation of biological diversity has, therefore, become one of the key aims of governments throughout the world.

Designated Sites

There are three designated sites within the Fermoy Town Council boundary, namely; *Blackwater Callows* SPA (Site Code: 004094), *Blackwater River (Cork/Waterford)* cSAC (Site Code: 002170) and *Blackwater River Callows* pNHA (Site Code: 000073). There are also a number of sites designated for biodiversity conservation within 10km of Fermoy town, these are described in this section.

Sites of International Importance

The Natura 2000 Network is a network of important ecological sites across the European Union. It is comprised of areas known as Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). The total land and freshwater area within the Natura 2000 network in Ireland is some 11,644km²: this includes some 2,300km² of designated marine areas. Whilst the designation of an area as a Natura 2000 site greatly restricts development, the designation does not necessarily mean limitation of activities within the site or surrounding area provided these activities are environmentally sensitive and do not impact negatively upon the habitats, or species for the protection of which the site has been designated.

Candidate Special Areas of Conservation (cSACs)

Candidate Special Areas of Conservation (cSACs) are protected under the European Union (EU) 'Habitats Directive' (92/43/EEC), as implemented in Ireland by the European Communities (Natural Habitats) Regulations, 1997. There is one cSAC situated within 10km of the town boundary, the *Blackwater River (Cork/Waterford)*, which flows through Fermoy town boundary (Site Code: 002170). See Table 5.2.1 for the key features of this designated site.

Special Protection Areas (SPAs)

Special Protection Areas (SPAs) were initially designated under Directive 79/409/EEC, the Directive on the Conservation of Wild Birds ('The Birds Directive'), and are now protected as Natura 2000 Sites under the EU 'Habitats Directive'. There is one SPAs within 10km of the Fermoy town boundary, namely *Blackwater Callows* (Site Code: 004094). Blackwater Callows lies within the town boundary. See Table 5.2.1 for the key features of this designated site.

Ramsar sites

Ramsar sites are internationally important wetlands where water is the primary controlling environmental factor. The full title of the Ramsar convention is *The Convention on Wetlands of International Importance, especially as Waterfowl Habitat*. The convention was developed and adopted by participating nations at a meeting in Ramsar, Iran on February 2, 1971 and came into force on December 21, 1975. There are no Ramsar sites within 10km of the Fermoy town boundary.

Sites of National Importance

Proposed Natural Heritage Areas (pNHA)

Sites of national importance in the Republic of Ireland are termed, proposed Natural Heritage Areas (pNHAs). While the Wildlife (Amendment) Act (2000) has been passed into law, pNHAs will not have legal backing until consultative process with landowners has been completed; this process is currently underway. *Blackwater River Callows* (Site Code: 000073) lies within Fermoy town boundary. There are eight other pNHAs within 10km of Fermoy town boundary including *Blackwater Valley (The Beech Wood)* (Site Code: 001797), *Blackwater Valley (Cregg)* (Site Code: 001796), *Cregg Castle* (Site Code: 002050), *Blackwater Valley (Killathy Wood)* (Site Code: 001795), *Convamore, Ballyhooly (Near Fermoy)* (Site Code: 002097), *Glanworth Ponds* (Site Code: 000085) *Araglin Valley* (Site Code: 001029) and *Brown's Farm, Togher Cross Roads* (Site Code: 001169). Table 5.2.1 gives details of the key ecological features of these sites, and also gives their distances and directions from Fermoy town.

Table 5.2.1 presents details of the key ecological features of the cSACs, SPAs and pNHAs within 10km of Fermoy; it also gives their distances and directions from Fermoy, and provides a summary of the key ecological features for which the sites have been designated.

Table 5.2.1: Designated sites within 10km of Fermoy and the key ecological features of the sites

Name	Site Code	Key Features	Distance (and direction) from the Fermoy
Blackwater Callows SPA	004094	The River Blackwater is a noted salmonid fishery, and the river also has Sea Lamprey (<i>Petromyzon marinus</i>), Brook Lamprey (<i>Lampetra planeri</i>), River Lamprey (<i>L. fluviatilis</i>) and Twaite Shad (<i>Alosa fallax fallax</i>). Otter is frequent throughout the site. This site is of importance for its populations of wintering waterfowl, including an internationally important population of Whooper Swan and nationally important populations of Wigeon, Teal and Black-tailed Godwit. The presence of Whooper Swan, as well as Little Egret, is of particular note as these species are listed on Annex I of the E.U. Birds Directive.	Within Fermoy town boundary
Blackwater River (Cork/Waterford) cSAC	002170	Overall, the River Blackwater 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. Two Special Protection Areas, designated under the E.U. Birds Directive, are also located within the site - Blackwater Callows and Blackwater Estuary. Additionally, the importance of the site is enhanced by the presence of a suite of uncommon plant species.	Within Fermoy town boundary
Blackwater River Callows pNHA	000073	The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. The site is also important for the presence of several Habitats Directive Annex II animal species, including Sea Lamprey (<i>Petromyzon marinus</i>), Brook Lamprey (<i>Lampetra planeri</i>), River Lamprey (<i>L. fluviatilis</i>), Twaite Shad (<i>Alosa fallax fallax</i>), Freshwater Pearl-mussel (<i>Margaritifera margaritifera</i>), Otter (<i>Lutra lutra</i>) and Salmon (<i>Salmo salar</i>).	Within Fermoy town boundary

Blackwater Valley (The Beech Wood) pNHA	001797	The Beech Wood site is part of the Castle Hyde estate. It comprises both wet and dry deciduous woodland. There is a good ground flora and many woodland birds, the wood also provides cover and seclusion for otters and other mammals.	0.3km west of Fermoy town boundary
Araglin Valley pNHA	001029	This site is predominantly broadleaved woodland. Oak (<i>Quercus</i> sp.) and Beech (<i>Fagus sylvatica</i>) are joined by Hazel (<i>Corylus avellana</i>), Wild Cherry (<i>Prunus avium</i>) and Goat Willow (<i>Salix caprea</i>). The ground flora is relatively rich with Pignut (<i>Conopodium majus</i>), Wild Garlic (<i>Allium ursinum</i>), Garlic Mustard (<i>Alliaria petiolata</i>) and Wild Strawberry (<i>Fragaria vesca</i>). The presence of Ivy Broomrape (<i>Orobancha hederæ</i>), a local species within Ireland, suggests that the woodland, along with its attendant Ivy (<i>Hedera helix</i>) is long established.	4.4km southeast of Fermoy town boundary
Blackwater Valley (Cregg) pNHA	001796	Cregg is one of 10 sites along the Blackwater Valley. The site comprises dry deciduous woodland, lowland dry grassland, the river channel, scrub and mixed woodland.	3km west of Fermoy town boundary
Cregg Castle pNHA	002050	This site is a nursery roost of the Daubenton's Bat (<i>Myotis daubentonii</i>). Approximately 100 bats hang from the ceiling of a domed ground floor room in Cregg Castle. This is a site of national importance because it is the second largest nursery colony of this species in the country.	3.4km west of Fermoy town boundary
Blackwater Valley (Killathy Wood) pNHA	001795	Killathy Wood is a small strip of mixed woodland situated on the north bank of the River Blackwater. The dominant species in this woodland is Ash (<i>Fraxinus excelsior</i>) with some Oak (<i>Quercus petraea</i>) and Scot's pine (<i>Pinus sylvestris</i>).	4.8km west of Fermoy town boundary
Convamore, Ballyhooly (Near Fermoy) pNHA	002097	This site is a male roost of the Daubenton's bat (<i>Myotis daubentonii</i>). Approximately 50 bats hang from the roof of the wine cellars in the ground floor of the ruined Convamore House. This is a site of national importance because it is the only known male roost of this species in the country.	9km west of Fermoy town boundary
Glanworth Ponds pNHA	000085	The Glanworth Ponds are new records for the occurrence of the Golden Dock (<i>Rumex maritimus</i>) in East Cork. Golden Dock is a Red Data Book species	8km north west of Fermoy town boundary

		where occurrence is apparently declining because often its appearance in a place is only fleeting; it depends on low water levels to provide the right conditions and stimulus for seed germination.	
Brown's Farm Togher Cross Roads pNHA	001169	It is a small site comprising 4 fields, at the intersection of their hedges in the middle, is a small area of exposed mud, whose vegetation is trampled and grazed. The site has been designated for the protection of the Red Data Book species - Golden Dock (<i>Rumex maritimus</i>) which has been recorded at the site.	9.8km north west of Fermoy town boundary

Shadow Sites

There is one site within 10km of the town boundary that is included in the *NGO Special Areas of Conservation Shadow List* (Dwyer, 2000), Blackwater River Callows pNHA, which lies within Fermoy town boundary. The site has been included for the presence of the Habitats Directive Alkaline Fens (Code: 7230, in the *NGO Special Areas of Conservation Shadow List*). The Shadow List has been compiled by a grouping of Irish conservation Non-Government Organisations (NGOs), and includes sites, which, according to the NGOs, fulfil the ecological requirements for SAC designation.

Important Bird Areas (IBAs)

Birdlife International (Hunt *et. al.* 2000) classifies the area *River Blackwater Callows* (Republic of Ireland IBA no. 92) as an International Bird Area. The site consists of a narrow flood-plain of the River Blackwater surrounded by parallel sandstone ridges and extending 29 km along the river from Fermoy east to Cappoquin, encompassing the river itself and adjacent wet grassland along either side. The river flood-plain supports important numbers of wintering waterfowl. Additional species wintering in numbers of national importance are Wigeon (*Anas Penelope*) (4,217 birds, 1996), Teal (*Anas crecca*) (1,844 birds, 1996), Mallard (*Anas platyrhynchos*) (844 birds, 1996) and Sholeler (*Anas clypeata*) (50 birds, 1996). The IBA listed as being of High International Importanc overlaps with Wildfowl Sanctuary (River Blackwater Callows; area not known). 1,053 ha of the IBA forms part of the Special Protection Area (River Blackwater Callows, 1,053 ha).

Salmonid Water

The Blackwater River is designated as a 'Salmonid Water'. The objective of the designation is for the maintenance of water quality for salmon and trout. Designated rivers are protected under the European Communities (Quality of Salmonid Waters) Regulations 1998, which transposes the European Freshwater Fish Directive 1978 (78/659/EEC) Council directive of 18th July 1978 on the quality of freshwaters needing protection or improvement in order to support fish life (78/659/EEC) (Freshwater Fish Directive) regulations, 1988. S.I. No. 84of 1988.

Wildlife Sanctuaries

The *River Blackwater Wildfowl Sanctuary* is designated as a Wildlife Sanctuary under the Wildlife Act of 1976; the precise boundaries of the Wildfowl Sanctuary are not however available. Wildlife Sanctuaries protect certain species of ducks, geese and waders from hunting. However, the boundaries are usually a compromise and are drawn up under consultation with local gun clubs and landowners. Whilst affording a degree of protection to wildfowl, which learn quickly the location of areas safe from shooting, this designation has little significance in planning and development and is not normally recognised by local authorities (Hickie 1997).

Other Designated sites

There are no Statutory Nature Reserves within 10km of Fermoy.

5.2.2.1 Flora of Fermoy

A plant species list for 10km squares W79 and W89 was generated from the CD-Rom version of the *New Atlas of British and Irish Flora* (Preston *et. al.*, 2002). This list was then compared to the lists of species protected under the Flora (Protection) Order of 1999; and those included in the Irish Red Data Book (Curtis and McGough, 1988). Table 5.2.2 shows rare and protected plant species found within 10km squares W79 and W89.

Table 5.2.2: Rare or Protected Plant Species recorded by Preston *et. al.* (2002) from 10km squares W79 and W89.

Species	Status within 10km square W79	Status within 10km square W89	Notes
Corncockle (<i>Agrostemma githago</i>)	Not Present	Pre 1970	IUCN = Extinct
Cornflower (<i>Centaurea cyanus</i>)	Not Present	Pre 1970	IUCN = Extinct
Darnel (<i>Lolium temulentum</i>)	Not Present	Pre 1970	IUCN = Extinct
Golden Dock (<i>Rumex maritimus</i>)	Not Present	1987 - 1999	IUCN = Rare IRDB TN = 7 (Rare)
Heath Cudweed (<i>Omalotheca sylvatica</i>)	Not Present	Pre 1970	Flora Protection Order IUCN = Rare IRDB TN = 8 (Rare)
Henbane (<i>Hyoscyamus niger</i>)	Not Present	Pre 1970	IUCN = Rare IRDB TN = 8 (Rare)
Ivy Broomrape (<i>Orbanche hederæ</i>)	1987 - 1999	1987 - 1999	IUCN = not threatened. IRDB TN = 5 (Rare).
Pennyroyal (<i>Mentha pulegium</i>)	Not Present	Pre 1970	Flora Protection Order IUCN = Vulnerable IRDB TN = 9 (Vulnerable)

Two Flora (Protection) Order species are recorded from 10km National Grid squares W79 and W89 as follows:

Heath Cudweed (*Omalotheca sylvatica*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (Pre 1970) is listed as "Rare" in the Red Data book. It occurs in 'upland pastures and damp, sandy places' (Webb *et. al.*1996). It has not recently been recorded on Co. Cork (Curtis and McGough 1988).

Pennyroyal (*Mentha pulegium*) was recorded by Preston *et. al.* (2002) within 10km square W89, pre-1970. It is a perennial mint of damp sandy places and has been recorded from over 50 sites throughout Ireland. The majority of these sites are concentrated in the southwest of Ireland, notably in Kerry and Cork (Curtis and McGough, 1988).

Six further species recorded from 10km National Grid squares W79 and W89 are listed in the Irish Red Data Book:

Corncockle (*Agrostemma githago*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (Pre 1970) is listed as “Extinct” in the Red Data Book. Curtis and McGough, (1988) describe it as being, ‘*widespread throughout corn fields in Ireland at one stage, but is now believed to be extinct.*’(Curtis and McGough 1988).

Cornflower (*Centaurea cyanus*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (Pre 1970) is listed as “Extinct” in the Red Data Book. Curtis and McGough, (1988) describe it as being, ‘*an annual weed of corn and flax fields...Its decline is attributed to more effective methods of seed cleaning, weed control and a decline in tillage*’ Curtis and McGough 1988).

Darnel (*Lolium temulentum*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (Pre 1970) is listed as “Extinct” in the Red Data book. It occurred in *cultivated fields and waste ground* but has become extinct due to *increasingly advanced agricultural practices such as seed cleaning and herbicide application* (Curtis and McGough 1988).

Golden Dock (*Rumex maritimus*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (between 1987 and 1999), is listed as ‘Rare’ in the Red Data Book. Golden Dock occurs in ‘*ditches and by recently drained lakes and ponds; very rare.*’ (Webb *et. al.*, 1996).

Henbane (*Hyoscyamus niger*) which is recorded by Preston *et. al.* (2002), as being present within the 10km grid square W89 (Pre 1970) and is listed as ‘Rare’ in the Red Data Book. Webb *et. al.*, (1996) describes it as occurring on *sandy or stony shores throughout; often impermanent*. Curtis and McGough, (1988) describe it as the species as having undergone a dramatic decline and in only being present in Wicklow, Wexford, Dublin, Louth, Kilkenny, Galway and Down.

Ivy Broomrape (*Orbanche hederæ*), which grows parasitically on Ivy, was recorded by Preston *et. al.* (2002) within the 10km squares W79 and W89 (1987 – 1999). Curtis and McCough (1988) describe Ivy Broomrape as occurring occasionally in the southern half of Ireland, becoming scarcer northwards.

5.2.2.3 Fauna of Fermoy

Mammals

In *Exploring Irish Mammals*, Hayden and Harrington (2000) present the distribution of mammal species by 20km x 20km squares, each of which is composed of four Ordnance Survey 10km National Grid Squares. Fermoy lies within the two 20km squares composed of W99, W89, W98, W88, W79, W69, W78 and W68. Table 5.2.3 presents details of the mammal species found in these 20km squares.

Table 5.2.3 Legally protected mammal species recorded by Hayden and Harrington as being present in the 20km x 20km square comprising 10km National Grid Squares W99, W89, W98, W88, W79, W69, W78 and W68.

Species	Indication of National Distribution	Level of Protection	Likelihood of the species occurring in Fermoy
Badger <i>Meles meles</i>	Throughout Ireland	Irish Red Data Book 'Internationally Important' Wildlife (Amendment) Act (2000).	Unlikely to be present within the town boundary but likely to be present in close vicinity of the town.
Brown long-eared bat <i>Plecotus auritus</i>	Throughout Ireland	Irish Red Data Book 'Internationally Important'. Habitats Directive Annex IV. Berne Convention Annex II.	Likely to be present in the vicinity of town, roosting in buildings.
Common Pipistrelle/ Soprano pipistrelle <i>Pipistrellus pipistrellus / Pipistrellus pygmaeus</i>	Throughout Ireland	Irish Red Data Book 'Internationally Important'. Habitats Directive Annex IV. Berne Convention Annex II.	Likely to be present in the town, roosting in buildings.
Daubenton's bat <i>Myotis daubentonii</i>	Throughout Ireland	Irish Red Data Book: 'Internationally Important' Bern Convention Appendix II. Habitats Directive Annex IV.	Likely to be present in the vicinity of the town.
Hedgehog <i>Erinaceus europaeus</i>	Throughout Ireland	Berne Convention Appendix III.	Likely to be present in larger gardens and 'wild' areas within the town.
Irish (mountain) hare <i>Lepus timidus hibernicus</i>	Throughout Ireland	Wildlife (Amendment) Act (2000). Irish Red Data Book 'Internationally important'. Berne Convention Appendix	Unlikely to be present within the town boundary but likely to be present in close vicinity of the town.

		III.	
Irish stoat <i>Mustela ermineae hibernica</i>	Throughout Ireland	Wildlife (Amendment) Act (2000). Berne Convention Appendix III.	Unlikely to be present within the town boundary but likely to be present in close vicinity of the town.
Leisler's bat <i>Nyctalus leisleri</i>	Widespread distribution although not abundant	Irish Red Data Book 'Internationally Important'. Habitats Directive Annex IV. Berne Convention Annex II.	May be present in the town, roosting in buildings.
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	South West & West of Ireland	Irish Red Data Book 'Internationally Important'. Habitat Directive Annex I Habitats Directive Annex IV Berne Convention Appendix II.	May be present in the vicinity of the town, roosting in buildings.
Otter <i>Lutra lutra</i>	Throughout Ireland	Irish Red Data Book 'Internationally important'. Habitats Directive Annexes II and IV. Berne Convention Appendix III. Wildlife (Amendment) Act (2000).	Likely to be present in the Blackwater River.
Pygmy shrew <i>Sorex minutus</i>	Throughout Ireland	Berne Convention Appendix III.	Likely to be present in rough areas of scrub and grassland in close vicinity to the town. It is considered unlikely that suitable habitat exists within the town boundary.
Red squirrel <i>Sciurus vulgaris</i>	Scattered throughout Ireland, but with evidence of a recent decline.	Wildlife (Amendment) Act (2000).	Likely to be present in woodlands within a few kilometres of the town or possibly within the town itself.

Birds

Table 5.2.4 presents details of bird species of conservation concern recorded by Gibbons *et. al.* (1993) as breeding within OS 10km grid squares W79 and W89, within which Fermoy is located. Species considered here to be of high conservation concern are those listed either on the 'Red List' by Lynas *et. al.* (2007), as

being of high conservation concern in Ireland; those listed in the Irish Red Data Book (RDB) (Whilde, 1993) or those listed under Appendix I of the EU 'Birds Directive'.

Table 5.2.4 Selected bird species (those of high conservation concern) recorded from 10km National Grid Squares W79 and W89 during the 'New Atlas Survey' 1988-91 (Gibbons *et. al.*, 1993).

Species	Breeding status within 10km square W79	Breeding status within 10km square W89	Notes
Curlew <i>Numenius arquata</i>	Probable/Possible Breeding	Not Present	Annex I Birds Directive Amber List. (Lynas <i>et al.</i> , 2007)
Hen Harrier <i>Circus cyaneus</i>	Probable/Possible Breeding	Not Present	Red List (Lynas <i>et al.</i> , 2007)
Kingfisher <i>Alcedo atthis</i>	Confirmed Breeding	Not Present	Annex I Birds Directive Amber List (Lynas <i>et al.</i> , 2007)
Yellowhammer <i>Emberiza citrinella</i>	Probable/Possible Breeding	Not Present	Red List (Lynas <i>et al.</i> , 2007)

Curlews are frequently found nesting at high altitudes in damp upland and northern moorland areas. Curlews have also however occupied lowland regions such as agricultural habitats e.g. pastures & cereals (Gibbons *et al.*, 1993). Its rate of expansion into these regions is thought to have declined by the 1950's. No suitable breeding habitat for Curlew exists close to Fermoy.

Hen Harrier show strong preference for undulating moorland, usually below 500m, with a lush covering of heather, but they also breed in young forestry plantations. The proliferation of upland afforestation schemes in the last 40 years has favoured the species by providing at least in the early years of tree growth, enhanced hunting and nesting grounds free from human disturbance (Gibbons *et. al.*, 1993). No suitable breeding habitat for Hen Harrier exists within Fermoy town boundary.

Kingfisher requires relatively shallow and slow moving freshwater, with thriving populations of small fish on which to feed, and vertical banks of fairly soft material where they can excavate their nesting burrows (Gibbons *et. al.*, 1993). There is potential for Kingfisher to occur on the Blackwater River.

Gillmore (1979) found that Yellowhammers had disappeared from agricultural areas in which tillage comprises the lowest proportion (<10%) of agricultural land use. Outside the breeding season, the Yellowhammer is heavily dependant for food on cereals and other large grass seeds (see Gibbons *et al.*, 1993). Yellowhammer was recorded within the 10 km Square W79. There is little to no agricultural land within Fermoy town boundary. It is considered highly unlikely that Yellowhammer breed within the town boundary.

Reptiles and Amphibians

It is highly likely that common frog (*Rana temporaria*) and probable that smooth newt (*Triturus vulgaris*) may utilise wet areas such as drains, ponds, etc within the town boundary. The Viviparous Lizard (*Lacerta vivipara*) has been recorded within 10km squares W79 and W89 (Marnell, 2002). It is considered highly unlikely that Viviparous Lizard breed within Fermoy town boundary.

Terrestrial Invertebrates

There are no recent records of the Habitats Directive Annex II butterfly species marsh fritillary (*Euphydryas aurinia*) in OS 10km National Grid squares W79 and W89 (Asher *et. al.* 2001). It is considered unlikely that this species occurs within the town boundary.

None of the three species of *Vertigo* snails (*V. geyeri*, *V. angustior* and *V. moulinsiana*) that are listed under Annex II of the EU Habitats Directive are known to occur in the town boundary (NPWS, 2008). The Kerry slug (*Geomalacus maculosus*) has not been recorded within Fermoy town boundary (NPWS, 2008).

5.2.2.4 Aquatic biodiversity

The River Blackwater rises in east Kerry where it flows west through Kanturk. The Blackwater turns eastwards along the northern slopes of the Boggeraghs before entering the narrow limestone strike vale at Mallow. The valley deepens at the Nagles Mountains and the river continues west where it bisects the town of Fermoy and flows south of the Araglin valley. At Cappelquin the river turns sharply south and enters the sea at Youghal.

The Blackwater River holds populations of Sea Lamprey, River Lamprey, Brook Lamprey, Twaite Shad and Atlantic Salmon (NPWS, 2008). The Habitats Directive Annex I freshwater pearl-mussel (*Margaritifera margaritifera*) has been recorded in the Blackwater River (Moorkens, 1999).

The water quality of the Blackwater River is continually monitored by the EPA. The most recent water quality survey was carried out in 2003 at a sampling station within Fermoy town boundary where a 'Q value' rating of 4 (meaning that it is of 'Good' status) was recorded. The next station downstream which is located 5.5km east of Fermoy has a 'Q-value' rating of 4 also.

5.2.2.5 Ecological Networks

An ecological network is a network that consists of core areas of high biodiversity value and corridors or 'stepping stones' which are linkages between them. Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated. They also provide important linkages for wildlife, flora and fauna and are important for mammals, including bats, and for birds and invertebrates. Treelines and hedgerows are likely to be important

components of Fermoy's ecological networks, allowing for linkages between and within areas of high biodiversity such as woodlands and wetlands in the surrounding countryside. The ecological network approach supports management of linkages between areas of biodiversity value, between areas used by species for different functions and between local populations of different species.

The importance of ecological networks is the subject of Article 10 of the EU Habitats Directive, which recognises that ecological networks are corridors and 'stepping stones' for wildlife, flora and fauna allowing for migration, dispersal and genetic exchange. The Habitats Directive requires that ecological connectivity and areas of ecological value outside the network of designated ecological sites (cSACs and SPAs) are maintained and it recognises the need for the management of these through land-use planning and development policies.

5.2.2.6 Invasive Species

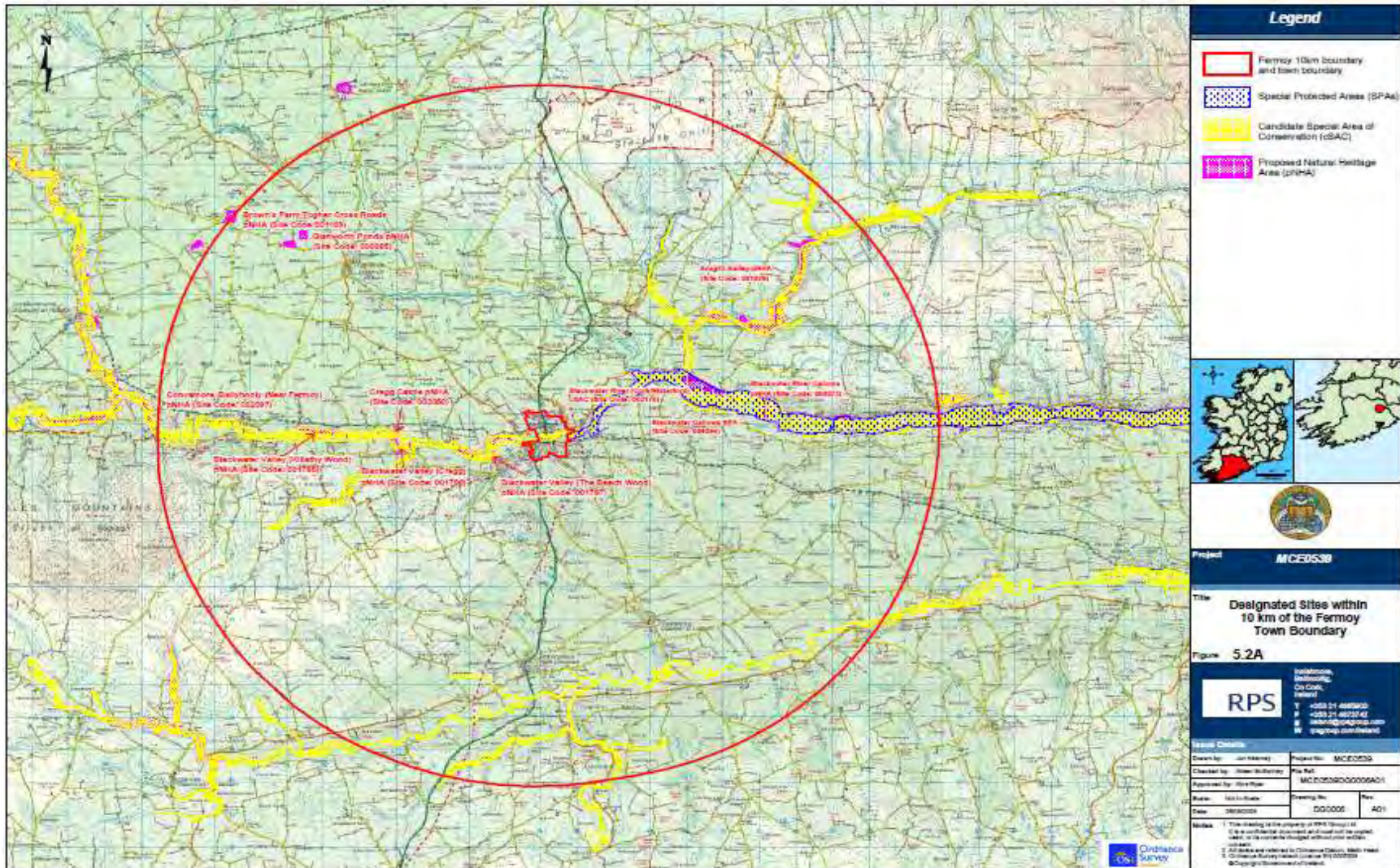
Invasive species is the term used to describe a non-native species which becomes established in natural, or semi natural ecosystems or habitats, is an agent of change, and threatens native biological diversity (or has the potential to do so).

Other potential sources for invasive species include surface water runoff from garden centres, which may bring seeds or fragments of living plants into natural systems; and exotic species planted in parks and residential gardens, which may 'escape' and spread into natural habitats.

Other invasive species threatening natural systems in Ireland include Rhododendron sp., Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and, and any of these, or other invasive species, could potentially become a problem for biodiversity in Fermoy.

The red squirrel population within the Fermoy town boundary and the environs is under threat by the rapid expansion in the range of the introduced grey squirrel (*Sciurus carolinensis*). Red squirrel abundance declines with the arrival of grey squirrel and red squirrel generally disappear from woods that have been invaded by grey squirrel. Factors favouring grey squirrel include their larger size, which allows them to out compete red squirrel for food resources; their wider dietary range, which allows them to utilise foods such as unripe acorns, which are toxic to red squirrels (NPWS / EHS, 2008)

Figure 5.2.1 Designated Sites within 10km of Fermoy Town



5.2.3 Impact Assessment – existing environmental problems and constraints/Threats

The following environmental problems and constraints / threats to biodiversity in Fermoy have been identified:

- There is potential for impacts to the aquatic environment in the form of residential, industrial and agricultural run-off, other municipal sources of pollution, fragmentation of river corridors and soil erosion. These risks apply in particular to the Blackwater River. Under the Water Framework Directive the River Blackwater is currently classified as “Possibly at Risk of Not Achieving Good Status” Under the Water Framework Directive, water quality must achieve “good status” by 2015.
- Greenfield Development: All developments which take place on greenfield sites are likely cause some degree of negative impact on biodiversity. Where developments i.e. roads, housing and other infrastructural developments have occurred on greenfield sites they have replaced some semi-natural and natural areas with artificial surfaces causing a gradual loss of biodiversity.
- Invasive species: There is potential for invasive species to enter surface waters and marine systems from a number of sources including runoff from garden centres, from boats, by dumping of waste from fish tanks and garden ponds, and perhaps also from aquaculture facilities. Grey Squirrels are currently posing a threat to red squirrels within the Fermoy area there is therefore a need to include a policy in the new plan to prevent the introduction of those alien species which threaten ecosystems, habitats or species. The utilisation of native species in amenity planting and stocking along with change in community actions to reduce the introduction and spread of non-native species should be encouraged.
- Removal of Ecological Corridors: The removal of ecological networks / corridors is a significant issue. It is recognised that there has been a significant increase in hedgerow removal throughout Ireland in recent years.
- Climate Change: Until recently biodiversity losses have been attributed to the spread and increased environmental impact of people, however, it seems likely that future losses will increasingly result from human induced global climate change. Climate change considerations must therefore be seen as central to the protection of the natural environment.

5.2.4 Evolution without implementation of the plan

In Fermoy, biodiversity, flora and fauna is offered protection through the County Development Plan and the Town Plan. Without implementation of the new Plan it is expected that there would be a continual loss of greenfield sites and semi-natural habitats, potential for pollution of surface waters and indirect impact to the aquatic environment and spreading of invasive species.

In general terms, there would be no long-term guidance and each planning application would be dealt with on an individual basis, resulting in potential for long terms individual and cumulative impacts on habitats (including fragmentation), water and other natural resources.

5.3 POPULATION AND HUMAN HEALTH

This section of the report outlines the policies relevant to population in the Fermoy Town Council area and population, employment and household data primarily retrieved from the Census of Population 2006. The main threats in terms of population and Human Health in the Plan Area include infrastructure constraints, development on greenfield lands and flooding.

The 2006 Census of Population identified a population of 2,275 within the Fermoy Town Council boundary area and the Fermoy Rural area had a population of 3,598 people. Fermoy Town Council has a total area of 132 hectares.

5.3.1 Policy

Relevant National plans outlined in Chapter 4 including the National Spatial Strategy, the National Development Plan, the Retail Planning Guidelines, the Residential Planning Guidelines and the Planning and Development Act are all considered key plans/acts to reference in relation to population and human health. At a regional level the Regional Planning Guidelines for the Southwest Region will inform the policies and objectives for population and human health. While at a local level the Cork Strategic Retail Study (CSRS) 2008, Cork County Development Plan 2003, draft Cork County Development Plan 2007, North and West Cork Strategic Plan 2002 to 2020 and the Fermoy Electoral Local Area Plan 2005 will inform mitigation, policies and objectives in relation to the human environment (refer to Chapter 4 Related Plans).

5.3.2 Baseline

This section describes the evaluation as set out in the SEA regulations of the environmental topic of population. For the purposes of evaluation, the impacts on population are divided into population impacts in terms of job creation and impacts on population in terms of residential population. The initial section presents a synopsis of the baseline conditions followed by a background to the Plans and policies, which influence the population of Fermoy.

Census Data Analysis

Table 5.3.1 indicates trends in population during the intercensal period between 1996-2002, Cork County recorded an increase (10.7%) in population, while Fermoy Urban District saw a decrease of 1.7% and Fermoy Environs saw an increase of 17.4%. Therefore it was evident that during this period the population of Fermoy Urban District was in decline while the Rural District saw a large increase.

During the most recent intercensal period of 2002-2006, Cork County recorded another increase in its population (11.4%). In the same period the population of Fermoy Urban area increased 0.2%, while Fermoy Environs dramatically increased by 42%. Therefore the most significant increase in population between 2002 – 2006 was in the Fermoy rural area. It should be noted at this stage that the Fermoy Electoral Area Local Area Plan 2005 has zoned approximately 90.6 hectares for residential development. CSO statistics show that

the number of houses constructed between 1996 and 2006 for the rural area of Fermoy was just over 650. Compared to the 150 houses constructed in Fermoy Urban district within the same timeframe, it can be deemed that this scale of development in the rural parts of Fermoy is the reason for such significant increases in the population in the environs of the town.

Table 5.3.1: Trends in Population between the Censal Periods of 1996-2002 and 2002-2006 for County Cork, Fermoy Urban and Fermoy Environs

Area	1996	2002	% Change 96-02	2006 ¹	% Change 02-06
Fermoy Urban	2,310	2,270	-1.73%	2,275	0.22%
Fermoy Environs	2,159	2,534	17.4%	3,598	41.99%
Co. Cork	293,323	324,767	10.7%	361,877	11.4%

Source: Census of Population 1996, 2002 and 2006.

The age structure of the population of Fermoy is important to examine, as this will have implications for future housing demand, schools and health care services. It must be noted that the figures in Table 5.3.2 below are based on the Fermoy town Council area, which comprises of Fermoy Urban; the total population figure for this area is 2,275. Three categories of the population structure are examined:

- the young age dependant population (i.e. those persons within the 0-14 age cohort);
- the old age dependent population (i.e. those persons in the 65+ age cohort); and
- the working/independent age population (i.e. those persons within the 15-64 age cohort).

Table 5.3.2 Fermoy Urban Age Cohort of the population 2002 - 2006

Area	0-14	15-64	65+	Total
Fermoy Urban 2006	363 (16%)	1,585 (69.7%)	327 (14.3%)	2,275
County Cork	78,863 (22%)	245,103 (68%)	37,911 (10%)	361,877

In 2006, 16% of the population of Fermoy Urban District was within the young age dependant population. This is significantly below that for the County, which has a young age dependant population of approximately 22%. This has negative implications for the future working/independent age cohort as there is likely to be a natural decline in the future housing and employment demand in the area, as there is likely to be less young adults moving into the labour market and setting up independent households in the future.

In 2006, 14.3% of the population in Fermoy Urban were within the old age dependent population of people approximately 327 people. Fermoy had a greater number of persons aged 65 and over than the County which only recorded 10% of its population within the 65+ age cohort in 2006, this is indicative of an ageing population in Fermoy Urban. This increase in the percentage of an elderly population has long-term implications relating to health and social service needs.

Reflecting the national economic growth of recent years and increased participation in employment, a total of 90.5% of the labour force¹ in Fermoy Town were engaged in employment in 2006, which is below the County average of 94%. In 2006 7.8% of the labour force in Fermoy was unemployed while the county average was slightly lower at 5% which is in line with labour force figures. The largest percentage of persons at work in Fermoy in 2006 was within the manufacturing sector (23%), the second largest employer was the professional sector accounting for 13% of all people at work in the town, while 12.5% of people were employed in sales, and just over 12% were working in building and construction.

