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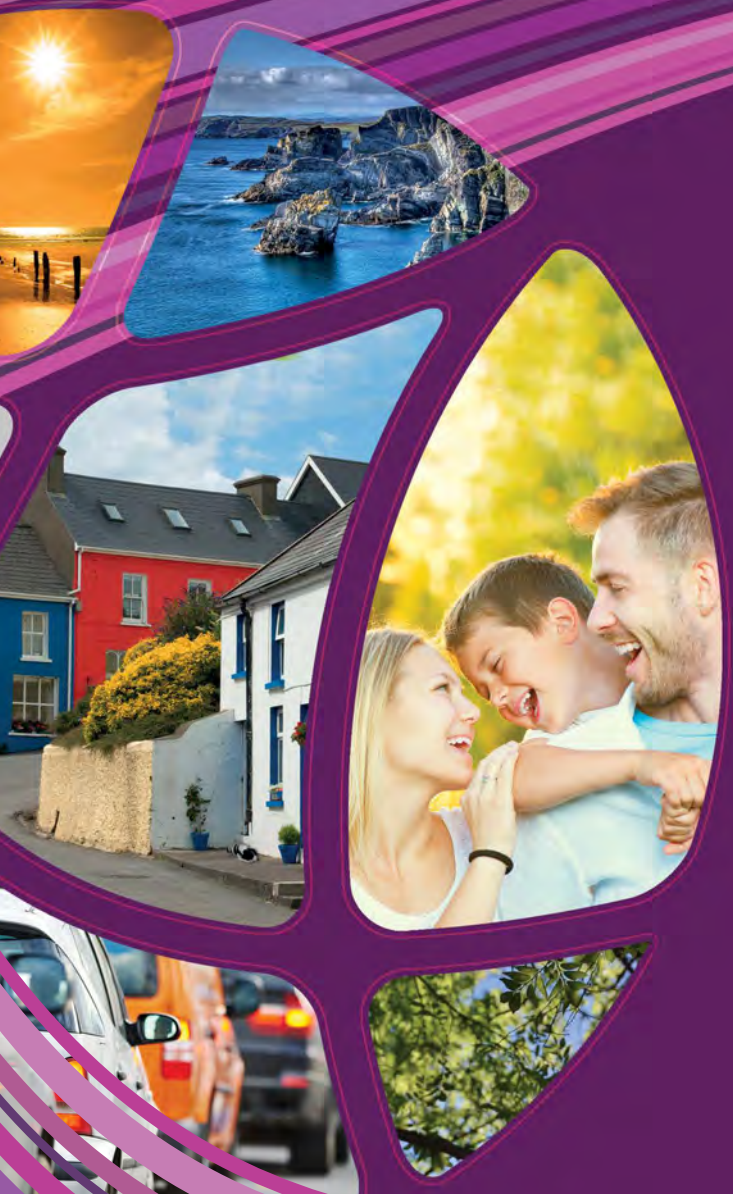
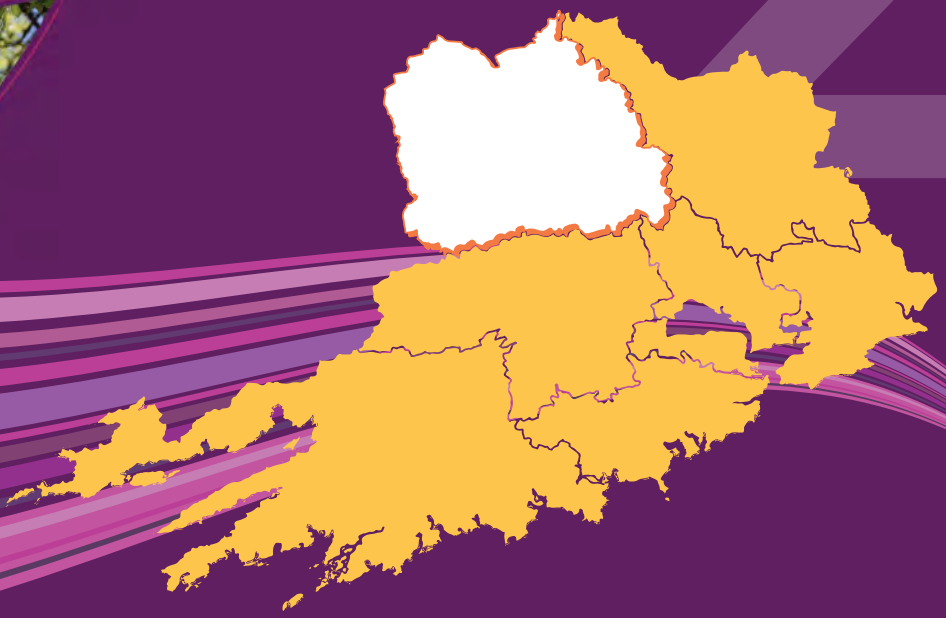


Draft

Kanturk Mallow Municipal District

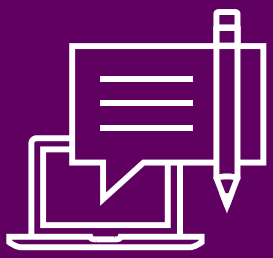
Environmental Reports



VOLUME TWO
Environmental Reports

2

16th November 2016



How to make a Submission

The Draft Municipal District Local Area Plan is available from the Council website at www.corkcoco.ie. If required, a hard copy of the document may be inspected between the hours of **9.30 a.m. and 4.00p.m**, from **Wednesday 16th November 2016** to **Friday 06th January 2017** at the following locations:

- Planning Department, Floor 1, County Hall, Cork.
- Planning Department, Norton House, Skibbereen, Co. Cork.
- Cork County Council Offices, Mallow
- Public Libraries - Please check libraries regarding opening times and availability.

CD copies of the documents may be requested by phone (Tel: 021-4285900) or collected from the Planning Department, Floor 1, County Hall between the hours of **9.30am** and **4.00pm** during the above period.

Submissions or observations regarding the Draft Municipal District Local Area Plan document are hereby invited from members of the public, children, or groups or associations representing the interests of children and other interested parties during the period **Wednesday 16th November 2016** to **4.00pm** on **Friday 06th January 2017**.

Submissions may be made in either of the following two ways:

- On-line via www.corkcoco.ie following the instructions provided

OR

- In written form to the Senior Planner, Planning Policy Unit, Cork County Council, Floor 13, County Hall, Cork. T12R2NC.

All such submissions lodged within the above period and prior to the close of business at **4.00pm on Friday 6th January 2017**, will be taken into consideration in the finalisation of the Municipal District Local Area Plan.

Environmental Reports

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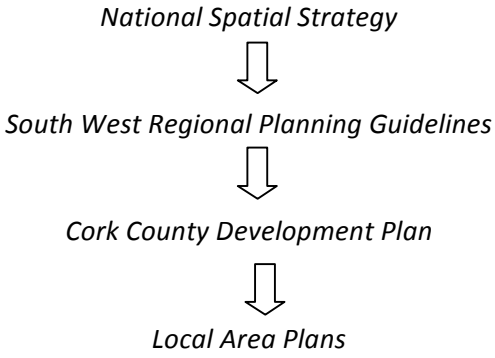
1 Introduction

1.1 Introduction

1.1.1 This is the Environmental Report on the strategic environment assessment of the Draft Kanturk Mallow Municipal District Local Area Plan 2016 and it describes the assessment of the likely significant effects on the environment of implementing the Draft Plan.

1.1.2 Cork County Council sets out its land use planning strategy for the development of the towns and villages of the county in a series of eight Municipal District Local Area Plans.

1.1.3 Local Area Plans sit at the lower end of the planning policy hierarchy and must be consistent with the higher level plans like the County Development Plan and the Regional Planning Guidelines.



1.1.4 The most recent Local Area Plans were adopted in 2011. The Plans have a six year life and the Council is now commencing the process of preparing new plans which will be in place by August 2017. Following the re-organisation of local government in 2014, the electoral structure of the County is now based on eight Municipal Districts; see Table 1.1 and Figure 1.1. A new Local Area Plan will be prepared for each of the eight Municipal Districts in the County.

1.1.5 Currently the Town Development Plans adopted by the nine former Town Councils of Cobh, Clonakilty, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal remain in force pending the making of the next Cork County Development Plan in 2020. It is proposed to vary the Town Development Plans, such that the zoning provisions and associated policy objectives of the Town Development Plans are updated and incorporated into the new Local Area Plans. The Town Plans will remain in force but the relevant zonings provisions will be those of the new Local Area Plan.

Table 1.1 : Municipal Districts in County Cork				
Municipal District		Population 2011	Main Towns	No of villages
1	Ballincollig - Carrigaline	71,946	Ballincollig, Carrigaline, Passage West/ Monkstown/ Glenbrook, Cork City South Environs, Ringaskiddy	5
2	Bandon - Kinsale	42,454	Bandon, Kinsale	34
3	Blarney - Macroom	43,398	Blarney, Macroom	54
4	Cobh	53,544	Carrigtwohill, Cobh, Glanmire, Little Island, Cork City North Environs. (Monard is proposed new town and a designated Strategic Development Zone)	24
5	East Cork	42,399	Midleton, Youghal	30
6	Fermoy	42,226	Charleville, Fermoy, Mitchelstown	29
7	**Kanturk-Mallow**	**47,305**	**Buttevant, Kanturk, Mallow, Millstreet, Newmarket**	**46**
8	West Cork	56,530	Bantry, Castletownbere, Clonakilty, Dunmanway, Schull, Skibbereen	67 & 7 Inhabited Islands

Figure:1 Municipal Districts in the County

1.2 Strategic Environmental Assessment

1.2.1 From a legislative viewpoint, the concept of SEA was initially introduced by way of the Directive 2001/42/EC of the European Parliament and of the Council of 27th June 2001 on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) which was transposed into Irish legislation by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004 (S.I. No. 435 of 2004) and Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (S.I. No. 436 of 2004). Subsequently, these statutory instruments were amended by S.I. 200 of 2011 and S.I. No. 201 of 2011. This SEA is being undertaken under S.I. No. 436 of 2004 (as amended) in accordance with Article 8, insofar as this legislation relates to land-use planning.

1.2.2 Strategic Environment Assessment is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest stage of decision-making on a par with economic and social considerations. The SEA process is undertaken using a methodical iterative approach. The methodology followed in this report is derived from a number of sources including the appropriate legislation and guidance documents prepared on a national and EU level. Legally, the SEA Directive (2001/42/EC), transposed Irish regulations and associated amendments to provide the legislative framework. The main sources of guidance include the documents detailed below:

- 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, Department of Environment, Heritage and Local Government, 2004;
- SEA Pack and Scoping Guidance Document, EPA.
- SEA Process Checklist, EPA.

1.3 Stages of SEA

1.3.1 There are a number of stages involved in the SEA process which are listed as follows:

(1) Screening

(2) Scoping

(3) **Collection of baseline data, assessment and compilation of the Environmental Report (current stage).**

(4) Consultation with designated environmental authorities on Environmental Report and Draft Plan.

(5) Evaluation of submissions received in response to the consultation and amendments to the plan as appropriate with designated environmental authorities.

(6) Issuing of the final SEA Statement identifying how environmental considerations have been integrated into the final adopted Plan.

(7) Monitoring of significant environmental effects following adoption and implementation of the Plan.

1.3.2 This report only deals with stages 1-3.

Screening

1.3.3 The purpose of screening is to determine definitively if there is a necessity for a strategic environmental assessment to be undertaken. There is a mandatory requirement under the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (as amended) to undertake a strategic environmental assessment in respect of Local Area Plans for areas with a population of 5,000 or more, so in this instance, screening was not required and the SEA process proceeds to the next stage.

Scoping

1.3.4 The process of scoping for SEA is defined as the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in consultation with the prescribed environmental authorities. Scoping is necessary in order to establish, with objectivity, the potential impacts of the implementation of the draft plan on a number of environmental elements from consultations with a range of environmental bodies and the incorporation of associated submissions into the draft plan by way of their inclusion in the Environmental Report.

1.3.5 Scoping for the current SEA was commenced with the circulation of a Draft Scoping Report to all the environmental authorities on the 22nd April 2016. A total of two (2) submissions were received from EPA and Irish Water respectively. The Scoping Report was finalised on the 31st May 2016 and issues raised were considered further in the preparation of this Draft Local Area Plan and SEA Environment Report.

Collection of Baseline Data, Assessment and Environmental Report.