Policy Background

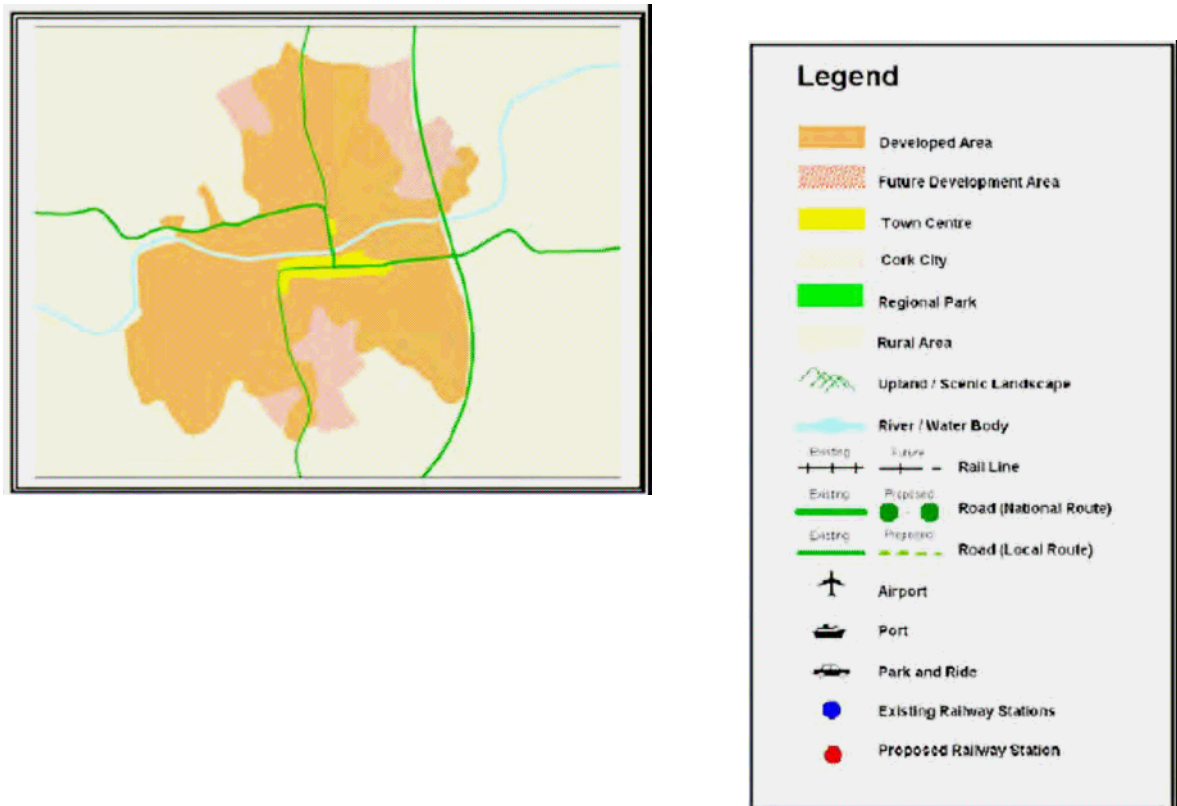
According to the draft Cork County Development Plan 2007 Fermoy is located in the CASP Ring Strategic Planning Area. The draft Cork County Development Plan 2007 projects the population of Fermoy (Urban and Rural) to increase from 5,873 persons in 2006 to 7,314 people by 2020 (p.25).

¹ Labour Force= those at work + unemployed + seeking regular work for the first time.

Section 5.2.23 of the draft CDP 2007 outlines that in relation to the CASP Ring strategic planning area, the Ring Town of Fermoy will be designated as a District Employment Centre and outlines that *'It is important for these strategic towns to retain a sufficient critical mass of population in order to attract new investment and employment and develop and modernise the range of services and facilities that they offer In order to establish an appropriate balance in the spatial distribution of growth, these centres will provide additional employment for the population expected in the towns as well as providing an improved service for the large rural hinterlands in the area.'* (p.107)

Policy/Objective SET 1 - 34 as set out in the draft plan in relation to Fermoy Town aims to promote urban renewal within the town centre particularly along the River Blackwater, expand its commercial base and strengthen its function as a district employment centre. The draft Cork County Development Plan 2007 also includes an indicative layout for future development to the north and north east of the town on page 50.

Figure 5.3.1: for future development of Fermoy



Source: draft Cork County Development Plan 2007 p. 50

Zoning Provision

The plan contains a number of strategic objectives that influence the proposed pattern of growth for the town within the period of 2009 to 2015 and going forward, these include the following;

- Promote and develop Fermoy as a self sustaining town.
- It would be desirable to encourage Fermoy to enhance its ranking in the order of town size in the state.
- It is desirable that the Fermoy Plan harmonises with the Draft County Development Plan projections concerning population growth in the town.
- It will be desirable that the Town Council supports Cork County Council in its implementation of the Housing Strategy while at the same time recognising the special aspirations that Fermoy has regarding the provision of housing.

The Regional Planning Guidelines, Cork Area Strategic Plan and draft Cork County Development Plan project the population of Fermoy (Urban and Rural) to increase by 24% from 5,873 persons in 2006 to 7,314 people by 2020. The Fermoy Town Development Plan takes account of the population projections as outlined within the above mentioned policy documents, however much of the land within the town boundary is developed and therefore much of the population growth will need to be accommodated within the environs. Cork County Council have undertaken a landuse survey within the town and environs which has identified approximately 6 hectares of available residentially zoned land within the town and 90 hectares of available residentially zoned lands within the environs. Therefore it is envisaged that much of the targeted population growth will take place in the Fermoy environs.

5.3.3 Impact assessment – existing environmental problems and constraints

No environmental problems or constraints were identified. Sufficient lands will be rezoned for residential, employment and community uses within the town boundary in line with national, regional and local population projections, which will contribute to the generation of critical mass within the town of Fermoy. The proposed plan should help to facilitate the growing population of Fermoy in a sustainable manner and in accordance with various policies and objectives of both national and local plans.

5.3.4 Evolution without implementation of the plan

The provision of planned residential, employment, improved infrastructure and community uses within the Fermoy Town Council area will result in a better quality of life than would arise from an unstructured/unplanned approach. If the plan was not implemented, the redevelopment and renewal of the area would take place in a haphazard approach, possibly allowing growth in the form of pockets of populations developing in an ad hoc fashion and could impact on environmentally sensitive areas such as the River Blackwater. Moreover the positive regulatory policies and objectives being introduced by the Fermoy Development Plan would not be implemented through the planning and development process.

5.4 SOIL

5.4.1 Policy

Soils are offered protection through the proposed EC Directive 2004/35/EC of the European Parliament and of the Council for establishing a framework for the protection of soil and amending Directive 2004/35/EC. This Directive provides a common strategy for the protection and sustainable use of soil based on the principles of integration of soil concerns into other policies, preservation of soil functions within the context of sustainable use, prevention of threats to soil and migration of their effects, as well as restoration of degraded soils to a level of functionality consistent with the current and approved future use.

5.4.2 Baseline

Bedrock Geology

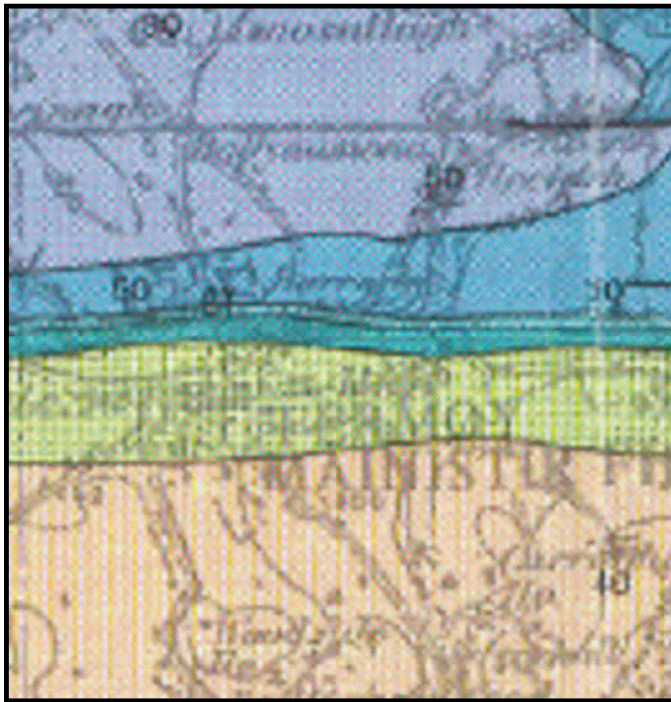
The North Cork town of Fermoy is situated within a sedimentary geological setting. The underlying rock comprises of bedded sandstone and limestone from the Middle Devonian Period and siltstone of the Middle Carboniferous Period.

The Devonian lithologies lie to the south of the town of Fermoy; the Ballytrasna Formation consists of purple mudstone with some layers of siltstone. Much of the built up areas of the town lie on the sandstone and mudstones of the Glyeen Formation.

North of the River Blackwater the underlying geology is made up of middle Carboniferous sediments consisting of the Lower Limestone Shale, limestone and calcareous shale of the Ballymartin Formation, fossiliferous muddy limestone of the Ballysteen Formation and Waulsortian Limestone.

Structurally on a large scale each formation is undisturbed tectonically, though there is likely to be some fracturing and faulting of the bedrock to be found on a local level. Figure 5.4.1 Group Bedrock Geology and Figure 5.4.2 Formation Bedrock Geology below provide an overview of the bedrock geology within the town and the vicinity of the town.

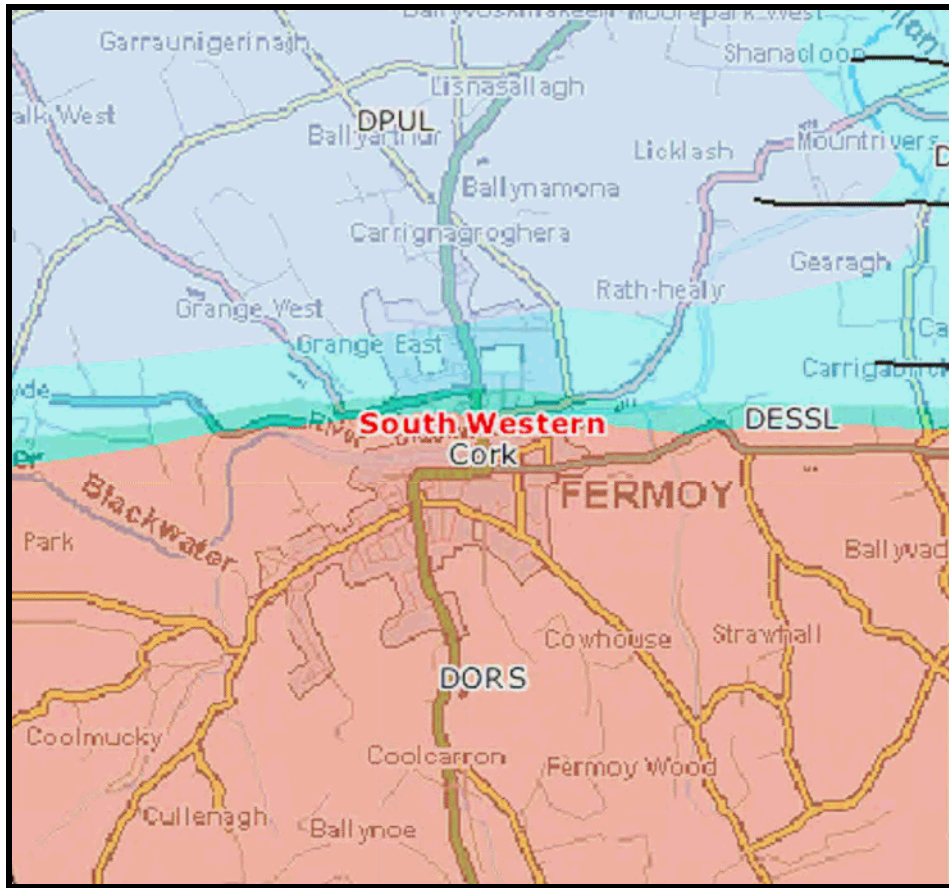
Figure 5.4.1 – Group Bedrock Geology



Colour Key	Formation	Bedrock Description
WA	Waulsortian Limestone Formation	Massive, unbedded limestone and mudstone
BA	Ballysteen Formation	Fossiliferous muddy grey limestone
BT	Ballymartin Formation	Limestone and dark grey calcareous shale
LLS	Lower Limestone Formation	Sandstone, mudstone and thin limestone
GY	Gyleen Formation	Sandstone with mudstone and siltstone
BS	Ballytrasna Formation	Purple mudstone with some sandstone layers

Source: *Geology of Kerry-Cork, Geological Survey of Ireland (GSI) (1997), Sheet 21*

Figure 5.4.2 – Formation Bedrock Geology



Hydrogeology

Within the study area there are three underlying aquifers. One locally important aquifer – moderately productive in local zones can be found underlying the majority of the town of Fermoy. However interbedded within the moderately productive aquifer is a Poor aquifer, which is generally unproductive. Such an aquifer is capable of yielding only enough water to springs and boreholes to supply single houses, small farms or small group water schemes. The aquifer trends east-west and can be considered relatively thin but extended across the town boundary.

Towards the northern outskirts of Fermoy town centre lies a regionally important aquifer, which is karstified and diffuse. This aquifer radiates northwards and eastward along the Blackwater valley. The presence of

Karstified rock can increase vulnerability through rapid movement of water. An overview of Local Aquifers is depicted below in Figure 5.4.3 Draft Bedrock Aquifer Map.

Figure 5.4.3 – Local Aquifers



Sites of Geological Heritage/Interest

Within the Fermoy area there is one Area of Geological Interest as outlined in Table 5.4.1 below.

Table 5.4.1 – Areas of Geological interest within the Study Area

Site Name	Principal characteristics	Description
Blackwater Valley – sporadic outcrops	Quaternary – outwash trains and deltas	Blackwater Valley, Fermoy

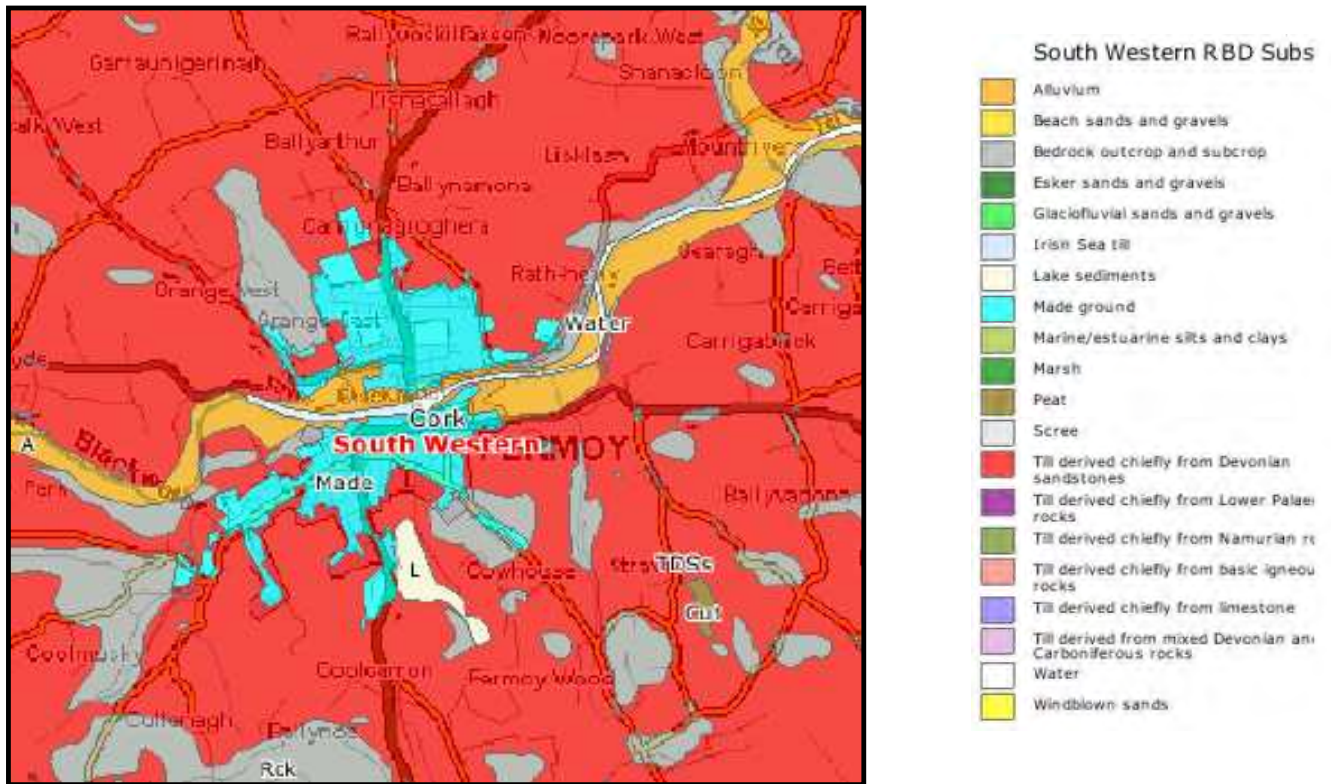
Soils and Subsoils

Fermoy town centre generally consists of man-made ground extending over the urban and residential areas of the town. The area generally consists of glacial gravel and tills laid down during the last glaciation period. They are however extensive alluvium soils deposited across the town centre following the direction of the Blackwater River and most likely originated from floodwater and tributary migration and development of the river during the Quaternary Period.

Outside of the town boundary much of the underlying soils and subsoils consist of glacial till deposited from the migration and melt water of glaciers that passed over Fermoy during the Quaternary ice ages. Much of the subsoils consist of till derived from Devonian sandstone, which is native to the north cork area. The till reflects local deposits of glacially eroded country rock.

Further south of the Fermoy are some deposits of lake sediments, deposited by an ancient lacustrine body of water. There are also some outcrops of the bedrock to be found along the River Blackwater and on higher ground towards the southwest and northwest of Fermoy.

Figure 5.4.4 – Soils and deposits within the Fermoy Area (source – EPA Mapper)



Quarrying and Mining

At present there no mining or quarrying activities being carried out in the immediate study area.

5.4.3 Impact assessment –existing environmental problems and constraints

Greenfield sites - any proposed developments on greenfield sites involves changing the character of the ground and soil. New developments have the potential to contaminate the soil and underlying groundwater, particularly in the case of septic tanks and poor wastewater treatment facilities. Existing activities such as agriculture and manufacturing may also pose a risk to soil and groundwater.

Soil erosion – construction, agriculture and forestry can lead to soil erosion, which has a negative affects on water quality and aquatic biodiversity. Soil erosion results in a loss of nutrients in the upper layers of the soils also leading to a reduced water-holding capacity. Soil erosion can also lead to sediment movement and agricultural pollution into watercourses. This can lead to increased solids in watercourses, disruption of ecosystems and contamination of drinking water.

5.4.4 Evolution without implementation of the Plan

The proposed Soil Directive suggests the encouragement of development on brownfield sites through sustainable redevelopment of existing sites. The reuse of urban brownfield sites in particular will reduce urban sprawl and the need to develop greenfield sites.

The new Plan will provide policies and guidance for development of brownfield sites over Greenfield sites. In the absence of the Plan there is the potential for further development of Greenfield sites resulting in a loss of soil resource to development and soil erosion due to removal of materials due to construction works.

5.5 WATER

5.5.1 Policy

In the interest of maintaining good water quality the European Communities (Water Policy) Regulations, 2003 (SI No.722 of 2003) transposed the Water Framework Directive (2000/60/EC) into Irish Law to offer protection for water in Ireland. The Water Framework Directive (WFD) sets an objective of achieving at least good status for all water bodies and aims to ensure that no further deterioration in status of any waters will occur by 2015.

Good status for surface water is a combination of the chemical quality, biological quality and microbiological quality that must be achieved. For groundwater “Good Status” refers to groundwater chemical water quality and quantity.

In addition to the Water Framework Directive, water in Ireland is also offered protection under European Community (Groundwater Directive, 80/68/EEC) and National Legislation (Local Government (Water Pollution) Act; The Waste Management Acts and the Planning and Development Act.

In addition the Drinking Water Regulations (S.I No 439 of 2000) ensure that the presence of a single faecal coliform in a water supply is unacceptable.

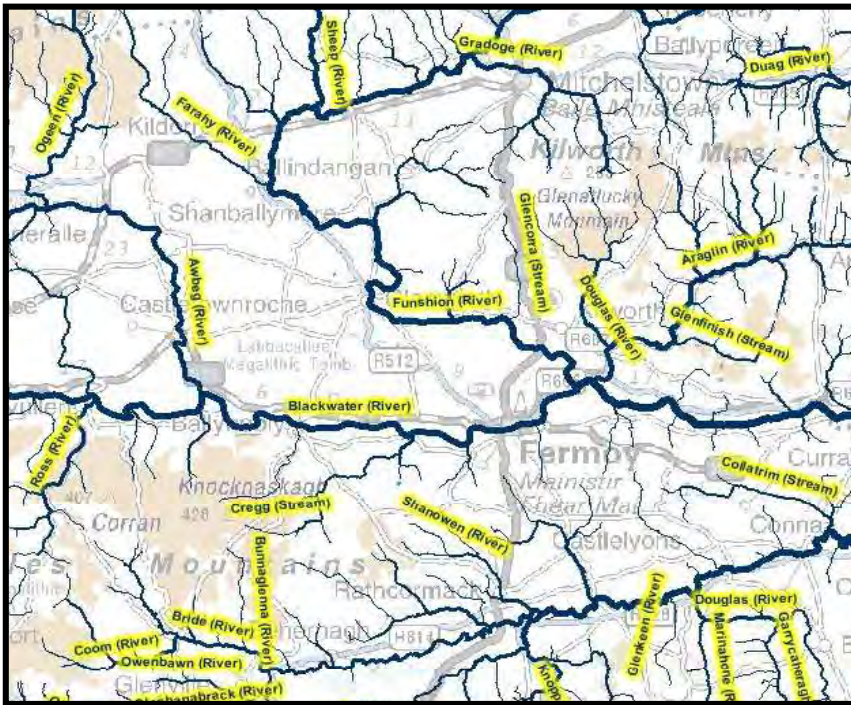
5.5.2 Baseline

Surface Water

The town of Fermoy lies northeast of Cork City on the banks of the River Blackwater. The River Blackwater is one of Ireland’s largest rivers flowing through five counties including Kerry, Limerick, Cork, Tipperary and Waterford. The River Blackwater rises in the peat bog terrain of east Kerry giving it a darker colour lending to its name the River Blackwater. From its source the River Blackwater turns eastwards along the northern slopes of the Boggeraghs before entering the narrow limestone valley at Mallow. The river continues east where it bisects the town of Fermoy and flows south of the Araglin valley. At Cappoquin the river turns sharply south and enters the sea at Youghal. Additional rivers in the greater Fermoy area include the River Funshion which flows through Glanworth (located 6km northwest of Fermoy) joining the Blackwater just 2 km northeast of Fermoy, where just downstream it is also joined by the smaller Douglas River . The Awbeg River joins the River Blackwater near Ballyhooly west of Fermoy, see Figure 5.5.1 which illustrates surface waters within the Fermoy and its immediate vicinity.

In order to manage and assess water quality, a River Basin Management plan was put in place in the south west of Ireland. Fermoy lies within the South Western River Basin District (SWRBD) the plan for which is due to be adopted in 2009. Baseline data including the various risk assessments for surface water and groundwater in the Fermoy area are outlined below.

Figure 5.5.1 – Streams and Rivers within the Fermoy Area



Source – EPA ENvision Mapper

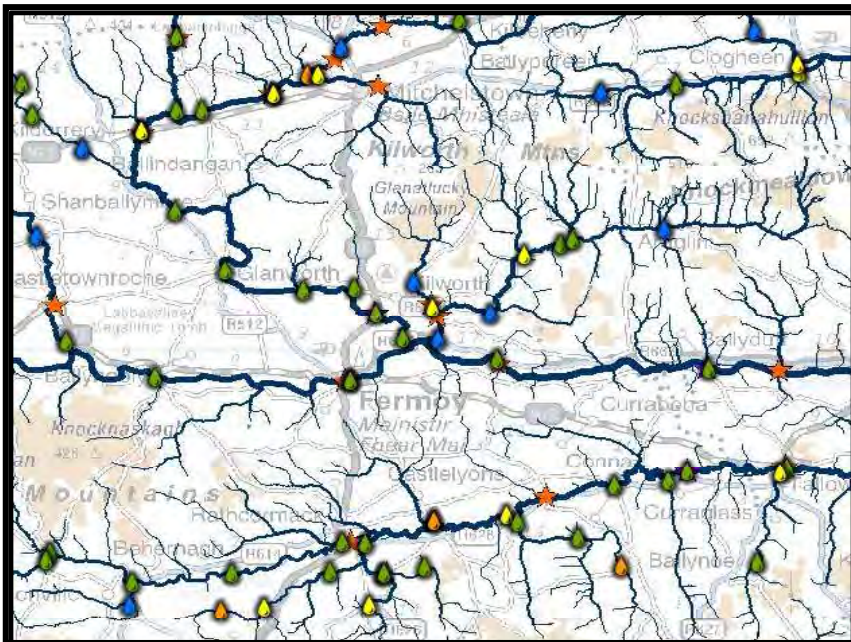
Surface Water Quality

Most rivers/streams within the Fermoy area have received an EPA Q-value rating of 4 (depicted in green) indicating “Good Status”, despite this the SWRBD has characterised the water in this area as “At Risk of Not Achieving Good Status”.

A Q-value of 4-5 was recorded on the Awbeg River upstream from the confluence of the Awbeg River and the River Blackwater suggesting that as it joins the River Blackwater it is not diminishing the quality of the water within the River Blackwater. The Funshion River is sampled consistently along its length and at every station a Q-value of 4 has been recorded showing that the quality does not fluctuate as it flows towards the River Blackwater and joins it just outside of the town of Fermoy. The Douglas River also joins the River Blackwater just downstream of this point and the water quality joining the Douglas River has a Q-value of 4-5 indicating again that it does not diminish the water quality of the River Blackwater.

The water quality of the River Blackwater is continually being monitored by the EPA, and a Q-value of 4 has been recorded. The most recent water quality survey was in 2003 at a sampling station near the main bridge in Fermoy. The location of stations and there values can be seen in Figure 5.5.2. A list of sampling stations is given in Table 5.5.1.

Figure 5.5.2 Water quality of streams and rivers within the Fermoy area



Source: EPA ENvision Mapper

Table 5.5.1 - The Water Framework Directive and EPA ratings of Rivers, Streams and Bathing Waters within the Study Area

Stream/River	EPA Q-Rating	Status	Water Framework Directive Rating
Blackwater	4	Good	At Risk of not achieving good status.
Funshion	4	Good	
Awbeg (Buttevant)	4	Good	
Awbeg	4-5	High	Possibly at of not achieving good status
Douglas	4-5	High	

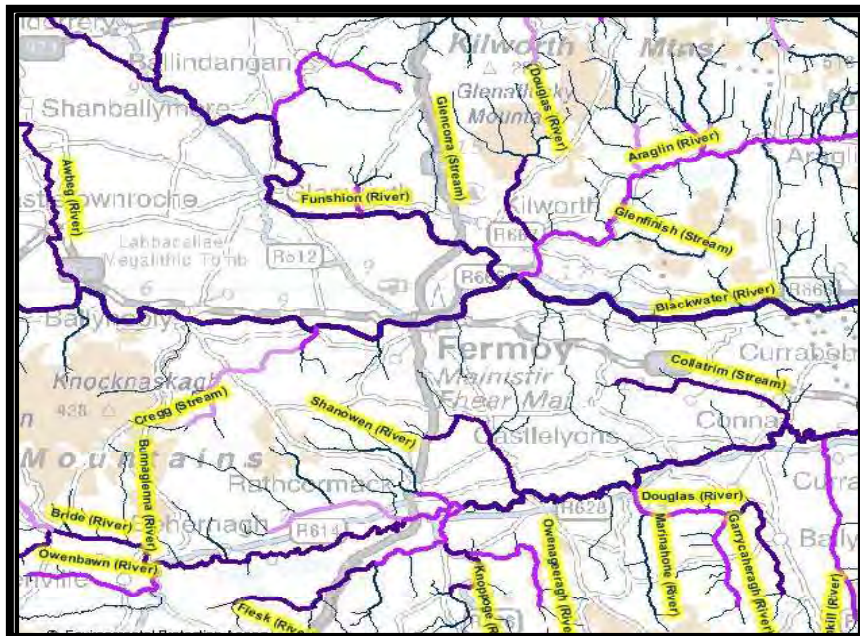
Source: EPA ENvision Mapper

Risk assessments have been carried out on all water bodies within the SWRBD and four risk categories were created.

1. Not at Risk;
2. Probably not at Risk;
3. Probably at Risk; and
4. At Risk.

Figure 5.5.3 shows a map of risk assessments undertaken by the SWRBD for Rivers and Lakes within Fermoy.

Figure 5.5.3 WFD Risk Assessment Rating for Rivers



Water Framework Directive Key	Colour	At Risk of Not Achieving Good Status	Possible at Risk of Not Achieving Good Status	Expected to Achieve Good Status	Strongly Expected to Achieve Good Status

Source: EPA ENvision Mapper

Groundwater

Groundwater forms an integral part of all ecosystems and within the Fermoy area is a significant resource. A number of private drinking water supplies are taken from groundwater reserves.

Groundwater is subject to contamination from agriculture, poorly designed/constructed and maintained domestic wastewater treatment infrastructure, industrial sources etc. Groundwater also contributes to surface water quality providing residual flows from rivers and streams. It is also integral to the support of wetlands.

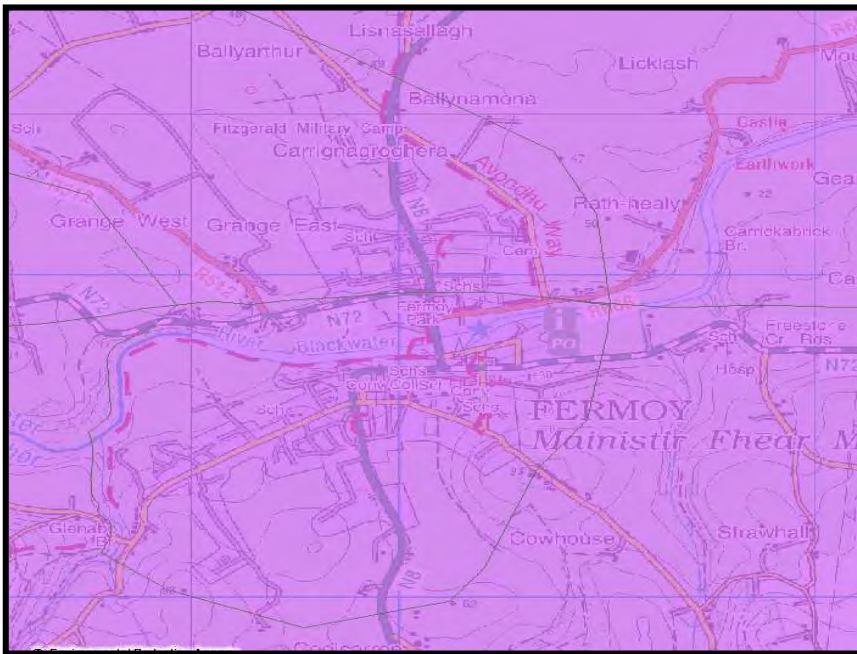
Table 5.5.2 summarizes the groundwater throughout the Study Area. This information is presented in Figure 5.5.5.

Table 5.5.2 Summary of GW Ratings Throughout Fermoy

Location	Water Framework Directive Rating	Aquifer Classification	Aquifer Vulnerability
Town Area and North of the Town	Possibly at Risk of Not Achieving Good Status	Regionally Important Aquifer, Karstified (Conduit)	High – Low (interim study only) Some Extreme to High Areas North of Town
South of the Town		Poor Aquifer Bedrock which is generally unproductive except for local zones	

Source – WFD - EPA ENvision Mapper, Aquifer Vulnerability - GSI

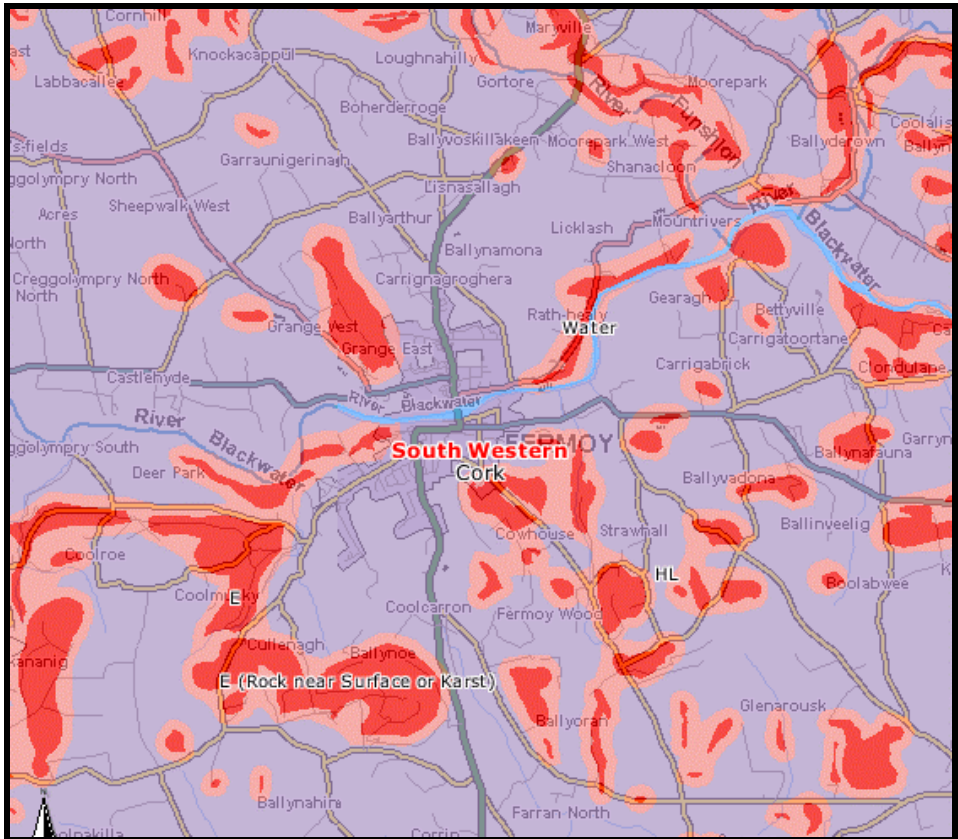
The Water Framework Directive classifies a large proportion of the Fermoy urban area groundwater as “Possibly at Risk of Not Achieving Good Status”. Figure 5.5.4 shows a map of risk assessment for Groundwater throughout the Fermoy area.

Figure 5.5.4 - WFD Risk Assessment Rating for GW

Source: EPA ENvision Mapper

Aquifer vulnerability within the town is considered Low to High. However aquifer vulnerability within the Grange East area, Rath-Healy area and to the southeast and south west of the town is considered "Extreme" with some rock found near surface, therefore verifying a possible risk. See Figure 5.5.5 illustrating aquifer vulnerability within the townland and immediate vicinity of Fermoy.

Figure 5.5.5 –Aquifer Vulnerability within the Study Area



South Western Interim Vulnerability

- E (Rock near Surface or Karst)
- E - Extreme
- H - High
- M - Moderate
- L - Low
- HL - High to Low. Only an interim study took place.
- Water

Source – GSI GW Mapper

Aquifer Potential

Within the study area there are three underlying aquifers. One locally important aquifer – moderately productive in local zones can be found underlying the majority of the town of Fermoy. However interbedded within the moderately productive aquifer is a Poor aquifer, which is generally unproductive. Such an aquifer is capable of yielding only enough water to springs and boreholes to supply single houses, small farms or small group water schemes. The aquifer trends east-west and can be considered relatively thin but extended across the town boundary.

Towards the northern outskirts of Fermoy town centre lies a regionally important aquifer, which is karstified and diffuse. This aquifer radiates northwards and eastward along the Blackwater valley. The presence of Karstified rock can increase vulnerability through rapid movement of water. An overview of Local Aquifers is depicted below in Figure 5.5.6 Draft Bedrock Aquifer Map.

Figure 5.5.6– Bedrock Aquifer Potential in the Fermoy Area



Source - GSI GW Mapper



Flooding

Fermoy is located approximately 50km upstream of the mouth of the River Blackwater at Youghal and is therefore not affected by the tides. There are large floodplains downstream of Fermoy along the banks of the River Blackwater. These floodplains are larger than the floodplains upstream and are therefore able to cope with the excess water during periods of flooding (OPW, 2008). The floodplains upstream of the River Blackwater in Fermoy Town are significantly smaller. They are less able to cope with any significant rise in the water levels during the event of a flood. For this reason Fermoy Town is more susceptible to damage during periods of excess flooding.

The River Blackwater in Fermoy has a long history of flooding and is considered a key problem for the town. It has been reported that flooding occurred in Fermoy four times in 1988. The most recent flood event occurred in July 2008 while another flood occurred on the 11th January 2008 and was the worst recorded flood in the area within 20 years.

A preliminary flood study was carried out in 2000 by University College Cork (UCC) to review the risk of flooding in Fermoy and provide mitigation measures to alleviate the risk of flooding. The study included the collection of historical flood data, hydrological analysis to determine various return period flows up to and including the rare one in 100 year return period, prediction of design flood levels using a mathematical model, and initial assessment of likely flood alleviation measures (OPW, 2008).

In 2002, work was commissioned by the Office of Public Works (OPW) to carry out a feasibility study to assess flood risk in the town of Fermoy and develop a flood alleviation scheme (OPW, 2008).

During periods of significant flooding when the water levels rise above a critical level the River Blackwater's water can impact the water quality being used by Fermoy Water Supply Scheme (Urban District). The river water can become highly turbid and can affect the quality of the water coming in through the intake pipe located at Deerpark 5km west of Fermoy, resulting in a complete shut down of the pipe at the source. This can then lead to a balancing act between providing treated water and maintaining supply.

5.5.3 Impact Assessment –existing environmental problems and constraints

There are a variety of activities both within and outside the study area, which have the potential to impact on water quality. These include sewerage treatment works, domestic water treatment systems, housing, construction work, industry, spillages, increased road runoff and agriculture.

Existing problems within the Fermoy area include:

- Surface Water Pollution -Under the WFD the River Blackwater is classified as being "At Risk of Not Achieving Good Status";
- Groundwater Pollution - The majority of the study area is "probably at risk of not achieving good status" for groundwater;
- Impacts to Angling - Direct impacts to water and water quality will have direct and indirect effects on angling;
- Flooding- Flooding has been identified as being important, particularly for buildings that are prone to flooding in Fermoy as well as areas zoned for development near or adjacent to rivers or their floodplains. Strict control of planning will be required in these areas i.e. along the River Blackwater and the OPW's Guidelines on Flood Risk alleviation should be adhered to. The new Plan has included Flood risk management objectives these include:
 1. To minimise risk of inundation and reduce the risk of flooding elsewhere;
 2. To incorporated reasonable measures to improve the management of flood waters on and around the site to assist in the protection of properties within the vicinity;
 3. To incorporate building design measures and avail of more suitable materials to aid in the reduction of damage caused to property; and
 4. To provide for the maintenance of any approved privately funded flood defence measures to the satisfaction of the council, however applicants may be required to provide a hydrological survey

and assessment information to support their proposals when the site is in a well known flood risk area and may also be required to make a contribution to flood defences.

The Plan also includes a provision for Flood Impact Assessments at planning application stage and to take cognisance on any future guidelines on flood risk management.

- Municipal Wastewater Treatment and Domestic Wastewater Treatment – There is a possibility of unchecked increase in demand for wastewater treatment with potential for increased pollution to surface waters. Therefore correct treatment of wastewater is an important factor to consider in order to protect the quality of surface water. It is essential that the WWTP operates to highest standards and that monitoring of the performance of wastewater treatment plant and sewerage network is undertaken to capture leakages to GW and SW. The Fermoy WWTP has recently been upgraded and now has a population capacity equivalent of 20, 000 which is more than capable of dealing with the expected volumes from the town of Fermoy.

5.5.4 Evolution without implementation of the plan

A review of the existing baseline information shows that a number of water bodies in the study area are under pressure from various sources of pollution, which has resulted in reduced biodiversity, poor water quality and algal blooms. In the event that the Plan is not updated there is potential for increased pressure on these water bodies and most water bodies would be unlikely to reach the objectives of the WFD. If water quality were to deteriorate further or experience a reduction in its quality status, there would also be increased adverse impacts on biodiversity, flora and fauna, fisheries, drinking water, human health and soils. The new 2009 to 2015 Plan will steer development away from watercourses rather than along or within their floodplains.

Also, in the absence of the Plan there is a possibility of unchecked increase in demand for wastewater treatment with potential for increased pollution of surface water having knock on effects on flora and fauna thus impacting on a range of local economic resources e.g. angling (tourism).

5.6 AIR AND CLIMATE (ENERGY)

5.6.1 Policy

At international level the Air Quality Framework Directive 96/62/EC sets out standards for air quality. The Directive was transposed into Irish law by the Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999 (S.I No. 33 of 1999).

At a national level the National Climate Change Strategy 2007-2011 provides for the protection of air quality. The strategy for reducing emissions will be shared across all sectors but the main focus will be on transport, residential, industry, electricity production, the public sector and waste. The new Programme for Government outlines a 3% reduction in greenhouse gas emissions per annum. The programme will also require Ireland to join the top 5 countries in the world, as measured by the Environmental Performance Index (EPI). The National Climate Change Strategy will also be supported by other relevant government policy such as the National Development Plan, Transport 21, National Energy policy 2007 and the at a local level there are currently two objectives in relation to energy and climate change in the County Development Plan.

In March 2007 the Government launched its Energy White Paper entitled '*Delivering a Sustainable Energy Future for Ireland*'. The paper was devised to be a practical action-based strategy for achieving a new energy future for Ireland and spans the timeframe 2007-2020. Key to the strategy are the three pillars of energy supply - security, sustainability, and economic competitiveness.

5.6.2 Baseline

Air Quality

In general the air quality in Ireland is considered to be good and this is primarily as a result of the prevailing Atlantic southwesterly winds crossing the country. The EPA monitors the air quality across the country, dividing the country into regions or zones. For Ireland, four zones, A, B, C and D are defined in the Air Quality Regulations (2002). The main areas defined in each zone are: Zone A (Dublin Conurbation), Zone B (Cork Conurbation), Zone C (other named cities and large towns) and Zone D (Rural Ireland, i.e. the remainder of the State excluding Zones A, B and C).

Air quality monitoring and assessments are undertaken at 5 locations in Cork, of which 3 are located within Cork City Council area and 2 locations are within the administrative area of Cork County Council. Air quality is monitored and assessed in Cork County at Glashaboy and Cork Harbour at Passage West. Air quality at these locations can be considered representative of Fermoy.

There appears to be a small decreasing trend in concentrations in recent years.

- Suspended particulates reached about 90% of the EU limits in the past and have now reduced to about 10% of the limit due to the ban on the sale of coal. These particles arise from the inefficient combustion of solid fuels and diesel.
- New monitoring parameters called PM₁₀ and PM_{2.5} are now being used to monitor for particulates. These measure particulates less than 10 and 2.5 microns in diameter. Results from the gravimetric method indicate compliance at about 30 % of the EU annual mean limit.
- Sulphur dioxide levels were always quite low in Cork. The first smokeless fuels increased levels but levels have now fallen again to previous values. The old method for monitoring is compliant at about 7% of the standard. The new method is at about the same level of compliance with the new standard. Sulphur is a contaminant in most types of fuel.
- Nitrogen dioxide average values are about 40% of the mean limit. It arises from air being used as an oxidant in the high temperature combustion of fuel in space heating and traffic.
- Ozone levels were in compliance. There were 9 exceedances of the 8 hour running average while 25 are allowed. Ozone levels can be strongly influenced by imported pollution and/or natural sunshine events. Rural stations in Ireland have far higher levels than our urban station because nitric oxide reduces levels in cities. It is only in urban areas with extreme traffic densities and very high sunshine levels that a different series of reactions dominate to produce very high ozone levels. Ozone has always been present in ambient air but levels have increased due to pollution. It also arises due to diffusion downwards from the stratosphere
- Carbon monoxide levels are about 36% of the standard operative in 2005. It arises from poor oxidation of fuel.
- Lead levels are about 4 % of the standard. This is a major decrease from the 1980's. Unleaded petrol is now the only type available. It is a petrol additive to prevent "knock" and improve acceleration.
- The new continuous monitor, in operation since March 2000, indicates benzene levels to be about 10% of the standard. Benzene derives mainly from traffic fuels.

Source - Air Pollution in Cork City 2007 Report

Climate

The dominant influence on Ireland's climate is the Atlantic Ocean. Consequently, Ireland does not suffer from the extremes of temperature experienced by many other countries at similar latitudes. Met Eireann provides information on the various climatic conditions experienced across the country. The climate of the area is best

described by meteorological measurements collected by the National Meteorological Service from the synoptic stations at Cork Airport. To characterise the prevailing conditions at the site, historical meteorological data compiled by Met Eireann (www.meteireann.ie) is presented for Cork Airport and is available at www.met.ie.

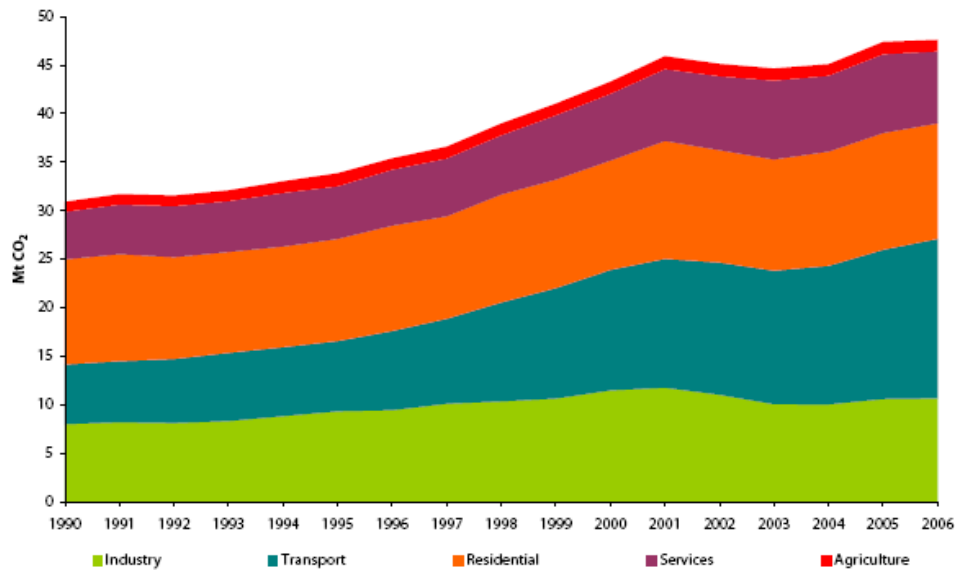
However, the climate is becoming ever more variable and we can no longer safely refer to past climate when planning for the future.

Greenhouse Gas Emissions (GHG)

Ireland currently emits 1.7% of total GHG emissions in the EU-15. This equates to 69.9 Mt of CO₂ equivalents. According to the most recent data (2005), Ireland currently emits 25.4% more GHG's than were emitted in 1990. This is 12% above the target set for Ireland under the EU burden-sharing agreement.

The contribution of various sectors to total energy related CO₂ emissions over the period 1990-2006 is shown in Figure 5.6.1. While not the greatest contributor, the sector of most concern is transport as it has shown the greatest growth in the corresponding period. Coupled with a lack of public transport infrastructure, transport is likely to continue to increase its contribution to global warming and poor air quality in the immediate future.

Figure 5.6.1: Energy related CO₂ emissions by Sector



Source: Energy in Ireland 1990 – 2005-Trends, Issues, Forecasts and Indicators (SEI, 2006)

Green House Gas Permitted Installations within the study area

The National Allocation Plan 2008 to 2011(extracted from Articles 9 and 10 and Annex III of the EU Emissions Trading Directive (as transposed into Irish law by the European Communities (Greenhouse Gas Emissions Trading) Regulations 2004 (S.I. 437 of 2004) and amendments) contains a list of all installations with GHG permits in Ireland. A GHG permit is issued in attempt to control the emissions of gases, which have the potential to change global climatic conditions. There is one GHG permitted installation in the area;

- Irish Asphalt Ltd., Mobile Plant, Fermoy By-Pass, County Cork.

Energy Overview

Energy is used in Ireland primarily for transportation, electricity generation and heat generation purposes. The contribution of each source to national energy demand has changed somewhat in the last number of decades, for example

- In 1990, thermal uses accounted for 44% of all primary energy used, electricity accounted for 34% and transport 22%; and
- In 2005 thermal uses accounted for 34% of all primary energy used, electricity accounted for 33% and transport 33%.

It is predicted that by 2020 the transport sector will increase its share in national energy demand to a value of 43%. Thermal and electricity uses, it is predicted, will together account for the remaining 57% of national energy demand.

Current Situation

Total Primary Energy Requirements (TPER) have increased substantially in Ireland since the early 1990s. Under a 'business as usual approach' this trend would continue, however, significant national efforts are currently being made to curb energy requirements. These efforts are outlined in national energy policy documents.

Currently, national TPER is met largely by the combustion of fossil fuels and in particular oil, with natural gas, coal and peat supplying lesser amounts of energy. There has been a change in fuel mix used for energy generation in Ireland from 1990 to 2005. In general

- the use of gas and oil has increased substantially;
- the use of coal and peat has declined; and

- the use of renewables has also increased substantially, albeit from a very low base.

TPER are projected to increase up to 2010. After this time the effect of the implementation of current energy policy is expected to result in a stabilization of TPER.

The demand for electricity is predicted to grow in the future. Predictions are that electricity demand will increase by 4.5% per annum between 2005 and 2010. In the following decade, the rate of growth is expected to slow down considerably to 1.2% per annum.

Fossil Fuels

In 2005, fossil fuels supplied 98% of TPER requirements. By 2010 this value is expected to decrease to 94% and to 86% by 2020. The shortfall in supplying TPER is expected to be met through the use of renewables.

Oil and Coal

Ireland imports all coal and oil requirements.

Natural Gas

There is existing indigenous production at the Fermoyfields and satellite fields off the south coast of Ireland but this is expected to decline over the next few years. New indigenous production from the Seven Heads facility also came on shore in the last quarter of 2003, through the nearby FermoyHead facility. Further indigenous gas supplies were discovered at the Corrib field, located off the West Coast of Ireland. Reserves are believed to be of the order of 20-30bcm. The development of the field was substantially delayed by planning permission difficulties. Despite the more recent finds of indigenous gas fields at Seven Heads and Corrib, the Irish gas market is expected to continue to be heavily reliant on Interconnection with the UK market.

Renewables

Following the publication in January 2008 of the All Ireland Grid Study, the ESB have announced a massive new investment plan, which will see €22 billion invested in the country's electricity infrastructure in the next 12 years. The scale of the new capital spending programme is unprecedented and half of all the money is to be invested in renewable energy projects including wind, tidal, wave, and biomass energy generation.

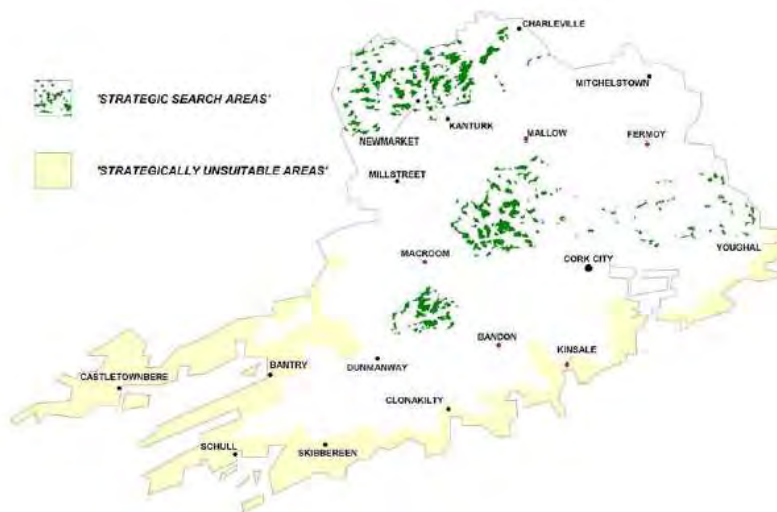
The increased use of renewables in supplying TPER will result in a decrease in energy related carbon dioxide (CO₂) emissions. The government policy document '*Delivering a Sustainable Energy Future for Ireland*' predicts that national CO₂ emissions will decrease by 6% as a result of the increased use of renewables in supplying future TPER.

Windfarms

Cork County Council has received in excess of 70 applications for wind farms in the County. However, while there have been a number of wind farms permitted in County Cork to date only approximately 6 wind farms have been or are in the process of being constructed. A number of existing permissions will have to be renewed over the lifetime of the CDP 2009-2015.

Cork County Council has identified Strategically Unsuitable Areas, which because of high landscape sensitivity, are generally considered to be unsuitable for wind energy projects. Except on a small scale and at particularly suitable locations, wind projects would normally be discouraged in these areas. However, the identification of strategically suitable areas and strategically unsuitable areas does not give any certainty about the outcome of any particular wind energy proposal and even in strategic search areas there will be particular constraints at particular sites. Areas to the south of Fermoy have been identified as Strategically Unsuitable Areas for Windfarm development. No Strategic Wind Areas have been identified in the vicinity of Fermoy.

Figure 5.6.2: Strategic Wind Energy Areas in County Cork



Source: Cork County Development Plan 2003

Solar

Solar energy can be used cost-effectively to meet Irish buildings' heating requirement. Contrary to the old belief that our climate is not suitable for solar, we enjoy as much solar radiation here as most northern European countries. Ireland's annual solar irradiation varies between 950 kWh/m² per/year and 1,100 kWh/m² per year. Valentia experiences the greatest solar irradiation in the country. Each square meter horizontal area therefore receives the equivalent of 100 litres of oil in free energy from the sun.

Hydro

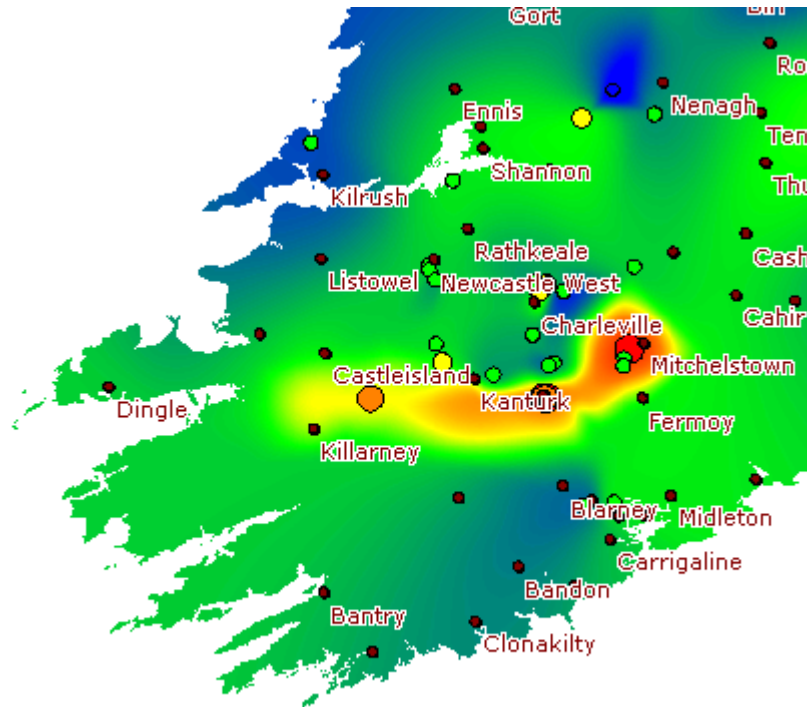
At present there is single hydropower plant in operation at Inniscara on the River Lee (12km from the city centre). The hydroelectric plant has a capacity of 27 MW of electricity. One other pilot scheme is in place, at Carrigrohane a micro-renewable turbine house has been supplying green electricity to 132 of Cork City Council's electricity accounts since 2004 and delivers a maximum of 1,130 MWh/yr electricity. There are no hydro electricity generating plants in the Fermoy area. It is generally accepted that all the significant hydro-power potential in the country has been exploited.

Tidal/Wave Energy

Ireland has become one of the world leaders in wave energy technology with the development of the Wavebob. The Wavebob was developed by an Irish company and can successfully convert wave energy to electrical energy. In general the waters off South Cork have poor potential for wave energy generation. The potential wave resources for the country and county can be seen on www.marinemaps.ie.

Geothermal

In 2004, CSA Group, a natural resource consultancy, completed a study commissioned by SEI, which aimed at identifying the potential resources of geothermal energy in Ireland. The results of this review indicate that Ireland is particularly well suited for the utilization of ground source heat pumps, due to its temperate climate and rainfall levels that ensure good conductivity and year round rain-fall recharge. The current installation rate is increasing rapidly and requires immediate attention to set and maintain high standards of equipment installation and operation. One of the outcomes of the project was to create a series of geothermal maps for Ireland, an example of which is illustrated below.

Figure 5.6.3: Geothermal Resources in the South West

This Map is for illustrative purposes only. All data copyright OSI + SEI

Source www.sei.ie

The map above illustrates clearly the Killarney-Mallow thrust fault and elevated ground temperatures. The warm springs in the Mallow area and in the more recently identified eastward extension to Glanworth, lie along an east northeast trending Killarney-Mallow thrust fault. Temperatures in this area vary between 13°C at Marybrook spring, Newmarket, Co. Cork (typical of groundwater temperatures in the area) to 23.5 °C at the County Council borehole north of Glanworth, Co. Cork. It is also worth noting that in broad terms silica rich rocks, of which the Devonian in the Cork and Kerry area are mostly comprised, have higher heat conductivity than limestone.

However close inspection of the maps indicate that the geothermal resource of the North Fermoy area may have a significant potential for geothermal energy.

Power Generation in Cork

There are 3 power stations operating in County Cork and permission has also been granted for a further power station at Aghada, which is yet to commence construction. The €400m plant at Aghada will generate 400 megawatts of electricity for the national grid every year. The plant will sit alongside an existing power station and is due to be completed in 2009. (Natural gas powered).

Table 5.6.1: Existing Power Plants in Cork

Location	Capacity (megawatts)	Energy Source
Innishcara	27	Hydro
Aghada	525	Gas
Marina	115	Gas

Energy Efficiency in Buildings, Sustainable Building Design

The Government's energy efficiency and carbon reduction targets for the built environment targets have been set as part of the National Energy Efficiency Plan for Ireland 2007 – 2020 which commits to a 20% improvement in energy efficiency by 2020. Two thirds of this will come from the built environment with over 50% set to come from the residential sector.

The EU Directive on the Energy Performance of Buildings (EPBD) contains a range of provisions aimed at improving energy performance of residential and non-residential buildings, both new-build and existing. This Directive was adopted into Irish law as Regulation in 2006.

The EPBD obliges specific forms of information and advice on energy performance to be provided to building purchasers, tenants and users. This information and advice provides consumers with information regarding the energy performance of a building and enables them to take this into consideration in any decisions on property transactions.

As part of the Directive, a Building Energy Rating (BER) certificate, which is effectively an energy label, will be required at the point of sale or rental of a building, or on completion of a new building.

The Action Plan for Implementation of the EPBD in Ireland published in July 2006 proposes phased implementation of BER in Ireland as follows:

- 1 January 2007: BER of new dwellings;
- 1 July 2008: BER of new buildings, other than dwellings; and
- 1 January 2009: BER of existing dwellings and other existing buildings, when offered for sale or rental.

5.6.3 Impact assessment – existing environmental problems and constraints

Sustainability is a key constraint for future development. Emissions to the atmosphere, energy consumption and climate change are all interlinked. Future developments should give consideration to passive design and clean and energy efficient technologies such as renewables, district heating and co-generation.

In Ireland the transport sector is the fast growing contributor of GHG emissions. A reliable efficient public transport system within the Fermoy area would reduce car dependence and combat rising CO₂ emissions from vehicle exhausts.

Space may also be a constraint in particular when locating vertical ground source heat pumps and district heating plant.

5.6.4 Evolution without implementation of the plan

Evolution without the plan would see a continued upward trend in the inefficient use of energy in the region and deterioration in air quality as a result of ever increasing combustion emissions and inefficient use of resources. Evolution without the plan would also see a slower uptake of renewable energy technologies sustainable building design.

There are policies within the Plan promoting sustainable forms of development and promoting public transport initiatives and without implementation of the Plan these policies may not be achieved.

5.7 MATERIAL ASSETS

Within the Fermoy area there are a variety of material assets. In general material assets are associated with the;

- Built Environment – (protected structures and archaeological monuments); (discussed under cultural heritage)
- Natural Assets – (quarries and mines, agriculture and forestry, conservation areas;
- Infrastructure – (roads, telecommunications, wastewater, roads, energy).

It is how these assets are utilised that has the potential to impact on the Environment.

5.7.1 Policy

The Fermoy Plan has a number of policies that have regard to material assets. The Plan takes into account policies at a national level, regional and local level. Particular reference is made to the National Spatial Strategy (for transport), the Urban Wastewater Treatment Regulations 2001, the Cork Waste Management Plan, the Cork County Development Plan and the Fermoy Electoral Local Area Plan.

5.7.2 Baseline

Water Supply

The source of water for the Fermoy Water Supply Scheme is an infiltration gallery on the south bank of the River Blackwater at Deerpark 4 km upstream of Fermoy Bridge. The supply is augmented by an adjacent bored well. Raw water is pumped to the Coolroe reservoir 1 km to the south via a rising main. At Coolroe the water is chlorinated and fluoridated prior to distribution. This reservoir serves the bulk of Fermoy town, the environs north of the River Blackwater and the village of Clondulane 4 km to the east of the town. An adjacent water tower serves the high area locally around Uplands.

Fermoy Town and Environs consumes 4,000 cubic metres of water per day and has spare capacity of some 1,000 to 1,200 cubic metres per day which would allow a population equivalent of c.1,500 people. According to the Cork Strategic Water Plan there is sufficient water supply to cater for projected growth within the town. However the existing Fermoy supplies can be vulnerable during periods of flooding, therefore it is recommended that a new source that is not vulnerable to flooding should be considered in the plan.

According to the Cork Strategic Water Plan, in strategic terms, the Conna Regional Water Supply Scheme has the capacity to provide supplies to an expanded regional area and to augment the supply to Fermoy. Given that the existing Fermoy supplies can be vulnerable during periods of Blackwater River flooding, a strategic link between the Conna Regional Scheme and the Fermoy system would offer significant security of supply

benefits.

Leakage has also been identified as a major problem in the town. A Water Conservation project has been implemented in the area including district metering and leak detection in order to mitigate against this problem.

Drinking Water Quality

Drinking water is regulated by the European Communities (Drinking Water) Regulations, 2000. Drinking water is supplied in County Cork via a range of public and private schemes; however, the vast majority of the population are served by public water supplies. Most drinking water originates from surface water, particularly for public water supplies whereas group water schemes and small private supplies tend to be slightly more reliant on groundwater or spring water.

Cork County Council as a sanitary authority is responsible for the production, distribution and monitoring of public water supplies. Other drinking water supply schemes which are present in the County include:

- Public Group Water Schemes, where the water is provided by the sanitary authority but responsibility for distribution of the water rests with the group scheme. These schemes tend to be supplied off larger public water supplies.
- Private Group Water Schemes' are schemes where the owners of the scheme (usually representatives of the local community) source and distribute their own water.

In accordance with these regulations, the local authority must notify the EPA where there has been a failure to meet a quality standard. According to the EPA report: 'The Provision and Quality of Drinking Water in Ireland, A Report on the Years 2006-2007', no notification of drinking water contamination has been sent to the EPA regarding the supply to the Fermoy Town Council area. However according to this report, the Conna Village water supply (Cork) exceeded the nitrate parametric value and the lead chemical standards in 2006. Therefore this issue should be explored before any connection is pursued.

According to the Environmental Protection Agency, the River Blackwater is described as being 'at risk of not achieving good status' in terms of water quality under the Water Framework Directive. It is considered that the impacts of flooding on the infiltration gallery on the south bank of the River Blackwater is the reason that Fermoy is at 'risk of not achieving good status' in terms of water quality.

Waste Water Treatment

The waste water treatment plant serving the town is located to the east of the town on the south bank of the River Blackwater. It was upgraded in 2006 for a Population Equivalent (PE) of 20,000PE and BOD loading of 1,200Kg/day. The wastewater in Fermoy is collected in a partially combined foul and separated foul sewage drainage network, whereby the old town centre is primarily a combined system. Wastewater drains from the town on both sides of the Blackwater River, while the wastewater on the north side of the river drains to a

pumping station at Rathaely Road, which is then pumped across Fermoy Bridge to the main sewer. The wastewater arising on the south side of the river drains directly to the waste water treatment works.

The maximum hydraulic capacity of the Fermoy WWTP is 673m³/h, which is 2.3 Dry Weather Flow (2.3DWF). In order to cope with flows above 2.3DWF storm storage has been provided at the wastewater treatment works. The volume of storm storage at the waste water treatment works is approximately 1,126m³. In the event that the storm water holding tanks are filled and the storm continues, the storm water tanks are operated as a pre-clarification tank without sludge removal. The overflow from the storm water storage tank is connected to the final effluent outlet pipe and is discharged into the Blackwater River.

Waste Disposal/Landfill

In relation to waste disposal, it is noted that the Cork MRF, which is the cornerstone of Waste Management Strategy, is yet to be built; the Bottlehill landfill is non-operational and the Hazardous Waste Incinerator is still not constructed. Landfill capacity in the Cork region, prior to the opening of Bottlehill, is limited to that at Youghal (300,000), which is running below licensed capacity. Rossmore is currently at capacity. FermoyRoad landfill only accepts waste from Cork City Council. Once Bottlehill opens it will have a capacity of 5 Million tonnes with an approximate life of 20 years.

Waste and IPPC Licensed Sites

Currently there is one IPPC licensed facility within Fermoy Town Council boundary and one on the periphery of the town to the north east. Micro-Bio (Ireland) Limited, Industrial Estate Fermoy County Cork IPPC licensed facility is located outside the town boundary to the north east (Reg. ref. P0082-01), this facility manufactures inorganic chemicals and the licence is currently under review. Superwarm Homes (Limerick) Limited, (reg. ref. P0328-01) is located within the Town boundary and the facility treats/protects wood involving the use of preservatives with a capacity exceeding 10 tonnes per day.

There are currently no Waste Licences within the Town Council boundary.

Waste-to-Energy

In January 2004 Indaver received planning permission for the construction of Phase 1 of a 100,000tpa €75M incinerator for hazardous waste, including a Waste Transfer Station for hazardous waste, to be located at Ringaskiddy. The development was appealed to An Bord Pleanála who subsequently granted permission subject to 27 conditions in January 2004. In addition, a Waste Licence was granted by the EPA for the facility in November 2005. Judicial reviews were sought by objectors to both EPA and APB decisions.

Gas Infrastructure

Gas infrastructure is divided between transmission and distribution infrastructure. Transmission infrastructure forms the backbone of the Irish natural gas system and delivers large volumes of gas at high pressures to the main consumption centres, and in special cases, high consumption customers (generally power stations). The distribution network operate at lower pressure and delivers gas to low consumption customers, typically including small businesses and residential customers, in mostly urban areas.

Transmission Infrastructure

Currently Bord Gais Éireann (BGE) is the only entity that owns and operates transmission infrastructure in Ireland. However the possibility exists for other entities to build and operate a transmission network, subject to licence by the CER under the Gas (Interim) (Regulation) Act 2002.

Electricity

The Electricity Regulation Act 1999 liberalised the electricity sector in Ireland. As a result, the electricity market in Ireland is now fully open to competition, in accordance with the requirements of the EU Directives 96/92/EC and 98/30/EC, as of February 19th 2005. Nationally, the electricity network is currently undergoing a major refurbishment program, to continue to 2010. One of the major projects within this programme is the completion of the Medium Voltage Network Renewal Project. This project will see all of Ireland's Medium Voltage overhead electricity network converted to 20kV or refurbished, to ensure a secure, high quality supply with adequate capacity for existing and future loads.

The main electricity substation supplying the town is located on the Castlehyde Road and is a 38KV network.

Transport

Fermoy Town is situated on the N8 Cork to Dublin National Primary Route, 34 km north east of Cork City. The town is also at the cross road between the N8 and the N72 Killarney to Dungarvan. While the new N8 bypass has removed a significant amount of through traffic out of Fermoy town centre there are still a number of traffic and congestion problems throughout the town as a result of only one bridge crossing within the town.

In April 2007, Cork County Council, in association with Fermoy Town Council, appointed Malachy Walsh and Partners to carry out a traffic management study for Fermoy. A draft recommended Traffic Management Plan has been prepared on the basis of the Study to date, including the on-site surveys, initial public consultation phase, forecast year modelling, consultations with Fermoy Town Council and Cork County Council and site visits. The recommended Traffic Management Plan is set out hereunder, under the following headings:

- M8 Fermoy Bypass;

- Fermoy Bridge/New River Crossing;
- Traffic Circulation Modifications;
- Speed Limits and Entrance Gateways;
- Road Network Urbanisation;
- Junction Improvements;
- Traffic Calming Measures;
- Parking Management and Supply;
- Pedestrians, Cyclists and Vulnerable Users; and
- Delivery Vehicles and Heavy Goods Vehicles Management.

This Traffic and Transportation study is due for completion before the plan is adopted. The overall objective of the Transportation Study is to enable Fermoy Town Council and Cork County Council to introduce transport policies. This involves producing a programme of traffic, transportation and road safety proposals, which in the short, medium and long term will take into account traffic growth and land use in the study area. The Fermoy Traffic and Transportation Study is currently being progressed and the findings and recommendations included within the study, when published, will be incorporated within the Amended Draft Town Development Plan and will be assessed in terms of this Environmental Report.

The proposed infrastructural strategic objectives are outlined in Chapter 6, Volume II of the Plan. According to the objectives it is proposed to enhance pedestrian amenities and the rights of pedestrians within the town centre. It shall also be an objective to enhance cycling facilities including the provision of cycle lanes and bicycle parking, enhance public transport facilities, provide adequate car parking within the town and regulate delivery vehicles within the old town core.

Access to Fermoy Town

Significant economic growth and a consequent increase in car ownership throughout Ireland in recent years have added to the pressures on existing infrastructure. Fermoy Town is accessed via the N8 National Primary Route, which connects the town to Cork City and Mitchelstown. The town is also accessed via the N72, which connects the town to other important towns such as Mallow, Killarney and Dungarvan. The town is accessed from the rural hinterland via a series of regional routes including the R512, R666 and R639. A number of bus services serving Fermoy, these include the 245 Cork - Fermoy – Mitchelstown route and the 366 Waterford – Dungarvan – Fermoy – Mallow/Cork. The town was connected to the national railway system, on a line from

Mallow to Waterford, with a junction near Mitchelstown, however closed in 1967. The town does not benefit from rail connection with the nearest railway station at Kent Station in Cork City 37 kilometres away. Fermoy Town is approx. 42km south west of Cork International Airport. The town is accessible via road and air; all routes are listed below in Table 5.7.1.

Table 5.7.1 Accessibility to Fermoy Town

Road Network	Transport Network
National Road	<p>N8 – Cork City – Fermoy – Mitchelstown – Cahir – Cashel – Portlaoise (M7)</p> <p>N72 –Mallow - Killarney - Dungarvan</p>
Regional Road	<p>R512 – Glanworth and Kildorrery</p> <p>R666 – Ballyduff and Lismore</p> <p>R639 – Rathcormaic</p>
Rail Network	Kent Station, Cork City (37 km) – Kerry, Dublin
Air	Cork International Airport (42 km)

5.7.3 Impact assessment – existing environmental problems and constraints

Traffic - A traffic management study for Fermoy has been commissioned by Cork County and Fermoy Town Councils. Draft recommendations have been made and the study is due for completion before the plan is adopted. The overall objective of the Transportation Study is to enable Fermoy Town Council and Cork County Council to introduce transport policies. This involves producing a programme of traffic, transportation and road safety proposals, which in the short, medium and long term will take into account traffic growth and land use in the study area. The Fermoy Traffic and Transportation Study is currently being progressed and the findings and recommendations included within the study, when published, will be incorporated within the Amended Town Development Plan and will be assessed in terms of this Environmental Report.

Wastewater Treatment – The sewage treatment plant serving the town was upgraded in 2006 to cater for a population equivalent of 20,000 people. The wastewater treatment plant serving the town is located to the east of the town on the south bank of the River Blackwater.

Water Supply – The source of water for the Fermoy Water Supply Scheme is an infiltration gallery on the south bank of the River Blackwater at Deerpark 4 km upstream of Fermoy Bridge. The supply is augmented by an adjacent bored well and water is pumped to the Coolroe reservoir 1 km to the south where the water is chlorinated and fluoridated prior to distribution. This reservoir serves the bulk of Fermoy town, the environs north of the River Blackwater and the village of Clondulane 4 km to the east of the town.

Fermoy Town and Environs consumes 4,000 cubic metres of water per day and has spare capacity of some 1,000 to 1,200 cubic metres per day which would allow a population equivalent of c.1,500 people, therefore adequate to meet the proposed population projections as set by CASP and the draft Cork County Development Plan. However the existing Fermoy water supplies can be vulnerable during periods of flooding, therefore it is recommended that a new source that is not vulnerable to flooding should be considered in the plan.

The Cork Strategic Water Plan, has identified the Conna Regional Water Supply Scheme as having capacity to provide supplies to an expanded regional area and to augment the supply to Fermoy. However according EPA report: 'The Provision and Quality of Drinking Water in Ireland, A Report on the Years 2006-2007', the Conna Village water supply (Cork) exceeded the nitrate parametric value and the lead chemical standards in 2006. Therefore this issue should be explored before a connection to this source is pursued.

5.7.4 Evolution without implementation of the plan.

In the absence of the Town Development Plan specific transport objectives would still be provided through the County Development Plan. However the town plan provides a guidance that specifically relates to transport infrastructure within the Fermoy area.

It is an objective of the plan to implement the recommendations of the Fermoy Traffic and Transportation Study. In the absence of the Fermoy Town Development Plan 2009 – 2015, recommendations of the transportation study would not be implemented and therefore it is likely that the town would become even more congested, causing increased air and noise pollution within the town centre. Without the plan it is likely that additional public transportation facilities, cycling facilities, pedestrian amenities and parking facilities would not be provided. Without these integral features of the plan the transport situation within the town itself would deteriorate as increased volumes of traffic over time were using the same routes that may presently be at or near capacity.

5.8 CULTURAL HERITAGE

This section of the SEA establishes Fermoy Town Council's objectives and policies for the protection, conservation and enhancement of Fermoy's architectural and archaeological heritage. There are many fine buildings of note in the town and these buildings have been listed in the Record of Protected Structures for Fermoy and are also protected by virtue of their location within the Architectural Conservation Area (ACA) designation.

The overall strategic underlying the Plan specifically aims to address the following matters that relate specifically to cultural Heritage within the Fermoy Town Council area:

- The objective of developing a heritage and tourism led public realm regeneration plan.
- The unique heritage of the town needs to be protected and leveraged in a balanced manner for the benefit of all stakeholders in the town.
- Fermoy's unique architectural heritage is noted and a detailed inventory in respect of same is included. These heritage items are an asset to the town and it is an objective to continue to develop a heritage strategy that will enable the preservation of these structures for their intrinsic conservation value, their potential for enhancing the town's urban quality and their economic value enhancing role with respect to the tourist industry.

5.8.1 Policy

There are a number of specific planning policies and objectives in the Fermoy Development Plan 2009 to 2015 to retain and improve those structures, buildings and streetscapes within the town which significantly add to the uniqueness of Fermoy's urban landscape and to the amenity value of the town. The Plan also refers to national, regional and local plans including the Cork County Development Plan 2003 and draft Cork County Development Plan 2007.