1.3.6 In order to assess the likely significant impacts of the Plan, baseline data on the current state of the environment has to be collected and evaluated and the potential effects of the plan predicted and considered. In accordance with legislation and guidance, the existing environment is described with respect to biodiversity, population, human health, fauna, flora, soil, water (surface freshwater, coastal, transitional, groundwater, bathing and water services (drinking water and waste water treatment), air, climatic factors, material assets (roads, transportation, energy etc), cultural heritage (including architectural and archaeological heritage), landscape and the interrelationships between these factors as appropriate. Any existing problems relevant to the new Plan are also identified at this baseline stage.

1.3.7 Identification of baseline environmental status provides for the identification of key resources and sensitivities within the Plan area and the identification of potential threats to the environment, thus allowing for the inclusion of mitigation measures that may need to be incorporated into the new Plan to ensure that it does not exacerbate existing problems. Assessment of the baseline environment also enables plan-makers to consider how the environment might evolve in the absence of the proposed plan.

1.3.8 As the data is complied and plan policies evolve the likely significant effects of implementing the plan are identified, described and evaluated and this is described in the Environmental Report.

1.3.9 The information to be contained in the environmental report is set out in Annex 1 of the SEA Directive and reproduced in Schedule 2B of the Planning and Development Regulations 2001, as inserted by Article 12 of the Planning and Development (SEA) Regulations 2004). The structure of this report is summarised as follows:

Table 1: Information to be contained in an Environmental Report		
Item	**Information to be contained in an Environmental Report**	**Relevant Section of Environmental Report**
A	Outline of the contents and main objectives of the draft plan and relationship with other relevant plans or programmes	Section 2: Context of the Plan
B	Description of the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Section 3: Baseline Environment
C	Description of the environmental characteristics of areas likely to be significantly affected	Section 3: Baseline environment
D	Description of any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance, such as Natura 2000 sites	Section 3: Baseline environment
E	Description of environmental protection objectives (EPOs),established at international, EU or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation	Section 4: EPOs
F	Description of the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and interrelationships between these factors	Section 6: Evaluation of Draft Plan
G	Description of the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan	Section 6: Evaluation of Draft Plan
H	Outline of the reasons for selecting the alternatives considered, with a description of how the assessment was undertaken and including any difficulties encountered in compiling the information	Section 5: Alternative Scenarios.
I	Description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan	Will be included in SEA Statement once plan finalised
J	A non-technical summary of the above information.	

Documenting the SEA process

1.3.10 The SEA Process produces two documents – this environmental Report which is published with the Draft Municipal District Local Area Plan and an SEA statement which will be published at the end of the process, once the plan is adopted.

1.3.11 This Environmental Report will be submitted to the Elected Members with the Draft Municipal District Local Area Plan. The Members must take account of the Environmental Report before the Plan is adopted. When the Plan is adopted, an SEA Statement will be published, summarising, inter alia, how environmental considerations have been integrated into the Plan and the reasons for choosing the Plan as adopted over other alternatives considered in the Environmental Report.

1.3.12 Should alterations to the Draft Plan be proposed, there will be a further submission period of not less than four weeks during which time submissions and/or observations may be made on the proposed alterations. If material alterations are proposed they will need to undergo a screening process to determine if SEA is required. The proposed alterations, the screening document and SEA Environmental report, where relevant, will be sent to the Minister, the Board and the prescribed authorities and will be made available for public inspection.

1.4 Habitats Directive Assessment

1.4.1 Habitats Directive Assessment is an iterative process which runs parallel to and informs both the plan making process and the Strategic Environmental Assessment Process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard must also be had to the potential for policies to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.

1.4.2 The results of this analysis and review are presented in a Habitats Directive Screening Report which is contained in Volume Two Environmental Reports of this plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement will be produced which contains a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the Plan. The final Natura Impact Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at this time.

1.5 Strategic Flood Risk Assessment

1.5.1 As part of the review of the Local Area Plan, and in order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department of the Environment, Heritage and Local Government / Office of Public Works Guidelines, “The Planning System and Flood Risk Management” (2009), Cork County Council also undertook a Strategic Flood Risk Assessment (SFRA).

1.5.2 The assessment provides for an improved understanding of flood risk issues within the Municipal District and the spatial distribution of flood risk. The SFRA report sets out how the Flood Risk Assessment was undertaken, as well as how its findings were addressed and integrated into the Draft Plan. A copy of the SFRA is included in Volume Two Environmental Reports of this plan. It should be read in conjunction with the Draft Municipal District Local Area Plan.

1.6 Difficulties Encountered

1.6.1 As part of the LAP preparation process an ecological baseline study for the non metro main towns was commissioned. The study was not complete in time to inform the review process however recommendations will be considered at the amendment stages. No other new research was undertaken and information was gathered from existing sources of data. It should be noted that there are a number of areas where data was not readily available which include:

- No wetland inventory
- Habitat Mapping for the Non Metropolitan Towns was not finalised in time to inform preparation of report.
- Information is largely paper based with exceptions of designated areas in digitised format (GIS)
- Lack of guiding legislation in some areas e.g. soils and their conservation.
- Limited Air Quality monitoring data for the plan area. The frequency of this monitoring is also identified as an issue.
- Lack of a data on compliance records for waste water treatment systems on settlements of less than 500 p.e.
- Lack of information on the effectiveness of existing septic tank systems within the county.
- The lack of centralised data source for environmental baseline data posed a difficulty to the SEA process.

1.6.2 In addition, the status of a number of Transitional and Coastal Waterbodies was not available. Not only did this impede the preparation of the baseline assessment, it also highlights a potential problem with the implementation of the Water Framework Directive.

Section 2: The Draft Kanturk Mallow Municipal District Local Area Plan

Sub-Section

2 The Draft Kanturk Mallow Municipal District Local Area Plan

2.1 Introduction

2.1.1 In accordance with the Planning and Development Act, 2000 as amended a planning authority may at any time, and for any particular area within its functional area, prepare a local area plan in respect of that area.

2.1.2 The current Kanturk and Mallow Electoral Area Local Area Plans were adopted in 2011 and must be replaced by end of July 2017. On the 14th December 2015 the Council commenced a review by publishing a Preliminary Consultation Document for each of the 8 Municipal Districts and placing notices in the press to advise the public of the commencement of a 6 week period of public consultation. Submissions received were considered and included in a Chief Executive's Report to the Elected Members of the Council in April 2016. This was followed up by a series of briefing sessions to allow for consultation with members on issues raised and what needed to be addressed in the Draft Plan.

2.2 County Development Plan Strategy

2.2.1 A new Cork County Development Plan came into force in 2014. This plan, which has also been subject to Strategic Environmental Assessment and Habitats Directive Assessment, sets out the overall strategy for the proper planning and sustainable development of the County as a whole, including population targets for each Municipal District and each of the main towns. Within each Municipal District a combined population target is also given for the villages and rural areas. The County Development Plan 2014 has also identified the amount of new housing required in each Municipal District / Town /Village to meet the needs of the target population.

2.2.2 The County Development Plan has been prepared so that it is consistent with national population targets issued by the Department of the Environment, Community and Local Government and the Regional Planning Guidelines for the South West Region. The Plan also sets out county-wide objectives for issues such as housing, social and community facilities, economy and employment, town centres and retail, energy and digital economy, transportation and mobility, water services, heritage, green infrastructure and the environment and zoning and land use.

2.2.3 The new Local Area Plan must be consistent with the objectives of the Cork County Development Plan 2014 and comply with the Local Area Plan Guidelines for Planning Authorities prepared by the Department of Environment, Community and Local Government and various legislative and other policy documents issued by the Government.

2.3 Local Area Plan Strategy

Overview

2.3.1 The Kanturk – Mallow Municipal District is located to the north west of the county and in 2011 the population of the area stood at 47,305. This population is spread across a network of settlements including five towns and forty six villages and the open countryside, as detailed in Table 2.1. Outside the

main towns the district is largely rural / agricultural in character and almost half the population of the Municipal District lives in the open countryside i.e. not within a settlement.

2.3.2 Mallow is the largest town in the Municipal District with a population of 11,605 in 2011 and the largest employment, service and retail base. All the other towns are significantly smaller in terms of population but offer services that support a significant rural hinterland.

2.3.3 Agriculture is a key economic activity throughout the District both in direct farming of land and in food processing with significant dairy processing industries located in Mallow, Kanturk and Newmarket. Services and more traditional manufacturing are also significant employers in the area.

Table 2.1: Distribution of population within the Kanturk Mallow Municipal District 2011

	Settlement	Population 2011	%
Towns	Buttevant (945), Kanturk (2,263), Mallow (11,605), Millstreet (1,574), Newmarket (988)	17,375	37%
Key Villages	Ballydesmond, Banteer, Boherbue, Dromina, Knocknagree, Milford	6,727*	14%
Villages	Ballydaly, Ballyclogh, Bweeng, Burnfort, Castlemagner, churchtown, Cecilstown, Cullen, Dromahane, Derrinagree, Freemount, Glantane, Kilcorney, Kiskeam, Kilbrin, Liscarroll, Lismire, Lombardstown, Lyre, Meelin New Twopothouse, Rathcoole, Rockchapel, Tullylease.		
Village Nuclei	Aubane, Ballyhass, Cloghboola, Currarigue, Dromagh/Dromtariff, Gortroe, Knockaclarig, Laharn Cross Roads, Lisgriffin, Mourneabbey (Athnaleenta), Nad, Old Twopothouse, Taur.		
Other Locations	Dromalour, Sally's Cross		
Rural Areas		23,203	49%
Total population		**47,305**	

* Village and Rural Populations are estimated figures

2.3.4 At present planning policy for the settlements within the Kanturk Mallow Municipal District is spread across the Kanturk and Mallow Electoral Area Local Area Plans adopted in 2011 and the Mallow Town Development Plan 2010. The intention is that local planning policy for all settlements within the Municipal District will be contained within the new Kanturk Mallow Municipal District Local Area Plan 2017.

2.3.5 It is anticipated than many of the provisions of the current local area plans adopted in 2011 will be continued into the new Local Area Plan unless there is a specific requirement for change arising from changes in national planning policy, legislation, government guidelines, changes in local circumstances, needs etc or to reflect the provisions of the new County Development Plan adopted in 2014.

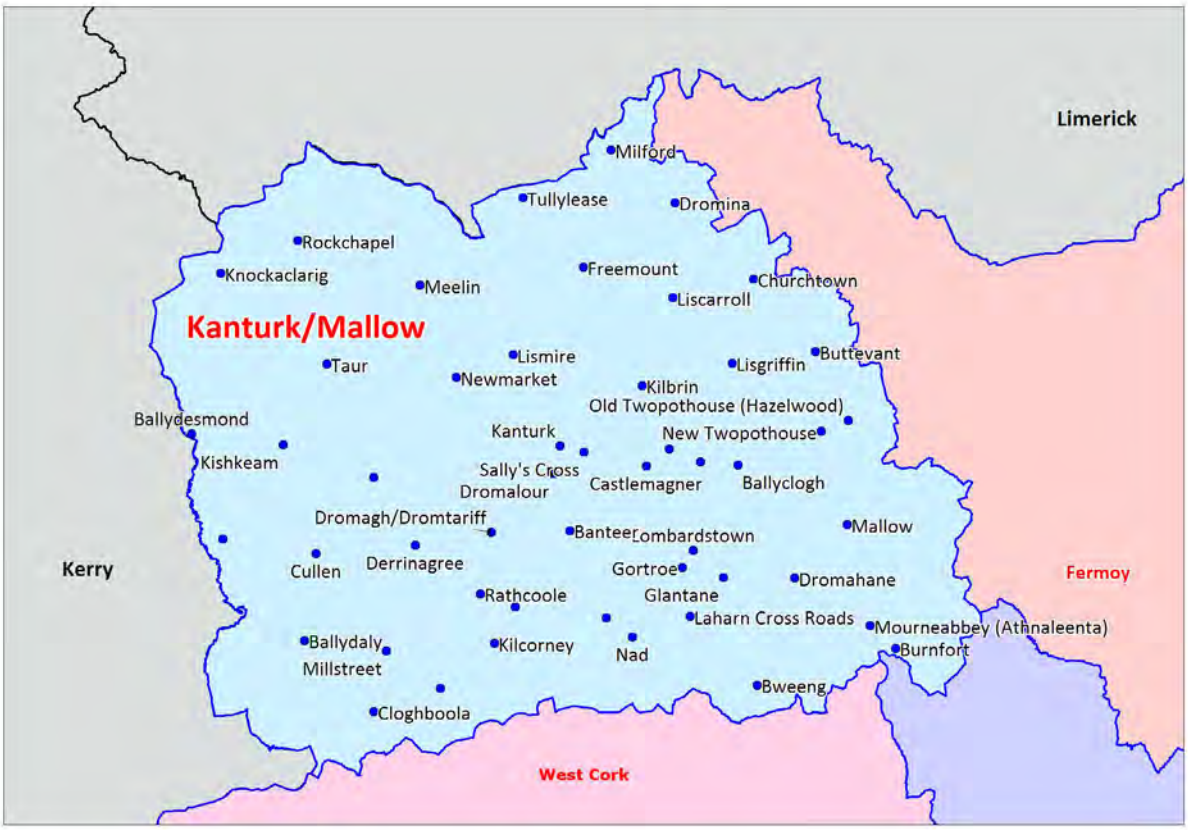


Figure 2.1: Kanturk Mallow Municipal District Settlements

2.4 Growth Strategy Population Trends

2.4.1 Within the Kanturk Mallow Municipal District the County Development Plan provides for growth in population of 10,134 persons. The number of households is expected to grow by 6,939 leading to a net requirement for 7,556 new houses within the Municipal District. The County Development Plan indicates that 270ha of residentially zoned land is required.