5.8.2 Baseline

Cultural heritage includes inherited artifacts and intangible attributes that are inherited from past generations, maintained and bestowed for the benefit of future generations. The protection of heritage not only has environmental benefits and benefits for the quality of the people of Fermoy, but it also brings economic benefits to the County by providing attractive towns, villages and countryside for visitors to enjoy.

Fermoy town possesses a wealth of historical buildings and archaeological remains. Such features are a finite, non-renewable resource particularly vulnerable to partial or total destruction and in certain instances contain irreplaceable information about the past. The Council recognises the value and significance of its built and archaeological heritage and therefore seeks to ensure the effective protection, conservation and enhancement of historical and archaeological sites, monuments and their settings, through preparing a Record of Protected

Structures (RPS), defining an Architectural Conservation Area (ACA), identifying recorded monuments and archaeological sites.

Archaeological Heritage

Archaeological heritage is a resource, which can be used to gain knowledge and understanding of the past and is therefore of great cultural and scientific interest. Archaeological heritage ranges from sites, features and objects of archaeological interest.

The Minister for the Environment and Local Government is responsible for the protection of archaeological heritage, including the licensing of archaeological excavations, through the exercise of powers under the National Monuments Acts 1930 to 2004.

There are a number of categories of monuments under the National Monuments Acts

- National monuments in the ownership or guardianship of the Minister or a Local Authority or national monuments which are subject to a preservation order;
- Historic monuments or archaeological areas recorded in the Register of Historic Monuments; or
- Monuments or places recorded in the Record of Monuments and Places.

The Archaeological Survey of Ireland (ASI) compiles the record of all archaeological monuments in the State and is responsible for the publication of Archaeological Inventories. The Record of Monuments and Places is compiled by The ASI and comprises lists and maps of all monuments with known locations.

It should be noted that any direct impacts on national monuments in State or Local Authority care or subject to a preservation order will require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004.

Record of Monuments and Places

The National Monuments (Amendment) Act 1994 made provision for the compilation of a record of all known monuments in the County - The Record of Monuments and Places (RMP). The Record of Monuments and Places consists of a set of maps on which all the archaeological sites in the county known to the Minister in 1997 were marked. It is accompanied by a manual, which contains a descriptive listing of each site. All the sites marked on the RMP maps are protected under section 12 of the National Monuments (Amendment) Act 1994. As new features and monuments are discovered due to research and development driven archaeological assessment, monitoring, testing and excavation a second layer of monuments not yet included in the RMP is created.

All recorded monuments within Fermoy are indicated on Map 6 of the Fermoy Town Development Plan. Copies of the Record of Monuments & Places maps and accompanying manual can be viewed at the Cork County Library, Model Business Park, Model Farm Road, Cork.

Preservation (i.e. preservation in-situ or, as a minimum, preservation by record) of all archaeological monuments included in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act, 1994, and of sites, features and objects of archaeological interest generally, is legal requirement. This includes all remains and sites which might yet be undiscovered, as the Record of Monuments and Places is subject to ongoing continuous updating. The precise location of Zones of Archaeological Potential (ZAP) and Monuments and Places included in the Record of Monuments and Places (RMP) are identified in Map 6 of the Plan.

Given the historic significance of the River Blackwater, underwater archaeology may be another important aspect of Fermoy's archaeological heritage as there is generally a high archaeological potential within maritime environments. Under the National Monuments Acts 1930-1994 all shipwrecks over one hundred years old, including underwater archaeological structures, features and objects are protected. The Record of Monuments and Places does not include all underwater archaeological sites and as a result development could potentially impact negatively on underwater cultural resources. Therefore the possible impacts on riverine environments by developments adjoining the River Blackwater will be considered.

Fermoy Town has a diverse range of monuments ranging from a number of historic eras. Monuments within the area include an Abbey, holy well, graveyards and corn mill. There are 5 archaeological sites within the town boundary, listed in on Map 6 of the Plan.

National Monuments - Archaeological Sites and Monuments in State Ownership

While no state owned National Monuments occur within the boundary of Fermoy Town Council it should be noted that under the National Monuments Acts any monument in the ownership or guardianship of the local authority may be declared a national monument. This applies to any Recorded Monument in local authority ownership or guardianship where the preservation of any such monument is a matter of national importance because of the archaeological, architectural, historical, traditional or artistic importance attaching to that monument. National Monuments Service will advise on any determinations regarding the status of such monuments. Under the national monuments acts (1930-2004) any works at or in proximity to such monuments will require ministerial consent.

It shall be an objective to protect in an appropriate manner all sites of archaeological interest within the town boundary. There may be sites of archaeological potential that are as yet unidentified and it is an objective of the Plan to protect such sites if or when they are so identified.

Architectural Heritage

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

- a) Structures and buildings together with their settings and attendant grounds fixtures and fittings;
- b) Groups of such structures and buildings, and Sites; and
- c) Which are of architectural, historical, archaeological, artistic, scientific, social or technical interest.

Record of Protected Structures

The Planning and Development Act, 2000 (Part II, Section 10) places an obligation on all local authorities to include in its development plan objectives for the protection of structures, or parts of structures, which are of special architectural, historic, archaeological, artistic, cultural, scientific, social or technical interest. These buildings and structures are compiled on a register known as the Record of Protected Structures (RPS), and are mapped on Maps 5 to 5D within the Town Development Plan. There are currently a number of structures listed for protection in the Record of Protected Structures (Fermoy Development Plan 2009).

The buildings and structures identified on the RPS are irreplaceable records of the past, of the local and national heritage, and therefore require protection. Their presence enhances the character of Fermoy and adds to its local distinctiveness. It is an objective of the plan to seek the identification and protection of all structures within the town that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Such structures include but are not exclusive to the Record of Protected Structures hereunder. It shall be an objective of the Council to have due regard to the protection of the context of structures of heritage merit and to take into consideration the context of such structures in considering proposals for development in their vicinity. It shall be an objective to maintain and enhance the context of heritage structures and developments which are liable to prejudice or undermine the context of such structures will be prohibited.

National Inventory of Architectural Heritage (NIAH) - Recorded Structures

The NIAH is a section within the Department of the Environment, Heritage and Local Government. The work of the NIAH involves identifying and recording the architectural heritage of Ireland, from 1700 to the present day. Identified buildings may be put forward for inclusion in the Record of Protected Structures. The NIAH has undertaken a survey on buildings within Fermoy, however the County Cork NIAH survey of buildings has not yet been published.

Architectural Conservation Areas (ACA's)

The built heritage of County Cork and Fermoy town is also offered protection through the designation of Architectural Conservation Areas (ACAs).

An ACA is defined as a place, area, group of structures or townscape, taking account of building lines and heights, that is of special architectural, historical, archaeological, artistic, cultural scientific, social or technical interest or that contributes to the appreciation of a Protected Structure, and whose character is an objective of a development plan to preserve. Piecemeal alterations on individual non-protected structures can have a significant cumulative effect on the streetscape.

Much of the town is designated as an ACA as indicated on Map 4 of the Fermoy Town Development Plan. Within the central core of the town there are significant groupings or concentrations of heritage structures within the Fermoy Town Development Plan. Their value and significance may be greater than if the buildings are taken individually.

In addition to the policy of the plan, Architectural Conservation Areas are protected by legislation and may be used to protect the following:

- Groups of structures of distinctiveness or visual richness or historical importance;
- The setting and exterior appearance that are of special interest, but the interiors of which do not merit protection;
- The setting of a Protected Structure where this is more extensive than its curtilage;
- Designed landscapes where these contain groups of structures as in, for example urban parks, the former demesnes of country houses and groupings of archaeological or industrial remains; and
- Groups of structures, which form, dispersed but unified entities but which are not within the attendant grounds of a single dominant Protected Structure.

Tree Preservation Orders

In accordance with Section 205 of the Planning & Development Act (2000) it is an objective within the plan, subject to safety considerations to preserve specimen trees in the town council area and environs and examining the possibility of conserving the visually and/or ecologically important ones by means of Tree Preservation Order. At present there are no specific tree preservation orders on any trees within the town.

Industrial Heritage

Over the past decade there has been a growing public awareness of Ireland's industrial heritage, as seen in a number of sites which have been restored by enthusiasts and are now open to the public as tourist and educational attractions. Although there is now official recognition of the importance of the industrial heritage of Ireland, statutory protection is still low, due in the main to a backlog of listing of heritage structures.

The Plan acknowledges that Fermoy has a natural setting on the Backwater and superb eighteenth and nineteenth century built environment which are still in a good state of preservation, (albiet deteriorating due to insufficient awareness of its value and importance) and a fascinating military history coupled with the extant remains of two military barracks and a military hospital. Therefore it is an overall strategic objective of the plan to transform Fermoy into a post industrial knowledge, tourist and service economy.

Gaeltacht Areas

There are no Gaeltacht areas within the subject area.

5.8.3 Impact assessment –existing environmental problems and constraints

Developments or works which occur in close proximity to archaeological monuments would have potential to impact existing archaeological monuments through disturbance or destruction of the monuments. New developments that are adjacent to and/or alterations/extensions to existing protected structures also need to be carefully managed to ensure that the cultural heritage of such areas are not disturbed or negatively impacted upon.

It is deemed that the Plan area has archaeological potential. This determination is based on the presence of archaeological remains from many periods of the past within the development area.

5.8.4 Evolution without implementation of the plan

In the absence of the Plan, specific objectives would still be provided through the Cork County Development Plan and National Legislation. However the Fermoy Development Plan provides a guidance that encompasses principles from the Cork County Development Plan and the national legislation and is therefore more applicable to the area of Fermoy.

If the plan were not implemented there would not be any local guidance, policies or objectives to protect and conserve archaeological sites, protected structures, trees of merit, Architectural Conservation Areas and buildings and sites of Architectural merit. Therefore these features of special architectural, historical, archaeological, artistic, cultural, social or technical interest could be damaged or even lost in some cases.

5.9 LANDSCAPE

Fermoy contains significant areas of landscape importance, which are important not only for their intrinsic value as places of natural beauty but also because they provide a real asset for residents and visitors alike in terms of recreation, tourism and other uses. The importance of landscape is recognised in the *Planning and Development Act 2000*, which requires that Development Plans include objectives for the preservation of the landscape, views and prospects and the amenities of places and features of natural beauty.

5.9.1 Policy

There are a number of specific planning policies and objectives in the 2009 to 2015 Fermoy Development Plan to protect features of Landscape and Natural Heritage importance which significantly add to the uniqueness of Fermoy's landscape and to the amenity value of the town. The Plan also refers to national, regional and local plans including the Cork County Development Plan 2003 and draft Cork County Development Plan 2007.

5.9.2 Baseline

Landscape character is a distinct area of landscape that is relatively homogeneous in character. Each character represents its own landscape values and sensitivities. The character specified for a study area is generally a descriptive term made up of the prominent landform and land cover. The town of Fermoy is particularly attractive enjoying a fine townscape and an attractive landscape setting. The town offers valuable amenities in terms of the River Blackwater, which flows through the centre of the town, forming the town's natural setting. Prominent ridges to the southeast and southwest of the town, provide an attractive rural setting to the town, and constrain expansion of the town in these directions. Outside the town boundary the land forms part of the open countryside.

The Blackwater River is the main natural amenity feature and has had a strong influence on the historic development of the town. The river bisects the town, with development on its northern and southern banks. The presence of the river represents a major constraint to future growth to both the east and west of the town, as this area comprises mostly low-lying land, which acts as an important flood storage area. The river carves a large meander through the town and has caused flooding in the town on a number of occasions.

The amenity value to Fermoy of the River Blackwater cannot be underestimated. To the east and west of the town, the Blackwater River Valley forms part of the proposed Natural Heritage Area (pNHA) and candidate Special Area of Conservation (cSAC). A Special Protection Area (SPA) to the east is also designated for protection. The river valley itself, in conjunction with its surrounding floodplains, is designated as a Scenic Landscape in the Cork County Development Plan 2003 and the 2007 Draft Plan.

According to the *draft Cork County Council Landscape Strategy* the landscape type of Fermoy town is of very high value and sensitivity. The landscape in this area is also of local and national importance.

Landscape Types

The landscape of Fermoy Town comprises primarily of Fertile Plain with Moorland Ridge. This landscape is generally referred to as the “Golden Vale”. This is a low lying landscape, which comprises an extensive area of predominantly flat or gently undulating topography along the River Blackwater, and which is contained in its periphery by low ridges. The latter includes the southern slopes of the Ballyhoura and Galtee Mountains of the north, the northern slopes of the Nagles to the south and the western ridges of the Knockmealdown Mountains. The bedrock of the plain comprises mostly of limestone, while sandstone typically forms the underlying geology of the peripheral ridges. Lower ground comprises brown earth and the occasional gley while the brown podzols are located at slightly higher levels.

These physical conditions create a fertile and verdant landscape well suited to intensive farming. It is this activity and the planar landform, which give the landscape its characteristic rectilinear mosaic of large sized fields. This mosaic is articulated by the field boundaries comprising mostly mature broadleaf hedgerows but also scrub species such as gorse. Articulation also results from the variation in colour arising from alternative use, whether dairying or arable. Occasional small blocks of coniferous plantations introduce a patchy landcover pattern to hills and ridge tops.

The landscape is also characterised by many old demesnes comprising, for example, high stonewalls, broadleaf avenues and open parkland. Several large settlements are found within the area, including at Fermoy, all of which developed on the basis of high agricultural productivity.

Values

This landscape character, together with its complex topography, forms an important and attractive characteristic of the town of Fermoy. The Fertile Plain of the “Golden Vale” landscape is valued nationally as an important agricultural area. In addition to this, the natural heritage of the area, particularly given the range, quality and diversity of habitats, is also of national importance. Locally, the area is highly valued for its recreational and scenic amenity value, particularly in the Broad fertile valley of the River Blackwater, which is characterised by demesnes, broadleaf woodland and a high quality built heritage. Some of the more upland areas are valued for forestry.

The area is highly valued by local residents as a place to live and has a strong sense of identity based largely on continuity of settlement.

Sensitivity

Land in the vicinity of the town centre is sensitive to development. The Blackwater Valley, which flows through the town centre, represents a major constraint to future growth to both the east and west of the town. Low lying land here is subject to flooding and forms an important flood storage area providing natural protection to the town and other downstream areas.

The River Blackwater is designated as candidate Special Area of Conservation (cSAC 002170), selected for conservation of protected habitats and species. To the west of the town, the river valley forms part of a proposed Natural Heritage Area (pNHA 001797). The steeply sloping valley sides make an important contribution to the setting of the town and are, in part, designated as Scenic Landscape. To the east, land is designated a Special Protection Area (SPA 004094), River Blackwater Callows, noted for its well developed aquatic plant life and populations of wintering waterfowl.

The principal roads approaching the town from the north, west and east are designated as part of the county's network of Scenic Routes. These are: A8 (S9)¹ to the west, the N72 from Castlehyde to Fermoy Bridge with views of the town, Blackwater Valley and the eastern slopes of the Nagle Mountains; A9 (S8) to the southwest, Road over Hollymount, with distant views of the Blackwater and Bride River Valleys and local views of wooded valley; A5 (S4) to the northeast, Road between Fermoy and Kilworth, with views of the Blackwater, Funchion and Argalin River Valleys; and A6 (S7), to the southeast, with views of the Blackwater River Valley and distant mountain views.

There are also a number of areas of amenity and scenic designations throughout the town, which are sensitive to development.

5.9.3 Assessment –existing environmental problems and constraints

It is an objective of the town plan to conserve and protect the landscape setting of Fermoy, while also providing active and passive open space and recreational areas, thereby enhancing the overall living environment and ensuring quality of life for all residents.

The River Blackwater is an important amenity area and is also subject to flooding. In particular, it is considered that the low-lying land, comprising the floodplains of the riverbank, is sensitive to development and should therefore be reserved from development. Instead it is proposed to make use of these areas for the general amenity of the town.

¹ *Draft Cork County Development Plan 2007, Volume 2, Heritage and Amenity, references of scenic routes.*

Four scenic routes approach the town from the north, west and east with protected views of the River Blackwater. The N72, west of the town is designated as Scenic Route A8. It is considered that the river valley, which forms part of the main approach roads into the town, is not, generally suitable for development.

An important and attractive characteristic of the town of Fermoy is the complex topography and landscape character of its setting. The prominent ridges to the southeast and southwest of the town, which are relatively free from development, provide an attractive rural setting to the town and are therefore not considered suitable for development. To the north of the town, the topography is less elevated and is considered more suited to development.

5.9.4 Evolution without implementation of the plan.

In the absence of the Plan specific objectives would still be provided through the Cork County Development Plan and National Legislation. However the Fermoy Development Plan provides a guidance that encompasses principles from the Cork County Development Plan and the national legislation and is therefore more applicable to the area of Fermoy.

If the plan was not implemented, lands within the town would not be zoned and it is likely that development would take place in an ad hoc manner. It is possible that that development would take place in scenic landscapes and important flood soakage areas within the town. Therefore features of landscape value could be damaged or even lost in some cases.

6 OBJECTIVES, TARGETS AND INDICATORS

The sustainability criteria are broadly categorised in terms of the indicators outlined in the SEA Directive and in the Draft SEA of the Cork County Development Plan 2009-2015. In the course of carrying out the appraisal, the sustainability criteria were refined, combined and classified in order to avoid duplication and ensure a clear, focused and measurable set of criteria against which the strategy can be assessed. Set out in Table 6.1 are the SEA Objectives that are being considered to test the Fermoy Development Plan policies and objectives. These objectives are based on the current understanding of the key environmental issues identified at a local level in Fermoy and at a county level.

Table 6.1: Fermoy Town Plan Objectives, Targets and Indicators

Issue	Objective	Target	Indicator	Responsibility
Biodiversity, Flora and Fauna				
B1	To avoid significant adverse impacts (direct, cumulative and indirect), to protected habitats, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG CCC
B2	To protect aquatic biodiversity, flora, fauna and wetland areas within the Plan area.	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG
Population and Human Health				
PH1	To improve the quality of life for the people of Fermoy through high quality residential, working and recreational environments, sustainable travel patterns.	To improve quality of life, provision of improved physical and social infrastructure, to reduce journey to work times and allow for a better match between place of residence and place of work.	Journey to work times.	CCC

Issue	Objective	Target	Indicator	Responsibility
PH2	To protect human health from hazards or nuisances arising from traffic and incompatible land uses.	No spatial concentrations of health problems arising from environmental factors.	Occurrence of a spatially concentrated deterioration in human health.	FTC/CCC
Soils				
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment, rather than developing greenfield lands.	All brownfield lands to be redeveloped at the end of the plan lifespan (subject to availability on the open market and demand for such land).	Area of brownfield land available.	FTC
S2	To maintain the quality of soils.	To reduce contamination and safeguard soil quality and quantity.	Cannot specifically monitor at present, however, when soil directive comes into force, will be obliged to consider impacts of policies on soils.	CCC
S3	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices.	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill.	Volume of waste recycled and volume of waste sent to landfill.	FTC/CCC
Water				
W1i	Maintain or improve the quality of surface water to meet the requirements of the South Western	0 Faecal Coliform Counts per 100ml of groundwater.	Faecal Coliform Counts per 100ml of groundwater.	EPA FTC/CCC
W1ii	River Basin Management Plan (SW RBMP) and Programme of Measures (POMs)	To improve biotic quality ratings, where possible to Q5.	Changes in water quality as identified during water quality monitoring programmes.	EPA FTC/CCC
W2i	To maintain and improve, where possible, the quality of rivers, lakes and surface water.	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC

Issue	Objective	Target	Indicator	Responsibility
W2ii		To improve biotic quality ratings, where possible, to Q5.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC
W3	Promote sustainable water usage	Increase number of water conservation measures implemented during the lifetime of the Plan	Number of water conservation measures implemented during the lifetime of the Plan Water loss through leakage	EPA FTC/CCC
Air and Climate				
A 1	To maintain and improve air quality in Fermoy and reduce CO2 Greenhouse Gases (GHGs) to alleviate Climate Change. Promote Flood risk assessment	Increased use of public transport. Increase numbers of cycle lanes and pedestrian routes in the study area. Increase number of permissions granted for renewable energy projects.Reduce flooding impacts within the Plan area	Use of public transport. Provision of cycle lanes and walking routes. Number of permissions granted for renewable energy projects. Results from air quality indicators. Level of impact within town in terms of flooding	FTC/CCC
Energy				
E1	Use of renewable energy technology for projected power requirements over the lifetime of the Plan	Encourage use of renewable energy for domestic and small businesses. Use of renewable energy to supply National Grid where applicable	Number and type of renewable energy technologies employed in new developments	FTC/CCC
Material Assets				
M1	To serve new development under the plan with appropriate wastewater treatment.	No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	CCC NRA
M2	To maintain and improve the quality of drinking water supplies.	To maintain and improve drinking water quality in Fermoy to comply with the requirements of the European Communities (Drinking Water) Regulations 2000.	Drinking water quality standards (Microbiological, Chemical and Indicator parameters).	EPA FTC/CCC

Issue	Objective	Target	Indicator	Responsibility
Cultural Heritage				
CH1	To protect the archaeological heritage of Fermoy and; the context of the above within the surrounding landscape where relevant.	No unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	Number of unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	CCC Heritage Section Cork Heritage Forum DoEHLG
CH2	To preserve and protect the special interest and character of Fermoy's architectural heritage and the context of the above within the surrounding landscape where relevant.	No unauthorized developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	Number of unauthorized developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	CCC Heritage Section Cork Heritage Forum DoEHLG
Landscape				
Li	To protect Fermoy's sensitive landscapes, landscape features and designated scenic routes and landscape	No developments to be conspicuously located within sensitive landscapes or designated scenic landscape.	Number of conspicuous developments located within sensitive landscapes or designated scenic landscape.	FTC/CCC
Lii		No developments to adversely impact upon designated scenic views or scenic landscape.	Number of conspicuous developments adversely impacting upon designated scenic views or scenic landscape.	FTC/CCC

7 ASSESSMENT OF ALTERNATIVES

7.1 INTRODUCTION

Article 5 of the SEA Directive requires the environmental report to consider 'reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme' and the significant effects of the alternatives selected. Alternatives must be realistic and capable of implementation and should present a range of different approaches within the statutory and operational requirements of the Town Plan.

Section 3.14 of the DoEHLG SEA Guidelines sets out that the higher the level of the plan, the more strategic the options which are likely to be available. Conversely, lower tier plans, such as Local Area Plans, will be framed in a policy context set by the level(s) above them, and strategic options may be limited. As a result, the strategic options available to the preparation of the Fermoy Development Plan are limited.

It is a mandatory objective of a Development Plan that sufficient lands are zoned for particular purposes. This is especially relevant in relation to the quantum and location of new residentially zoned lands. In this regard it is important to highlight that sufficient lands are proposed to be rezoned for residential, employment and community uses within the town boundary in line with national, regional and local population projections, which will contribute to the generation of critical mass within the town of Fermoy.

Alternative 1 The 'Do-nothing' Alternative;

Alternative 2 Rezone sufficient lands as a natural extension of the town centre;

Alternative 3 Extend new development zonings on remaining undeveloped Greenfield lands within the town boundary.

Under Alternative 1 the 'do nothing' scenario, Fermoy would maintain its current physical and socio-economic characteristics. Development would be market dependent and would occur at a slower pace and in a less co-ordinated manner. Adopting the 'do-nothing' approach would have implications for the proper planning and sustainability of Fermoy Town, as it would mean that development would take place in a haphazard manner.

As a result of the do-nothing approach, policies and objectives of the plan would not be updated and therefore derelict and under-utilised buildings would dilapidate further. Physical, social and economic development would not be planned and promoted within the town. Therefore Alternative 1 would not help to achieve the priority objectives of the plan, which aim to promote balanced and sustainable development that takes account of the values and concerns of all stakeholders in the town. This Alternative would also not work towards other strategic objectives, which aim to protect and enhance the environment including landscape, water quality, nature, archaeology, and architecture which are vital components of a high quality of life. Therefore this

Alternative is not considered to be very positive in terms of the promotion of quality of life for Fermoy and is therefore not the chosen Alternative for the plan.

Alternative 2 is to rezone sufficient lands as a natural extension of the town centre in accordance with projected growth for the area through the intensification and consolidation of the existing Town Centre. This Alternative would allow for the redevelopment of brownfield sites and Greenfield sites only where there is a natural extension to existing zoning. This scenario allows for the intensification of the town centre and the consolidation and expansion of existing services to accessible lands. This scenario would meet a large number of the objectives of the Town Development Plan, as it would allow the rejuvenation of existing derelict sites, which would improve the town’s architectural character and townscape and consequently improve its tourist function. It would also be likely to have a positive impact on existing residents and traders in the town. Therefore Alternative 2 is the preferred Alternative for the Fermoy Town Development Plan 2009 - 2015.

Alternative 3 was to extend new development zonings on the last remaining undeveloped Greenfield lands within the town boundary. Fermoy Town Council is quite limited in its extent and very little greenfield lands remain within the town boundary, however some greenfield lands remain on the northern banks of the River Blackwater and to the north of the town. However the last remaining greenfield is either quite elevated or is designated open space and/or acts as a protective buffer. Therefore this Alternative would involve extending zonings into the greenfield areas of the Town that is considered to be of high landscape character. Therefore Alternative 3 is considered unsustainable due to the dispersed nature of growth and primarily due to its potential to have an impact on scenic and amenity areas.

7.2 ASSESSMENT OF ALTERNATIVES

Table 7.2.1 below provides a description of the criteria used to assess the various environmental SEA topics against the proposed alternative.

Table 7.2.1 Scoring Symbol for the Purpose of Assessment of Alternatives

Impact	Negative	Negative indirect	Neutral	Positive (direct)	Positive (indirect)	Uncertain/ Questionable
Symbol	x	⊗	0	✓	⊠	?

Alternative 1- The “do-nothing” Alternative

Under Alternative 1 the ‘do nothing’ scenario, Fermoy would maintain its current physical and socio-economic characteristics. Development would be market dependent and would occur at a slower pace and in a less co-

ordinated manner. Adopting the ‘do-nothing’ approach would have serious implications for the proper planning and sustainability of Fermoy Town, as it would mean development would take place in a haphazard manner.

As a result of the do-nothing approach, policies and objectives of the plan would not be updated and therefore derelict and under-utilised buildings would dilapidate further. Physical, social and economic development would not be planned and promoted within the town. Therefore Alternative 1 would not help to achieve the strategic objectives of the plan which aim to promote and develop Fermoy as a self sustaining town and enhance its ranking in the order of town size in the state. This Alternative would also not work towards other strategic objectives, which aim to protect and enhance the environment including landscape, water quality, nature, archaeology, and architecture which are vital components of a high quality of life. Therefore this Alternative is not considered to be very positive in terms of the promotion of quality of life for Fermoy and is therefore not the chosen Alternative for the plan. An overview of impacts by considering the “do nothing” scenario is provided below in Table 7.2.2.

Table 7.2.2: Alternative 1 - the ‘Do-nothing’ Alternative

Environmental Issue	Score	Commentary
Biodiversity	0	May result in pressures to the River Blackwater due to unplanned growth. Possible loss of hedgerows, tree lines and potentially sensitive habitats but not on a significant scale.
Population and Human Health	☒	Under this scenario there would be a continuing reliance on private transport as development would be of an unplanned nature which would result in greater exposure to noise and air pollution.
Water	*	Uncontrolled development could place pressure on surface water and on groundwater quality. Uncontrolled development within the town is likely to have negative impacts to the River Blackwater and indirect impacts on the Blackwater Estuary further downstream. In addition development near the river and bay could cause pollution and could affect recreational fishing opportunities with a slight negative impact on water quality.
Soil	0	Unplanned development within the area could potentially result in the loss of fertile soils/resources but not on any significant scale.
Air & Climate	☒	Under this scenario there is no planned provisions for the facilitation of a green fabric and therefore there would be a greater reliance on the private car rather than cycleways and pedestrian links resulting in increased CO ₂ emissions and negative impacts to air quality and climate
Material Assets	0	Access to services and public facilities would not be planned under this scenario.
Cultural Heritage	☒	There could be impacts on the recorded monuments and places sites and protected structures within the area as a consequence of this Alternative. Also under the do-nothing Alternative, the plan would not implement protective policies in terms of trees, the landscape and heritage, therefore it is possible that the special features of the ACAs and Trees of high landscape, amenity and/or ecological value could be lost or degraded.
Landscape	☒	Unformulated development in the town may result in impacts on scenic and amenity areas.
Traffic	☒	Under this scenario the inclusion of sustainable public transport recommendations from the draft Transport Study would not be included within the plan.

Alternative 2 Rezone sufficient lands as a natural extension of the town centre;

Alternative 2 is to develop the town in a compact and sustainable manner is to rezone sufficient lands as a natural extension of the town centre in accordance with projected growth for the area through the intensification and consolidation of the existing Town Centre. This Alternative would promote the redevelopment of brownfield sites and Greenfield sites only where there is a natural extension to existing zoning to the east of the town. This scenario allows for the intensification of the town centre and the consolidation and expansion of existing services to easily accessible lands.

This scenario would meet a large number of the objectives of the Town Development Plan, as it would allow the rejuvenation of existing derelict sites, which would improve the town's architectural character and townscape and consequently improve its tourist function. It would also be likely to have a positive impact on existing residents and traders in the town. Therefore Alternative 2 is the preferred Alternative for the Fermoy Town Development Plan 2009 - 2015.

Table 7.2.3: Rezone sufficient lands as a natural extension of the town centre;

Environmental Issue	Score	Commentary
Biodiversity	0	The intensification of the Town centre and redeveloping brownfield sites and Greenfield sites only where there is a natural extension to existing zonings would have a neutral effect on biodiversity as it would reduce impacts to greenfield areas and wildlife corridors outside the town.
Population and Human Health	✓	It promotes greater use of public transport due to the intensification of the town centre and promotion of development on lands, which have been zoned in a planned manner. This Alternative promotes growth and development to allow for greater open space, amenities and community facilities, which in turn would improve the quality of life for the individual.
Water	0	Policies in the plan ensure that development will only take place where wastewater and water supply capacity have been assessed with the aim of reducing pressure on surface water and groundwater. In addition, this Alternative will aim for the preservation and enhancement of good water quality in line with the Water Framework Directive.
Soil	0	This scenario would involve uptake of land the majority of which is made ground and therefore impacts will be minimised.
Air & Climate	✓	Development will be concentrated in areas well served by existing and planned infrastructure making it convenient for the population to utilise public transport and thereby reduce CO ₂ emissions and negative impacts to air quality and climate.
Material Assets	✓	This Alternative focuses development in existing development areas and also promotes development on brownfield sites and on Greenfield sites only where there is a natural extension to existing zonings. This Alternative would help to rejuvenate existing derelict sites, which would improve the town's architectural character and townscape and consequently its tourist function. This Alternative promotes development where there is provision of services, water supply are planned to accommodate development.
Cultural Heritage	0	This Alternative will concentrate development in areas already developed or zoned for development. In addition policies and objectives within the plan ensure that Cultural Heritage is protected and enhanced and therefore would prevent development impacting on cultural heritage.
Landscape	0	This Alternative would lead to the development of a more compact urban form within the town and would reduce the need for the development of greenfield areas on the edge of town. This Alternative would concentrate development in the town and on lands zoned for development and would promote development of brownfield or derelict sites, which should reduce the visual impact on the landscape of the area. Some greenfield lands will be

Environmental Issue	Score	Commentary
		developed therefore there may be slight negative impacts.
Traffic	0	With the provision of sustainable public transport, it is likely that there will be an increase of use in public transport and reductions in the distances of commuting for the increasing population, as development is concentrated in the town and on lands planned and zoned for development.

Alternative 3 Extend new development zonings on remaining undeveloped Greenfield lands within the town boundary.

Alternative 3 is to extend new development zonings on the last remaining undeveloped greenfield lands within the town boundary. Fermoy Town Council is quite limited in its extent and very little greenfield lands remain within the town boundary, however some greenfield lands remain on the northern banks of the River Blackwater and to the north of the town. Lands within Fermoy Town boundary have largely been developed, therefore much of the remaining greenfield lands are zoned with a specific purpose to protect scenic and amenity values or to act as a protective buffer.

This Alternative would involve extending zonings into the greenfield areas of the Town that is considered to be of high landscape character. Furthermore much of the open space to the north of the River Blackwater is subject to flooding, therefore extending development on to this land could have implications in terms of flooding impacts. Therefore Alternative 3 is considered unsustainable due to its potential to have an impact on scenic and amenity areas and flooding within the town. An overview of impacts by considering Alternative 3 is provided below in Table 7.2.4.

Table 7.2.4: Extend new development zonings on remaining undeveloped Greenfield lands within the town boundary.

Environmental Issue	Score	Commentary
Biodiversity	<input checked="" type="checkbox"/>	Development of the remaining greenfield sites of the town could potentially have a negative impact on biodiversity. Much of the Greenfield lands in Fermoy is designated open space.
Population and Human Health	<input checked="" type="checkbox"/>	This scenario would increase the amount of development on open space within the town boundary; this would reduce the number of amenities for the population and tourists visiting the town. Overall this Alternative is considered neutral in terms of human health and on the quality of life for the individual.
Water	<input checked="" type="checkbox"/>	Much of the greenfield lands in Fermoy is designated open space, development on these lands could potentially place pressure on surface water and on groundwater quality.
Soil	<input checked="" type="checkbox"/>	Development on greenfield lands would eventually result in loss of fertile soils/resources in favour of development of brownfield sites.
Air & Climate	0	Under this scenario there would be greater reliance on the private car rather than use of cycleways and pedestrian links resulting in increased CO ₂ emissions and slight negative impacts to air quality and climate.

Environmental Issue	Score	Commentary
Material Assets	☒	This Alternative would result in the development of greenfield sites instead of the re-use of brownfield sites and the redevelopment of derelict structures within the town. This Alternative would therefore result in the further dilapidation of the town centre and would not be sustainable in the long term. This could have indirect impacts on the tourism industry of Fermoy.
Cultural Heritage	0	It is not considered that the development of greenfield lands would cause any increased risk of impact on archaeology and built heritage.
Landscape	*	This scenario would result in the development of greenfield lands within the town boundary and is likely to put pressure on the open landscapes within the town. In addition, without the development of brownfield or derelict sites in favour of greenfield sites, these areas will continue to be unused and negatively impact upon the landscape character of the town.
Traffic	☒	If all Greenfield lands were rezoned in addition to the lands already zoned within the town this would result in a haphazard approach to the town planning principles of the town therefore this would increase the number of people travelling by private means of transport leading to traffic congestion and delays and additional pressure on existing road network.

7.3 CONCLUSION

Table 7.3.1. below summarises the scoring for each development Alternative. Development Alternative 2 has clearly emerged as the preferred Alternative for the preparation of the Fermoy Development Plan and will be examined in more detail in Chapter 8.

Table 7.3.1 Summary of Development Alternative Score

SEA Objective	Alternative 1	Alternative 2	Alternative 3
Biodiversity	0	0	☒
Population and Human Health	☒	✓	☒
Water	*	0	☒
Soil	0	0	☒
Air & Climate	☒	✓	0
Material Assets	0	✓	☒
Cultural Heritage	☒	0	0
Landscape	☒	0	*
Traffic	☒	0	☒

8 EVALUATION OF THE DRAFT PLAN POLICIES AND PROPOSED AMENDMENTS

8.1 INTRODUCTION

The purpose of this section of the Environmental Report is to evaluate as far as is possible the environmental effects of the Town Plan policies and objectives and to set out measures envisaged to prevent, reduce and as far as possible offset any significant adverse effects on the environment. This section therefore evaluates the policies and objectives of the draft Plan against the SEA objectives, indicators and targets as set out in chapter 6. As part of the methodology for assessing the policies and objectives a matrix was drawn up to assess the strategic objectives of the Fermoy Development Plan against the objectives devised to ensure that the strategy is sustainable.

This process enables an overview of where potential environmental problems may arise from implementation of the Plan and allows for additional objectives to be generated, if necessary. Overall the proposed strategy will not have a negative impact on the environment. Where potential impacts/constraints occur mitigation measures will be put in place and monitoring will ensure there is no deterioration in environmental quality within the Plan area. Mitigation and monitoring measures are described in Chapters 9 and 10 respectively.

The environmental objectives of Biodiversity, Flora and Fauna, Population and Human Health, Soil water, Air and Climatic Factors, Energy, Material Assets, Cultural Heritage and Landscape area assessed against the draft policies and objectives in Volume II of the draft Fermoy Town Development Plan 2009 – 2015 in Table 8.2 below.

In order to ensure that the SEA process is transparent, the assessment of the proposed amendments as conducted at the s.12 (4) and s.12 (8) Amendment Stages are set out in Tables 8.3 and 8.4 respectively.

8.2 ASSESMENT CRITERIA

The assessment criteria used is based on the likely significant effects of the Plan's Objectives on the environmental objectives as detailed in Table 8.1. The criteria used for the assessment is described in Table 8.1:

Table 8.1 Assessment Criteria

Type of Impact	Description	Symbol
Positive	Improves the quality of the environment (i.e. improves air quality, biodiversity etc. Positive impacts may be Short Term / Temporary Long Term/ Permanent Indirect	+ +S +L +T +P + I
Negative	Reduces the quality of the environment (i.e. reducing air quality or reducing species diversity). A negative impact can however be sufficiently minimised/eliminated by installation of appropriate mitigation measures. Negative impacts may be Short Term/Temporary Long Term/Permanent Indirect	- -S -L -I
Short term/ Temporary	Usually lasts the duration of the project i.e. during the construction stage of a development i.e. during provision of infrastructure recommended in the Plan.	S +S or -S
Long term/ Permanent	Will last greater than 60 years	L

		+L or -L
Indirect	Effects that are not a direct result of the Plan, same as secondary effects.	I +I or -I
Neutral	No Impact	0
Questionable	Unknown	?
Cumulative	Effects on the environment that result from incremental changes caused by strategic action together with other past, present, and reasonably foreseeable future actions. These results can result from individually minor but collectively significant actions taking place over time or space.	C

8.3 ASSESSMENT MATRIX OF DRAFT DEVELOPMENT PLAN POLICIES AND OBJECTIVES

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																					
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health				Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land- scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i				

Overall Strategy and Strategic Objectives																		
Objective 2.10.2	0	0	+L	0	0	0	0	0	0	0	0	0	0	0	+I	+I	0	
Objective 2.10.3 - 1	+I	+I	+L	+I	+I	0	0	0	+I	+I	+I	0	0	0	0	0	+L	
Objective 2.10.3 - 2	+L	+L	+L	+I	0	0	0	0	+L	+L	0	0	+I	0	0	0	+I	
Objective 2.10.3 - 3	-0	0	+L	+I	0	0	0	0	0	0	0	0	+L	+I	0	0	0	
Objective 2.10.3 - 4	0	0	+L	+I	0	0	0	0	0	0	0	0	+I	0	0	0	+I	
Objective 2.10.3 - 5	0	0	+L	+L	0	0	0	0	0	0	+L	0	0	0	+I	+I	0	
Objective 2.10.3 - 6	0	0	+L	+L	0	0	0	0	0	0	+L	0	0	0	+I	+I	0	Positive as it promotes sustainable forms of transport
Objective 2.10.3 - 7	0	0	+I	+I	0	0	0	0	0	0	-I	0	+L	+I	+I	+I	0	
Objective 2.10.3 - 8	+I	+I	+L	+I	0	0	0	0	0	0	0	0	0	0	+I	+I	+I	Positive in terms of protection of cultural heritage which has indirect positive impacts on population and the landscape
Objective 2.10.3 - 9	+I	+I	+L	+I	+I	+I	0	0	0	0	0	0	0	0	+I	+I	+L	Ensures a vibrant Town Centre.
Objective 2.10.3 - 10	+I	+I	+L	+L	0	0	0	0	0	0	0	0	0	0	+I	+I	+L	Positive as it will reduce hap hazard development
Objective 2.10.3 - 11	+I	+I	+L	+L	+L	+L	+L	+L	+L	+L	+I	0	+L	+L	+L	+L	+L	Positive for population, human health and the built environment. Indirect positive impacts for biodiversity.
Objective 2.11.3 - 12	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	0	0	0	
Objective 2.10.3 - 13	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	0	0	0	
Social and Economic																		
Objective 3.1.1	-I	0	+I	-I	0	0	0	0	0	0	-I	-I	0	0	0	0	0	May be some indirect negative impacts on

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land- scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

Objective 3.7.1	0	0	+L	+I	0	0	0	0	0	0	+I	0	0	0	0	0	0	
Community Facilities Development and Zoning Objectives																		
Objective 3.8.1	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	0	
Civic Facilities: Development and Zoning Objectives																		
Objective 3.9.1	+I	+I	+L	+L	+I	+I	+I	+I	+I	+I	+I	0	0	0	0	+I	+I	Sustainable in terms of proper planning and zoning of uses within the town
Objective 3.9.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Education Development and Zoning Objectives																		
Objective 3.10.1	0	0	+L	+I	0	0	0	0	0	0	+I	0	0	0	0	0	0	Sustainable in terms of providing services within the town.
Objective 3.10.2	0	0	+L	+I	0	0	0	0	0	0	+I	0	0	0	0	0	0	Sustainable in terms of providing services within the town.
Objective 3.10.3	?	?	+L	+I	?	0	0	0	?	0	0	0	0	0	0	0	0	Sustainable in terms of providing services within the town. However, may be negative impacts on biodiversity and soils depending on the location.
Objective 3.10.4	0	0	+L	+I	0	0	0	0	0	+L	0	0	0	0	0	0	0	A safe, efficient mobility plan would have positive impacts and indirect positive impacts within the town
Sports, Recreation and Amenity Development and Zoning Objectives																		
Objective 3.11.1	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	0	0	0	+L	+L	+L	Positive policy as it helps to promote provision of sports and leisure facilities.
Objective 3.11.2	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	0	0	0	+L	+L	+L	Positive policy as it helps to promote provision of recreation and amenity facilities.

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																					
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health				Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i				
Objective 4.1.1-	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	+I	0	0	+L	+L	+L	Generally positive due to infill nature of development			
Objective 4.1.1-	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	+I	0	0	+L	+L	+L				
Objective 4.1.1	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	+I	0	0	+L	+L	+L				
Objective 4.1.1	+I	+I	+L	+L	+I	+I	0	0	0	0	+I	+I	0	0	+L	+L	+L				
Objective 4.1.1-	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	+I	+I	+I				
Objective 4.1.1-	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	+I				
Objective 4.1.1-	0	0	+I	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	+I				
Objective 4.1.1-	0	0	+I	0	0	0	0	0	0	0	0	0	0	0	+L	+L	+I	Positive in terms of protection of cultural heritage which has indirect positive impacts on population and the landscape			
Objective 4.1.2	0	0	+I	0	0	0	0	0	0	0	0	0	0	0	+L	+L	+I	Positive in terms of protection of cultural heritage which has indirect positive impacts on population and the landscape			
Evolution, Recycling and Renewal of Buildings, functions and uses																					
Objective 4.2.1	+I	+I	+L	+I	0	0	0	0	0	0	0	0	0	0	+I	+I	+I				
Archaeological Heritage																					
Objective 4.3.2	+I	+I	+L	0	0	0	0	0	0	0	0	0	0	0	+L	+L	+I				
Protected Structures Objectives																					
Objective 4.5.12.	0	0	+L	0	0	0	0	0	0	0	0	0	0	0	+L	+L	+I	Positive in terms of protection of cultural heritage which has indirect positive impacts on population and the landscape			
Objective 4.5.13	0	0	+L	0	0	0	0	0	0	0	0	0	0	0	+L	+L	+I	Positive in terms of protection of cultural heritage which has indirect positive impacts on heritage and the landscape			

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land- scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

Trees in Fermoy																			
Objective 4.6.1	+L	+I	+L	+I	+I	+I	0	O	O	O	O	O	O	O	+L	+L	+L		
Protected features of Landscape and Natural Heritage importance																			
Objective 4.7.1	+L	+I	+L	+I	0	+I	0	0	0	0	0	0	0	0	+L	+L	+L	Many positive and indirect positive impacts from policies to protect the river and landscape.	
Objective 4.7.2	+L	+I	+L	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	+L		
Objective 4.7.3	+L	+I	+L	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	+L		
Objective 4.7.4	+L	+I	+L	+I	0	0	0	0	0	0	0	0	0	0	+L	+L	+L		
Environment Objectives																			
Objective 5.1.1	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L		
Objective 5.1.2 - Designated Sites.	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	Such protection has long-term positive impacts for all aspects of the Plan.	
Objective 5.1.2 - Invasive species.	+L	+L	+I	O	+L	+L	+L	+L	+L	+L	O	O	O	O	O	O	+L	Specific policy required	
Objective 5.1.2 - Environmental appraisals	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L		
Objective 5.1.2 - Major Pressures	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L	+L		
Water Quality Management Objectives																			
Objective 5.2.1	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I		

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

Objective 5.2.2 - Encourage sustainable water usage (in SUDS).	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	
Objective 5.2.2 - Promote compliance with the Water Framework Directive and the implementation of Management Plans for the South Western region.	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	
Objective 5.2.2 - Maintain high status or good status of waters where they exist and to achieve good quality status in all other waters by 2015. Good water is measured in quantity, quality and ecology for surface water and quantity and quality for groundwater.	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	
Objective 5.2.2 - Continue monitoring of drinking waters.	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	
Objective 5.2.2 - Wastewater Treatment Plants	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	
Objective 5.2.2 - Ground Water	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

Flood Risk Management Objectives																			
Objective 5.3.1	+I	+I	+L	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I		
Objective 5.3.2	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I		
Objective 5.3.3	+I	+I	+L	+I	+I	+L	0	+L	+L	+L	0	0	+L	+L	+I	+I	+I	Ensures new build takes cognisance of risks from flooding.	
Objective 5.3.4	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	0	0	+L	+L	+I	+I	+I	Ensures new build takes cognisance of risks from flooding.	
Groundwater Protection Objectives																			
Objective 5.4.1	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	0	0	+L	+L	+I	+I	+I		
Septic Tank Objectives																			
Objective 5.5.1	+I	+I	+I	+I	+L	+L	0	+L	+L	+L	0	0	+L	+L	+I	+I	+I		
Surface Water Management Objectives																			
Objective 5.6.1	+I	+I	+I	0	+L	+L	0	+L	+L	0	0	0	+L	+L	0	0	+I		
Waste Recycling and Disposal																			
Objective 5.8.1	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I		
Energy Efficiency																			
Objective 5.9.1	+I	+I	+L	+L	+L	+I	+I	+I	0	0	+L	+L	-T	+I	+I	+I	+I	Positive in terms of the sustainable growth of the town. May be temporary negative impacts in terms of servicing new development.	

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix

Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water		Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3		A1	E1	M1	M2	CH1	CH2		

																			Sufficient Policies in plan to protect against negative impacts on environment.
Objective 5.9.2	+I	+I	+L	+L	+L	+I	+I	+I	O	O	+L	+L	-T	O	+I	+I	+I	+I	Same as above.
Objective 5.9.3	+I	+I	+L	+L	+L	+I	+I	+I	O	O	+L	+L	0	0	+I	+I	+I		
Objective 5.9.4	+I	+I	+L	+L	+L	+I	+I	+I	O	O	+L	+L	0	O	+I	+I	+I		
Objective 5.9.5	+I	+I	+L	+L	+L	+I	+I	+I	+I	+I	+L	+L	0	O	+I	+I	+I		
Objective 5.9.6	+I	+I	+L	+L	+L	+I	+I	+I	O	O	+L	+L	0	O	+I	+I	+I		
Soils																			
Objective 5.10.1	+I	+I	+I	+I	+L	+L	+L	+I	0	0	0	0	0	0	0	0	0	+I	
Objective 5.10.2	+I	+I	+I	+I	+L	+L	+L	+I	0	0	0	0	0	0	0	0	0	+I	
Objective 5.10.3	+I	+I	+I	+I	+L	+L	+L	+I	0	0	0	0	0	0	0	0	0	+I	
Infrastructure Objectives																			
Objective 6.1.1	+I	+I	+L	+L	+I	+I	+I	+L	+L	+L	+L	+L	+L	+L	+I	+I	+I		
Objective 6.1.2	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	Unknown as report not finalised.
Objective 6.1.3	+I	+I	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	+L	A safe, efficient transport system would have many positive impacts and many indirect positive impacts within the town
Objective 6.1.4	+I	+I	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	+L	Positive in terms of pedestrian movement within the town centre. Helps promote the town centre as a place to live and work
Objective 6.1.5	+I	+I	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	+L	Same as above.
Objective 6.1.6	+I	+I	+L	+L	+I	+I	O	O	O	O	+L	O	O	O	+I	+I	+L		
Objective 6.1.7	+I	+I	+L	+L	+I	+I	O	O	O	O	+L	O	O	O	+I	+I	+L	+L	Positive as it promotes sustainable forms of transport

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																			
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i		

Objective 6.1.8	+I	+I	+L	+L	+I	+I	O	O	O	O	+L	O	O	O	+I	+I	+L	
Objective 6.1.9	+I	+I	+L	+L	+I	+I	O	O	O	O	+L	O	O	O	+I	+I	+L	Reduces the no of private vehicles on the road which is positive
Objective 6.1.10	O	O	+I	+I	O	O	O	O	O	O	+L	O	O	O	+I	+I	O	
Objective 6.1.11	O	O	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	Study not final. However enhancement of existing facilities would be likely to have positive impacts for the town
Objective 6.1.12	O	O	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	It is considered that if parking spaces were not provided, it is likely that circulating traffic would increase and parking on open space would occur.
Objective 6.1.14	O	O	+I	+L	O	O	O	O	O	O	+I	O	O	O	+I	+I	O	
National Roads Authority																		
Objective 6.3.1	O	O	O	O	O	O	O	O	O	O	+L	O	O	O	O	O	O	
Transport																		
Objective 6.4.1	+I	+I	+I	+L	+I	+I	O	O	O	O	+L	O	O	O	+I	+I	O	
Car parking Objectives																		
Objective 6.5.1	O	O	+L	+L	O	O	O	O	O	O	+L	O	O	O	+I	+I	+L	
Water Supply																		
Objective 6.6.1	O	O	+L	+L	+I	+I	O	+L	+L	+L	O	O	O	+L	O	O	O	
Drainage																		
Objective 6.8.1	+I	+I	+I	+I	O	+I	O	+L	+L	O	O	O	O	O	O	O	+L	
Fermoy Surface Water Flooding																		
Objective 6.9.1	+I	+I	+I	+I	+L	+L	+L	+L	+L	+L	+I	+I	+L	+L	+I	+I	+I	

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

Septic Tank Objectives																			
Objective 6.10.1	+I	+I	+I	+I	+I	+L	+I	+L	+L	+L	0	0	0	+L	+I	+I	+I		
Telecommunications																			
Objective 6.11.1	O	O	+L	O	O	O	O	O	O	O	O	O	O	O	O	O	O		
Energy: Electricity, Gas																			
Objective 6.12.1	+I	+I	+L	+L	+I	+I	+I	+I	+I	+I	+L	+I	O	O	+I	+I	+I		
Objective 6.12.2	+I	+I	+L	+L	O	O	O	O	O	O	+L	+L	O	O	O	O	+I		
Objective 6.12.3	+I	+I	+L	+L	O	O	O	O	O	O	+L	+L	O	O	O	O	O		
ZONING OBJECTIVES																			
Primarily Town Centre Zoning Objectives																			
TC-01	-I	-I	+L	+L	+L	-I	O	-I	O	O	0	0	0	0	+L	+L	+L	Positive in terms of population and urban design within the town centre. Helps promote the town centre as a place to live and work. However, may have slight negative impacts on biodiversity and soils during times of flooding. However there are policies in plan to mitigate against this.	
TC-02	-I	-I	+L	+L	+L	-I	O	-I	O	O	0	0	0	0	+L	+L	+L	As above	
TC-03	-I	-I	+L	+L	+L	-I	O	-I	O	O	0	0	0	0	+L	+L	+L	As above	
Commercial Land use Zoning Objectives																			
C-01	-I	O	+L	+L	+L	-I	O	O	O	O	O	O	-T	+L	+L	+L	+L	Positive in terms of promotion of commercial uses, in the town. However there may be indirect impacts on the environment or built heritage, therefore the provision of protective	

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix																				
Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health			Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i			

																				policies on the sites' ACA status are included within the plan.
C-02	O	O	+L	+L	+L	0	O	O	O	O	O	O	0	+L	+L	+L	+L			
C-03	O	O	+L	+L	+L	0	O	O	O	O	O	O	0	+L	+L	+L	+L			
C-04	O	O	+L	+L	+L	0	O	O	O	O	O	O	0	+L	+L	+L	+L			Sustainable in terms of town centre consolidation
Primarily Residential Zoning Objectives																				
R-01	-I	-I	+L	+L	-L	-I	0	-I	O	O	O	O	0	0	0	0	0	-S		Generally positive due to infill nature of development. May be some negative short-term impacts to soil, biodiversity and noise during construction.
R-02	-I	-I	+L	+L	-L	-I	0	0	O	O	O	O	0	0	0	0	0	-S		Generally positive as site is centrally located. Help to promote the town centre as a place to live and work. May be some negative impacts on soils and biodiversity due to its riverside location.
R-03	-I	-I	+L	+L	-L	-I	0	0	O	O	O	O	0	0	0	0	0	-S		Same as above.
R-04	-I	-I	+L	+L	-L	-I	0	0	O	O	O	O	0	0	0	0	0	-S		May be some negative impacts in terms of quality of soils during construction, however any impact is only likely to be short term. Negative in terms of Greenfield development and impacts on biodiversity. However Sufficient Biodiversity policies to ensure protection of environment against this objective

Table 8.2: FermoyTown Development Plan Policy and Objectives Assessment Matrix

Strategic Objectives	Biodiversity Flora & Fauna		Pop-ulation & Human Health				Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i				
R-05	-I	-I	+L	+L	-L	-I	0	0	0	0	0	0	0	0	0	0	0	0	-S	May be potential negative impacts as greenfield sites are used to accommodate additional units, mainly short term during construction. Policies in plan should protect against negative impacts on the environment	
R-06	-I	-I	+L	+L	-L	-I	0	0	0	0	0	0	0	0	0	0	0	0	-S	Same as above.	
Primarily Open Space/sports/Recreation/Amenity Zoning Objectives:																					
O-01	+I	+I	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Positive in terms of the promotion of sports and leisure facilities and protection of cultural heritage.		
O-02	+I	+I	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Same as above.		
O-03	+I	+I	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Same as above.		
O-04	0	0	+L	+L	+I	+I	0	0	0	0	0	0	-T	0	+L	+L	+I		Positive in terms of population and open space/amenity provision within the town centre. Helps to promote the town centre as a place to live and work		
O-05	0	0	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Protective policies in plan should ensure buffer between site and river.		
O-06	0	0	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Same as above.		
O-07	0	0	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Same as above.		
O-08	0	0	+L	+L	+I	+I	0	0	0	0	0	0	0	0	+L	+L	+I		Same as above		

8.4 ASSESSMENT MATRIX OF AMENDMENTS S.12 (4) AUGUST 2009

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

objective of the Plan to ensure that mitigations for the 'Red Squirrel Species Action Plan' are implemented.																		
EPA submission: Inclusion following Objective: It is an objective of the Plan to protect Fisheries including those listed in Annex II of the Habitats Directive and other protected species such as salmon, lamprey species (Brook Lamprey, River Lamprey and Sea Lamprey) and freshwater pearl mussel.	+L	+L	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	
EPA submission: Inclusion following Objective: It is an objective of the Plan to implement the protection of water as outlined in the "Water Quality Management Plan for the River Blackwater Catchment" prepared by Cork County Council in 1988.	+L	+L	O	O	O	O	O	+L	+L	+L	O	O	O	O	O	O	O	
EPA submission: Inclusion following Objective: It is an objective of the Plan to adhere to the recommendations of 'The Provision and Quality of Drinking Water in Ireland – A Report for the years 2006 –	O	O	+L	+L	O	O	O	+L	O	O	O	O	O	+L	O	O	O	

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i		

or otherwise impact detrimentally on its performance or effectiveness".																			
DoEHLG: Sets out that Para. 5.3.4 should require all development proposals in flood risk areas shall be required to submit a flood risk assessment. Pending publication of the completed flood risk management guidelines, a precautionary approach should be adopted to the zoning of land for development without the benefit of a full flood risk assessment in any area where flood risk has been identified by the OPW".	O	O	+I	+L	O	+I	O	+I	+I	+I	O	O	O	O	O	O	O	O	
Definition of national heritage will be deleted	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Non-material. Improve clarity of text
Reference to "Register of Protected Structures" be amended to "Record of Protected Structures"	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Non-material. Improve clarity of text

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	
Deletion of text on text on Map 4 referring to the Built heritage and Architectural Areas be amended because it is considered to be ambiguous at present	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Non-material. Improve clarity of text
References to "Development Control" be amended to "Development Management"	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Non-material. Improve clarity of text
Bus Eireann: amend par 6.2.4	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Non-material. Improve clarity of text
OPW Submission: Flood risk areas along with the location of the proposed flood defence works would to be indicated in Map 2, Amenity, Scenic and other Constraints Map.	O	O	+I	+I	O	O	O	O	O	O	O	O	O	O	O	O	O	
Inclusion of Cork Joint Local Housing Strategy 2009 as Volume IV of the Plan and associated text changes	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	This Strategy is an administrative strategy and should be read in conjunction with the zoning and Objectives of the Fermoy Town Plan. The Final Version of the Strategy is very similar to the draft Strategy and has no significant impact on the environment of Fermoy.
Amalgamate TC – 01 and TC – 02 zoning and revise wording	O	O	+L	+L	+I	O	O	+L	O	O	O	O	O	O	+L	+L	+L	Amendment amalgamates zoning of TC – 01 and TC – 02 areas, which proposes better integration between two sites, also make provision for cultural facilities on site. Additional mitigation measures in terms of flooding and traffic proposed.

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

<p>1. It shall be an objective to encourage the provision of an excellent bus service facilitating third level students travelling from Fermoy to Cork, Limerick, Waterford and Dublin.</p> <p>2. It shall be an objective to encourage the provision of an excellent Sunday bus service to Cork.</p>																			
<p>Fermoy as centre of excellence for food processing. Insert the following paragraph: 3.4.3: It shall be an objective to promote Fermoy as a centre of excellence and innovation in the food processing industry.</p>	0	0	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Positive in terms of employment
<p>Bus Services to and from Fermoy: Regarding Submission number 7, (Bus Eireann) a number of members mentioned that Bus Eireann services had been reduced and this seems to be the case. As the service schedule changes on a regular basis it is considered, on reflection, inappropriate to</p>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Non material, clarification text

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i		

include a listing of destinations and connections that may change from time to time over the life of the Plan. Amend Paragraph 6.3.5 of Volume 1 to: Bus links include Bus Eireann normal and expressway services along with an Aircoach service that runs everyday between Cork and Dublin and major settlements en route.																			
Zoned O-08 and R-06 be amalgamated as one area designated X-01 with the following zoning objective: <i>X-01: This site shall be developed in a sequential basis as follows: Phase 1 shall provide a high quality architecturally designed hotel and conference facilities on the southern part of the site and subsequent Phase 2 shall provide low density high quality architecturally designed detached houses on individual plots on the northern part of the site, subject to respecting the</i>	-I	-I	+L	+L	-I	-I	O	O	O	O	O	O	O	O	O	+L	+L	+I	Positive in terms of Cultural Heritage, subject to the relevant mitigatory text regarding high quality design. It is likely that there will be negative indirect impacts in terms of biodiversity, soil and landscape due to the rezoning of open space.

Table 8.3: Fermoy Town Development Plan Assessment of Amendments s.12 (4) August 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy		Material Assets		Cultural Heritage		Land-scape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i		

<i>visual and heritage amenities of the area and proper planning and sustainable development considerations and subject to a satisfactory flood risk assessment.</i>																			
<p>Showgrounds: Zoning Objective O-03 be amended as follows to: Sports Ground; to be preserved as a Sports Ground and Park and for leisure use and having regard to the protected structures on or bordering the site and sites status as an Architectural Conservation Area having due regard to existing uses on site.</p> <p>It is also proposed to reduce the area zoned for commercial usage surrounding the James Dunlea business premises to take better account of the existing open space usage around the site. In effect only those areas in use for commercial usage will be so zoned and space currently in use as open space will be so zoned.</p>	+I	+I	+I	+L	O	O	O	O	O	O	O	O	O	O	O	O	O	+L	Positive in terms of landscape, population and indirectly positive in terms of biodiversity.
Gaelscoil: Having regard to recent discussions with	O	O	O	+I	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Located adjacent to the town centre therefore is in line with the strategy of the plan (rob from above)

8.5 ASSESSMENT MATRIX OF AMENDMENTS S.12 (8) NOVEMBER 2009

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

Shipton Submission																			
TC-01: Zoned for Town Centre uses, primarily retail and commercial development including an element of residential, social and cultural facilities which would be in keeping with the vibrant mixed use role of the town as a retail, tourist and family friendly residential area. Proposals for the site shall address the following:	0	0	-I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	This change sets out that 'an element' of residential, social and cultural facilities should be provided as part of this zoning objective. This amendment dilutes the amount of these uses required on site, which is not desirable from a strategic population, cultural and social perspective.
Urban Design: The scale, height, density and built form shall respect the existing character of the town centre, adjacent Architectural Conservation Areas, Protected Structures and the riverside location. The development shall be outward facing and properly address existing streets unless to do so would restrict the provision of adequate private service space and car-parking to serve the development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-I	0	0	Could be possible negative indirect impacts on the architectural heritage of the area if the development does not address the existing streets in an adequate manner. A development on this site was previously refused by An Bord Pleanála under PL 60.231465 reason 3. due to 'failure to provide active frontages onto the existing public streets, the poor level of pedestrian permeability and the lack of visual connection with the existing town centre'. Therefore recommend that this should not be jeopardised in any way and therefore the highlighted text should be deleted: unless to do so would restrict the provision of adequate private service space and car-parking to serve the development
Connectivity/Permeability: The development of the site will connect with the existing town centre to the west and south and should ensure that	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	No impact. Zoning objective in this regard has been made more prescriptive to take account of the proposed OPW flood Relief Works.

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

<p>Flooding: Proposals shall address the location of the development in an area at risk of flooding. Flooding is one of the principal factors that will determine the design of any development on this site. It is intended that Phases 2 and 3 of the OPW Flood Relief Scheme will offer protection from future flooding. In the meantime the site is liable to flood and any design on the site must acknowledge current flood issues and the future OPW proposals.</p>	O	O	O	O	O	O	O	+	+	O	O	O	O	O	O	O	O	O	Positive in terms of protection in terms of flooding.
<p>Transport: Proposals shall address the traffic/parking impacts and ensure suitable provision for pedestrians/cyclists. It is recognised that underground parking may not be appropriate on any part of the site and on the eastern part of the site surface or decked parking will be considered. Where surface parking is allowed on this part of the site the location of development over parking will be considered.</p>	O	O	O	O	O	O	O	O	O	O	O	O	O	O	-I	-L	O	O	<p>Given that the subject site is prone to flooding the requirement to provide underground parking on this site has been amended. However the objective to allow development over parking now poses new issues in terms of impact on architectural heritage and visual impact. Not appropriate to include this objective in the absence of a detailed visual and architectural heritage assessment.</p> <p>Recommend deletion of highlighted text below:</p> <p>Where surface parking is allowed on this part of the site the location of development over parking will be considered.</p>
Development of Lands:	O	O	-I	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	The rewording of this objective poses the risk of not achieving

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

Proposals for any development shall be set within the context of an overall agreed framework for the entire site which shall be submitted by the owners as part of any proposal for the site. Such framework shall include phasing proposals so as to ensure the continued viability and vitality of the existing town centre. Proposals for any part of the site may include some or all of the uses listed above in the initial phase(s), subject to an overall balance between the various uses being achieved upon completion of the entire development.																		<p>planning gain uses such as 'residential, social, cultural facilities' if they are not required in the earlier phases of development. Therefore recommend deletion of the highlighted text below:</p> <p>Proposals for any part of the site may include some or all of the uses listed above in the initial phase(s), subject to an overall balance between the various uses being achieved upon completion of the entire development.</p>
EPA Submission																		
X-01: "and Article 6 Appropriate Assessment Screening of the potential for any development to impact negatively on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC will be carried out."	+I	+I	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Ensure Appropriate Assessment screening is undertaken with regard to this zoning objective.
O-05: to include: "Any permitted development shall have regard to the OPW flood guidelines."	+I	+I	O	O	O	O	+I	+I	+I	O	O	O	O	O	O	O	O	Minor Change. To ensure that the OPW Flood Guidelines are referred to in relation to this zoning objective.

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

Fix typo on p. 49 "It shall be an objective of this plan to promote the well-being and life-cycle of protected aquatic species within its area of control."	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.
Reference to 1988 Water Quality Management Plan should be changed to refer to the recommendations of the 'River Basin Management Plan and Programme of Measures.'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.
reference to SUDS abbreviation will be clarified.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.
Page 17: Issue B2, should be amended to "To protect the marine environment , aquatic biodiversity, flora and fauna and wetland areas within the town Plan area.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.
Page 19: Air and Climate Change Issue A1 might also contain objectives for water conservation and flood risk assessment.	0	0	0	0	0	0	0	+	+	+	0	0	0	0	0	0	0	0	Minor Change. To improve future monitoring of impacts within the plan area.
Page 42, under the Topic for "Energy", reference could be made to "Grid 25", the upgrading of the National Electricity Grid, currently having SEA undertaken.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

B1 Consider adding Cork County Council to the list of responsible parties for helping to avoid significant adverse impacts. B2, should be amended to "To protect the marine environment, aquatic biodiversity, flora and, fauna and wetland areas within the town Plan area.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To improve clarity of text.
W2i Target Column should change the year from 2016 to 2015 to achieve Water Framework Directive Target.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. Typo.
W3 indicator could also include a reduction in the amount of water loss through leakage.	0	0	0	0	0	0	0	+1	+1	+1	0	0	0	0	0	0	0	0	Minor Change. To improve future monitoring of impacts within the plan area.
A1 Objective should also include objectives for water conservation and flood risk management. Target: Reduce impacts of flooding within the Plan area.	0	0	0	0	0	0	0	+1	+1	+1	0	0	0	0	0	0	0	0	Minor Change. To improve future monitoring of impacts within the plan area.
Potential exists for likely significant environmental effects in relation to proposed development on floodplains. The area is potentially at risk, and further development upstream and downstream could increase cumulative	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Minor Change. To clarify likely cumulative impacts on the town. Mitigation measures already included in the Plan for same.

Table 8.4: Fermoy Town Development Plan Assessment of Amendments s.12 (8) November 2009

Strategic Objectives	Biodiversity Flora & Fauna		Population & Human Health		Soil			Water			Air & Climate	Energy	Material Assets		Cultural Heritage		Landscape	Comments
	B1	B2	PH1	PH2	S1	S2	S3	W1i	W2i	W3	A1	E1	M1	M2	CH1	CH2	L1i	

effects.																			
EPA recommend that 'EPA' is replaced with 'NPWS' in Chapter 1 (page 1, last paragraph) of the Appropriate Assessment Report.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Minor Change. To improve clarity of text.
EPA recommend that the commitment to Appropriate Assessment in Section 5.5 of the Appropriate Assessment Report (p28) is changed to 'Appropriate Assessment Screening Requirement'.	+I	+I	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Ensure Appropriate Assessment screening is undertaken
Spinning Wheel Submission																			
Zoning Objective TC-02 be amended as follows: Zoned for mixed use that would be in keeping with the vibrant role of the town core as a retail, commercial, service, tourist and family friendly residential area. Proposals for the site shall address the following:	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Minor Change. To improve clarity of text.

9 SIGNIFICANT EFFECTS AND MITIGATION MEASURES

9.1 INTRODUCTION

Annex 1 (f) and (g) of the Directive requires that the Environmental Report describe the likely significant effects on the environment and their interrelationship and the measures envisaged to prevent, reduce and/or offset as fully as possible any significant adverse effects on the environment from implementing the plan.

It should be noted that proposals to implement this plan may also require Environmental Impact Assessment (EIA) at planning application stage. Other impacts and necessary mitigation measures or actions may be identified during this process.

The likely significant effects of the Fermoy Town Development Plan have been informed by trends and potential impacts as identified in section 5 of this Environmental Report and from impacts arising from the assessment of policies and objectives of the Plan as set out in Tables 8.2, 8.3 and 8.4 of this report.

The following table 9.1 links significant effects with potential trends and impacts with proposed mitigation measures and monitoring as set out in table 10.1 below.

The mitigation measures identified within this Environmental Report have been included within the Fermoy Town Development. These have been included by way of changes to or inclusion of additional objectives and or policies. The following table references where mitigation measures have been included within the plan.

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
<p>Biodiversity</p> <p>There is potential for impacts to the aquatic environment in the form of residential, industrial and agricultural run-off, other municipal sources of pollution, fragmentation of river corridors and soil erosion. These risks apply in particular to the Blackwater River, which is a Salmonoid River and also contains other protected species such as Lamprey Species and Freshwater Pearl Mussel. Under the Water Framework Directive the River Blackwater is currently classified as “Possibly at Risk of Not Achieving Good Status” Under the Water Framework Directive, water quality must achieve “good status” by 2015.</p>	<p>Possibly significant if not mitigated</p>	<p>SEA suggests inclusion a policy/objective to ‘to maintain the conservation value of Blackwater Callows SPA, Blackwater River (Cork/Waterford) cSAC and pNHA during the lifetime of this plan and to ensure Appropriate Assessment is carried out where development projects are likely to have significant effects on this European site whether within or outside the boundary of the European Site.</p> <p>(Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p> <p>SEA suggests inclusion of a policy/objective under Water Quality Management - to implement the protection of water as outlined in the “Water Quality Management Plan for the River Blackwater Catchment” prepared by Cork County Council in 1988.</p> <p>(Addressed in Section 5.2, Water Quality Management of Volume 2 of the Plan)</p> <p>SEA suggests inclusion of a policy/objective for the Protection of Fisheries including those listed in Annex II of the Habitats Directive and other protected species such as salmon, lamprey species (Brook Lamprey, River Lamprey and Sea Lamprey) and freshwater pearl mussel.</p> <p>(Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: B1, B2, W1, W2, M1, M2</p>
<p>Greenfield Development: All developments which take place on greenfield sites are likely cause some degree of</p>	<p>Possibly significant if not mitigated</p>	<p>The SEA recommends inclusion of a specific policy for the development of brownfield sites over Greenfield</p>	<p>Refer to Monitoring Programme As Indicated</p>

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
<p>negative impact on biodiversity. Where developments i.e. roads, housing and other infrastructural developments have occurred on greenfield sites they have replaced some semi-natural and natural areas with artificial surfaces causing a gradual loss of biodiversity.</p>		<p>sites; (Section 4.1.1 and 4.12 in Volume II of the Plan adequately address this matter as policies/objectives encourage the renewal of derelict sites, backland areas and street infill and to pursue derelict and neglected sites and buildings)</p>	<p>In Table 10.1: B1, S1, S2,</p>
<p>Invasive species: There is potential for invasive species to enter surface waters and marine systems from a number of sources including runoff from garden centres, from boats, by dumping of waste from fish tanks and garden ponds, and perhaps also from aquaculture facilities. Grey Squirrels are currently posing a threat to red squirrels within the Fermoy area there is therefore a need to include a policy in the new plan to prevent the introduction of those alien species which threaten ecosystems, habitats or species. The utilisation of native species in amenity planting and stocking along with change in community actions to reduce the introduction and spread of non-native species should be encouraged.</p>	<p>Possibly significant if not mitigated</p>	<p>SEA suggests inclusion of a policy/objective to ensure that invasive species are not introduced into the environment of Fermoy, or into adjacent semi-natural habitats, particularly the River Blackwater. (Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p> <p>SEA suggests inclusion of a policy/objective to support the development of a habitat map of Fermoy to tie in with the County Habitat Mapping Project. (Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p> <p>SEA suggests inclusion of a policy/objective Ensure that mitigations for the 'Red Squirrel Species Action Plan' are implemented. (Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: B1, B2,</p>

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
<p>Removal of Ecological Corridors: The removal of ecological networks / corridors is a significant issue. It is recognised that there has been a significant increase in hedgerow removal throughout Ireland in recent years.</p>	<p>Possibly significant if not mitigated</p>	<p>SEA suggests inclusion of a policy/objective to ensure that the natural environment, biodiversity and waterways of Fermoy shall be protected, conserved and enhanced and should include sufficient buffer zones from areas zoned for development. In addition linkages shall be enhanced.</p> <p>(Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p>	
<p>Climate Change: Until recently biodiversity losses have been attributed to the spread and increased environmental impact of people, however, it seems likely that future losses will increasingly result from human induced global climate change. Climate change considerations must therefore be seen as central to the protection of the natural environment.</p>	<p>Possibly significant if not mitigated</p>	<p>In order to ensure the preservation of the habitats of legally protected plant and animal species in accordance with the requirements of the Natural Habitats Regulations of 1997 this SEA recommends inclusion of a policy/objective to undertake environmental appraisals, Environmental Impact Assessments and/or Appropriate Assessments in areas within or likely to affect pNHA's, cSAC's and SPAs; i.e. new roads and other infrastructure, other major developments, etc. It shall also be an objective to undertake such assessments in visually sensitive areas.</p> <p>(Adequately addressed as strategic environmental Objectives in section 5.1 of Volume 2 of the Plan)</p>	

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
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Population and Human Health			
<p>In terms of the development of the town and its impact on the well being of its population through plan implementation, the plan contains a range of objectives and policies to ensure the provision of adequate employment, retail, leisure, educational and other community facilities within the immediate Fermoy area in line with its rapidly growing population to enable the people of Fermoy to inhabit the town as a vibrant, sustainable community.</p>	<p>Possibly significant if not mitigated</p>	<p>SEA recommends inclusion of a policy/objective to work with Cork County Council to seek to ensure that development and population growth is accommodated within the Fermoy Town Council development boundary in a sequential manner in preference to the Fermoy Environs in the interest of sustainable development.</p> <p>(Adequately addressed in section 3.2 of Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: PH1, PH2</p>
Soil			
<p>Greenfield sites - any proposed developments on greenfield sites involves changing the character of the ground and soil. New developments have the potential to contaminate the soil and underlying groundwater, particularly in the case of septic tanks and poor wastewater treatment facilities. Existing activities such as agriculture and manufacturing may also pose a risk to soil and groundwater.</p>	<p>Possibly significant if not mitigated</p>	<p>The SEA recommends inclusion of a specific policy for the development of brownfield sites over Greenfield sites;</p> <p>(Section 4.1.1 and 4.12 in Volume II of the Plan adequately address this matter as policies/objectives encourage the renewal of derelict sites, backland areas and street infill and to pursue derelict and neglected sites and buildings)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: S1, S2</p>