2.4.2 The population growth target will require the provision of 7,556 new housing units, with at least 5,323 units allocated to the 5 Main Towns. Housing growth of 1,361 units is also planned for the villages.

Table 2.2 Population Trends and Targets within the Kanturk Mallow Municipal District 2002-2022

	Population 2002	Population 2011	Population Target 2022
Total Main Towns	13,919	17,375	26,846
Total Villages and Rural Areas	25,961	29,930	30,593
Total Population	39,880	47,305	57,439

2.4.3 Table 2.3 shows that, arising from the County Development Plan 2014, there is a net requirement within the towns of the Municipal District for 5,323 new dwelling units and capacity, in terms of the current provision of zoned lands within the towns, to accommodate 8,256. At this stage in the LAP process there is no need to add to the overall land supply as it includes headroom of 55% in terms of the amount of housing units required.

Table 2.3 Kanturk Mallow Municipal District

	Housing Requirement				Housing Supply	
	Census 2011	**Population Target**	**New Units Required**	**Net Estimated Requirement (ha)**	**Est. Net Residential area zoned in LAP / TCP (ha)**	**Estimated Housing Yield (LAPs and TCPs) (Units)**
Mallow	11,605	20,000	4,552	228	31.50	482
Newmarket	988	1,189	155	9	29.20	329
Buttevant	945	1,501	298	17	332.45	6,750
Kanturk	2,263	2,400	141	8	19.62	350
Millstreet	1,574	1,756	177	10	24.90	345
Main Towns	**17,375**	**26,846**	**5,323**	**270**	**437.67**	**8,256**
Villages	6,727	8,796	1,361	--	--	987
Rural	23,203	21,798	872	--	--	--
Total Villages and Rural	29,930	30,593	2,233	--	--	987
Total for District	**47,305**	**57,439**	**7,556**	**270**	**437.67**	**10,230**

Current Estimated Strategic Land Reserve for this Municipal District is 178.9 Ha
Source: Cork County Development Plan 2014- Volume One. Appendix B, Table B 13

2.4.4 The scale of growth for the individual main settlements of the Municipal District as provided for in this Local Area Plan is outlined in Table 2.3. For the towns, the 'Overall Scale of New Development' figure is the same target figure established by the Core Strategy of the County Development Plan and sufficient residential land has been zoned within the plan to cater for this level of growth and to provide for additional spare capacity in the form of headroom.

2.4.5 Based on estimated current and target population figures for the villages, the County Development Plan (Core Strategy) estimated the number of new houses that that may need to be accommodated within the villages of this Municipal District as 1,361 units. This local area plan has the retained the scale of growth figures for the villages and rural areas at the 2011 figures.

2.4.6 Within the village network it is suggested that the new local area plan should maintain the scale of growth established in the 2011 Local Areas Plans in order to respect the scale and character of the villages and because there are significant deficits in water services infrastructure. Ample land is available within the development boundaries of the villages to accommodate the expected level of growth and at this stage of the process it is not intended to make any significant changes to the development boundaries of any of the villages. The main factor constraining development in the villages is likely to be inadequate water services infrastructure. As outlined above, there is enough land available within the towns within the Municipal District to accommodate any development which cannot take place within the villages due to lack of infrastructure.

2.4.7 The Settlement network of this Municipal District includes two 'Other Locations' Dromalour, Sally's Cross. County Development Plan Strategy recognises other locations, as areas which may not form a significant part of the settlement network, but do perform important functions with regard to tourism, heritage, recreation and other uses. No changes are proposed to the strategy for 'Other Locations' as part of the review of the Local Area Plans.

2.5 Contents of the Draft Plan

2.5.1 The Draft Local Area Plan provides a blueprint for the development of Kanturk Mallow Municipal District for the next 6 years. Set out below are details of the structure and broad chapter content of the Draft local Area Plan.

Section 1 Introduction

2.5.2 This Section sets out the review process to date, the overall plan context and the overall approach/key policies that will influenced the preparation of the Draft Plan namely;

Water Quality issues affecting the River Blackwater SAC

Role of the Cork County Development Plan 2014

Approach to deal with Town Council Development Plans

Settlement Network

Traffic and Transport

Water Services

Development Contributions

Regeneration Areas

Town Centres

Green Infrastructure

Quality in Urban Design

Flood Risk Assessment and Management

Green Belts around Towns

Environmental Considerations including

- Strategic Environmental Assessment
- Strategic Flood Risk Assessment
- Habitats Directive Assessment

Section 2 Local Area Strategy

2.5.3 This section set out the overall strategy for the Kanturk Mallow Municipal District. It sets out the housing requirements and zoned housing land supply for each of the 5 main towns, sets out the appropriate scale of growth within the village network and the current infrastructure position for all the main towns and smaller settlement within the settlement network. It assesses the current employment position in the Municipal District and the key Environment and Heritage assets within the area. The key

message is that sufficient land has been provided to meet population targets but that infrastructure remains a key constraint to delivering on those targets.

Section 3 Main Towns

2.5.4 The purpose of this section is to set out the policies and objectives including land use zoning maps for the 5 Main Towns of Buttevant, Kanturk, Mallow, Millstreet and Newmarket in the Kanturk Mallow Municipal District. Where appropriate Regeneration Areas have also been identified.

Table 2.4: Population, Households and Net New Houses for Main Towns

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (Ha)	Net Estimated Residential Area Zoned (Ha)	Estimated Housing Yield
Buttevant	945	1,501	285	298	17	31.50	482
Kanturk	2,263	2,400	188	141	8	29.20	329
Mallow	11,605	20,000	4,154	4,552	228	339.93	6,961
Millstreet	1,574	1,756	166	177	10	23.80	475
Newmarket	988	1,189	141	155	9	24.90	345

2.5.5 Mallow is the largest settlement within the Kanturk Mallow Municipal District and a major focus of employment and retail services in North Cork. River Blackwater and its wide flood plain runs east-west through the centre of the town and acts as an important flood storage area. The landscape character of the Blackwater Valley makes an important contribution to the setting of the town.

2.5.6 The aim for Mallow is to realise the significant population growth proposed as part of its "hub" status under the National Spatial Strategy and to support this growth with the expansion of the employment base of the town, making it a strategic focus of employment outside Metropolitan Cork; to ensure new development delivers enhanced quality of life for all based on high quality residential, working and recreational environments, respectful of the unique character and heritage of the town and supported by a good range of services and community facilities.

2.5.7 Kanturk which is the second largest town in the Kanturk Mallow Municipal District area has a population of approximately 2500 and is a busy market town serving a wide rural hinterland.

2.5.8 The overall strategy aims to continue Kanturk's role as an important local centre whilst establishing strong links with Millstreet and Newmarket so as to form a strategic growth and development focus for North West Cork. Priorities include the expansion of the employment and service base of the town, regeneration of brownfield sites and completion of the southern river crossing to ease traffic congestion.

2.5.9 Buttevant is a small town of less than a thousand population, located on the main Cork – Limerick road. The town has an interesting military, ecclesiastical and social history. The strategic aim for Buttevant over the lifetime of this plan is to boost the town's population in line with prescribed targets; optimise employment opportunities having regard to the towns proximity to the proposed M20 and the Atlantic Corridor; and ensure new development respects the significant historic and architectural fabric of the town.

2.5.10 Millstreet is located close to the Cork-Kerry border at the northern foot of Claragh Mountain. It is a traditional linear town centred on an elongated square and wide Main Street which hosts a significant cross section of activity including residential, commercial, social and industrial uses. The strategic aim

for Millstreet is to strengthen its role as an important centre of population, district employment centre with an established service base, and an events centre which serves a wide rural hinterland.

2.5.11 Newmarket is a small market town located in an undulating landscape at the foothills of the Mullaghareirk Mountains. The strategic aim for Newmarket over the lifetime of the plan is to aim to continue Newmarket's role as an important local centre through encouraging further population growth and expansion of its employment and service functions. To continue to establish strong links between its neighbouring town Kanturk so as to form a strategic growth and development focus for North West Cork.

Section 4 Key Villages

2.5.12 There are 6 Key Villages in the Kanturk Municipal District as follows; Ballydesmond, Banteer, Boherbue, Dromina, Knocknagree and Milford.

2.5.13 It is a strategic aim of the Cork County Development Plan, 2014 to establish key villages as the primary focus for development in rural areas in the lower order settlement network and allow for the provision of local services, by encouraging and facilitating population growth at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available. Supporting the retention and improvement of key social and community facilities, and inter urban public transport.

Table 2.5: Appropriate Scale of Development for Key Villages

Name	Existing Number of Houses Q1 2015 (Geodirectory)	Growth 2005 to 2015 (Geodirectory)	Overall Scale of New Development (No. of houses)	Normal Recommended Scale of any Individual scheme
Ballydesmond	107	16	53	12
Banteer	167	48	200	20
Boherbue	196	17	150	20
Dromina	124	43	30	10
Knocknagree	94	10	30	10
Milford	124	43	30	15
Total Key Villages			493	

Section 5 Villages, Village Nuclei and Other Locations

2.5.14 There are 24 villages in the Kanturk Mallow Municipal District as follows: Ballyclough, Ballydaly, Burnfort, Bweeng, Castlemagner, Cecilstown, Churchtown, Cullen, Derrinagree, Dromahane, Freemount, Glantane, Kilbrin, Kilcorney, Kiskeam, Liscarroll, Lismire, Lombardstown, Lyre, Meelin, New Twopothouse, Rathcoole, Rockchapel, Tullylease.

2.5.15 It is a strategic aim of the Cork County Development Plan, 2014 to encourage and facilitate development at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available and support the retention and improvement of key social and community facilities within villages, including the improved provision of interurban public transport.

Table 2.6. Scale of Development in Kanturk Mallow Municipal District Villages				
Villages	**Existing Number of Houses Q1 2015 (Geodirectory)**	**Growth 2005 to 2015 (Geodirectory)**	**Overall Scale of New Development (No. of houses)**	**Normal Recommended Scale of any Individual scheme**
Ballyclogh	112	24	20	10
Ballydaly	14	4	5	1
Burnfort	24	-18	10	10
Bweeng	177	138	10	6
Castlemagner	118	106	30	5
Cecilstown	42	3	10	10
Churchtown	252	176	25	15
Cullen	47	7	25	5
Derrinagree	20	0	5	5
Dromahane	343	151	63	20
Freemount	114	69	20	10
Glantane	59	7	10	10
Kilbrin	78	32	20	10
Kilcorney	22	14	10	5
Kiskeam	65	2	24	10
Liscarroll	122	11	15	10
Lismire	30	14	30	5
Lombardstown	66	26	10	10
Lyre	82	56	10	10
Meelin	36	3	20	10
New Twopothouse	57	21	10	10
Rathcoole	80	52	15	10
Rockchapel	41	2	15	5
Tullylease	29	0	10	5

2.5.16 There are 13 Village Nuclei in the Kanturk Mallow Municipal District as follows: Aubane, Ballyhass, Cloghboola, Curraraigue, Dromagh/Dromtariff, Gortroe, Knockaclarig, Laharn Cross Roads, Lisgriffin, Mourneabbey, Nad, Old Twopothouse and Taur.

2.5.17 It is a strategic aim of the Cork County Development Plan, 2014 to preserve the rural character of village nuclei and encourage small scale expansion at a scale, layout and design that reflects the character of each village, where water services and waste water infrastructure is available generally through low density individual housing, in tandem with the provision of services.