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
Water			
<p>Flooding- Flooding has been identified as being important, particularly for buildings that are prone to flooding in Fermoy as well as areas zoned for development near or adjacent to rivers or their floodplains. Strict control of planning will be required in these areas i.e. along the River Blackwater and the OPW's Guidelines on Flood Risk alleviation should be adhered to.</p>	<p>Possibly significant if not mitigated</p>	<p>The SEA recommends that the draft plan should refer to the Draft Planning System and Flood Risk Management Guidelines and policies therein should be incorporated into the draft Plan.</p> <p>(Adequately addressed in section 5.3 of Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: W1, W2, W3, W4, M2</p>
<p>Groundwater Pollution - The majority of the study area is "probably at risk of not achieving good status" for groundwater;</p>	<p>Possible impact if not mitigated</p>	<p>EPA recommend new plan policy under section 5.2.2 (which refers to groundwater resources) to 'Develop a groundwater protection scheme for the plan area, whereby high and extreme vulnerability should be mapped and set out for enhanced protection from inappropriate development or use.'</p> <p>(Section 5.4 adequately addresses the protection of ground waters)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: W1, W3</p>
Air and Climate			
<p>Climate Change: Until recently biodiversity losses have been attributed to the spread and increased environmental impact of people, however, it seems likely that future losses will increasingly result from human induced global climate change. Climate change considerations must therefore be seen as central to the protection of the natural environment.</p>	<p>No significant effect proposed as a result of the implementation of the Plan.</p>	<p>The SEA suggests the inclusion of a policy to implement the objectives and measures of the National Climate Change Strategy 2007-2012.</p> <p>The SEA suggests the inclusion of a policy to promote the continual promotion of sustainable, renewable and clean technologies in order to reduce dependence on fossil fuels, which will reduce emissions and provide a security of supply.</p> <p>(Adequately addressed in section 5.8, 5.9 and 6.12 Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: A1, PH1, PH2, S3 and E1.</p>

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
<p>Material Assets</p> <p>The source of water for the Fermoy Water Supply Scheme is an infiltration gallery on the south bank of the River Blackwater and therefore water supplies can be vulnerable during periods of flooding.</p> <p>According to the Cork Strategic Water Plan, in strategic terms, the Conna Regional Water Supply Scheme has the capacity to provide supplies to an expanded regional area and to augment the supply to Fermoy. Given that the existing Fermoy supplies can be vulnerable during periods of Blackwater River flooding, a strategic link between the Conna Regional Scheme and the Fermoy system would offer significant security of supply benefits.</p> <p>According to the EPA report: 'The Provision and Quality of Drinking Water in Ireland, A Report on the Years 2006-2007', the Conna Village water supply (Cork) exceeded the nitrate parametric value and the lead chemical standards in 2006. Therefore this issue should be explored before any connection is pursued.</p>	<p>Significant if not mitigated</p>	<p>The SEA suggests inclusion of policy/objective outlining that 'Fermoy Town Council will adhere to the recommendations of 'The Provision and Quality of Drinking Water in Ireland – A Report for the years 2006 – 2007' in terms of ensuring a safe and secure drinking water supply and monitoring thereof. Particularly, Fermoy Town Council will ensure that Cryptosporidium risk assessments are carried out on the public water supply and, if a supply is identified as high risk, then the local authority should take action to reduce the risk.</p> <p>(Adequately addressed in section 5.2 of Volume 2 of the Plan)</p> <p>The SEA suggests the inclusion of text setting out that 'The Cork Strategic Water Plan has highlighted that in strategic terms, the Conna Regional Water Supply Scheme has the capacity to provide supplies to an expanded regional area and to augment the supply to Fermoy. However in 2006 the Conna Village water supply (Cork) exceeded the nitrate parametric value and the lead chemical standards and therefore this issue should be dealt with before any connection is pursued.'</p> <p>(Adequately addressed in section 5.2 of Volume 2 of the Plan)</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1: M2, W1, W2, W3,</p>
<p>Inclusion of recommendations from the Fermoy Traffic and Transportation study.</p>	<p>Possibly significant if not mitigated against</p>	<p>Any proposed Transport proposals should be environmentally assessed by way of an Environmental Impact Assessment before development commences.</p>	<p>Refer to Monitoring Programme As Indicated In Table 10.1:</p>

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
		Consideration should also be given to the environmental policies and objectives of the current and proposed plan in relation to any proposed strategic infrastructural development.	PH1, PH2, A1, L
Cultural Heritage			
Any direct impacts on national monuments in State or Local Authority care or subject to a preservation order will require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004.	Possibly significant if not mitigated	SEA suggests inclusion of a policy/objective outlining that any direct impacts on national monuments in State or Local Authority care or subject to a preservation order will require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004. (Adequately addressed in section 4.3.3 of Volume II of the Plan)	Refer to Monitoring Programme As Indicated In Table 10.1: CH1, CH2
Potential Impacts on the coastal/Riverine and inter-tidal zone	Possibly significant if not mitigated	The archaeological potential of the Riverine and inter-tidal zone, where relevant, should be carefully considered and any potential impacts on archaeological heritage should be subject to full archaeological assessment. (Adequately addressed in section 4.3.3 of Volume II of the Plan)	Refer to Monitoring Programme As Indicated In Table 10.1: CH1, CH2
Landscape			
It is considered that development should not have visual impacts on scenic routes in the vicinity of the town, scenic elevated areas or the floodplain.		To ensure that any proposed new development within the town will not impact negatively on the A8, A9, A5 and A6 Scenic Routes in the Cork County Development Plan 2003 (S9, S8, S4, S7 Scenic Routes in the Draft Cork County Development Plan	Refer to Monitoring Programme As Indicated In Table 10.1: L, PH1

Table 9.1: Trends, Significant Effects, Proposed Mitigation Measures and Proposed Monitoring of Fermoy Town Development Plan Environmental Report

Trend & Potential Impacts	Significant Effects	Mitigation Measures (and reference to where addressed in the Plan highlighted in brackets – Amendments highlighted in Yellow)	Monitoring (Refer to relevant Indicators, targets and responsibilities as indicated in Table 10.1)
		2007). (Adequately addressed in section 4.7 of Volume II of the Plan. Also Policy of the Cork County Development Plan is still applicable and therefore no change proposed in draft Plan)	
The implications of development on the above mentioned features should be investigated with a view to ensuring such views/ features are protected from any potential development in the area.		Hedgerows where possible, should also be retained in order to reflect field patterns. (Adequately addressed in section 4.7.3 of Volume II of the Plan)	Refer to Monitoring Programme As Indicated In Table 10.1: L,
The River Blackwater is an important amenity area and is also subject to flooding. In particular, it is considered that the low-lying land, comprising the floodplains of the riverbank, is sensitive to development and should therefore be reserved from development. Instead it is proposed to make use of these areas for the general amenity of the town.		The floodplains of the river Blackwater should be protected from future development. (Adequately addressed in section 4.7 of Volume II of the Plan)	Refer to Monitoring Programme As Indicated In Table 10.1: L, PH1, W1, W2.

9.2 CUMULATIVE EFFECTS

Cumulative effects are changes to the environment that are caused by an action in combination with other past, present and future human actions. Cumulative impacts can be created when insignificant impacts are joined together to create a cumulative impact. Cumulative effects can occur in various ways including 'Nibbling loss', 'Spatial and temporal crowding' and 'growth inducing potential' and are described as follows;

- 'Nibbling loss': the gradual disturbance and loss of land and habitat
- Spatial and temporal crowding: Cumulative effects can occur when a lot of things are happening within too a small area and in too brief a period of time. This may result in the exceedance of a threshold and the environment may not be able to recover to pre-disturbance conditions and can occur quickly or gradually over a long period of time before the effects become apparent. Spatial crowding results in an overlap of effects among actions
- Growth-inducing potential: Each new action can induce further actions to occur. The effects of these "spin-off" actions (e.g., increased vehicle access into a previously unroaded hinterland area) may add to the cumulative effects already occurring in the vicinity of the proposed action, creating a "feedback" effect. Such actions may be considered as "reasonably-foreseeable actions".

Potential cumulative impacts of the Draft Fermoy Town Development Plan have been identified from a review of negative impacts directly resulting from implementation of objectives and policies of the Plan as indicated in Table 8.1 of this Report. Potential cumulative impacts have also been identified from review of trends and potential impacts as identified study of the existing baseline topics outlined in Chapter 5 of this report and from review of relevant plans and projects within and in the vicinity of the Town. Table 9.2 below documents all potential cumulative effects, their significance along with the relevant mitigation measures. It is not considered that the subject Development Plan would have a significant cumulative impact on the environment of the area.

Table 9.2 Assessment of Cumulative Impacts

Environmental Topic	Description of Cumulative effects	Significance	Mitigation (refer to Plan)	Residual Significance
Biodiversity /Soil	The cumulative nibbling loss of greenfield lands and associated vegetation, species, habitats - and their flora and fauna of development such as roads, housing and other infrastructural developments occurring often replace semi-natural and natural areas with artificial surfaces causing a gradual loss of greenfield sites and biodiversity, flora and fauna.	Possibly significant if not mitigated	A number of Policies/Objectives included in section 5 of the Plan to mitigate against impacts to biodiversity. The Plan also contains a policy to promote Greenfield sites over brownfield sites.	Not significant
Flooding	Physical destruction to Fermoy Town Centre as a result of severe Flooding of the River Blackwater, especially on land adjacent to the River. Flooding of the River Blackwater also has the potential to contaminate the water supply of the town which could significantly and cumulatively impact the human health of the population of the town. The town is also at risk in terms of flooding on its floodplain due to further development upstream and downstream.	Significant if not managed and mitigated	Strict control of planning will be required in these areas i.e. along the River Blackwater and the OPW's Guidelines on Flood Risk alleviation should be adhered to. Objectives as set out in section 5.3 in Volume II of the Plan aim to address this issue. New Policy to provide a new water supply source.	Not significant

10 MONITORING

Article 10 of the SEA Directive (2001/42/EEC) requires Member States to monitor the significant environmental effects of the implementation of plans *“in order, inter alia, to identify at an early stage unforeseen adverse effects to be able to undertake appropriate remedial action”*. The primary purpose of monitoring is to cross-check significant environmental effects which arise during the implementation stage against those predicted during the plan preparation stage.

The Directive leaves considerable flexibility to Member States in deciding how monitoring shall be arranged, however it is generally agreed that a mixture of “quantitative and qualitative indicators are required. The Directive recognises that the monitoring does not necessarily require new research activity and that existing sources of information can be used. Monitoring programmes for different Plans can also be combined e.g. monitoring of within the Fermoy Development Plan can be combined with monitoring required for the Cork County Development Plans. This allows for consistency in monitoring across the county and assists in comparing results.

In addition monitoring can be used to identify any information gaps and/deficiencies that were identified as part of the SEA process. Furthermore, Government Guidelines state that monitoring should concentrate on the likely significant effects identified in the Environmental Report (DOEHLG, 2004).

Monitoring will be based around the SEA “Environmental Objectives, indicators and targets. The Objectives, indicators and targets for the various environmental topics are set out below in Table 10.1. The indicators that area used will show changes that would be attributable to the implementation of the Plan. The indicators chosen are at a level, which is relevant to the Plan and are collated on and reported on by a variety of government agencies including EPA – Environmental Protection Agency, CCC – Cork County Council, NPWS – National Parks and Wildlife Service, OPW – Office of Public Works and WFD – Water Framework Directive.

Monitoring proposals must concentrate on likely significant environmental effects, which have been identified in the Environmental Report and the measures identified as necessary to prevent, reduce, or offset any significant adverse effects. The indicators/monitoring will act as an early warning sign so that appropriate remedial action is undertaken.

Responsibilities and Frequency of Reporting

The Statutory Manager’s Report on progress in achieving objectives of the Town Plan, takes place two years after the adoption of the Town Plan and “shall include information in relation to the progress on, and the results of monitoring the significant environmental effects of implementation of the plan”. If an objective or policy is having a significant adverse effect a variation may be considered during the lifetime of the plan.

It is largely the responsibility of Cork County Council to undertake the monitoring, however it is the responsibility of Fermoy Town Council to interpret the monitoring data relevant to Fermoy and to ensure new studies recommended in the Environmental Report (i.e. habitat survey) are undertaken.

Identification of Significant Gaps in Environmental Information

During the preparation of this Environmental Report a number of gaps in environmental information have been identified, these comprise:

- The lack of local habitat surveys for non-designated sites and insufficient baseline data on habitats and species to allow for on-going monitoring. There is a need to prepare a local biodiversity action plan, which is expected to occur during the lifetime of the new 2009-2015 Plan. It is recommended that Fermoy Town Council undertake habitat surveys of the study area
- No detailed wetland inventory in County Cork
- Lack of information on fisheries
- Lack of monitoring on “Major Pressures reported in the assessment of Habitats and Species” in Fermoy

Table 10.1 Monitoring

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
Biodiversity, Flora and Fauna						
B1	To avoid significant adverse impacts (direct, cumulative and indirect), to protected habitats, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.	Loss of biodiversity and ecological networks and spread of invasive species	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG CCC	Review each planning application as submitted

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
B2	To protect aquatic biodiversity, flora, fauna and wetland areas within the Plan area.	Loss of aquatic biodiversity, flora and fauna.	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources in designated ecological sites.	Number of significant adverse impacts (direct, cumulative and indirect impacts), to relevant habitats and species in designated ecological sites.	FTC DoEHLG	Review each planning application as submitted
Population and Human Health						
PH1	To improve the quality of life for the people of Fermoy through high quality residential, working and recreational environments, sustainable travel patterns.	Deterioration in: streetscape quality due to increased litter; in human health and quality of life; Lack of a diversity in employment and accommodation	To improve quality of life, provision of improved physical and social infrastructure, to reduce journey to work times and allow for a better match between place of residence and place of work.	Journey to work times.	CCC	Review during the lifetime of the Plan
PH2	To protect human health from hazards or nuisances arising from traffic and incompatible landuses.	Poor Drinking water quality Poor Air quality; deterioration in human health and quality of life.	No spatial concentrations of health problems arising from environmental factors.	Occurrence of a spatially concentrated deterioration in human health.	FTC/CCC	Review during the lifetime of the Plan
Soils						
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment, rather than developing greenfield lands.	Loss of biodiversity and quality soils through over use of greenfield sites instead of brownfield sites	All brownfield lands to be redeveloped at the end of the plan lifespan (subject to availability on the open market and demand for such land).	Area of brownfield land available.	FTC	Review during the lifetime of the Plan
S2	To maintain the quality of soils.	Loss of biodiversity and quality soils	To reduce contamination and safeguard soil quality and quantity.	Cannot specifically monitor at present, however, when soil directive comes into force, will be obliged to consider impacts of policies on	CCC	Review during the lifetime of the Plan

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
				soils.		
S3	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices.	Negative impacts to groundwater quality and increased litter;	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill.	Volume of waste recycled and volume of waste sent to landfill.	FTC/CCC	Annually
Water						
W1i	Maintain or improve the quality of surface water and groundwater to meet the requirements of the South Western River Basin Management Plan (SW RBMP) and Programme of Measures (POMs)	Negative impacts to surface water, groundwater quality, fisheries and aquatic biodiversity	0 Faecal Coliform Counts per 100ml of groundwater.	Faecal Coliform Counts per 100ml of groundwater.	EPA FTC/CCC	
W1ii			To improve biotic quality ratings, where possible to Q5.	Changes in water quality as identified during water quality monitoring programmes.	EPA FTC/CCC	As per monitoring cycle in accordance with the WFD monitoring programme
W2i	To maintain and improve, where possible, the quality of rivers, lakes and surface water.	Negative impacts to surface water quality, fisheries and aquatic biodiversity; Poor water quality	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC	Annually
W2ii			To improve biotic quality ratings, where possible, to Q5.	Biotic Quality Rating (Q Value) and Risk Assessment.	EPA FTC/CCC	Annually
W3	Promote sustainable water usage	To introduce water measures to reduce water wastage, leakage and over consumption usage and to promote conservation measures at household and Industrial level.	Increase number of water conservation measures implemented during the lifetime of the Plan	Number of water conservation measures implemented during the lifetime of the Plan. Water loss through leakage	EPA FTC/CCC	Annually

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
Air and Climate						
A 1	To maintain and improve air quality in Fermoy and reduce CO2 Greenhouse Gases (GHGs) to alleviate Climate Change. Promote Flood risk assessment	Poor Air quality and increasing contributions to climate change through greenhouse gas emissions Flooding impacts on the town	Increased use of public transport. Increase numbers of cycle lanes and pedestrian routes in the study area. Increase number of permissions granted for renewable energy projects Reduce flooding impacts within the Plan area	Use of public transport. Provision of cycle lanes and walking routes. Number of permissions granted for renewable energy projects. Results from air quality indicators. Level of impact within town in terms of flooding	FTC/CCC	Review during the lifetime of the Plan
Energy						
E1	Use of renewable energy technology for projected power requirements over the lifetime of the Plan	Poor Air quality and increasing contributions to climate change	Encourage use of renewable energy for domestic and small businesses. Use of renewable energy to supply National Grid where applicable	Number and type of renewable energy technologies employed in new developments	FTC/CCC	Review during the lifetime of the Plan
Material Assets						
M1	To serve new development under the plan with appropriate wastewater treatment.	Inadequate WWT for increased population; poor quality water and contamination	No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the plan.	CCC EPA	Review during the lifetime of the Plan
M2	To maintain and improve the quality of drinking water supplies.	Overuse of resources potentially resulting in inadequate water supply during the lifetime or post 2016.	To maintain and improve drinking water quality in Fermoy to comply with the requirements of the European Communities (Drinking Water) Regulations 2000.	Drinking water quality standards (Microbiological, Chemical and Indicator parameters).	EPA FTC/CCC	Review during the lifetime of the Plan.

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
Cultural Heritage						
CH1	To protect the archaeological heritage of Fermoy and; the context of the above within the surrounding landscape where relevant.	Impacts to RPS, RMPs, ACAs and the townscape of Fermoy	No unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	Number of unauthorised developments permitted over the lifespan of the plan which result in full or partial loss of: a) entries to the Record of Monuments and Places; b) entries to the Register for Historic Monuments; National Monument subject to Preservation Orders, and; c) the context of the above within the surrounding landscape where relevant.	CCC Heritage Section Cork Heritage Forum DoEHLG	Review each planning application as submitted
CH2	To preserve and protect the special interest and character of Fermoy's architectural heritage and the context of the above within the surrounding landscape where relevant.	Impacts to RPS, RMPs, ACAs and the townscape of Fermoy; Visual impact to the streetscape of Fermoy	No unauthorised developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	Number of unauthorised developments permitted over the lifespan of the plan which result in physical loss or loss to the context in the surrounding landscape or streetscape of: entries to the Record of Protected Structures; Architectural Conservation Areas, or; entries to the National Inventory of Architectural Heritage.	CCC Heritage Section Cork Heritage Forum DoEHLG	Review each planning application as submitted

Issue	Objective	Impact	Target	Indicator	Responsibility	Frequency
Landscape						
Li	To protect Fermoy's sensitive landscapes, landscape features and designated scenic routes and landscape	Visual impacts to the landscape	No developments to be conspicuously located within sensitive landscapes or designated scenic landscape.	Number of conspicuous developments located within sensitive landscapes or designated scenic landscape.	FTC/CCC	Review each planning application as submitted.
Lii			No developments to adversely impact upon designated scenic views or scenic landscape.	Number of conspicuous developments adversely impacting upon designated scenic views or scenic landscape.		Review each planning application as submitted

APPENDIX 1 – DESIGNATED SITES SYNOPSIS

SITE NAME: BLACKWATER RIVER (CORK/WATERFORD)**SITE CODE: 002170**

The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. In times of heavy rainfall the levels can fluctuate widely by more than 12 feet on the gauge at Careysville. The peaty nature of the terrain in the upper reaches and of some of the tributaries gives the water a pronounced dark colour. The site consists of the freshwater stretches of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries, the larger of which includes the Licky, Bride, Flesk, Chimneyfield, Finisk, Araglin, Awbeg (Buttevant), Clyda, Glen, Allow, Dalua, Brogeen, Rathcool, Finnow, Owentaraglin and Awnaskirtaun. The extent of the Blackwater and its tributaries in this site, flows through the counties of Kerry, Cork, Limerick, Tipperary and Waterford. Towns along, but not in the site, include Rathmore, Millstreet, Kanturk, Banteer, Mallow, Buttevant, Doneraile, Castletownroche, Fermoy, Ballyduff, Rathcormac, Tallow, Lismore, Cappoquin and Youghal.

The Blackwater rises in boggy land of east Kerry, where Namurian grits and shales build the low heather-covered plateaux. Near Kanturk the plateaux enclose a basin of productive Coal Measures. On leaving the Namurian rocks the Blackwater turns eastwards along the northern slopes of the Boggeraghs before entering the narrow limestone strike vale at Mallow. The valley deepens as first the Nagles Mountains and then the Knockmealdowns impinge upon it. Interesting geological features along this stretch of the Blackwater Valley include limestone cliffs and caves near the villages and small towns of Killavullen and Ballyhooly; the Killavullen caves contain fossil material from the end of the glacial period. The associated basic soils in this area support the growth of plant communities which are rare in Cork because in general the county's rocks are acidic. At Cappoquin the river suddenly turns south and cuts through high ridges of Old Red Sandstone. The Araglin valley is predominantly underlain by sandstone, with limestone occurring in the lower reaches near Fermoy. The site is a candidate SAC selected for alluvial wet woodlands and Yew wood, both priority habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, perennial vegetation of stony banks and old Oak woodlands, 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, Crayfish, Twaite Shad, Atlantic Salmon, Otter and the plant, Killarney Fern.

Wet woodlands are found where river embankments, particularly on the River Bride, have broken down and where the channel edges in the steep-sided valley between Cappoquin and Youghal are subject to daily inundation. The river side of the embankments was often used for willow growing in the past (most recently at Cappoquin) so that the channel is lined by narrow woods of White and Almond-leaved Willow (*Salix alba* and *S. triandra*) with isolated Crack Willow (*S. fragilis*) and Osier (*S. viminalis*). Grey Willow (*S. cinerea*) spreads naturally into the sites and occasionally, as at Villierstown on the Blackwater and Sapperton on the Bride, forms woods with a distinctive mix of woodland and marsh plants, including Gypsywort (*Lycopus europaeus*), Guelder Rose (*Viburnum opulus*), Bittersweet (*Solanum dulcamara*) and various mosses and algae. These wet woodlands form one of the most extensive tracts of the wet woodland habitat in the country.

A small stand of Yew (*Taxus baccata*) woodland, a rare habitat in Ireland and the EU, occurs within the site. This is on a limestone ridge at Dromana, near Villierstown. While there are some patches of the wood with a canopy of Yew and some very old trees, the quality is generally poor due to the dominance of non-native and invasive species such as Sycamore, Beech and Douglas Fir (*Pseudotsuga menziesii*). However, the future prospect for this Yew wood is good as the site is proposed for restoration under a Coillte EU Life Programme. Owing to its rarity, Yew woodland is listed with priority status on Annex I of the EU Habitats Directive.

Marshes and reedbeds cover most of the flat areas beside the rivers and often occur in mosaic with the wet woodland. Common Reed (*Phragmites australis*) is ubiquitous and is harvested for thatching. There is also much Marsh Marigold (*Caltha palustris*) and, at the edges of the reeds, the Greater and Lesser Pond-sedge (*Carex riparia* and *C. acutiformis*). Hemlock Water-dropwort (*Oenanthe crocata*), Wild Angelica (*Angelica sylvestris*), Reed Canary-grass (*Phalaris arundinacea*), Meadowsweet (*Filipendula ulmaria*), Nettle (*Urtica dioica*), Purple Loosestrife (*Lythrum salicaria*), Marsh Valerian (*Valeriana officinalis*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*).

At Banteer there are a number of hollows in the sediments of the floodplain where subsidence and subterranean drainage have created isolated wetlands, sunk below the level of the surrounding fields. The water rises and falls in these holes depending on the watertable and several different communities have developed on the acidic or neutral sediments. Many of the ponds are ringed about with Grey Willows, rooted in the mineral soils but sometimes collapsed into the water. Beneath the densest stands are woodland herbs like Yellow Pimpernel (*Lysimachia nemorum*) with locally abundant Starwort (*Callitriche stagnalis*) and Marsh Ragwort (*Senecio palustris*). One of the depressions has Silver Birch (*Betula pendula*), Ash (*Fraxinus excelsior*), Crab Apple (*Malus sylvestris*) and a little Oak (*Quercus robur*) in addition to the willows.

Floating river vegetation is found along much of the freshwater stretches within the site. The species list is quite extensive and includes Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), Broad-leaved Pondweed (*Potamogeton natans*), Pondweed (*Potamogeton* spp.), Water Milfoil (*Myriophyllum* spp.), Common Club-rush (*Scirpus lacustris*), Water-starwort (*Callitriche* spp.), Lesser Water-parsnip (*Berula erecta*) particularly on the Awbeg, Water-cress (*Nasturtium officinale*), Hemlock Waterdropwort, Fine-leaved Water-dropwort (*O. aquatica*), Common Duckweed (*Lemna minor*), Yellow Water-lily (*Nuphar lutea*), Unbranched Bur-reed (*Sparganium emersum*) and the moss *Fontinalis antipyretica*.

The grassland adjacent to the rivers of the site is generally heavily improved, although liable to flooding in many places. However, fields of more species-rich wet grassland with species such as Yellow-flag (*Iris pseudacorus*), Meadow-sweet, Meadow Buttercup (*Ranunculus acris*) and rushes (*Juncus* spp.) occur occasionally. Extensive fields of wet grassland also occur at Annagh Bog on the Awbeg. These fields are dominated by Tufted Hair-grass (*Deschampsia cespitosa*) and rushes.

The Blackwater Valley has a number of dry woodlands; these have mostly been managed by the estates in which they occur, frequently with the introduction of Beech (*Fagus sylvatica*) and a few conifers, and sometimes of Rhododendron (*Rhododendron ponticum*) and Laurel. Oak woodland is well developed on

sandstone about Ballinatrav, with the acid Oak woodland community of Holly (*Ilex aquifolium*), Bilberry (*Vaccinium myrtillus*), Greater Woodrush (*Luzula sylvatica*) and Buckler Ferns (*Dryopteris affinis*, *D. aemula*) occurring in one place. Irish Spurge (*Euphorbia hyberna*) continues eastwards on acid rocks from its headquarters to the west but there are many plants of richer soils, for example Wood Violet (*Viola reichenbachiana*), Goldilocks (*Ranunculus auricomus*), Broad-leaved Helleborine (*Epipactis helleborine*) and Red Campion (*Silene dioica*). Oak woodland is also found in Rincrew, Carrigane, Glendine, Newport and Dromana. The spread of Rhododendron is locally a problem, as is over-grazing. A few limestone rocks stand over the river in places showing traces of a less acidic woodland type with Ash, False Brome (*Brachypodium sylvaticum*) and Early-purple Orchid (*Orchis mascula*).

In the vicinity of Lismore, two deep valleys cut in Old Red Sandstone join to form the Owenashad River before flowing into the Blackwater at Lismore. These valleys retain something close to their original cover of Oak with Downy Birch (*Betula pubescens*), Holly and Hazel (*Corylus avellana*) also occurring. There has been much planting of Beech (as well as some of coniferous species) among the Oak on the shallower slopes and here both Rhododendron and Cherry Laurel (*Prunus laurocerasus*) have invaded the woodland.

The Oak wood community in the Lismore and Glenmore valleys is of the classical upland type, in which some Rowan (*Sorbus aucuparia*) and Downy Birch occur. Honeysuckle (*Lonicera periclymenum*) and Ivy (*Hedera helix*) cover many of the trees while Greater Woodrush, Bluebell (*Hyacinthoides non-scripta*), Wood Sorrel (*Oxalis acetosella*) and, locally, Bilberry dominate the ground flora. Ferns present on the site include Hard Fern (*Blechnum spicant*), Male Fern (*Dryopteris filix-mas*), Buckler Ferns (*D. dilatata*, *D. aemula*) and Lady Fern (*Athyrium filix-femina*). There are many mosses present and large species such as Rhytidiadelphus spp., *Polytrichum formosum*, *Mnium hornum* and Dicranum spp. are noticeable. The lichen flora is important and includes 'old forest' species which imply a continuity of woodland here since ancient times. Tree Lungwort (*Lobaria* spp.) is the most conspicuous and is widespread.

The Araglin valley consists predominantly of broadleaved woodland. Oak and Beech are joined by Hazel, Wild Cherry (*Prunus avium*) and Goat Willow (*Salix caprea*). The ground flora is relatively rich with Pignut (*Conopodium majus*), Wild Garlic (*Allium ursinum*), Garlic Mustard (*Alliaria petiolata*) and Wild Strawberry (*Fragaria vesca*). The presence of Ivy Broomrape (Orobanche hederæ), a local species within Ireland, suggests that the woodland, along with its attendant Ivy is long established. Along the lower reaches of the Awbeg River, the valley sides are generally cloaked with mixed deciduous woodland of estate origin. The dominant species is Beech, although a range of other species are also present, e.g. Sycamore (*Acer pseudoplatanus*), Ash and Horse-chestnut (*Aesculus hippocastanum*). In places the alien invasive species, Cherry Laurel, dominates the understorey. Parts of the woodlands are more semi-natural in composition, being dominated by Ash with Hawthorn (*Crataegus monogyna*) and Spindle (*Euonymus europaea*) also present. However, the most natural areas of woodland appear to be the wet areas dominated by Alder and willows (*Salix* spp.). The ground flora of the dry woodland areas features species such as Pignut, Wood Avens (*Geum urbanum*), Ivy and Soft Shield-fern (*Polystichum setiferum*), while the ground flora of the wet woodland areas contains characteristic species such as Remote Sedge (*Carex remota*) and Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium*).

In places along the upper Bride, scrubby, semi-natural deciduous woodland of Willow, Oak and Rowan occurs with abundant Great Woodrush in the ground flora. The Bunaglanna River passes down a very steep valley, flowing in a north-south direction to meet the Bride River. It flows through blanket bog to heath and then scattered woodland. The higher levels of moisture here enable a vigorous moss and fern community to flourish, along with a well-developed epiphyte community on the tree trunks and branches.

At Banteer a type of wetland occurs near the railway line which offers a complete contrast to the others. Old turf banks are colonised by Royal Fern (*Osmunda regalis*) and Eared Willow (*Salix aurita*) and between them there is a sheet of Bottle Sedge (*Carex rostrata*), Marsh Cinquefoil (*Potentilla palustris*), Bogbean (*Menyanthes trifoliata*), Marsh St. John's-wort (*Hypericum elodes*) and the mosses *Sphagnum auriculatum* and *Aulacomnium palustre*. The cover is a scraw with characteristic species like Marsh Willowherb (*Epilobium palustre*) and Marsh Orchid (*Dactylorhiza incarnata*).

The soil high up the Lismore valleys and in rocky places is poor in nutrients but it becomes richer where streams enter and also along the valley bottoms. In such sites Wood Speedwell (*Veronica montana*), Wood Anemone (*Anemone nemorosa*), Enchanter's Nightshade (*Circaea lutetiana*), Barren Strawberry (*Potentilla sterilis*) and Shield Fern occur. There is some Wild Garlic, Three-nerved Sandwort (*Moehringia trinervia*) and Early-purple Orchid (*Orchis mascula*) locally, with Opposite-leaved Golden-saxifrage, Meadowsweet and Bugle in wet places. A Hazel stand at the base of the Glenakeeffe valley shows this community well. The area has been subject to much tree felling in the recent past and re-sprouting stumps have given rise to areas of bushy Hazel, Holly, Rusty Willow (*Salix cinerea* subsp. *oleifolia*) and Downy Birch. The ground in the clearings is heathy with Heather (*Calluna vulgaris*), Slender St John's-wort (*Hypericum pulchrum*) and the occasional Broom (*Cytisus scoparius*) occurring.

The estuary and the other Habitats Directive Annex I habitats within it form a large component of the site. Very extensive areas of intertidal flats, comprised of substrates ranging from fine, silty mud to coarse sand with pebbles/stones are present. The main expanses occur at the southern end of the site with the best examples at Fermoybeg in Co. Waterford and between Youghal and the main bridge north of it across the river in Co. Cork. Other areas occur along the tributaries of the Licky in east Co. Waterford and Glendine, Newport, Bride and Killahaly Rivers in Waterford west of the Blackwater and large tracts along the Tourig River in Co. Cork. There are narrow bands of intertidal flats along the main river as far north as Camphire Island. Patches of green algae (filamentous, *Ulva* species and *Enteromorpha* sp.) occur in places, while fucoid algae are common on the more stony flats even as high upstream as Glenassy or Coneen.

The area of saltmarsh within the site is small. The best examples occur at the mouths of the tributaries and in the townlands of Foxhole and Blackbog. Those found are generally characteristic of Atlantic salt meadows. The species list at Foxhole consists of Common Saltmarsh-grass (*Puccinellia maritima*), small amounts of Greater Seaspurrey (*Spergularia media*), Glasswort (*Salicornia* sp.), Sea Arrowgrass (*Triglochin maritima*), Annual Sea-blite (*Suaeda maritima*) and Sea Purslane (*Halimione portulacoides*) - the latter a very recent coloniser - at the edges. Some Sea Aster (*Aster tripolium*) occurs, generally with Creeping Bent (*Agrostis stolonifera*). Sea Couchgrass (*Elymus pycnanthus*) and small isolated clumps of Sea Club-rush (*Scirpus maritimus*) are also seen. On the Tourig River additional saltmarsh species found include Lavender (Limoniun

spp.), Sea Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvy-grass (*Cochlearia officinalis*) and Sea Plantain (*Plantago maritima*). Oraches (*Atriplex* spp.) are found on channel edges.

The shingle spit at Ferrypoint supports a good example of perennial vegetation of stony banks. The spit is composed of small stones and cobbles and has a well developed and diverse flora. At the lowest part, Sea Beet (*Beta vulgaris*), Curled Dock (*Rumex crispus*) and Yellow-horned Poppy (*Glaucium flavum*) occur with at a slightly higher level Sea Mayweed (*Tripleurospermum maritimum*), Cleavers (*Galium aparine*), Rock Samphire (*Crithmum maritimum*), Sandwort (*Honkenya peploides*), Spear-leaved Orache (*Atriplex prostrata*) and Babington's Orache (*A. glabriuscula*). Other species present include Sea Rocket (*Cakile maritima*), Herb Robert (*Geranium robertianum*), Red Fescue (*Festuca rubra*) and Kidney Vetch (*Anthyllis vulneraria*). The top of the spit is more vegetated and includes lichens and bryophytes (including *Tortula ruraliformis* and *Rhytidiadelphus squarrosus*).

The site supports several Red Data Book plant species, i.e. Starved Wood Sedge (*Carex depauperata*), Killarney Fern (*Trichomanes speciosum*), Pennyroyal (*Mentha pulegium*), Bird's-nest Orchid (*Neottia nidus-avis*), Golden Dock (*Rumex maritimus*) and Bird Cherry (*Prunus padus*). The first three of these are also protected under the Flora (Protection) Order 1999. The following plants, relatively rare nationally, are also found within the site: Toothwort (*Lathraea squamaria*) associated with woodlands on the Awbeg and Blackwater; Summer Snowflake (*Leucojum aestivum*) and Flowering Rush (*Butomus umbellatus*) on the Blackwater; Common Calamint (*Calamintha ascendens*), Red Campion (*Silene dioica*), Sand Leek (*Allium scorodoprasum*) and Wood Club-rush (*Scirpus sylvaticus*) on the Awbeg.

The site is also important for the presence of several Habitats Directive Annex II animal species, including Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*L. fluviatilis*), Twaite Shad (*Alosa fallax fallax*), Freshwater Pearl-mussel (*Margaritifera margaritifera*), Otter (*Lutra lutra*) and Salmon (*Salmo salar*). The Awbeg supports a population of White-clawed Crayfish (*Austropotamobius pallipes*). This threatened species has been recorded from a number of locations and its remains are also frequently found in Otter spraints, particularly in the lower reaches of the river. The freshwater stretches of the Blackwater and Bride Rivers are designated salmonid rivers.

The Blackwater is noted for its enormous run of salmon over the years. The river is characterised by mighty pools, lovely streams, glides and generally, a good push of water coming through except in very low water. Spring salmon fishing can be carried out as far upstream as Fermoy and is very highly regarded especially at Careysville. The Bride, main Blackwater upstream of Fermoy and some of the tributaries are more associated with grilse fishing.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. The bat species Natterer's Bat, Daubenton's Bat, Whiskered Bat, Brown Long-eared Bat and Pipistrelle, are to be seen feeding along the river, roosting under the old bridges and in old buildings.

Common Frog, a Red Data Book species that is also legally protected (Wildlife Act, 1976), occurs throughout the site. The rare bush cricket, *Metrioptera rosellii* (Orthoptera: Tettigoniidae), has been recorded in the reed/willow vegetation of the river embankment on the Lower Blackwater River. The Swan Mussel (*Anodonta cygnea*), a scarce species nationally, occurs at a few sites along the freshwater stretches of the Blackwater.

Several bird species listed on Annex I of the E.U. Birds Directive are found on the site. Some use it as a staging area, others are vagrants, while others use it more regularly. Internationally important numbers of Whooper Swan (average peak 174, 1994/95- 95/96) and nationally important numbers Bewick's Swan (average peak 35, 1994/95- 95/96) use the Blackwater Callows. Golden Plover occur in regionally important numbers on the Blackwater Estuary (average peak 885, 1984/85-86/87) and on the River Bride (absolute max. 2141, 1994/95). Staging Terns visit the site annually (Sandwich Tern (>300) and Arctic/Common Tern (>200), average peak 1974-1994). The site also supports populations of the following: Red Throated Diver, Great Northern Diver, Barnacle Goose, Ruff, Wood Sandpiper and Greenland White-fronted Goose. Three breeding territories for Peregrine Falcon are known along the Blackwater Valley. This, the Awbeg and the Bride River are also thought to support at least 30 pairs of Kingfisher. Little Egret now breed at the site (12 pairs in 1997, 19 pairs in 1998) and this represents about 90% of the breeding population in Ireland.

The site holds important numbers of wintering waterfowl. Both the Blackwater Callows and the Blackwater Estuary Special Protection Areas (SPAs) hold internationally important numbers of Black-tailed Godwit (average peak 847, 1994/95- 95/96 on the callows, average peak 845, 1974/75-93/94 in the estuary). The Blackwater Callows also hold Wigeon (average peak 2752), Teal (average peak 1316), Mallard (average peak 427), Shoveler (average peak 28), Lapwing (average peak 880), Curlew (average peak 416) and Black-headed Gull (average peak 396) (counts from 1994/95-95/96). Numbers of birds using the Blackwater Estuary, given as the mean of the highest monthly maxima over 20 years (1974-94), are Shelduck (137 +10 breeding pairs), Wigeon (780), Teal (280), Mallard (320 + 10 breeding pairs), Goldeneye (11- 97), Oystercatcher (340), Ringed Plover (50 + 4 breeding pairs), Grey Plover (36), Lapwing (1680), Knot (150), Dunlin (2293), Snipe (272), Black-tailed Godwit (845), Bar-tailed Godwit (130), Curlew (920), Redshank (340), Turnstone (130), Blackheaded Gull (4000) and Lesser Black-backed Gull (172). The greatest numbers (75%) of the wintering waterfowl of the estuary are located in the Fermoybeg area on the east of the estuary in Co. Waterford. The remainder are concentrated along the Tourig Estuary on the Co. Cork side.

The river and river margins also support many Heron, non-breeding Cormorant and Mute Swan (average peak 53, 1994/95-95/96 in the Blackwater Callows). Heron occurs all along the Bride and Blackwater Rivers - 2 or 3 pairs at Dromana Rock; c. 25 pairs in the woodland opposite; 8 pairs at Ardsallagh Wood and c. 20 pairs at Rincrew Wood have been recorded. Some of these are quite large and significant heronries. Significant numbers of Cormorant are found north of the bridge at Youghal and there are some important roosts present at Ardsallagh Wood, downstream of Strancally Castle and at the mouth of the Newport River. Of note are the high numbers of wintering Pochard (e.g. 275 individuals in 1997) found at Ballyhay quarry on the Awbeg, the best site for Pochard in County Cork.

Other important species found within the site include Long-eared Owl, which occurs all along the Blackwater River, and Barn Owl, a Red Data Book species, which is found in some old buildings and in Castlehyde west

of Fermoy. Reed Warbler, a scarce breeding species in Ireland, was found for the first time in the site in 1998 at two locations. It is not known whether or not this species breeds on the site, although it is known to nearby to the south of Youghal. Dipper occurs on the rivers.

Landuse at the site is mainly centred on agricultural activities. The banks of much of the site and the callows, which extend almost from Fermoy to Cappoquin, are dominated by improved grasslands which are drained and heavily fertilised. These areas are grazed and used for silage production. Slurry is spread over much of this area. Arable crops are grown. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Habitats Directive Annex II animal species within it. 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 Blackwater and its 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. Other recreational activities such as boating, golfing and walking are also popular. Water skiing is carried out at Villierstown. Parts of Doneraile Park and Anne's Grove are included in the site: both areas are primarily managed for amenity purposes. There is some hunting of game birds and Mink within the site. Ballyhay quarry is still actively quarried for sand and gravel. Several industrial developments, which discharge into the river, border the site.

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, dredging of the upper reaches of the Awbeg, overgrazing within the woodland areas, and invasion by nonnative species, for example Cherry Laurel.

Overall, the River Blackwater 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. Two Special Protection Areas, designated under the E.U. Birds Directive, are also located within the site - Blackwater Callows and Blackwater Estuary. Additionally, the importance of the site is enhanced by the presence of a suite of uncommon plant species.

13.09.2006

SITE NAME: BLACKWATER CALLOWS SPA

SITE CODE: 004094

This site comprises the stretch of the River Blackwater that runs in a west to east direction between Fermoy and Lismore, a distance of almost 25 km. The site includes the river channel and strips of seasonally-flooded grassland within the flood plain. Sandstone ridges parallel to the river confine the area of flooding to a relatively narrow corridor. The lower stretch, from Ballyduff to Lismore, is more subject to flooding than the upper part.

The river channel has a well-developed aquatic plant community, which includes such species as Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), pondweeds (*Potamogeton* spp.), water-milfoil (*Myriophyllum* spp.) and water-starwort (*Callitriche* spp.). Emergent swamp vegetation, comprised of species such as Common Club-rush (*Scirpus lacustris*), Common Reed (*Phragmites australis*) and Unbranched Bur-reed (*Sparganium emersum*), occurs in places. Marshes are present in some areas adjacent to the river and includes species such as Marsh Marigold (*Caltha palustris*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*), amongst others. The grassland adjacent to the rivers of the site is mostly improved, though substantial areas are still liable to flooding. The grassland most prone to flooding is characterised by such species as Yellow-flag (*Iris pseudacorus*), Meadow-sweet (*Filipendula ulmaria*), Meadow Buttercup (*Ranunculus acris*), Purple Loosestrife (*Lythrum salicaria*) and rushes (*Juncus* spp.). Wet woodland, comprised mostly of willows (*Salix* spp.) and Alder (*Alnus glutinosa*), fringe the river in places, whilst oakwoods occur in a few locations above the floodplain (mostly outside of the site).

The site is of high ornithological interest on account of the populations of wintering waterfowl that use it. Whooper Swan occurs in numbers of international importance (170) - all figures are average peaks for the 5 seasons 1995/96-99/00. Bewick's Swan was regular at the site in significant numbers up to the mid 1990s. However, only four birds were recorded in the winter of 1997/98 and two in the winter of 1998/99, and the species is no longer considered to be a regular visitor. This decline is in line with a national decrease in numbers and a marked contraction in range. The site supports a large population of Wigeon (2,313), as well as Teal (898), Mallard (398) and Shoveler (26). The Wigeon and Teal populations are of national importance. The callow grasslands are particularly suited to Black-tailed Godwit (251), a nationally important population that on occasions exceeds the threshold for international importance. Other waders that occur regularly are Lapwing (221) and Curlew (534). Black-headed Gull (323) is a feature of the site during winter. The birds feed mainly on the areas of grassland, the majority of which are improved, that flood seasonally. Some feeding also occurs outside of the site, while birds also leave the site to avail of suitable roosts. Little Egret is a feature of the site throughout the year as there is a breeding colony downstream. The river system provides an important feeding area for these birds. The River Blackwater is a noted salmonid fishery, and the river also has Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*L. fluviatilis*) and Twaite Shad (*Alosa fallax fallax*). Otter is frequent throughout the site. While water quality in the system is mostly good there are localised stretches which have been polluted from agricultural run-off and from point sources. Pollution remains a general threat to water quality within site.

This site is of importance for its populations of wintering waterfowl, including an internationally important population of Whooper Swan and nationally important populations of Wigeon, Teal and Black-tailed Godwit. The presence of Whooper Swan, as well as Little Egret, is of particular note as these species are listed on Annex I of the E.U. Birds Directive.

18.4.2005

SITE NAME: BLACKWATER VALLEY (THE BEECH WOOD)

SITE CODE: 001797

The Beech Wood site is part of the Castle Hyde estate, on the northern side of the River Blackwater, located c. 0.5km west of the town of Fermoy, Co. Cork. It comprises both wet and dry deciduous woodland, the dominant species are Oak (*Quercus petraea*) and Beech (*Fagus sylvatica*). There is a good ground flora and many woodland birds, the wood also provides cover and seclusion for otters and other mammals. The site is confined mainly to the north side of the river, much of the original site to the south has been excluded as little of the woodland here remains intact today. A major threat to the character of the wood and its groundflora is the widespread occurrence of Cherry Laurel (*Prunus laurocerasus*) throughout the wood and in places it is the dominant shrub layer species, casting considerable shade. Other exotics have also been planted on the south-east of the river bank, these include Poplar (*Populus* species) and Cherry Laurel.

A general description of the Blackwater Valley is given in the synopsis for site code; 001794.

18/12/1995

SITE NAME: BLACKWATER VALLEY (CREGG)

SITE CODE: 001796

AUTHOR: RUTH GILBERT

The site of Cregg is very small (less than 2/3km long) and situated in the south of the River Blackwater channel, 3km west of Fermoy town, County Cork. It comprises dry deciduous woodland, lowland dry grassland, the river channel, scrub and mixed woodland. There is very little information on this site; the ranger notes the spread of Rhododendron (*Rhododendron ponticum*) and Cherry Laurel (*Prunus laurocerasus*) at the eastern edge of the wood and comments that the area is frequently used for fishing.

Cregg is one of 10 sites along the Blackwater Valley and the general description of the site, compiled from the An Foras Forbartha Report of 1986, is contained within the synopsis for site 001794.

SITE NAME: CREGG CASTLE

SITE CODE: 002050

This site is a nursery roost of the Daubenton's Bat (*Myotis daubentonii*). Approximately 100 bats hang from the ceiling of a domed ground floor room in Cregg Castle, approximately 3 miles east of Fermoy Town. This is a site of national importance because it is the second largest nursery colony of this species in the country. The owners are extremely well disposed towards the bats, this site is completely safe from any adverse human disturbance. The only threat facing this site is the deterioration of the castle roof.

This species is dependent on aquatic insects so the proximity of the extensive River Blackwater is of utmost importance to the colony. It is essential that pollution of this river system and its associated tributaries is prevented.

11th July, 1995.

SITE NAME: BLACKWATER VALLEY - (KILLATHY WOOD)**SITE CODE: 001795****AUTHOR: RUTH GILBERT**

Killathy Wood is a small strip of mixed woodland c. 1km long, situated on the north bank of the River Blackwater and located 1.5km east of Ballyhooley and 6km west of the town of Fermoy.

The dominant species in this woodland is Ash (*Fraxinus excelsior*) with some Oak (*Quercus petraea*) and Scot's pine (*Pinus sylvestris*). Elm (*Ulmus* species) were present in the wood but many have been killed by Dutch Elm disease and felled for firewood. Sycamore (*Acer pseudoplatanus*) is also spreading through the wood; at the moment it is found mainly in the eastern half of the site, but it is seriously damaging the character of the wood. Other non-native species include a line of Spruce (*Picea* species) on the north-west edge of the wood. Cattle have access to shelter and graze in some parts of the wood from the adjacent fields.

There are several tracks traversing the wood from north to south to allow access to the fields between the wood and the river. Tracks have also been cut in the wood to aid the removal of Ash and dead Elm trees, the cutting of Ash for firewood is not thought to be a serious threat to the woods survival. Littering and dumping though may damage the scenic quality of this wood, the north-west edge is particularly affected. The fields included in the site have been improved and fertilizer run-off into the river may lead to problems of eutrophication.

14/12/1995

SITE NAME: BLACKWATER VALLEY (KILCUMMER)**SITE CODE: 001794****AUTHOR: RUTH GILBERT**

The Kilcummer site is located along 2km of the banks of the River Blackwater, 3km west of Ballyhooley and 11km west of the town of Fermoy. The site is adjacent to the Ballincurrag Wood ASI (1793) to the west and Killathy Wood ASI (1795) to the west of Ballyhooley. The underlying rock is limestone and this site includes exposed cliffs and craggs.

Within the site there is wet woodland of Alder (*Alnus glutinosa*) and Willow (*Salix* species) and also improved agricultural grassland, frequently used for silage production and/or cattle grazing. The agricultural improvement both within and surrounding the river may potentially be a threat to the water quality - fertilizer run off from these fields may cause eutrophication of the water. Other threats include woodland clearance, and trampling of the ground flora by cattle in these fields if they have access to the wood. This woodland is one of a series of woodlands along the banks of the Blackwater River.

The river Blackwater is one of the largest rivers in Ireland, draining a major part of County Cork and the Kerry Mountains. It flows in a wide valley down to the town of Mallow but then the valley deepens as it flows eastwards on the northern edge of the Nagles Mountains and then to the south of the Knockmealdown

Mountains and into County Waterford. The valley sides support the growth of much woodland, but also of ecological interest are the marshes, the river itself and the associated limestone outcrops e.g. inland cliffs and craggs.

The river-side trees are Alders (*Alnus glutinosa*) and Willow (*Salix* species) including the Almond Willow (*Salix triandra*). The shallower river water and adjacent marshland are vegetated with Common Bulrush (*Scirpus lacustris* subsp. *lacustris*), Bur-reeds (*Sparganium* species) and Pondweeds (*Potamogeton* species). The flowering rush (*Butomus umbellatus*) grows locally in the water and Creeping Yellow-Cress (*Ronippa sylvestris*) on the river banks.

The marshland is often colonized by Willow scrub and amongst the bushes Great Yellow-Cress (*Ronippa amphibia*), Lesser Pond-sedge (*Carex acutiformis*) and Wood Club-rush (*Scirpus sylvaticus*) occur with much Lady's smock (*Cardamine pratensis*), Meadowsweet (*Filipendula ulmaria*) and Hemp-agrimony (*Eupatorium cannabinum*).

The drier woods also support a varied flora. In the western part of the river valley are found the Hay-scented buckler fern (*Dryopteris emula*) and the Irish spurge (*Euphorbia hyberna*), these species are also found to the east on acid rocks. Plants associated with the richer limestone soils include Early dog-violet (*Viola reichenbachiana*), Goldilocks buttercup (*Ranunculus auricomus*), Broad-leaved helleborne (*Epipactis helleborine*) and Red Campion (*Silene dioica*).

The river valley also supports a rich bird population Lapwing, Snipe and Ringed Plover nest by the river, there are several major heronries and good numbers of marsh woodland birds, for example, Blackcap, Sparrowhawk, Jay and Long-eared Owl. There are also many butterflies including fritillaries and the Holly Blue.

The Blackwater Valley contains interesting geological features - there are limestone cliffs and caves near Killavullen and Ballyhooly. The Killavullen caves contain fossil material from the end of the glacial period. The associated basic soils in this area support the growth of plant communities which are rare in Cork because in general the county's rocks are acidic. The Gortmore caves of Roskeen Bridge form the longest cave system in the county, consisting of three main series leading into the limestone escarpment. They have fine dripstone formations, especially shawl and straw stalacties on the roof. In normal weather conditions many of the passages are dry although there are pools at intervals. Unfortunately, the wettest and best cave has been interfered with by quarrying. The caves at Castletownroche have been excavated and animal fossils have been found dating from several different time periods.

An important factor in the survival and evolution of the aquatic communities is the lack of arterial drainage in the valley, but probably the most significant threat to these habitats is pollution.

The Blackwater River Valley contains probably the richest area of ecological interest of all the southern rivers. This is in part due to the persistence of mature woodland with a variety of other wet and dry habitats.

Geologically the area is also of interest with the extensive limestone cave systems and fossil deposits.

Source: AFF Report (1986)

7/12/1995

10.1.1.1 SITE NAME: GLANWORTH PONDS

SITE CODE: 000085

This site comprises a few individual fields located c. 11/2km west of the village of Glanworth and 9½ km north-west of Fermoy town on East County Cork. The fields are situated to the north of the Glanworth - Shanballymore wood. These fields were found in the 1992/3 Rare Plant Survey of the area and contains the rare Red Data Book Species Golden Dock (*Rumex maritimus*).

One field contains a pond which is kept by the landowner for Wildlife, the surrounding land in the field being grazed. The Golden Dock is found on the muddy, duck-trampled margins of the pond between the summer water level and the rushes. It is a healthy population of more than 1000 individuals in all stages of development, from immature juvenile to dehiscent mature plants. In some areas on the mud the dock fossil the main cover species together with species such as Lesser Spearwort (*Raminculus flaminula*), Water Star-worts (Callutinche species), Celery-leaved Buttercup (*Ranunculus scleratus*) and Bog-Bean (*Menyanthes triohiata*). Also found in the area but less commonly are Nodding bur-marigold (*Biolens armua*), Marsh Pennywort (*Hydrocotyle vulgaris*) and Creeping buttercup (*Rammnanling regens*). This population does not appear to be threatened as the landowner intends to retain the pond. Other smaller populations of Golden Dock are found in 2 fields with wet hollows which are inundated in the winter; here the dock is locally abundant but its survival in these fields may not be so secure, possible drainage of the fields posing a major threat to the habitats survival.

The Glanworth Ponds are new records for the occurrence of the Golden Dock in East Cork. Golden Dock is a Red Data Book species where occurrence is apparently declining because often its appearance in a place is only fleeting; it depends on low water levels to provide the right conditions and stimulus for seed germination. This site contains healthy and viable populations of the Golden Dock, as well as, a good species diversity of other aquatic and wetland plants and should therefore be considered for conservation and NHA status.

Sources :

1. The Irish Red Data Book. Vascular Plants. T.G.F. Curtis and H.N. McGough.

Rare Plants Survey in E. Cork 1992/3. R. Fitzgerald, C. Sich and P. Smiddy.

SITE NAME: BROWN'S FARM, TOGHER CROSS ROADS,

SITE CODE: 001169

Brown's Farm is located c. 1 3/4 km west of the village of Glanworth and some 10km north-west of Fermoy town, east County Cork. This site is just west of the Glanworth Ponds site (85), also on the Glanworth-Shanballymore road.

It is a small site comprising 4 fields, at the intersection of their hedges in the middle, is a small area of exposed mud, whose vegetation is trampled and grazed. Here the Red Data Book species - Golden Dock (*Rumex maritimus*) is found in association with Nodding bur-marigold (*Bidens cernua*), Water starworts (*Callitriche* species) and Water-purslane (*Lythrum portula*). This is another new record for the Golden Dock in E. Cork found in a rare Plant Survey of the area in 1992/3.

Golden Dock is a Red Data Book species whose occurrence is apparently declining, often its appearance is only fleeting as it depends on low water levels to provide the right conditions and stimulus for seed germination. This site contains hundreds of immature plants and should be considered for conservation and NHA status to protect this rare plant, to monitor its growth and health and to protect it in future years from threats such as field drainage.

Sources :

1. The Irish Red Data Book 1. Vascular plants T.G. F. Curtis and H.N. McGough, 1988.
2. Rare Plant Survey E. Cork. 1992/3 R. Fitzgerald, C. Saich and P. Smiddy.

SITE NAME: CONVAMORE, BALLYHOOLY (NEAR FERMOY)

SITE CODE: 002097

This site is a male roost of the Daubenton's bat (*Myotis daubentonii*). Approximately 50 bats hang from the roof of the wine cellars in the ground floor of the ruined Convamore House, near Ballyhooley, Co. Cork. This is a site of national importance because it is the only known male roost of this species in the country. The only threat facing the bats at this site is disturbance from people exploring the ruins and the destruction of parts of the cellars walls by people removing bricks.

This bat species is dependent on aquatic insects so the proximity of the extensive River Blackwater is of utmost importance to the colony. It is essential that pollution of this river system and its associated tributaries is prevented.

11th July, 1995.

SITE NAME: ARAGLIN VALLEY

SITE CODE: 001029

This site is situated 8km north-east of Fermoy. The area is predominantly underlain by sandstone, with limestone occurring in the lower reaches near Fermoy. These two contrasting rocky types bring with them differences in the soils and a wide diversity of plant and animal communities.

In 1986, An Foras Forbartha provided the following description of the site. This site is predominantly broadleaved woodland. Oak (*Quercus* sp.) and Beech (*Fagus sylvatica*) are joined by Hazel (*Corylus avellana*), Wild Cherry (*Prunus avium*) and Goat Willow (*Salix caprea*). The ground flora is relatively rich with Pignut (*Conopodium majus*), Wild Garlic (*Allium ursinum*), Garlic Mustard (*Alliaria petiolata*) and Wild Strawberry (*Fragaria vesca*). The presence of Ivy Broomrape (*Orobancha hederæ*), a local species within Ireland, suggests that the woodland, along with its attendant Ivy (*Hedera helix*) is long established.

The main landuses within the woodland are grazing, shooting and woodland management, including scrub clearance, felling and small areas of planting of exotic species.

The Araglin Valley is of regional importance because of its high diversity of species and ecological interest. This is a very attractive site.

**APPENDIX 2: APPROPRIATE
ASSESSMENT OF THE POTENTIAL
FOR FERMOY TOWN DEVELOPMENT
PLAN 2009 - 2015 TO NEGATIVELY
IMPACT UPON THE CONSERVATION
OBJECTIVES OF NATURA 2000 SITES**

1 INTRODUCTION

1.1 INTRODUCTION TO THIS DOCUMENT

This document presents a review of the Appropriate Assessment that was prepared of the Draft Fermoy Town Plan 2010-2016. The document remains substantially the same as the initial document (RPS, 2009). The Final Plan (Dec 2009) has been reviewed against Section 5 "Required Actions" of the RPS 2009 Report to examine whether the required actions were incorporated. It was found that all required actions were incorporated into the Final Plan.

The draft Fermoy Town Development Plan and Appropriate Assessment went on public display between the December 2008 to February 2009 and again between August and September 2009 and submissions were invited from the public, from the relevant statutory bodies and the Environmental Authorities.

At each of the two stages of consultation responses were received by Fermoy Town Council from the Department of the Environment, Heritage and Local Government (DoEHLG) and the Environmental Protection Agency (EPA) and suggestions and recommendations were included within the Appropriate Assessment where possible.

As a result of the two consultation periods a number of amendments were proposed to the draft Plan. Each of the proposed amendments as set out in the s.12 (4) Manager's Report and the s.12 (8) Manager's Report of the draft Fermoy Town Development Plan were assessed in terms of AA.

1.2 INTRODUCTION TO THE ORIGINAL APPROPRIATE ASSESSMENT

The purpose of Appropriate Assessment of local authority plans is to ensure that protection of the integrity of European 'Natura 2000' sites is included as an integral part of the planning process at a local level. By carrying out an Appropriate Assessment, Fermoy Town Council also ensure that in adopting and implementing Fermoy Development Plan 2010 - 2015 (henceforth referred to as 'the Town Plan') they are not likely to be in breach of the provisions of Articles 6(3) and 6(4) of the Habitats Directive.

The requirement for Appropriate Assessment of plans or projects originates from Article 6 (3) and (4) of *European Union (EU) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora*, commonly known as the 'Habitats Directive', which is implemented in Ireland through the European Communities (Natural Habitats) Regulations of 1997. The wording of Article 6 (3) of the Directive is as follows:

'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'

The wording of Article 6 (4) of the Directive is as follows:

'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.'

In February 2008, the statutory requirement for an Appropriate Assessment of all land use plans was further emphasised by a Department of the Environment, Heritage and Local Government Circular Letter (SEA 1/08 & NPWS 1/08), which was issued to all County and City Managers, Directors of Services for Planning and Town Clerks. The Circular Letter entitled 'Appropriate Assessment of Land Use Plans' emphasises the fact that an appropriate assessment of the ecological implications of any plan or project is required, whether it is within or outside a designated site, if it may impact upon the Conservation Objectives of that site. In May 2008, the Environmental Protection Agency circulated this letter as part of their guidance on the process to be employed in Strategic Environmental Assessment as part of "SEA Pack Vol. II 16 05 08".

The process is in its infancy in Ireland and to date very few Appropriate Assessments of local authority plans have been completed and there are currently no formal guidelines on the procedure to be employed. Staff from National Parks and Wildlife Service are however familiar with the requirements of Appropriate Assessment, and this document has been produced in consultation with NPWS staff. It is our understanding that guidelines are currently being prepared by the EPA, however until these become available, this on-going liaison and consultation process ensures that our Appropriate Assessment has been carried out in a manner that is acceptable to the relevant competent authorities.

In addition to the advice available from NPWS, the EU has published a number of documents which provide guidance on the requirements of Appropriate Assessment, including, *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, which sets out the principles of how to approach decision making during the process and this has been followed as closely as possible. There are however a number of restrictions when attempting to apply this document in an Irish context, including first and foremost, the lack of formal statutory guidelines; and also, importantly, the relative lack of published data on many of the faunal and floral elements of the environment which comprise the Conservation Objectives of European sites.

2 METHODOLOGY

The Appropriate Assessment process progresses through four stages as follows:

- Stage 1 – Screening of Fermoy Development Town;
- Stage 2 – Appropriate Assessment of Fermoy Development Town;
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Assessment of compensatory measures.

Stages 1 and 2 relate to Article 6(3) of the Habitats Directive; and Stages 3 and 4 to Article 6(4).

Stage 1 – Screening

The aim of Stage 1, 'Screening' is to determine whether or not Stage 2, the Appropriate Assessment is required, i.e. to determine whether or not the Objectives and Policies of the Fermoy Development Town are likely to negatively affect the Conservation Objectives on any Natura 2000 site. This is done by examining the Objectives and the Policies of the plan; and the Conservation Objectives of any Natura 2000 sites that might potentially be affected.

Stage 2 – Appropriate Assessment

The aim of Stage 2, the 'Appropriate Assessment' proper, is to identify any negative impacts that the Zonings, Policies or Objectives of the Town Plan might have upon Natura 2000 sites and to propose changes to the Town Plan that will Avoid and Mitigate any such negative impacts. The Town Plan should then be amended accordingly, thereby avoiding the need to progress to Stage 3, which would effectively constitute a rejection of the plan in its current Form and require the Town Council to implement measures to mitigate or compensate for impacts on Natura 2000 sites.

A key consideration of Appropriate Assessment is that the Plan or Project under consideration, in this case the Town Plan, must take account of potential impacts on Natura 2000 sites 'in combination' with other plans or projects. Such Impacts are termed 'Cumulative Impacts and are discussed in Sections 4.2.3 and 4.3.3.

Stages 3 and 4 - Assessment of Alternative Solutions and Compensatory Measures

Provided the recommendations of Stage 2 are incorporated into future drafts of Fermoy Development Town, Stages, 3 and 4, which relate to alternative solutions and compensatory measures under Article 6(4) of the EU Habitats Directive, will not be required.

Revisions

Any future revised drafts of Fermoy Development Plan, including revisions to zoning proposals, will be reviewed in order to ascertain whether or not revisions to this Appropriate Assessment are required. If a revised Appropriate Assessment is required, it will be prepared

by RPS and issued to the Town Council. This process will continue at each revision stage of the Town Plan until publication of the final version.

3 STAGE 1 – SCREENING

3.1 INTRODUCTION TO THE SCREENING PROCESS

This stage involves establishing whether or not the plan is likely to have a significant effect on the Conservation Objectives of any Natura 2000 site. The screening process requires an initial review of the Town Plan to identify any Zonings, Policies or Objectives that might potentially have impacts upon Natura 2000 sites. These might include for example Zonings that include a requirement for new development land; Policies or Objectives that may result in increases in disturbance to sensitive fauna and flora; Policies and Objectives that could result in deterioration in water quality, etc.

For definition purposes the Natura 2000 site(s) include Special Areas of Conservation (habitats) and/ or Special Protection Areas (birds). With regard to SACs, Annex I refers to habitats and Annex II refers to species listed in the Habitats Directive. With regard to SPAs, Annex I refers to the EU Birds Directive. Also land that could have a potential to contain important bird areas that have not already been designated, as an SPA are taken into consideration.

Screening requires a review of all Natura 2000 sites that could potentially be subject to the impacts that have been identified. Clearly a key variable that will determine whether or not a particular Natura 2000 site is likely to be negatively effected by the draft plan's Policies and Objectives is its physical distance from Fermoy , and it will generally, but not necessarily, be the case that the greater the distance the lower the possibility of impacts. It is not considered that any of the Policies or Objectives of Fermoy Development Plan 2010 – 2015 have the potential to impact upon any Natura 2000 sites more than 15km from the town. A total of six Natura 2000 sites are located within 15km of the town. These are shown in Table 1, which also gives the distance and direction of each site from Fermoy . Each site is then discussed with respect to its requirement or not for Appropriate Assessment.

Table 1: Details of the Natura 2000 Sites located within 15km of Fermoy

Site Name	Site Designation	Site Code	Location Relative to Fermoy
River Blackwater (Cork / Waterford)	cSAC	002170	Partially within Fermoy town
Blackwater Callows	SPA	004094	Partially within Fermoy town

Data and information for this screening assessment was collected from the following sources, consultation with NPWS, Natura 2000 Forms, NPWS Site Synopses, other published data on rare and protected species, and personal knowledge of the sites.

3.2 BLACKWATER RIVER (CORK / WATERFORD) cSAC

This large cSAC covers the Blackwater River from its headwaters in Cos. Cork, Kerry, Tipperary, Waterford and Limerick, to its mouth at Youghal.

The river is one of the largest in Ireland. The site is designated on the basis of the presence of ten Annex I habitat types including the two Priority Habitats 'remnant alluvial forest', which

is found between Fermoy and Cappoquin, and 'Yew woods', a small area of which occurs near Villierstown, some 30km from Fermoy and will therefore not be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan.

Six of the other eight Annex I habitat types, 'estuaries', 'mudflats and sandflats', 'perennial vegetation of stony banks', 'Mediterranean salt meadows', 'Atlantic salt meadows' and '*Salicornia* mudflats and sandflats' occur in the estuarine sections of the cSAC, some 55km downstream of Fermoy, and will therefore not be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan.

The best examples of 'old oak woodland' within the cSAC occur at Ballynatray and Glendine, with other areas at Rincrew, Newport East and Dromana, all of which lie downstream of Cappoquin, more than 40km downstream of Fermoy, and will therefore not be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan. The only area of 'old oak woodland' mentioned in the NPWS Site Synopsis that lies close to Fermoy is at Carrigane, which is approximately 13km downstream of Fermoy. This woodland is on the steep northern slope of the river valley, and is elevated more than 30m above the valley floor. It is considered very unlikely that it will be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan.

The final Annex II habitat type is 'floating river vegetation'. The EIS for the Fermoy Flood Relief Scheme (Michael Punch and Partners, 2005) states that this habitat occurs in the river channel within Fermoy town boundary. The NPWS Site Synopsis, '*is found along much of the freshwater stretches within the Site*'.

The site is also designated on the basis of a number of Annex II species. The mammal species otter occurs throughout the site, including the sections within Fermoy town boundary (Michael Punch and Partners, 2005).

Six Annex II fish species are present within the cSAC. Of these, Twaith Shad and Allis shad occur in the estuary, some 55km downstream of Fermoy, and will therefore not be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan; whilst Atlantic salmon, brook lamprey, sea lamprey and river lamprey all occur at Fermoy (Michael Punch and Partners, 2005).

White-clawed crayfish are present within the cSAC in the River Awbeg, which joins the Blackwater some 15km upstream of Fermoy, close to Castletownroche. This population is considered very unlikely to be affected by any activity associated with the policies, objectives and zonings of Fermoy Town Development Plan. The species is not recorded from OS National Grid 10km squares W89, W99 or R80 through which the Blackwater flows immediately downstream of Fermoy (NPWS, 2008). Hence, impacts on this species as a result of any Zoning, Objective or Policy of the Town Plan are not anticipated.

The mollusc, freshwater pearl-mussel is recorded from OS National Grid 10km squares W89, W99 through which includes the section of the Blackwater immediately downstream of Fermoy (NPWS, 2008). Michael Punch and Partners (2005) state that the species is not known to occur in the stretch between Fermoy Bridge and the Funshion confluence, although a detailed survey would likely be required to prove their absence or rarity in the stretch.

The pre-consultation draft of the freshwater pearl-mussel management plan for the Munster Blackwater River sub-basin (DEHLG, 2008), includes 19th century records of the species from Fermoy and with respect to more recent records, states that:

"...it is likely that a scattered population at least exists over the wide area from upstream of Mallow to Fermoy (and indeed from as far upstream as Knocknagree to as far downstream as Lismore)." (DEHLG, 2008).

This indicates that there is a possibility of the species occurring close to Fermoy and a precautionary approach should therefore be taken which assumes the presence of freshwater pearl-mussel in the main channel of the River Blackwater in the Fermoy area.

No suitable habitat for the Annex II plant species Killarney Fern is known of close to Fermoy, and the main channel of the Blackwater downstream of Fermoy, where impacts could potentially occur, does not support suitable habitat for this species.

Threats to the site listed in the Natura 2000 Form include pollution derived from agricultural run-off and point sources in towns; which may be of relevance to this assessment of Fermoy Town Development Plan. Other negative impacts are also possible and as the cSAC lies partly with Fermoy town boundary there are potential impacts on the site as a result of Policies, Objectives, Zonings or other issues described in the Plan. **Appropriate Assessment of Fermoy Town Development Plan 2010 - 2016 in relation to the potential for negative impacts on *Blackwater River (Cork / Waterford)* cSAC is required.**

3.3 BLACKWATER CALLOWS SPA

The SPA is designated primarily on the basis of a resident population of the Birds Directive Annex I species Little Egret; and of an internationally important non-breeding winter population of the Birds Directive Annex I species Whooper Swan.

The site comprises the river channel, adjacent marshland and seasonally flooded pastures, all of which are utilised by these species and by significant numbers of other species, particularly ducks and waders. Teal, Wigeon, Shoveler, Mallard, Lapwing, Curlew, Black-headed Gull and Black-tailed Godwit are mentioned in the Natura 2000 Form, Black-tailed Godwit sometimes occurring in numbers of international importance.

Threats to the site listed in the Natura 2000 Form include pollution derived from agricultural run-off and point sources in towns; which may be of relevance to this assessment of Fermoy Town Development Plan. Other negative impacts are also possible and as the cSAC lies partly with Fermoy town boundary there are potential impacts on the site as a result of Policies, Objectives, Zonings or other issues described in the Plan. **Appropriate Assessment of Fermoy Town Development Plan 2010 - 2016 in relation to the potential for negative impacts on *Blackwater Callows* SPA is required.**

4 STAGE 2 – APPROPRIATE ASSESSMENT

4.1 INTRODUCTION TO THE APPROPRIATE ASSESSMENT

The Screening Stage (Stage 1) has concluded that Appropriate Assessment (Stage 2) of Fermoy Town Development Plan 2010 - 2016 is required to identify Zonings, Policies and Objectives (i.e. critical infrastructure) of the plan that might potentially impact negatively upon the Conservation Objectives of the following Natura 2000 Sites:

- **Blackwater River (Cork / Waterford) cSAC; and**
- ***Blackwater Callows SPA;***

The negative impacts that have been identified, which are discussed in this section, require the implementation of 'Avoidance' or 'Mitigation' measures, which will require amendments to Fermoy Town Development Plan 2010 - 2016 in order to avoid the need to progress to Stages 3 and 4 of the Appropriate Assessment process; the assessment of alternative solutions and compensatory measures.

Documentation that has been referred to in this Section of the Assessment includes, the Natura 2000 Forms and Site Synopses for the sites, the *Interpretation Manual of European Union Habitats* (EU, 1999) and NPWS's, *The Status of EU Protected Habitats and species in Ireland* (NPWS, 2008). Consultation with NPWS has also undertaken in the form of discussions between Rick Mundy and Jervis Good, NPWS Regional Ecologist. In addition, written submissions from EPA, OPW and DoEHLG received in response to SEA formal consultation have been reviewed.

4.2 BLACKWATER RIVER (CORK / WATERFORD) cSAC

4.2.1 Summary of the Key Features of the Site and of the Environmental Conditions Which Support Them

This section provides details of the Annex I habitats and the Annex II species for which this cSAC has been designated; that may occur or are known to occur close enough to Fermoy that there are potential negative impacts as a result of adoption of the zoning, policies and objectives of the Town Development Plan 2010-2016; and of the environmental factors which support these features (the conservation objectives of the site).

4.2.1.1 Annex I Habitats

The site is designated on the basis of the presence of ten Annex I habitat types. Only two of these occur in the vicinity of Fermoy in locations where they could potentially be affected by implementation of the zoning, policies or objectives of Fermoy Town Development Plan, the Priority habitat 'remnant alluvial forest', which is found between Fermoy and Cappoquin; and 'floating river vegetation', which occurs along much of the river, probably including sections within Fermoy town boundary (Michael Punch and Partners, 2005).

4.2.1.2 Annex II Species

The site is also designated on the basis of a number of Annex II species.

The mammal species otter occurs throughout the site including the sections within Fermoy town boundary (Michael Punch and Partners, 2005).

Six Annex II fish species are present within the cSAC, four of which, Atlantic salmon, brook lamprey, sea lamprey and river lamprey occur at Fermoy (Michael Punch and Partners, 2005), the other two being estuarine species.

There is a possibility that freshwater pearl-mussel occurs in the main channel of the River Blackwater in the Fermoy area (see Section 3.2).

All of these aquatic species of fauna are either directly or indirectly dependent upon good water quality in the river, and this in turn is influenced largely by land use and human activity on the flood plain of the river.

4.2.1.3 Environmental Factors that might be affected by the plan

The only threat to the site listed in the Natura 2000 Form that may be of relevance to this assessment is the potential for water quality deterioration as a result of pollution from the town. Other negative impacts resulting from Zonings, Policies Objectives of the Town Plan are however possible. The following broad environmental categories can be considered as significant influences on the Conservation Objectives of the cSAC. The ways in which these could potentially be negatively impacted upon are discussed here.

Available land / water area and habitat quality

All habitats and species require a sufficient area of land or water supporting suitable habitat, of sufficiently high quality, for populations to persist. Direct loss of land supporting or 'buffering' semi-natural habitat within the cSAC is therefore likely to constitute a negative impact on its conservation objectives.

Disturbance

All ecosystems and their habitats and species are to some extent sensitive to human disturbance, and an absence of excessive disturbance constitutes a key environmental factor for all of the species and habitats discussed above. This applies in particular to fauna species which can easily be displaced from an area by disturbance. In the case of the Annex I species discussed in Section 4.2.1.2, otter is especially prone to disturbance from people and domestic dogs. Zonings, Policies or Objectives that are likely to result in a significant increase in the volumes of people accessing the riverbank of the Blackwater or using the river itself, may therefore be viewed as having the potential to cause negative impacts on the conservation objectives of the cSAC.