Table 5.2: Scale of Development in Kanturk Mallow Municipal District Village Nuclei				
Village Nuclei	**Existing Number of Houses Q1 2015 (Geodirectory)**	**Growth 2005 to 2015 (Geodirectory)**	**Overall Scale of Development (No. of houses)**	**Normal Recommended Scale of any Individual scheme.**
Aubane	6	-4	5	1-5
Ballyhass		0	5	1-5
Cloghboola	11	3	5	1-5
Curraraigue	12	1	5	1-5
Dromagh/Dromtariff	20	2	5	1-5
Gortroe	11	-1	5	1-5
Knockaclarig	1	0	5	1-5
Laharn Cross Roads		0	5	1-5
Lisgriffin	42	9	5	1-5
Mourneabbey (Athnaleenta)		0	5	1-5
Nad	15	1	2	1-2
Old Twopothouse (Hazelwood)	26	9	5	1-5
Taur	6	2	5	1-5

2.5.18 There are two **Other Locations** in the Kanturk Mallow Municipal District as follows; Dromalour, Sally's Cross.

2.5.19 It is a strategic aim of the Cork County Development Plan, 2014 to recognise Other Locations, as areas which may not form a significant part of the settlement network, but do perform important functions with regard to tourism, heritage, recreation and other uses.

Section 6 Putting the Plan into Practice

2.5.20 This section assigns responsibility for the implementation of the Plan's policies to various agencies including the Local Authority. It also sets out the expected timeframes for the delivery of physical and social infrastructure, including the assignment of Plan priorities and funding streams necessary to secure key development objectives. It also outlines the approach to monitoring and how the Plan will inform other Plans within its functional area.

2.6 Relationship with Other Relevant Plans and Programmes

2.6.1 The Local Area Plan is part of a hierarchy of County, Regional and National plans. The Plan should be consistent with higher-level plans such as those of a county, regional or national nature. The following National, Regional and County Plans have influenced the policies contained in this Draft Local Area Plan.

National Policy

2.6.2 **National Spatial Strategy:** The National Spatial Strategy (NSS) is a twenty year planning framework for the entire country which is designed to achieve a better balance of social, economic and physical development and population growth between regions. The main focus of the NSS is to bring people, jobs and services closer together, in order to achieve a better quality of life for people, a strong, competitive economic position for the country and to ensure environmental protection.

2.6.3 Cork is identified as a gateway, a nationally significant centre whose location, scale and service base supports the achievement of the type of critical mass necessary to sustain strong levels of growth. Cork will build on its substantial and established economic base to lever investment into the South West region, with the support of its scale of population, its third level institutions and the substantial capacity for growth identified in the Cork Area Strategic Plan (CASP). Implementation of CASP is important to secure the objectives of the NSS. Mallow is identified as a 'hub' and will perform an important role within the national structure at regional and County level. Improvements in regional accessibility through roads, advanced communications infrastructure and public transport links are key supporting factors. The NSS also seeks to develop the potential of other towns and villages. Large towns near Cork City need to be promoted as self-sustaining towns. Medium sized towns in coastal and peripheral areas have a critical role to play as service centres and in economic development. In the more rural parts of the County "a dynamic and nationally important tourism product has been developed which will require effective management and sustainable development of the natural and cultural heritage to sustain it for the future".

2.6.4 **National Development Plan 2007 – 2013:** The National Development Plan (NDP) Transforming Ireland — A Better Quality of Life for All sets out our national investment priorities and 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. In Cork, the NDP identifies the need to accelerate growth and development and identifies a number of investment priorities for Cork including motorways, integrated public transport systems, enhancement of tourism, leisure and recreational facilities, developing employment, research and development capacity etc.

2.6.5 **Food Harvest 2020– A Vision for Irish Agri-Food and Fisheries:** The agri-food and fisheries sector is Ireland's most important indigenous industry and is recognised as having a key role to play in Ireland's export-led economic recovery. With €7bn in exports the sector currently accounts for over half of manufacturing exports, by Irish owned firms. The geographical distribution of the sector ensures that any future wealth and employment generated will be of direct benefit to rural and coastal communities. The 2020 vision for the sector seeks to increase the value of primary output in the agriculture, fisheries and forestry sector by €1.5 billion by 2020 (an increase of 33% on 2007-2009 levels); increase value added in the agri-food, fisheries and wood products sector by €3 billion (+40%) and achieve an export target of €12 billion for the sector (+ 42%). Meeting these targets will have significant environmental challenges including reducing the carbon intensity of Irish agriculture and ensuring the sector plays its part in reducing our overall greenhouse gas (GHG) emissions. As a County with a strong agri-food and fisheries sector already, there is obvious scope of sustainable growth in this area which should bring many benefits to the County as a whole.

2.6.6 **National Climate Change Strategy (2007 – 2012) / Climate Change Adaption Framework 2012:** The National Climate Change Strategy 2007 – 2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000) to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland's greenhouse gas emissions.

2.6.7 **The National Climate Change Adaptation Framework** introduces an integrated policy framework, involving all stakeholders on all institutional levels to ensure adaptation measures are taken across different sectors and levels of government to manage and reduce Ireland's vulnerability to the negative impacts of climate change. Under the Framework, the relevant Government Departments, Agencies and local authorities have been asked to commence the preparation of sectoral and local adaptation plans and to publish drafts of these plans by mid-2014

2.6.8 **National Renewable Energy Action Plan:** The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under European Renewable Energy Directive 2009/28/EC. The development of renewable energy is central to overall energy policy in Ireland. Nationally, the Government's ambitions for renewable energy and the related national targets are fully commensurate with the European Union's energy policy objectives and the targets addressed to Ireland under the Renewable Energy Directive. Ireland's energy efficiency ambitions (20% of energy from renewable sources by 2020) as set out in the National Energy Efficiency Action Plan are duly reflected in the NREAP.

2.6.9 **National Biodiversity Plan: Action for Biodiversity 2011 – 2016:** Ireland's second National Biodiversity Plan sets out a vision for the conservation and restoration of biodiversity and ecosystems in Ireland and includes the overarching target of "reducing biodiversity loss and degradation of ecosystems in Ireland by 2016, and achieving substantial recovery by 2020". The Plan sets out a number of strategic objectives and actions which are aimed at mainstreaming biodiversity in the decision making process across all sectors, strengthening the knowledge base and increasing awareness of biodiversity in order to support the achievement of the target.

2.6.10 **Our Sustainable Future -A framework for Sustainable Development in Ireland (2012):** This framework recognises that the green economy and sustainable development agendas are a key element of Ireland's economic recovery strategy and sets out the range of environmental, economic and social measures required to move these agendas forward. The framework sets out 70 measures that will ensure we improve our quality of life for current and future generations and sets out clear measures, responsibilities and timelines in an implementation plan. These include areas such as the sustainability of public finances and economic resilience, natural resources, agriculture, climate change, transport, sustainable communities and spatial planning, public health, education, innovation and research, skills and training, and global poverty. The framework recognises that some aspects of the pattern of development that emerged in Ireland over the last decade present major challenges from a sustainable development perspective and spatial planning is one of the mechanisms, along with wider public policy coordination and fiscal policy, to effect change at national, regional and local level and deliver more sustainable communities.

2.6.11 **Smarter Travel. A new transport Policy for Ireland 2009-2020:** Smarter Travel recognises that transport and travel trends in Ireland are unsustainable. Even with the investment in Transport 21, if we continue with present policies, congestion will get worse, transport emissions will continue to grow, economic competitiveness will suffer and quality of life will decline. Smarter travel is designed to show how we can reverse current unsustainable transport and travel patterns and reduce the health and environmental impacts of current trends and improve our quality of life. Actions are aimed at influencing overall travel demand and reducing emissions in both urban and rural areas. Key actions include the following:

- Actions to reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment and the use of pricing mechanisms or fiscal measures to encourage behavioural change,
- Actions aimed at ensuring that alternatives to the car are more widely available, through improved public transport service and investment in cycling and walking,
- Actions aimed at improving the fuel efficiency of motorised transport, and
- Actions aimed at strengthening institutional arrangements to deliver the targets.

2.6.12 **National Action Plan for Social Inclusion 2007 – 2016:** This National Action Plan for Social inclusion, complemented by the social inclusion elements of the National Development Plan 2007-2013: Transforming Ireland– A Better Quality of Life for All, sets out how the social inclusion strategy will be achieved over the period 2007-2016. The overall goal of this Plan is to reduce the number of those experiencing consistent poverty to between 2% and 0% by 2012, with the aim of eliminating consistent poverty by 2016.

2.6.13 **National Heritage Plan 2002:** The National Heritage Plan sets out a clear and coherent strategy and framework for the protection and enhancement of Ireland's national heritage. The core objective of the Plan is to protect the national heritage as well as promoting it as a resource to be enjoyed by all.

Regional Policy

2.6.14 **South Western Regional Planning Guidelines:** Prepared by the South West Regional Authority to provide a broad canvas to steer the sustainable growth and prosperity of the region in line with the key principles of national strategy. Planning Authorities are required to have regard to the guidelines in the discharge of their functions.

2.6.15 **South West River Basin District Management Plan** has been prepared on foot of the EU Water Framework Directive to create an integrated approach to managing water quality on a river basin basis. It requires that management plans be prepared on a river basin basis in six year cycles and specifies a structured approach to developing those plans with the first plans to cover the period 2009 to 2015. The South West River Basin Management Plan is the mechanism for protecting and improving the County's water resources and ensures that development permitted meets the requirements of the relevant River Basin Management Plan and does not contravene the objectives of the EU Water Framework Directive.

2.6.16 **Waste Management Plan:** A joint waste management strategy was prepared for the Cork City and county in 1995 by the both Local Authorities. Since then separate waste management plans have been prepared for each jurisdiction and the most recent plan for the County covers the period 2004-2009. Waste minimisation is a key element of the most recent Plan (2004) and includes a number of measures including waste prevention, reduction at source, reuse, recycling and recovery and is achieved through the use of bring sites, civic amenity sites, waste transfer stations, authorised transfer facilities and material recovery. All of these have a role to play in achieving national recycling targets.

Local Policy

2.6.17 **Cork County Development Plan 2014:** The Cork County Development Plan, 2014 adopted on the 8th December 2014 sets out the blueprint for the development of the county, underpinned by the core principles of sustainability, social inclusion, quality of design and climate change adaptation. The County Development Plan includes over 200 objectives on a range of issues including:

- Housing,
- Rural, Coastal and Island Development;

- Social and Community facilities;
- Economy and Employment;
- Town Centres and Retail Development;
- Tourism;
- Energy and Digital Economy;
- Transport and Mobility;
- Water Services, Surface Water (including Flooding) and Waste;
- Heritage;
- Green Infrastructure and Environment;
- Zoning and Land use.

2.6.18 The objectives of the County Development Plan have not been repeated in the Local Area Plan and so the two documents must be read together when planning a development. All proposals for development, put forward in accordance with the provisions of this Local Area Plan, must demonstrate compliance with the objectives of the County Plan.

2.6.19 The 2015 County Development Plan is expected to remain in force (subject to any interim variations that the Council may make) until late 2020. It is a six year development plan for the County that attempts to set out, as concisely as possible, Cork County Council's current thinking on planning policy looking towards the horizon year of 2022. The plan also sets out the overall planning and sustainable development strategy for the county which must be consistent with the National Spatial Strategy 2002-2020 and the South West Regional Planning Guidelines 2010-2022.

2.6.20 The Plan is the county's principle strategic planning policy document. Detailed land-use zoning maps for the main settlements of the county are contained in the Municipal District Local Area Plans.

2.6.21 **Local Economic and Community Plans:** The Local Economic and Community Plan (LECP) was adopted in 2016. It is provided for in the statutory Local Government Reform Act 2014. This Act requires that a six-year plan be adopted by Cork County Council, setting out high level goals, objectives and actions required to promote and support local economic and community development within the county. The strategic aim of this Local Economic and Community Plan (LECP) is, ultimately, the

"Removal of barriers to facilitate individuals and organisations in achieving their ambitions, within a long-term and sustainable framework"

2.6.22 This strategic aim seeks to absorb and reflect the breadth and complexity of modern life, where opportunities exist for individuals and organisations to fulfil their ambitions, whether personal, economic or social. Places and societies that best provide for those ambitions, within a sustainable framework, are the places where people want to live and work. In turn, places where people want to live are the places that become socially and economically relevant. Impediments – be they linked to issues around physical, organisational, environmental, economic, educational, equality, access, or related to any of the other aspects of our collective lives – are the barriers to our ambitions. This plan seeks to commence a process that will lead to removal of those barriers by those with the capacities to do so.

2.6.23 The legislation envisaged that the LECP will be consistent with its informing strategies, set at a European, National and Regional level, while also being consistent and integrated with complementary plans at its own level. In particular, the LECP must be consistent with the County Development Plan

Core Strategy and the planned for Regional Spatial and Economic Strategy (RSES), currently the Regional Planning Guidelines.

2.6.24 This Local Area Plan will play a key role in implementing the LECP's aims and objectives as they apply to this Municipal District while at the same time the LECP will set out a pathway to address many of the social and economic issues facing the District identified din this Local Area Plan.

2.6.25 **County Biodiversity Action Plan 2009-2014:** This plan addressed how the wildlife resources of the County, including native plants, animals and the ecosystems that they combine to produce, will be managed and protected. Its implementation will contribute to achieving national and international targets for the conservation of biodiversity in the context of constantly accelerating rates of species extinction and habitat loss and deterioration globally.

2.6.26 **Cork County Heritage Plan 2005-2010:** The development of the County Heritage Plan had its origins in the National Heritage Plan published in 2002. The aim of the plan is to 'ensure the protection of our heritage and to promote its enjoyment by all'. This is underpinned by the core principle that heritage is communal and we all share a responsibility to protect it.

2.6.27 **Cork City Development Plan 2015-2021**: The city plan is of relevance because the city is the main economic and retail focus for the county as a whole and the focus of public transport services within the metropolitan area. The Plan includes a population target for the city of 150,000 by 2022 and re-emphasises the potential for the development of brownfield land in the City Centre, Docklands, Mahon and Blackpool to cater for the sustainable growth of the city.

Legislative Context

2.6.28 The Directive 2001/42/EC of the European Parliament and of the Council on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) and its transposed Irish legislation, including amendments form the legislative framework for the SEA process, including its documentation in the form of an Environmental Report. The Planning and Development Act, 2000 (as amended) also forms an integral part of SEA and additional guidance from a European context and national context has been listed within this Section. Additional key pieces of legislation pertaining to environmental considerations include the following list which is regarded as not exhaustive:

- EU Birds Directive (79/409/EEC)
- EU Habitats Directive (92/43/EEC)
- The Wildlife Act, 1976 (as amended)
- The Flora (Protection) Order 1999
- UN Convention of Biological Diversity 1992 (ratified 1996)
- Convention on Wetlands of International Importance (Ramsar Convention 1971)
- European Communities (Birds and Natural Habitats) Regulations, 2011
- Urban Waste Water Treatment Regulations, 2001 and 2004 and Amendments (2010)
- Water Services Act, 2007
- Water Services (Amendment) Act, 2013
- European Communities Environmental Objectives (Surface Waters) Regulations, 2009
- European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations, 2009

- European Communities Environmental Objectives (Groundwater) Regulations, 2010
- EU Nitrates Directive (91/676/EEC)
- European Communities (Good Agricultural Practice for Protection of Waters) Regulations, 2010
- EU Bathing Water Directive (2006/7/EC)
- Bathing Water Quality Regulations, 2008
- Bathing Water Quality (Amendment) Regulations, 2011
- Shellfish Waters Directive (2006/113/EC)
- European Communities (Quality of Shellfish Waters) Regulations, 2006
- European Communities (Quality of Shellfish Waters) (Amendment) Regulations, 2009
- Waste Water Discharge (Authorisation) Regulations, 2007
- European Communities (Environmental Liability) Regulations, 2008
- Air Quality Standards Regulations, 2011
- Environmental Noise Regulations, 2006
- The European Landscape Convention, 2000

Section 3: Environmental Baseline

Sub-Section

3.1 Introduction
3.2 Population and Human Health
3.3 Biodiversity-Flora and Fauna
3.4 Soils
3.5 Water
3.6 Air and Climatic Factors
3.7 Material Assets
3.8 Cultural Heritage
3.9 Landscape

3 Environmental Baseline

3.1 Introduction

3.1.1 The environmental baseline of this Municipal District is described in this section. This baseline information outlines the environmental context within which the Draft Kanturk Mallow Municipal District Local Area Plan will operate. The purpose of this section is to provide enough environmental baseline data to:

- support the identification of environmental problems;
- support the process of assessing the environmental effects;
- provide a baseline against which future monitoring data can be compared.

3.1.2 A number of key environmental issues set the context for the collection of the baseline data and each section includes an overview of the current situation, the key environmental problems and an analysis of the likely evolution in the absence of the Draft Plan. The Environmental issues are listed below:

- Population and Human Health,
- Biodiversity – Flora and Fauna,
- Soil,
- Water,
- Air and Climatic factors,
- Material Assets,
- Cultural Heritage,
- Landscape.

3.1.3 A number of maps are included to illustrate the baseline environment of the Municipal District County, the majority of which indicate the existing situation for the environmental issues identified above. However in many cases the maps and information is only available at a County Level.

3.1.4 The Department of the Environment, Heritage and Local Government (DoEHLG) circular SEA 1/8 and NPWS 1/8 requires that under the Habitats Directive an Appropriate Assessment of the ecological implications of a plan is conducted. An appropriate assessment of the Draft Plan was conducted by Cork County Council and is provided as part of this Draft Plan.

3.2 Population and Human Health

3.2.1 In 2011 the population of the Kanturk Mallow MD stood at 47,305. In the period to 2022, the population target allocated by the Cork County Development Plan 2014 provides for the population to grow by 10,134 persons or approximately 21%. The majority of this growth is targeted at the five towns of the District; Buttevant, Kanturk, Mallow, Millstreet and Newmarket. Growth is also provided for across the network of smaller settlements within the District.

Table 3.1 Kanturk Mallow Municipal District Housing Requirements and Supply						
	Housing Requirement				Housing Supply	
	Census 2011	Population Target	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Buttevant	945	1,501	298	17	31.50	482
Kanturk	2,263	2,400	141	8	29.20	329
Mallow	11,605	20,000	4,552	228	332.45	6,750
Millstreet	1,574	1,756	177	10	19.62	350
Newmarket	988	1,189	155	9	24.90	345
Main Towns	17,375	26,846	5,323	270	437.67	8,256
Villages	6,727	8,796	1,361	--	--	987
Rural	23,203	21,798	872	--	--	--
Total Villages and Rural	29,930	30,593	2,233	--	--	987
Total for District	47,305	57,439	7,556	270	437.67	10,230
Current Estimated Strategic Land Reserve for this Municipal District is 178.9Ha Source: Cork County Development Plan 2014- Volume One. Appendix B, Table B 13						

3.2.2 With regard to Human Health, impacts relevant to SEA are those which arise as a result of interactions with environmental vectors such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so they come in contact with human beings. These issues will be explored in the Environmental Report.

Existing Sensitivities in relation to Population and Human Health

3.2.3 The Draft Plan has made provision for the population of the MD to increase leading to increased demand for housing within the area and the provision of supporting social, community and employment/commercial services, facilities and opportunities. The timely delivery of such services is important to the quality of life of the population.

3.2.4 Enabling population growth and sustainable patterns of development in key settlements may be hindered by delays in the delivery of key infrastructure required to facilitate development leading to a housing shortage in some areas and development being shifted to other, potentially less sustainable locations, frustrating efforts to plan for having people, jobs and services located closer together.

3.2.5 Dispersed settlement patterns can lead to an over dependence on car based transport and long journeys to work which can have negative impacts on the health of the population and quality of life.

3.2.6 The economic decline of some settlements and/or the failure of others to realise the expected level of growth, can lead to reduced service provision, loss of job opportunities and reduced quality of life for the remaining residents of the area. A key challenge for the Draft Plan is to promote the sustainable growth of the economy of the five main towns of the Municipal District to support the balanced socio economic growth of the area.

3.2.7 Improved recreational/walking and cycling facilities are needed to support an increased uptake in physical exercise to help improve / maintain the health of the population.

3.3 Biodiversity-Flora and Fauna

3.3.1 European and National Legislation now protect the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Area, Natural Heritage Areas, candidate Special Areas of Conservation and Special Protection Areas. The designation of these sites at a national level is the responsibility of the Department of the Environment, Heritage and local Government but it is the responsibility of all of us to protect these sites. The process of designation of such sites is ongoing, with new sites being added, redesignated and boundaries of existing sites being adjusted. The key Natura sites in the Kanturk Mallow MD are illustrated in Figure 3.1. There are 2 SPAs, 3 SAC's and 2 NHA's. The reasons for designation range from ecological, plants, ornithological, woodland, heath, bats and vegetation.

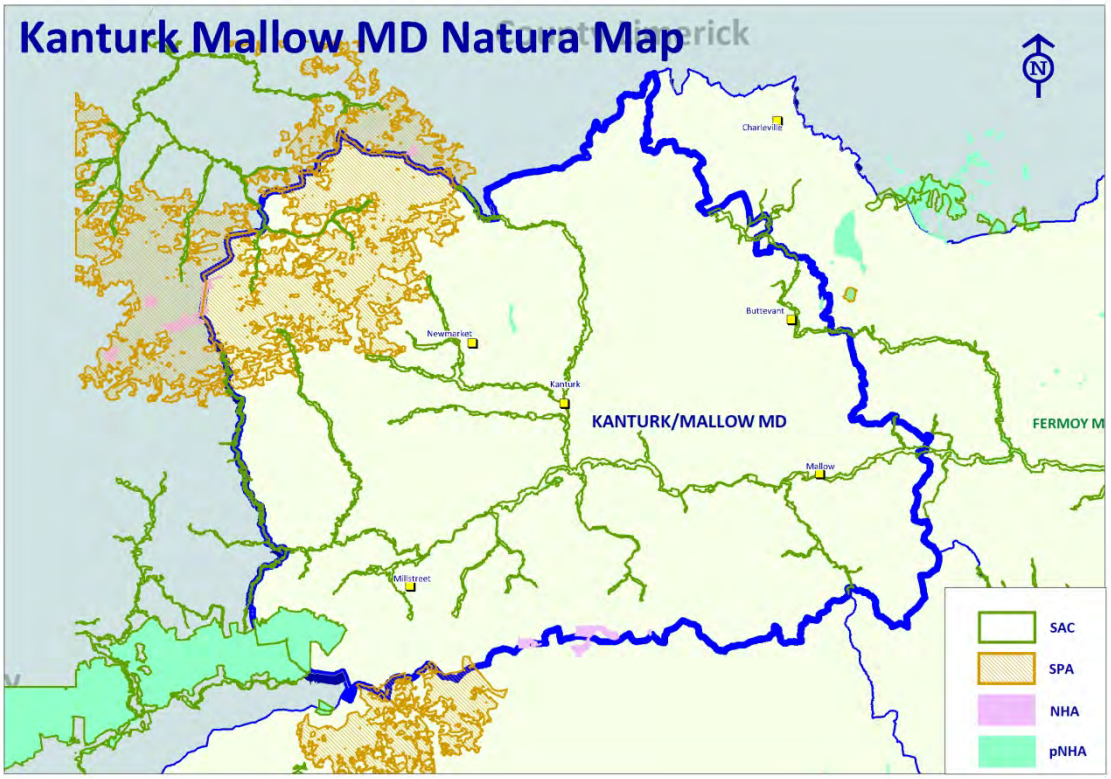


Figure 3.1 Kanturk Mallow Map

Table 3.2 Natural Heritage Sites in Kanturk Mallow MD		
Name	**Environmental Designation**	**Settlement**
Blackwater River (Cork/Waterford)	cSAC 2170, Natura 2000 site	Freemount, Kanturk, Kiskeam, Millstreet, Kilcorney, Lombardstown, Mallow, Buttevant
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment	cSAC 265 Natura 2000 site	n/a
Lower River Shannon	SAC 2165 , Natura 2000 site	Rockchapel
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	SPA 4161 , Natura 2000 site	Taur
Mullaghanish to Musheramore Mountains SPA	SPA 4162 Natura 2000 site	n/a
Mount Eagle Bogs NHA	pNHA 0075 Natura 2000 site	n/a
Boggeragh Mountains NHA	pNHA 0074	n/a

River Blackwater Special Area of Conservation

3.3.2 One of the key attributes of the Kanturk Mallow Municipal District is the River Blackwater which is designated as a Special Area of Conservation under the Habitats Directive as it is a significant site containing important rare plants and species one of which is the Freshwater Pearl Mussel.