Water quality

The River Blackwater is an aquatic system, and many of the habitats and species that the river supports are liable to negative impacts if water quality in the system deteriorates. All of the Annex II species discussed in Sections 4.3.1.2 are highly susceptible to negative impacts resulting from water pollution. The Annex I habitat 'floating river vegetation' and to a lesser extent the Priority habitat 'remnant alluvial forest' may also be susceptible to certain types of water contamination.

Hence, any Zonings, Policies or Objectives of the Town Plan that may cause deterioration in water quality in the River Blackwater should be viewed as having significant potential to negatively impact upon the conservation objectives of the cSAC.

An Objective should be included in the Town Plan which relates specifically to protection of the water quality of the River Blackwater in order to ensure no negative impacts on the aquatic qualifying features of the cSAC, particularly freshwater pearl-mussel (see Table 4.1 and Section 5).

4.2.2 Summary of Zoning, Policies and Objectives of the Fermoy Town Development Plan 2010 - 2016 that may impact upon the Conservation Objectives of the site.

The Town Plan has been reviewed and any Zoning, Policies or Objectives considered likely, if implemented, to have a negative effect on the Conservation Objectives of *River Blackwater (Cork / Waterford)* cSAC have been identified. Each such Zoning, Policy or Objective is discussed and assessed in this Section. Details of any changes to Zonings, Policies or Objectives that are recommended as a result of this assessment are detailed in Section 5.

4.2.2.1 Zoning

Map 3 'Zoning Objectives' indicates an area zoned 'Residential' and marked 'R-03' which lies within the boundary of the *River Blackwater (Cork / Waterford)* cSAC. This zoning is discussed in Section 3.7.29 of the Town Plan. If implemented, this Zoning / Objective would result in direct land take from the cSAC. The potential for such land take to impact upon the Conservation Objectives of the cSAC is discussed in Section 4.2.1.3.

Proposed walking routes along both the northern and southern banks of the River Blackwater are indicated on Map 2. These lie within the cSAC and will result in increased human access to the riverbanks increasing the potential for disturbance to flora and fauna within the cSAC as discussed in Section 4.2.1.3.

Other than these two issues, it is not considered that any of the Zonings indicated on the Maps accompanying Fermoy Town Plan, and Discussed in Section 3.4 of the Town Plan, are likely to have any negative impact on the Conservation Objectives of the *River Blackwater (Cork / Waterford)* cSAC.

4.2.2.2 Chapter 2. Strategic Context Objectives

2.10 Overall Strategy and Strategic Objectives: 2.10.3 11; "It shall be a strategic objective to continue to work towards the alleviation of the flooding problem that has affected the town so severely in the past."

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the cSAC, and this should be specified in the Town Plan.

Revision of this Objective is not required, however Objectives which refer specifically to the proposed OPW flood defence works or to Fermoy Flood Alleviation Scheme, namely Objectives 5.3.1 and 6.9.1 and Zoning Objective O-07, should be amended to include reference to the required mitigation works (see sections Table 4.1 and Section 5).

4.2.2.3 Chapter 3. Social and Economic Objectives

3.7 Residential Development and Zoning Objectives, Primarily Residential Zoning Objectives, (Coloured yellow on Map 3, Zoning Objectives Map): 3.7.24: “The following are objectives referring to specific areas of the town and are marked on Map 3:

R-03: Medium density residential development. Density to take account of and complement the riverside character of the site and adjacent uses. Development shall ensure that it is not at risk from flood damage.”

As discussed in Section 4.2.2.1, area R-03 lies within the boundary of the Blackwater River (Cork / Waterford) cSAC. Residential development in this area therefore has a high potential to impact negatively upon the Conservation Objectives of the cSAC. Proposals for residential development in this area will therefore be subject to Article 6 Appropriate Assessment.

This Objective therefore requires an amendment (see Section 5).

3.11 Sports, Recreation and Amenity Development and Zoning Objectives, Development Management Objectives, Primarily Open Space / sports / Recreation / Amenity Zoning Objectives (coloured green on Maps 2 and 3): O-05: “To be reserved for agricultural use, with limited residential usage restricted to the specific needs of the landowners immediate family and respecting the visual amenities of the area and the proposed riverside walk indicative indicated on Map 2.”

As this land lies within the boundary of the cSAC any development will be subject to Article 6 Appropriate Assessment. The restrictions imposed by the cSAC designation do not distinguish between developments that are pursued by the landowner (or the landowner’s immediate family) from developments pursued by other parties.

The proposed riverside walk indicated in area O-05 on Map 2 on the north bank of the River Blackwater lies within the boundary of the cSAC. Both this walk and the walk on the south bank of the river adjoin the walks indicated on ‘Settlement Map 1 Fermoy Environs’ of Fermoy Electoral Area Local Area Plan (see Section 4.2.3.1). The potential for disturbance to fauna within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment and is discussed further in Section 4.3.2.1.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

3.11 Sports, Recreation and Amenity Development and Zoning Objectives, Development Management Objectives, Primarily Open Space / sports / Recreation / Amenity Zoning Objectives (coloured green on Maps 2 and 3): O-07: “To be reserved for agricultural use recognising the constraints of the Candidate Special Area of Conservation status, the OPW flood defence works, its flood plain function, its amenity riverside amenity setting and having regard to the proposed riverside walk marked on Map 2.”

The proposed riverside walk indicated on Map 2 lies within the boundary of the cSAC. The potential for disturbance, particularly to fauna, within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment, and is discussed further in Section 4.3.2.1.

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the cSAC, and this should be specified in the Town Plan.

This Objective therefore requires amendment (see Table 4.1 and Section 5).

3.13 Amenity Objectives, Strategic Objectives: 3.13.2: “It shall be an objective to protect and provide the existing and proposed amenity [sic.] walks indicated on Map 2 of this Plan, Amenity and Scenic Areas Map.”

The potential for disturbance to fauna within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment and is discussed further in Section 4.3.2.1.

This Objective therefore required an amendment (see Table 4.1 and Section 5).

4.2.2.4 Chapter 4. Heritage Objectives

4.7 Protected Features of Landscape and Natural Heritage Importance, Scenic Views, Development Control Objectives: 4.7.3: “It is an objective to retain and enhance soft landscaping and amenity areas with the town, specifically with the development of the riverside walk and urban renewal of public open spaces.”

The proposed riverside walk indicated on Map 2 lies within the boundary of the cSAC. The potential for disturbance, particularly to fauna, within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment and is discussed further in Section 4.3.2.1.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

4.2.2.5 Chapter 5. Environment

5.1 Environment Objectives, Strategic Environmental Objectives: 5.1.2 “It shall be an objective to have regard and implement where possible the following objectives:”

“Designated Sites. To maintain the conservation value of Blackwater cSAC during the lifetime of this plan and to ensure Appropriate Assessment is carried out where development projects are likely to have significant effects on this European site whether within or outside the boundary of the European Site.”

The provisions of the EU Habitats Directive are transposed into Irish law through the 'Natural Habitats' Regulations of 1997 (SI No. 94 of 1997). Maintaining the conservation value of the *Blackwater River (Cork/Waterford)* cSAC is therefore a legal requirement and it is not appropriate for this Objective to include the qualifying phrase 'where possible'. 'Where possible' should therefore be removed from the wording of this Objective. In addition, 'Blackwater cSAC' should be replaced with the correct name of cSAC (see Section 5).

5.3 Flood risk management objectives, 5.3.1: ***"It shall be an objective to support and have regard to Fermoy north Flood Alleviation Scheme to be carried out by the OPW."***

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the cSAC, and this should be specified in the Town Plan.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

5.5 Natural Environment Objectives

An Objective that relates specifically to the importance of maintaining the internationally important biodiversity value and fisheries value of the River Blackwater should be included in this Section of the plan. The National Parks and Wildlife Service and South Western Regional Fisheries Board should be cited as the relevant authorities in this regard. Suggested wording is presented in Section 5.

4.2.2.6 Chapter 6. Infrastructure

6.9 Fermoy Surface Water Flooding, 6.9.1: ***"It is an objective of the Development Plan to implement the proposals of the Fermoy North Flood Alleviation Scheme."***

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the cSAC, and this should be specified in the Town Plan.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

4.2.3 Potential 'Cumulative Impacts'

A key consideration of Appropriate Assessment is that the Plan or Project under consideration, in this case the Town Plan, must take account of potential impacts on Natura 2000 sites 'in combination' with other plans or projects.

Fermoy Electoral Area Local Area Plan (Cork County Council, 2005); Cork County Development Plan 2003 (as varied) (Cork County Council, 2003); and the Draft County Development Plan (Cork County Council, 2007), have all been reviewed with respect to

potential cumulative impacts that may occur in combination with Zonings, Objectives or Policies of the new Fermoy Town Plan.

4.2.3.1 Walking Routes to the East and West of Fermoy

'Settlement Map 1 Fermoy Environs' of Fermoy Electoral Area Local Area Plan indicates two 'Amenity Walks' extending eastwards from Fermoy Town Council boundary along the north and south bank of the River Blackwater in areas U-04 (north bank) and U-05, U-06 (south bank). These link into Open Space / Sports / Recreation / Amenity Zones O-02 (north bank) and O-03 (south bank) of the Local Area Plan and Open Space / Sports / Recreation / amenity Zone O-05 of the Town Plan.

Section 8 Settlements and Other Locations; 1 Fermoy Environs, Utilities and Infrastructure, Paragraph 1.3.15 defines the Objectives for these walks as follows:

Specific Zoning Objective No. U-04: "*Provide amenity walk along river bank through scenic area.*"

Specific Zoning Objective No. U-05: "*Provide amenity walk to connect to town centre.*"

Specific Zoning Objective No. U-06: "*Provide pedestrian access to river.*"

'Settlement Map 1 Fermoy Environs' of Fermoy Electoral Area Local Area Plan indicates two 'Amenity Walks' extending westwards from Fermoy Town Council boundary along the north and south bank of the River Blackwater in areas U-07 (north bank) and U-08 (south bank).

Section 8 Settlements and Other Locations; 1 Fermoy Environs, Utilities and Infrastructure, Paragraph 1.3.15 defines the Objectives for these walks as follows:

Specific Zoning Objective No. U-07: "*Provide amenity walk along river bank.*"

Specific Zoning Objective No. U-08: "*Provide circular amenity walk from town centre through open space and scenic area along bank of stream to Glenabo bridge.*"

All of these walking routes are located in relatively sensitive river bank sections of the cSAC. Section 4.2.1.3 of this Assessment has identified the potential for disturbance, particularly to fauna, as a potential negative impact of the Town Plan, specifically if the number of people accessing the banks of the Blackwater increases. It is considered that development of these walking routes could result in such disturbance. Amendments to a number of Objectives of the Town Plan have been recommended in this regard (see Section 5).

4.2.3.2 Flood Prevention

Section 5, Transport and Infrastructure; Section 5.3 Infrastructure; Drainage; Paragraph 5.3.10; Objective No. DR1-1: "*Drainage and Flooding.* It is a general objective to implement the recommendations of the Office of Public Works policies, as current in June 2004, in relation to flood plains and areas sensitive to flooding."

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the cSAC, and this should be specified in the Town Plan. Amendments to a

number of Objectives of the Town Plan have been recommended in this regard (see Section 5).

No other significant developments or plans are known of that may result in such cumulative impacts on *Blackwater River (Cork / Waterford) cSAC*.

4.2.4 Appropriate Assessment of Fermoy Town Development Plan 2010 - 2016 in relation to the potential for negative impacts on *Blackwater River (Cork / Waterford) cSAC*

Table 4.1 brings together in tabular Form the details described in Section 4.2.1, 4.2.2 and 4.2.3. The matrix identifies the key features for which the cSAC is designated; the environmental factors on which those features depend; the elements of the plan that may result in negative impacts on those environmental factors; the avoidance and mitigation measures required and the actions required to implement these measures, namely additional Policies and amendments to existing Policies and Objectives of the plan, and changes to zonings.

Table 4.1: Potential Impacts on the Conservation Objectives of *Blackwater River (Cork / Waterford)* cSAC Resulting From the Policies and Objectives of Fermoy Development Plan

Qualifying features	Conditions that support the qualifying features and which might be potentially affected by Fermoy Town Plan	Possible Impacts of Fermoy Town Plan	Possible 'in combination' impacts from other plans and projects	Avoidance and mitigation measures required	Actions required
Priority Annex I habitat: 'remnant alluvial forest'	<ul style="list-style-type: none"> • Low levels of human disturbance such as trampling and vehicle use. 	<ul style="list-style-type: none"> • Increased disturbance resulting from increased visitor number to the banks of the River Blackwater on new riverside walks. 	<ul style="list-style-type: none"> • Interconnecting walking routes proposed in the Town Plan and in Fermoy Electoral Area Local Area Plan may result in increase visitor numbers to the banks of the River Blackwater resulting in increased disturbance to this habitat. 	<ul style="list-style-type: none"> • Footpath design should be developed in consultation with NPWS and or other relevant organisations such as BirdWatch Ireland to minimise disturbance impacts. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objectives, 3.11, O-05; 3.11 O-07 and 3.13.2. • Revision to Heritage Objective 4.7.3. • Addition of a new Natural Environment Objective in Section 5.5.
Annex I habitat: 'floating river vegetation'.	<ul style="list-style-type: none"> • Good water quality in the River Blackwater. • Intact Riparian vegetation corridors and natural channel and bank features. 	<ul style="list-style-type: none"> • Deterioration in water quality in the River Blackwater. • Damage or modifications to the banks or channel of the River Blackwater. 	<ul style="list-style-type: none"> • None known 	<ul style="list-style-type: none"> • Implementation of mitigation measures described in the Fermoy Flood Relief Scheme EIS. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objective 3.11 O-07. • Revision to Environment Objective 5.3.1.

Table 4.1: Potential Impacts on the Conservation Objectives of *Blackwater River (Cork / Waterford)* cSAC Resulting From the Policies and Objectives of Fermoy Development Plan (continued)

Qualifying features	Conditions that support the qualifying features and which might be potentially affected by Fermoy Town Plan	Possible Impacts of Fermoy Town Plan	Possible 'in combination' impacts from other plans and projects	Avoidance and mitigation measures required	Actions required
Annex II species: freshwater pearl-mussel, Atlantic salmon, brook lamprey, sea lamprey and river lamprey	<ul style="list-style-type: none"> • Good water quality in the River Blackwater. • Intact Riparian vegetation corridors and natural channel and bank features. 	<ul style="list-style-type: none"> • Deterioration in water quality in the River Blackwater. • Damage or modifications to the banks or channel of the River Blackwater. 	<ul style="list-style-type: none"> • None known 	<ul style="list-style-type: none"> • Implementation of mitigation measures described in the Fermoy Flood Relief Scheme EIS. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objective 3.11 O-07. • Revision to Environment Objective 5.3.1.

Table 4.1: Potential Impacts on the Conservation Objectives of *Blackwater River (Cork / Waterford)* cSAC Resulting From the Policies and Objectives of Fermoy Development Plan (continued)

Qualifying features	Conditions that support the qualifying features and which might be potentially affected by Fermoy Town Plan	Possible Impacts of Fermoy Town Plan	Possible 'in combination' impacts from other plans and projects	Avoidance and mitigation measures required	Actions required
Annex II species: otter	<ul style="list-style-type: none"> • Good fish populations in the River Blackwater • Low levels of human disturbance along the banks of the River Blackwater. 	<ul style="list-style-type: none"> • Increased disturbance resulting from increased visitor number to banks of the River Blackwater. • Deterioration in water quality in the River Blackwater. • Damage or modifications to the banks or channel of the River Blackwater. 	<ul style="list-style-type: none"> • Interconnecting walking routes proposed in the Town Plan and in Fermoy Electoral Area Local Area Plan may result in increase visitor numbers to the banks of the River Blackwater resulting in increased disturbance to birds. 	<ul style="list-style-type: none"> • Footpath design should be developed in consultation with NPWS and or other relevant organisations such as BirdWatch Ireland to minimise disturbance impacts. • Implementation of mitigation measures described in the Fermoy Flood Relief Scheme EIS. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objectives, 3.11, O-05; 3.11 O-07 and 3.13.2. • Revision to Heritage Objective 4.7.3. • Addition of a new Natural Environment Objective in Section 5.5. • Revision to Social and Economic Objective 3.11 O-07. • Revision to Environment Objective 5.3.1.

4.3 BLACKWATER CALLOWS SPA

4.3.1 Summary of the Key Features of the Site and of the Environmental Conditions Which Support Them

This section provides details of the Birds Directive Annex I species, and other features of ornithological importance, for which this SPA has been designated; and of the environmental factors which support these features (the conservation objectives of the site).

4.3.1.1 Birds Directive Annex I Species

The SPA is designated primarily on the basis of a resident population of the Birds Directive Annex I species Little Egret; and of an internationally important non-breeding winter population of the Birds Directive Annex I species Whooper Swan. Little Egrets breed locally and use the site throughout the year. The Natural 2000 Form states that up to 170 Whooper Swans winter at the site, which is below the current threshold for an internationally important population, which is 210 birds (Crowe, 2005). According to Crowe (2005) however, the 'five year mean' population between 1996 and 2000 was 214 birds, thus exceeding the threshold for an internationally important population.

4.3.1.2 Other Important Bird Populations

The Natura 2000 form indicates that the site supports nationally important populations of non-breeding, Teal, Wigeon and Black-tailed Godwit during the winter, with Black-tailed Godwit sometimes occurring in numbers of international importance. Significant numbers of Shoveler, Mallard, Lapwing, Curlew and Black-headed Gull also winter at the site.

4.3.1.3 Environmental Factors that might be affected by the plan

The site comprises a 23km stretch of the River Blackwater valley running eastwards from the Fermoy town boundary towards Lismore. It includes the river channel and adjacent seasonally flooded pastures and arable fields, with some marginal emergent vegetation and marshland.

The location of the site immediately downstream of Fermoy makes it potentially vulnerable to water quality or hydrological impacts from the town. Threats to the site listed in the Natura 2000 Form include pollution derived from agricultural run-off and point sources in towns.

The following broad environmental categories constitute conservation objectives of the site that could potentially be negatively impacted upon by the town plan.

Winter flooding

The importance of the Blackwater Callows to birds is largely dependent upon the annual winter flooding of the River Blackwater flood plain downstream of Fermoy.

Zonings, Policies or Objectives that could alter the pattern of winter flooding within the SPA should therefore be viewed as potentially having a negative impact on the conservation objectives of the SPA.

Disturbance

All ecosystems and their habitats and species are to some extent sensitive to human disturbance, and an absence of excessive disturbance constitutes a key environmental factor for bird populations using the Blackwater Callows.

Zonings, Policies or Objectives that are likely to result in a significant increase in the volumes of people accessing the riverbank of the Blackwater, or using the river itself, downstream of Fermoy may therefore be viewed as having the potential to cause negative impacts on the conservation objectives of the SPA.

Water quality

The River Blackwater is an aquatic system, and many of the bird species that the river supports are liable to longer-term negative impacts if water quality in the system deteriorates. The Natura 2000 form for the SPA identifies water pollution from agricultural run-off and from point sources as a threat to the site and states that pollution is a general threat to the site.

Eutrophication of waters entering the callows is unlikely to have a negative impact in the short-term on the quality of feeding habitat for winter bird populations, and could potentially improve grass productivity and the supply of invertebrate prey thus increasing the quantity of available food for birds. However, pollutants entering the system could have long-term negative impacts on both habitat quality and on the fitness and health of the bird populations. Hence, any Zonings, Policies or Objectives of the Town Plan that may cause deterioration in water quality in the River Blackwater should be viewed as having significant potential to negatively impact upon the conservation objectives of the SPA.

Available land / water area and habitat quality

Bird populations require a sufficient area of land of sufficiently high quality, for their populations to persist. Loss of such habitat is likely to result in reduction in bird populations. Direct loss of land within the SPA is therefore likely to constitute a negative impact on its conservation objectives.

4.3.2 Summary of Policies and Objectives of Fermoy Town Development Plan 2010 - 2016 that may impact upon the Conservation Objectives of the site

Zoning

It is not considered that any of the Zonings indicated on the Maps accompanying Fermoy Town Plan, and Discussed in Section 3.4 of the Town Plan, are likely to have any negative impact on the Conservation Objectives of the *Blackwater Callows* SPA.

4.3.2.1 Chapter 2. Strategic Context Objectives

2.10 Overall Strategy and Strategic Objectives: 2.10.3 11; “It shall be a strategic objective to continue to work towards the alleviation of the flooding problem that has affected the town so severely in the past.”

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS

must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the SPA, and this should be specified in the Town Plan.

Revision of this Objective is not required, however Objectives which refer specifically to the proposed OPW flood defence works or to Fermoy Flood Alleviation Scheme, namely Objectives 5.3.1 and 6.9.1 and Zoning Objective O-07, should be amended to include reference to the required mitigation works (see sections Table 4.1 and Section 5).

4.3.2.2 Chapter 3. Social and Economic Objectives

3.11 Sports, Recreation and Amenity Development and Zoning Objectives, Development Management Objectives, Primarily Open Space / sports / Recreation / Amenity Zoning Objectives (coloured green on Maps 2 and 3): O-05: “To be reserved for agricultural use, with limited residential usage restricted to the specific needs of the landowners immediate family and respecting the visual amenities of the area and the proposed riverside walk indicative indicated on Map 2.”

The proposed riverside walk indicated on Map 2 on the south bank of the River Blackwater to the east of the town lies within the boundary of the SPA. Both this walk and the walk on the north bank of the river adjoin the walks indicated on ‘Settlement Map 1 Fermoy Environs’ of Fermoy Electoral Area Local Area Plan (see Section 4.3.3.1). The potential for disturbance to fauna within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment and is discussed further in Section 4.3.2.1.

This Objective therefore requires an amendment (see Table 4.2 and Section 5).

3.13 Amenity Objectives, Strategic Objectives: 3.13.2: “It shall be an objective to protect and provide the existing and proposed amenity [sic.] walks indicated on Map 2 of this Plan, Amenity and Scenic Areas Map.”

The potential for disturbance to birds within the SPA resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.3.1.3 of this Assessment and is discussed further in Section 4.3.3.1. This Objective therefore required an amendment (see Table 4.2 and Section 5).

4.3.2.3 Chapter 4. Heritage Objectives

4.7 Protected Features of Landscape and Natural Heritage Importance, Scenic Views, Development Control Objectives: 4.7.3: “It is an objective to retain and enhance soft landscaping and amenity areas with the town, specifically with the development of the riverside walk and urban renewal of public open spaces.”

The proposed riverside walk indicated on Map 2 lies within the boundary of the cSAC. The potential for disturbance, particularly to fauna, within the cSAC resulting from an increase in the volumes of people accessing the riverbank of the Blackwater has been identified as a potential negative impact in Section 4.2.3.1 of this Assessment and is discussed further in Section 4.3.2.1.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

4.3.2.4 Chapter 5. Environment

5.1 Environment Objectives, Strategic Environmental Objectives: 5.1.2 ***“It shall be an objective to have regard and implement where possible the following objectives:”***

“Designated Sites. To maintain the conservation value of Blackwater cSAC during the lifetime of this plan and to ensure Appropriate Assessment is carried out where development projects are likely to have significant effects on this European site whether within or outside the boundary of the European Site.”

This Objective should include a commitment to maintaining the conservation value of the *Blackwater Callows* SPA as well as the *Blackwater River (Cork/Waterford)* cSAC. The SPA is protected under the provisions of the EU Birds Directive which is transposed into Irish law through the ‘Natural Habitats’ Regulations of 1997 (SI No. 94 of 1997). Maintaining the conservation value of the *Blackwater Callows* SPA is therefore a legal requirement and it is not appropriate for this Objective to include the qualifying phrase ‘where possible’. ‘Where possible’ should therefore be removed from the wording of this Objective. (see Section 5).

5.3 Flood risk management objectives, 5.3.1: ***“It shall be an objective to support and have regard to Fermoy north Flood Alleviation Scheme to be carried out by the OPW.”***

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the SPA, and this should be specified in the Town Plan.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

5.5 Natural Environment Objectives

An Objective that relates specifically to the importance of maintaining the conditions that support the internationally important bird populations of the Blackwater Callows downstream of Fermoy should be included in this Section of the plan. The National Parks and Wildlife Service should be cited as the relevant authorities in this regard. Suggested wording is presented in Section 5.

4.3.2.5 Chapter 6. Infrastructure

6.9 Fermoy Surface Water Flooding, 6.9.1: ***“It is an objective of the Development Plan to implement the proposals of the Fermoy North Flood Alleviation Scheme.”***

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the SPA, and this should be specified in the Town Plan.

This Objective therefore requires an amendment (see Table 4.1 and Section 5).

4.3.3 Potential 'Cumulative Impacts'

A key consideration of Appropriate Assessment is that the Plan or Project under consideration, in this case the Town Plan, must take account of potential impacts on Natura 2000 sites 'in combination' with other plans or projects.

Fermoy Electoral Area Local Area Plan and (Cork County Council, 2005) Cork County Development Plan 2003 (as varied) (Cork County Council, 2003) and the Draft County Development Plan (Cork County Council, 2007) have been reviewed with respect to potential cumulative impacts that may occur in combination with Zonings, Objectives or Policies of the new Fermoy Town Plan.

4.3.3.1 Walking Routes to the East and West of Fermoy

'Settlement Map 1 Fermoy Environs' of Fermoy Electoral Area Local Area Plan indicates two 'Amenity Walks' extending eastwards from Fermoy Town Council boundary along the north and south bank of the River Blackwater in areas U-04 (north bank) and U-05, U-06 (south bank). These link into Open Space / Sports / Recreation / Amenity Zones O-02 (north bank) and O-03 (south bank) of the Local Area Plan and Open Space / Sports / Recreation / amenity Zone O-05 of the Town Plan.

Section 8 Settlements and Other Locations; 1 Fermoy Environs, Utilities and Infrastructure, Paragraph 1.3.15 defines the Objectives for these walks as follows:

Specific Zoning Objective No. U-04: "*Provide amenity walk along river bank through scenic area.*"

Specific Zoning Objective No. U-05: "*Provide amenity walk to connect to town centre.*"

Specific Zoning Objective No. U-06: "*Provide pedestrian access to river.*"

These walking routes are located within the SPA. Section 4.3.1.3 of this Assessment has identified the potential for disturbance to birds in the SPA as a potential negative impact of the Town Plan, specifically if the number of people accessing the banks of the Blackwater to the east of Fermoy increases. It is considered that development of these walking routes could result in such disturbance. Amendments to a number of Objectives of the Town Plan have been recommended in this regard (see Section 5).

4.3.3.2 Flood Prevention

Section 5, Transport and Infrastructure; Section 5.3 Infrastructure; Drainage; Paragraph 5.3.10; Objective No. DR1-1: "***Drainage and Flooding.*** It is a general objective to implement the recommendations of the Office of Public Works policies, as current in June 2004, in relation to flood plains and areas sensitive to flooding."

The Fermoy Flood Relief Scheme Engineering Report (OPW, 2003) and EIS (Michael Punch and Partners, 2005) have been reviewed as part of this assessment. Whilst serious negative impacts are not anticipated, the EIS does identify some potential negative impacts on the River Blackwater and the mitigation measures described in Sections 6.0 and 7.0 of the EIS must therefore be implemented in order to avoid negative impacts on the Conservation Objectives of the SPA, and this should be specified in the Town Plan. Amendments to a number of Objectives of the Town Plan have been recommended in this regard (see Section 5).

No other significant developments or plans are known of that may result in such cumulative impacts on *Blackwater River (Cork / Waterford) cSAC*.

4.3.4 Appropriate Assessment of Fermoy Town Development Plan 2010 - 2016 in relation to the potential for negative impacts on *Blackwater Callows SPA*

Table 4.2 brings together in tabular Form the details described in Section 4.3.1 and 4.3.2. The matrix identifies the key bird populations for which the SPA is designated; the environmental factors on which they depend; the elements of the plan that may result in negative impacts on them; the avoidance and mitigation measures required and the actions required to implement these measures, namely additional Policies and Objectives and amendments to existing Policies and Objectives of the plan, and changes to zonings.

Table 4.2: Potential Impacts on the Conservation Objectives of *Blackwater Callows* SPA Resulting From the Policies and Objectives of Fermoy Development Town Plan

Qualifying features	Conditions that support the qualifying features and which might be potentially affected by Fermoy Town Plan	Possible Impacts of Fermoy Town Plan	Possible 'in combination' impacts from other plans and projects	Avoidance and mitigation measures required	Actions required
Birds Directive Annex I species: Whooper Swan (non-breeding population, present in winter) and also other non-breeding wetland bird populations including Teal, Wigeon Black-tailed Godwit Shoveler, Mallard, Lapwing, Curlew and Black-headed Gull (present mainly in autumn and winter).	<ul style="list-style-type: none"> • Low levels of human disturbance to birds using this habitat. 	<ul style="list-style-type: none"> • Increased disturbance resulting from increased visitor number to the banks of the River Blackwater. • Reduction in quality or quality of wet and flooded grassland feeding habitat. 	<ul style="list-style-type: none"> • Interconnecting walking routes proposed in the Town Plan and in Fermoy Electoral Area Local Area Plan may result in increase visitor numbers to the banks of the River Blackwater resulting in increased disturbance to birds. 	<ul style="list-style-type: none"> • Footpath design should be developed in consultation with NPWS and or other relevant organisations such as BirdWatch Ireland to minimise disturbance impacts. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objectives, 3.11, O-05; 3.11 O-07 and 3.13.2. • Revision to Heritage Objective 4.7.3. • Addition of a new Natural Environment Objective in Section 5.5.

Table 4.2: Potential Impacts on the Conservation Objectives of *Blackwater Callows* SPA Resulting From the Policies and Objectives of Fermoy Development Town Plan (Continued)

Qualifying features	Conditions that support the qualifying features and which might be potentially affected by Fermoy Town Plan	Possible Impacts of Fermoy Town Plan	Possible 'in combination' impacts from other plans and projects	Avoidance and mitigation measures required	Actions required
Birds Directive Annex I species: Little Egret (breeding, present year round).	<ul style="list-style-type: none"> • Low levels of human disturbance to birds using this habitat. • Deterioration in water quality in the River Blackwater. • Damage or modifications to the banks or channel of the River Blackwater. 	<ul style="list-style-type: none"> • Increased disturbance resulting from increased visitor number to the banks of the River Blackwater. • Reductions in quantity or quality of fish stocks and other food sources. 	<ul style="list-style-type: none"> • Interconnecting walking routes proposed in the Town Plan and in Fermoy Electoral Area Local Area Plan may result in increase visitor numbers to the banks of the River Blackwater resulting in increased disturbance to birds. 	<ul style="list-style-type: none"> • Footpath design should be developed in consultation with NPWS and or other relevant organisations such as BirdWatch Ireland to minimise disturbance impacts. • Implementation of mitigation measures described in the Fermoy Flood Relief Scheme EIS. 	<ul style="list-style-type: none"> • Revision to Social and Economic Objectives, 3.11, O-05; 3.11 O-07 and 3.13.2. • Revision to Heritage Objective 4.7.3. • Addition of a new Natural Environment Objective in Section 5.5. • Revision to Social and Economic Objective 3.11 O-07. • Revision to Environment Objective 5.3.1.

5 REQUIRED ACTIONS

As a result of the recommendations made in the original Appropriate Assessment (RPS, 2009), the following changes have been made to the Volume 2 'Policies and Objectives' of Fermoy Development Plan 2010 – 2016, in order to avoid potential negative impacts on the Conservation Objectives of, *River Blackwater (Cork / Waterford) cSAC* or *Blackwater Callows SPA*.

Chapter 3; Social and Economic Objectives; 3.7 Residential Development and Zoning Objectives, Primarily Residential Zoning Objectives, (Coloured yellow on Map 3, Zoning Objectives Map): 3.7.24: *"The following are objectives referring to specific areas of the town and are marked on Map 3:*

R-03: Medium density residential development. Density to take account of and complement the riverside character of the site and adjacent uses. Development shall ensure that it is not at risk from flood damage." should be revised to read as follows: ***R-03: "Medium density residential development. Density to take account of and complement the riverside character of the site and adjacent uses. Development shall ensure that it is not at risk from flood damage; and Article 6 Appropriate Assessment of the potential for any development to impact negatively on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC will be carried out."***

Chapter 3; Social and Economic Objectives; 3.11 Sports, Recreation and Amenity Development and Zoning Objectives, Development Management Objectives, Primarily Open Space / sports / Recreation / Amenity Zoning Objectives (coloured green on Maps 2 and 3): O-05: *"To be reserved for agricultural use, with limited residential usage restricted to the specific needs of the landowners immediate family and respecting the visual amenities of the area and the proposed riverside walk indicative indicated on Map 2."* should be revised to read as follows: ***O-05: "To be reserved for agricultural use, with limited residential usage restricted to the specific needs of the landowners immediate family, and subject to and respecting the visual amenities of the area and the proposed riverside walk indicative indicated on Map 2. Residential development or development of the riverside walks in this area will be subject to Article 6 Appropriate Assessment of the potential for negative impacts on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC."***

Chapter 3; Social and Economic Objectives; 3.11 Sports, Recreation and Amenity Development and Zoning Objectives, Development Management Objectives, Primarily Open Space / sports / Recreation / Amenity Zoning Objectives (coloured green on Maps 2 and 3): O-07: *"To be reserved for agricultural use recognising the constraints of the Candidate Special Area of Conservation status, the OPW flood defence works, its flood plain function, its amenity riverside amenity setting and having regard to the proposed riverside walk marked on Map 2."* should be revised to read as follows: ***O-07: "To be reserved for agricultural use recognising the constraints of the Candidate Special Area of Conservation status, the OPW flood defence works, its flood plain function, its amenity riverside amenity setting and having regard to the proposed riverside walk marked on Map 2 The flood defence works will implement in full the mitigation measures described in Sections 6.0 and 7.0 of the Environmental Impact Statement (Michael Punch and Partners, 2005) and development of the riverside walk will be subject to Article 6 Appropriate Assessment of the potential for negative impacts on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC."***

Chapter 3; Social and Economic Objectives; 3.13 Amenity Objectives, Strategic Objectives: 3.13.2: *"It shall be an objective to protect and provide the existing and proposed amenity [sic.] walks indicated on Map 2 of this Plan, Amenity and Scenic Areas Map."* should be revised to read as follows: ***"It shall be an objective to protect and provide the existing and***

proposed amenity walks indicated on Map 2 of this Plan, Amenity and Scenic Areas Map. These walks, which connect to walks west of the town boundary, will be designed and developed subject to Article 6 Appropriate Assessment of the potential for negative impacts on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC and will be designed in consultation with National Parks and Wildlife Service.

Chapter 4. Heritage Objectives; 4.7 Protected Features of Landscape and Natural Heritage Importance, Scenic Views, Development Control Objectives: 4.7.3: ***“It is an objective to retain and enhance soft landscaping and amenity areas with the town, specifically with the development of the riverside walk and urban renewal of public open spaces.”*** should be revised to read as follows: ***“It is an objective to retain and enhance soft landscaping and amenity areas with the town, specifically with the development of the riverside walk and urban renewal of public open spaces. Design and development of the riverside walks will be subject to Article 6 Appropriate Assessment of the potential for negative impacts on the Conservation Objectives of the Blackwater River (Cork / Waterford) cSAC and will be designed in consultation with National Parks and Wildlife Service.”***

Chapter 5, Environment; 5.1 Environment Objectives, Strategic Environmental Objectives: 5.1.2 (this policy reference has been changed to 5.1.4 in the Final Plan) ***“It shall be an objective to have regard and implement where possible the following objectives: Designated Sites. To maintain the conservation value of Blackwater cSAC during the lifetime of this plan and to ensure Appropriate Assessment is carried out where development projects are likely to have significant effects on this European site whether within or outside the boundary of the European Site.”*** should be revised to read as follows: ***“It shall be an objective to have regard and implement the following objectives: Designated Sites. To maintain the conservation value of the River Blackwater (Cork / Waterford) cSAC and the Blackwater Callows SPA during the lifetime of this plan and to ensure Appropriate Assessment is carried out where development projects are likely to have significant effects on this European site whether within or outside the boundary of the European Site.”***

Chapter 5. Environment; 5.3 Flood risk management objectives, 5.3.1: ***“It shall be an objective to support and have regard to Fermoy north Flood Alleviation Scheme to be carried out by the OPW.”*** should be revised to read as follows: ***“It shall be an objective to support and have regard to Fermoy north Flood Alleviation Scheme to be carried out by the OPW. The flood defence works will implement in full the mitigation measures described in Sections 6.0 and 7.0 of the Environmental Impact Statement (Michael Punch and Partners, 2005)”***

Chapter 5. Environment; 5.5 Natural Environment Objectives: (This policy reference in the Final Plan is 5.6.2) An Objective that relates specifically to the importance of maintaining the internationally important biodiversity value and fisheries value of the River Blackwater should be included in this Section of the plan. The National Parks and Wildlife Service and South Western Regional Fisheries Board should be cited as the relevant authorities in this regard. Suggested wording is as follows: ***“The River Blackwater’s international biodiversity importance is recognised in its designation as a cSAC as an SPA and as a Salmonid Water. It shall be an objective to protect the riverine habitat of the River Blackwater and to maintain high water quality in the river in order to protect the internationally important flora and fauna communities that the river supports. Applicants for development that might affect the river will be required to consult with environmental bodies including the National Parks and Wildlife Service and the South Western Regional Fisheries board in accordance with the Planning and Development Regulations, 2001.”***

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