3.3.3 Features of interest in this SAC are as follows:

(a) Estuaries, Mudflats and sandflats not covered by seawater at low tide,

(b) Perennial vegetation of stony banks,

(c) Salicornia and other annuals colonising mud and sand, Atlantic salt meadows (Glauco-Puccinellietalia maritimae),

(d) Mediterranean salt meadows (Juncetalia maritimi),

(e) Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation,

(f) Old sessile oak woods with Ilex and Blechnum in the British Isles,

(g) Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae),

(h) Margaritifera margaritifera (Freshwater Pearl Mussel),

(i) Austropotamobius pallipes (White-clawed Crayfish),

(j) Petromyzon marinus (Sea Lamprey),

(k) Lampetra planeri (Brook Lamprey)

(l) Lampetra fluviatilis (River Lamprey)

(m) Alosa fallax fallax (Twaite Shad)

(n) almo salar (Salmon)

(o) Lutra lutra (Otter)

(p) Trichomanes speciosum (Killarney Fern)

3.3.4 In planning for the future development of the area the Council has a legally binding obligation to protect the favourable conservation status of the River Blackwater Special Area of Conservation, in line with the Conservation Objectives for site.

3.3.5 The County Development Plan 2014 proposes significant new development within the Blackwater Catchment, particularly at Mallow, Fermoy, Kanturk, Newmarket and Millstreet. The Habitats Directive Assessment process undertaken as part of the preparation of County Development Plan concluded that it was not possible to rule out adverse impacts on the Special Area of Conservation if the scale of development proposed within the catchment went ahead. The County Development Plan has put development within the catchment on hold pending the outcome of further investigations studies.

3.3.6 Following recent discussions between the Council and the Department of Environment, Community and Local Government, the Department of Arts Heritage and Gaeltacht and Irish Water, the Department of Arts, Heritage and the Gaeltacht has indicated its intention to amend the conservation objectives for the Blackwater SAC, so that there would no longer be the objective of maintaining or restoring fresh water pearl mussel populations in the main channel of the river, but to retain the conservation objectives for the mussel in the Allow tributaries of the Blackwater, which are included in the SAC. When implemented, this change may necessitate a Variation of the County Development Plan to ensure that development in the catchment is no longer 'on hold' and to ensure that the Local Area Plan could continue to plan development within the catchment subject to normal requirements of proper planning and sustainable development and Habitats Directive Assessment.

3.3.7 Implementation, by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, of the proposed change to the Conservation Objective for the Blackwater SAC is awaited. The Council is proceeding on this basis.

Protected Species

3.3.8 The River Blackwater is important for the following species listed on Annex II of the EU Habitats Directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel (see above), Crayfish, Twaite Shad, Atlantic Salmon, Otter and the plant, Killarney Fern. 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. There is a concentration of bat colonies including Daubenton's bat along the river blackwater. This bat species is dependent on aquatic insects so the proximity of the river is of utmost importance to the colony.

Existing Sensitivities in relation to Biodiversity

3.3.9 At present water quality issues within the Blackwater Catchment, which is a designated Special Area of Conservation, mean that development within the catchment is on hold pending resolution of the water quality issues. (see previous section on River Blackwater Special Area of Conservation)

3.3.10 New development has the potential to impact on biodiversity, flora and fauna through the loss of some greenfield land, habitat loss or disturbance, contribution to climate change and impacts on water quality.

Ecological Baseline Study for Main Towns in Kanturk Mallow Municipal District

3.3.11 Habitat Mapping for the North Cork Main Towns is ongoing however it was not completed in time to inform this Draft Plan. When completed the Draft Plan will be assessed against its findings and any changes required will be brought forward by way of Amendment to the Draft Plan.

3.4 Soils

3.4.1 The SEA examined soil issues within the Municipal District, looking at the most common soil types within the plan area and how they might be affected by the development proposed in the Draft Plan. The SEA considered the challenges facing soil generally together with issues such as erosion, geology and quarrying as appropriate.

3.4.2 Much of this north-western part of the County contains heavy textured gley soil resulting from shales, grits and flagstones of glacial drift. Gleys are poorly drained due to a combination of heavy texture, gently undulating topography and/or high ground water level. The land-use range of these soils is more limited and they are best suited to grassland production. Most gleys have poor physical conditions and restricted growth seasons.

3.4.3 Along the shores of the Blackwater there is a prevalence of acid brown soils which are derived from alluvial deposits (i.e. coarse textured gravels and sands). These soils are free draining subject to flooding and are best suited to grass production but also support good crops of cereal.

3.4.4 High level Blanket Peat soils and low level peat soils are also found in this part of the County. High Level Blanket Peat soils occur above 150 meters and also at the higher mountain areas in the western parts of the County. Low level peat soils occur in flat or undulating topography below the 150m contour.

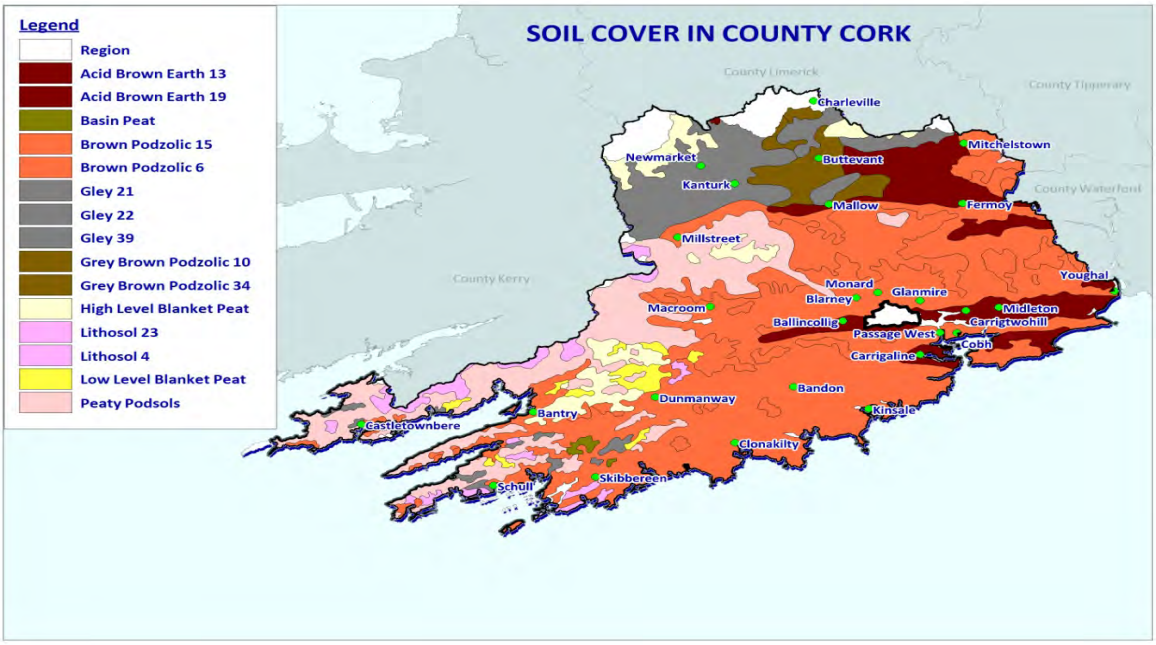


Figure 3.2 Soil Cover in County Cork

Existing Sensitivities in relation to Soil

4.5.3 Additional development may lead to damage to or loss of the soil resource or impact on its functions.

3.5 Water

3.5.1 This section of the SEA will consider issues in relation surface water (rivers and lakes, estuarine and coastal waters) and groundwater in the Municipal District as appropriate looking at the status and quality of these waters. The section will also examine water services infrastructure (drinking water supply, wastewater treatment and storm water).

3.5.2 Consideration was given to current and future loading within key water catchments, the potential impacts of additional development on water quality, surface water management, climate change and the need for new infrastructure to serve anticipated demands.

3.5.3 Water services of the all the infrastructure requirements needed to facilitate new development is the most critical, as in the absence of it, no development can take place. Since January 2014 Irish Water is responsible for the operation of public water services (drinking water and wastewater) including management and maintenance of existing water services assets. Those intending to carry out development must now obtain consent to connect to Irish Water Infrastructure for new development. Irish Water also has responsibility for planning for future infrastructure needs and for the delivery of new infrastructure and future decisions in relation to investment in new water services infrastructure will be made by Irish Water. Developers must also satisfy themselves that Irish Water will make adequate services available in order to meet the needs of any development they propose.

3.5.4 The Cork County Development Plan, 2014 and the new Municipal District Local Area Plans are important documents that Irish Water should take into account in formulating its plans and programmes.

3.5.5 So far as the villages are concerned, in many cases (see Table 3.7) the water services infrastructure needed to deliver the 2011 housing requirements is often not in place. In general the Councils approach to this, which is summarised in Table 3.6, is that where Irish Water already have water services infrastructure in a town or village then Irish Water will need to upgrade that infrastructure as necessary to meet the demands of current and future customers in the settlement.

3.5.6 Across the County as a whole the water services infrastructure needed to deliver the scale of growth envisaged by the County Development 2014 is often not in place. In general the Councils approach to this is that where Irish Water already have water services infrastructure in a town or village then Irish Water will need to up upgrade that infrastructure as necessary to meet the demands of current and future customers in the settlement.

3.5.7 Therefore, while the current water services infrastructure may not immediately be able to deliver the overall scale of growth set out in the LAP, the proposal is to retain the target with the expectation that the infrastructure will be delivered over time by Irish Water.

Table 3.3 :Strategy for Water Services Provision		
Normally Expected level of Water Services		Policy Approach
Towns Key villages	Public Drinking Water and Waste Water Treatment	Adequate water services infrastructure to be prioritised.
Villages	Public Drinking Water	Adequate drinking water services infrastructure to be prioritised
	Public Waste Water Treatment	Adequate waste water treatment facilities to be prioritised for villages which already have some element of public infrastructure.
		For smaller villages where services are not available or expected, development will be limited to a small number of individual houses with their own treatment plant.
Village Nuclei	Public Drinking Water	Where already present, adequate drinking water services to be maintained. In the absence of public drinking water, individual dwellings may be permitted on the basis of private wells subject to normal planning and public health criteria.
	Public Waste Water Treatment	In these smaller settlements within no public services, it is proposed to limit development to a small number of individual houses with their own treatment plant.

Table 3.4 Overall Scale of Growth for the Kanturk - Mallow Municipal District				
Name	**Existing Number of Houses 2015**	**Drinking Water Status**	**Waste Water Treatment Status**	**Overall Scale of New Development (houses)**
Towns				
Buttevant	533			298
Kanturk	1,251			141
Mallow	5,554			4,552
Millstreet	738			177
Newmarket	488			155
				5,323
Key Villages				
Ballydesmond	107			53
Banteer	167			200
Boherbue	196			150
Dromina	124			30
Knocknagree	94			30
Milford	124			30
				493
Villages				
Ballyclogh	112			20
Ballydaly	14		None	5
Burnfort	24		None ǂǂ	10

Table 3.4 Overall Scale of Growth for the Kanturk - Mallow Municipal District				
Name	**Existing Number of Houses 2015**	**Drinking Water Status**	**Waste Water Treatment Status**	**Overall Scale of New Development (houses)**
Bweeng	177			10
Castlemagner	118		None ǂ ǂ	30
Cecilstown	41			10
Churchtown	252			25
Cullen	47			25
Derrinagree	20		None	5
Dromahane	343			63
Freemount	114			20
Glantane	59			10
Kilbrin	78			20
Kilcorney	22			10
Kiskeam	65			24
Liscarroll	122			15
Lismire	30		None ǂ ǂ	30
Lombardstown	66			10
Lyre	82			10
Meelin	36			20
New Twopothouse	57		None ǂ ǂ	10
Rathcoole	80			15
Rockchapel	41			15
Tullylease	29			10
Village Nuclei				
Aubane	6	None	None	5
Ballyhass			None	5
Cloghboola	11	None	None	5
Curraraigue	12	None	None	5
Dromagh/ Dromtariff*	20		None	5
Gortroe	11		None	5
Knockaclarig	1	None	None	5
Laharn Cross Rds.			None	5
Lisgriffin	42		None	5
Mourneabbey		None	None	5
Nad	15			2
Old Twopothouse	26		None	5
Taur	6		None	5
Total				**6,300**
Water Services Key:				
Irish Water Services in place with broadly adequate existing water services capacity.				
Irish Water Services in place with limited or no spare water services capacity.				
None ǂ ǂ : No existing Irish Water Services. Unless Irish Water infrastructure is provided, development will be limited to individual houses with their own wastewater treatment plant.				
None : no existing Irish Water Services. In these settlements development will be limited to a small number of individual houses with their own wastewater treatment plant. In the absence of a public drinking water supply, individual dwellings may be permitted on the basis of private wells subject to normal planning and public health criteria.				

Existing Sensitivities in relation to Water

3.5.8 As noted in relation to Biodiversity, the Department of Arts, Heritage and the Gaeltacht has indicated its intention to amend the conservation objectives for the Blackwater SAC, so that there would no longer be the objective of maintaining or restoring fresh water pearl mussel populations in the main channel of the river, but to retain the conservation objectives for the mussel in the Allow tributaries of the Blackwater, which are included in the SAC.

3.5.9 Implementation, by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, of the proposed change to the Conservation Objective for the Blackwater SAC is awaited. The Council is proceeding on this basis. When implemented the Local Area Plan could continue to plan development within the catchment subject to normal requirements of proper planning and sustainable development and Habitats Directive Assessment.

3.5.10 See separate discussion in relation to the Blackwater above.

3.5.11 In terms of water services infrastructure within the Municipal District Table 3.2 in section 3 of this document details the current status of the water services infrastructure within the Kanturk Mallow Municipal District. Additional investment will be required in some settlements in order to facilitate development in line with Core Strategy provisions of the County Development Plan 2014.

Flooding

3.5.12 The assessment and management of flood risks in relation to planned future development is an important element of the local area plan. The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course. Similarly, in coastal areas flooding can periodically occur following unusual weather or tidal events.

3.5.13 As part of the preparation of this Local Area Plan the Council has updated the flood zone mapping used in the 2011 Local Area Plans to take account of the information that has become available from the National CFRAM programme (Catchment Flood Risk Assessment and Management), and other Flood Schemes undertaken by the OPW. In addition, flood risk mapping for rural areas, outside of settlements boundaries, is also now available and is being published simultaneously with this Draft Local Area Plan.

3.5.14 The Councils overall approach to Flood Risk Management is set out in Chapter 11 of the County Development Plan 2014 and intending developers should familiarise themselves with its provisions. The Council's approach to flood risk is to:

a) Avoid development in areas at risk of flooding; and

b) Where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.

3.5.15 A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of this plan, and all zoned lands in areas at risk of flooding have been reviewed. The Strategic Flood Risk Assessment (SFRA) is included in Volume 2 of this Plan and explains in detail the overall approach to flood risk management that has been followed. It is important to read this document in conjunction with Volume 1 of the plan.

3.5.16 Where development is proposed within an area at risk of flooding, either on land that is subject to a specific zoning objective, lands within the "existing built up area" of a town, within a development boundary of a village, or in the open countryside, then intending applicants need to comply with the provisions of Chapter 11 of the Cork County Development Plan 2014 and Objectives WS 6-1 and WS 6-

2, as appropriate, and with the provisions of the Ministerial Guidelines – 'The Planning System and Flood Risk Management'.

3.5.17 Flood Zone Mapping for the rural parts of the Municipal District (i.e. outside of a settlement boundary) is also now available to view online, for information purposes, as part of the Local Area Plan Map Browser at www.corkcoco.ie.

3.6 Air and Climatic Factors

3.6.1 One of the key manifestations of climate change is flooding. A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of this plan, and all zoned lands in areas at risk of flooding have been reviewed. The Strategic Flood Risk Assessment (SFRA) is included in Volume 2 of this Plan and explains in detail the overall approach to flood risk management that has been followed. It is important to read this document in conjunction with Volume 1 of the plan.

3.6.2 The dispersed nature of the settlement patterns throughout the county results in high levels of car based commuting which contributes to the overall transport emissions which impacts on air quality.

Existing Sensitivities in relation to Air and Climate

3.6.1 One of the key manifestations of climate change is flooding. A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of this plan, and all zoned lands in areas at risk of flooding have been reviewed. The Strategic Flood Risk Assessment (SFRA) is included in Volume 2 of this Plan and explains in detail the overall approach to flood risk management that has been followed. It is important to read this document in conjunction with Volume 1 of the plan.

3.6.2 The dispersed nature of the settlement patterns throughout the county results in high levels of car based commuting which contributes to the overall transport emissions which impacts on air quality.

3.7 Material Assets

3.7.1 The EPA SEA Process Draft Checklist (2008) defines material assets as the critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment, transportation, etc. Water Supplies and Waste Water Treatment infrastructure will be dealt with under Water in Section 3.5. This section of the SEA will deal with other essential infrastructure within the plan area i.e. Transport (Road, Rail, Public Transport, airports, ports/ harbours) etc as appropriate and Waste.

Existing Sensitivities in relation to Material Assets

3.7.2 Additional population and economic growth in the area is dependent on the provision of appropriate and sustainable water services and transport infrastructure to underpin sustainable growth. The Draft Plan has identified areas where additional investment is required in order to meet population growth targets.

3.8 Cultural Heritage

3.8.1 The SEA will consider Archaeological and Architectural Heritage. Cork County has a vast resource of archaeological heritage with over 19,000 monuments registered throughout the County. Figure 4.2 indicates the distribution of recorded monuments within the county. The County has the highest

concentration of National Monuments (58 in total). County Cork has a wealth of industrial archaeology and this is protected through the archaeological record. Underwater Archaeology is now recognised as an important element of our cultural heritage.

3.8.2 Within the network of settlements designated for growth, a number of towns are subject to zones of archaeological potential including Bandon, Buttevant, Clonakilty, Cobh, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal. Some of these towns are also walled towns and subject to recently released national policy and guidelines regarding "walled towns" (Youghal, Bandon, Kinsale & Buttevant).

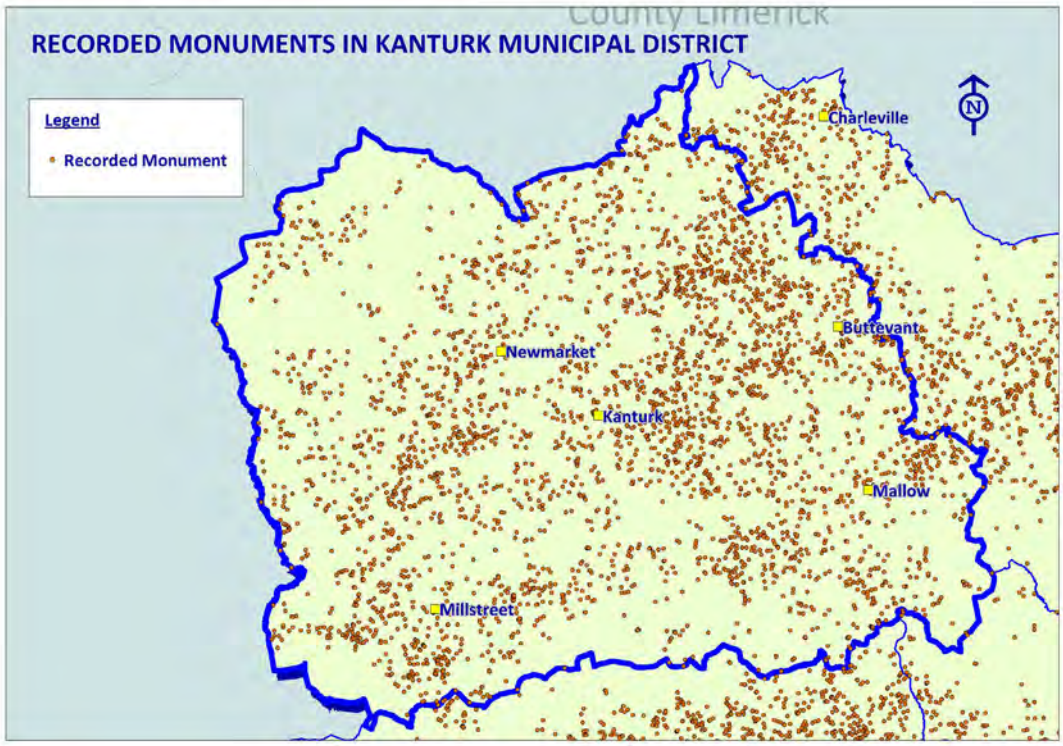


Figure 3.3: Recorded Monuments

3.8.3 In terms of Architectural Heritage, the Planning and Development Act sets out the requirements for County Development Plans to protect structures of "architectural, historical, archaeological, artistic, cultural, scientific and technical interest" by including a Record of Protected Structures (RPS) or the designation of Architectural Conservation Areas (ACAs) to protect areas of townscape value. There are currently in excess of 1,400 structures on the RPS as part of the County Development Plan 2014 and a further 139 structures currently designated in the Mallow Town Development Plan. Figure 3.4 illustrates the distribution of protected structures in the Kanturk Mallow MD while Table 4.5 provides information at main town level.

3.8.4 There are 9 Architectural Conservation Areas designated within the County Development Plan 2014, Mallow Town Development Plan, 2010. Under the Planning Act it is an objective to protect the special character of an area which generally comprises of a collection of buildings and their setting and in many cases may include a historic demense or park. Some of these are within settlements designated for growth.

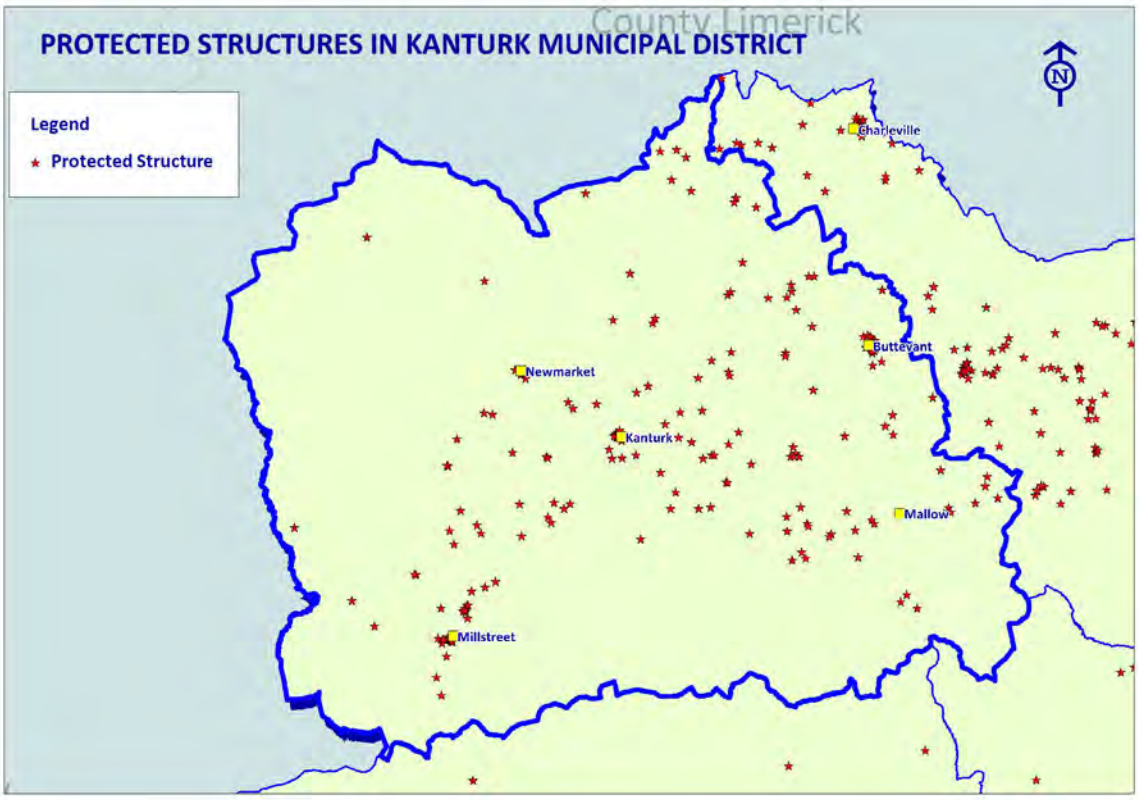


Figure 3.4: Protected Structures

Table 3.8 Kanturk Mallow Built Heritage Designations				
Settlement Name	**ACA**	**RPS**	**NIAH (Buildings & Gardens)**	**Archaeology Source: www.archaeology.ie**
Mallow	3	139	171 (1 National)	67 monuments
Newmarket	n/a	9	15*	8 sites
Buttevant	1	29	53	8 sites* (including walled town & 1 National Monument)
Kanturk	2	32	39	7 sites
Millstreet	1	32	21	7 sites
Total	**9**	-	-	-

3.9 Landscape

3.9.1 The landscape sensitivity of the Kanturk Mallow MD has been classified in accordance with Figure 4.5. The SEA explores landscape issue as they relate to the Local Area Plan process in accordance with the policy set out in the County Development Plan. As illustrated by the Map below, the Kanturk Mallow Municipal District is within an area of high value landscape.

*Figure **Error! No text of specified style in document.**-1 Landscape Value*

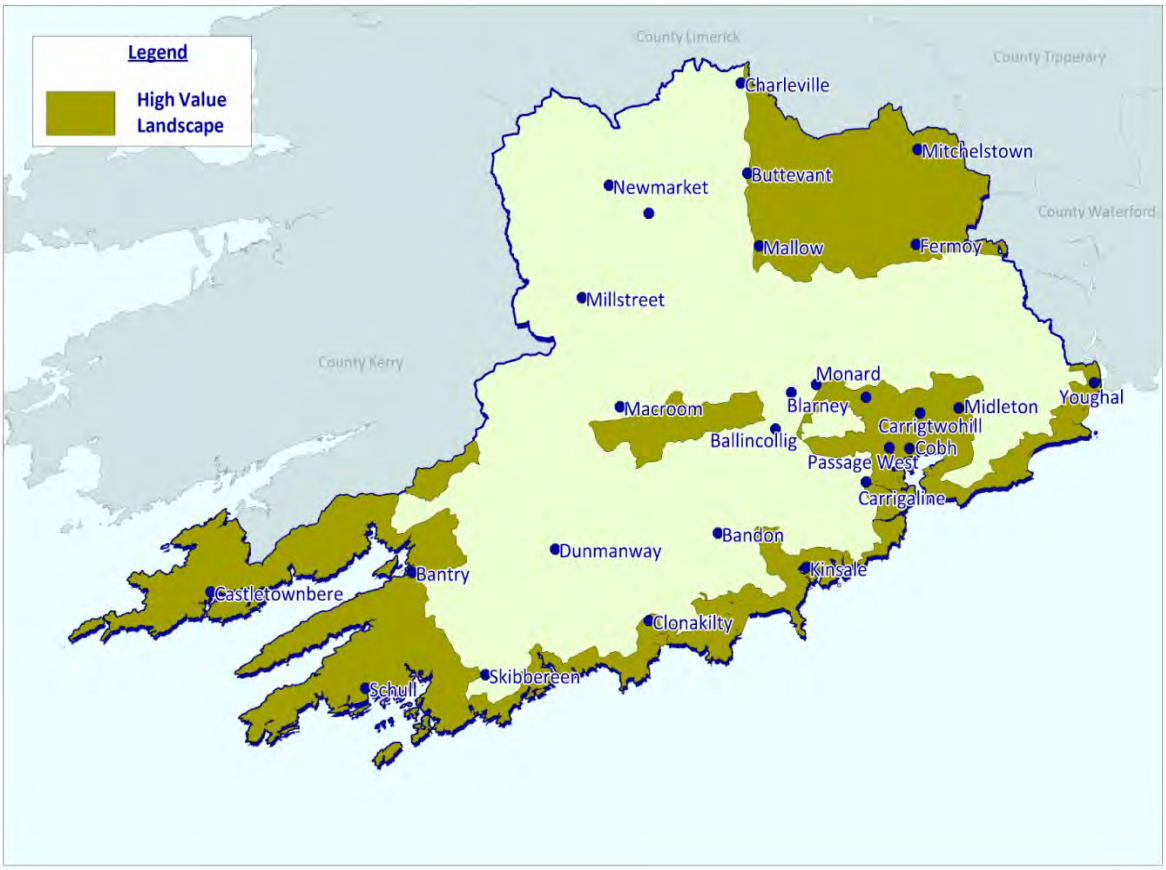


Table 3.9 Landscape Character Assessment				
Landscape Character Types	**Main Settlements located within LCT**	**LCT Value**	**LCT Sensitivity**	**LCT Importance**
Fissured Marginal and Forested Rolling Upland	n/a	Medium	Medium	Low
Ridged and Peaked Upland	Millstreet	Medium	Medium	Medium
Broad Marginal Middleground Valleys	Newmarket, Kanturk	High	High	Low
Fertile Plain with Moorland Ridge	Buttevant, Mallow	Very High	Very High	Medium

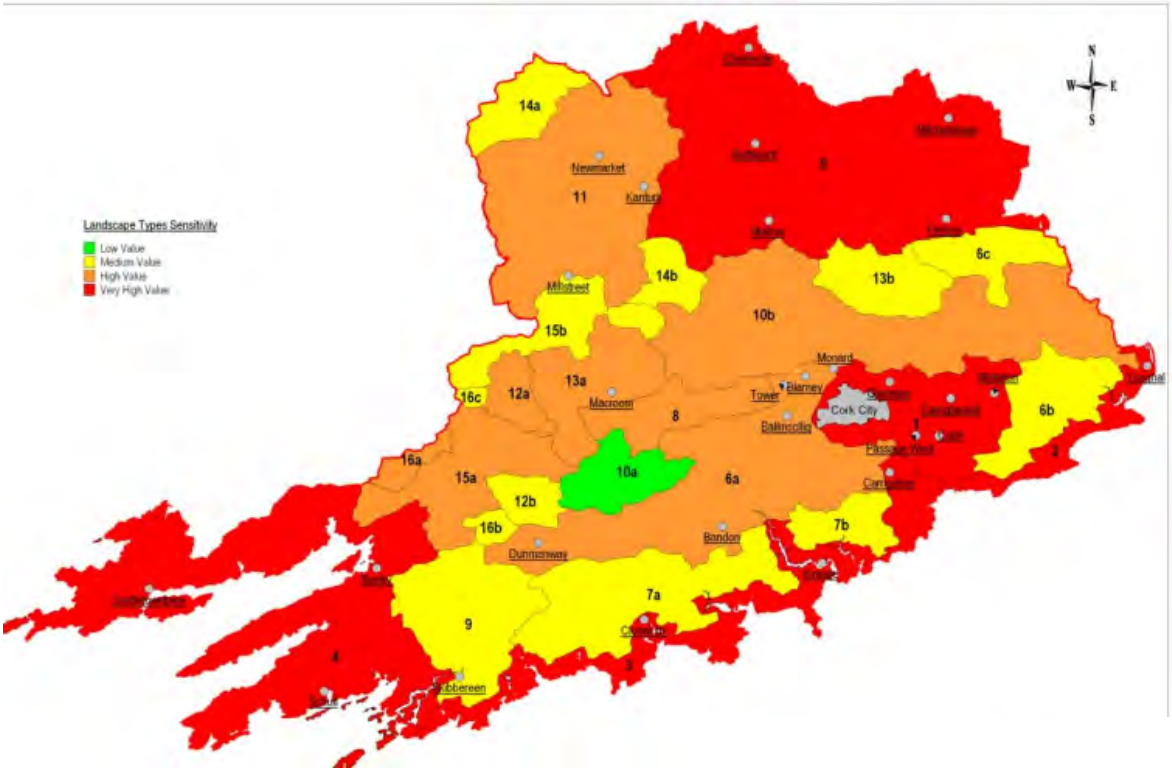


Figure 3.5: Landscape Sensitivity in County Cork

Section 4: Environmental Protection Objectives

	Sub-Section
4.1	Introduction
4.2	Population and Public Health
4.3	Biodiversity-Flora and Fauna
4.4	Soils
4.5	Water
4.6	Air Quality and Climatic Factors
4.7	Cultural Heritage
4.9	Landscape
4.8	Material Assets
4.9	Flooding

4 Environmental Protection Objectives

4.1 Introduction

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

4.1.2 The SEA Directive requires that the evaluation of plans and programmes be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. EPOs are developed from international, national and regional policies including various European Directives which have been transposed into Irish law and which are intended to be implemented within the County. The EPOs selected have also been informed by Table 4B of the SEA Guidelines (DEHLG, 2004), those used in the preparation of the current County Development Plan and the issues arising from the baseline assessment. The use of EPOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

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

4.2 Population and Human Health

4.2.1 The impact of the Plan on the population and human health is potentially multifaceted as the plan interacts with all the environmental receptors. The plan guides physical land use and seeks to promote sustainable development, guiding the spatial distribution of population across the county. Key directives and policy documents relevant to population have been referenced earlier in this document and include the National Spatial Strategy, Regional Planning Guidelines, National Development Plan, Our Sustainable Future – A Framework for Sustainable Development in Ireland 2011-2016, Smarter Travel, Guidelines for Sustainable Residential Development in Urban Areas, Sustainable Rural Housing, Guidelines for Planning Authorities 2005 etc.

4.2.2 The impact of the plan on human health will be influenced by nature, location and design of new development permitted under the plan and its impact on environmental factors like water quality, air quality, noise, landscape and in the long term on climatic factors. The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.3 Biodiversity-Flora and Fauna

4.3.1 County Cork has a rich and diverse natural heritage which is described in the baseline section of this report (Chapter 3). Key directives and policy documents relevant to biodiversity, flora and fauna have been referenced earlier in this document and include the EU Habitats Directive (92/43/EEC), the EU Birds Directive (79/409/EEC), UN Convention on Biological Diversity, the National Biodiversity Plan – Action for Biodiversity 2011-2016 and the County Biodiversity Action Plan 2009-2014. The EPOs,

Indicators and Targets set out in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.4 Soils

4.4.1 There is currently no legislation specific to protecting soil resources. Successive development plans have sought to protect and sustainably manage the soil resource of the county. The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the environmental baseline described in Section 3.

4.5 Water

4.5.1 Water Quality is governed by a large body of legislation and is subject to regular monitoring. As discussed in Chapter 3, the Water Framework Directive has introduced a new approach to water protection. The current baseline status of waters in Cork is varied (see Chapter 3) and the improvement of less than good water quality status is a priority for the future. Key directives and policy documents relevant to water have been referenced earlier in this document and include the Water Framework Directive (2000/60/EC) and Groundwater Quality Directive 2006/118/EC. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.6 Air Quality and Climate Factors

4.6.1 The main impacts on air quality are likely to arise from traffic emissions and noise from traffic and other sources. The land use policies of the plan affect the journeys people make every day to work, school, shopping or for leisure purposes etc. At present approximately 90% of journeys to work within the county are made by the private car. The transport sector is also a significant contributor to greenhouse gas emissions. Key directives and policy documents relevant to Air/ Climate change include Directive 96/62/EC – Air Quality Framework Directive, the Kyoto Protocol and the National Climate Change Strategy (2007-2012) and Climate Change Adaption Framework 2012. The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.7 Cultural Heritage

4.7.1 Cork has a rich architectural, archaeological and cultural heritage. Key directives, legislation and policy documents relevant to cultural heritage include the Planning and Development Acts 2000 – 2013, National Monuments Acts, National Heritage Plan 2000 and the Framework & Principles for the Protection of Archaeological Heritage (DAHGI 1999). The EPO, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.8 Landscape

4.8.1 The European Landscape Convention was signed in 2000 and came into force in Ireland in 2004. The European Landscape Convention aims to promote the protection, management and planning of European landscapes and to organise European co-operation on landscape issues. The Convention highlights the importance and need for public involvement in the development of landscapes. It encourages a joined up approach through policy and planning in all areas of land-use, development and management, including the recognition of landscape in law and is the first international treaty to be exclusively concerned with the protection, management and enhancement of the European landscape. The Convention covers natural, rural, urban and peri-urban areas. It deals with ordinary and degraded landscapes as well as those of outstanding beauty.

4.8.2 The preparation of a National Landscape Strategy is underway since 2011 but has yet to be completed. A Draft Landscape Strategy for County Cork was prepared in 2008 and identifies landscapes in the county in terms of their Character, Value, Sensitivity and Importance and includes recommendations on balancing development and change with landscape protection. Once the National Landscape Strategy is finalised the County Strategy will need to be reviewed and completed.

4.8.3 The EPOs, Indicators and Targets in Table 4.1 have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.9 Material Assets

4.9.1 Material Assets, for the purposes of SEA, comprises the infrastructure the population needs for the functioning of society and includes roads, transport, water services, energy and telecommunications infrastructure, the building stock of the county, production facilities (factories etc), green infrastructure (parks open spaces, recreational facilities etc.). Large infrastructural installations have the potential to have significant effects on the environment, both during its construction/ development stage and during its use and operation. Such projects will generally require EIA as part of the planning process which would evaluate such impacts and introduce mitigation measures where necessary to minimise any negative environmental effects. The EPO, Indicators and Targets in Table 4.1have been identified having regard to the policy context and the environmental baseline described in Section 3.

4.10 Flood Risk

4.10.1 In order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department Guidelines “The Planning System and Flood Risk Management” the Draft Local Area Plan has been subject to flood risk assessment procedures. Government Guidelines require, and it is an objective of this plan, that future development is avoided in areas indicated as being at risk of flooding. More detailed information on the approach to flooding and how development proposals in areas at risk of flooding have been assessed is given in the Strategic Flood Risk Assessment Report contained in Volume 2 Environmental Reports, of the Draft Plan.

4.10.2 Within Mallow, there are some other areas of conflict between the residential zonings at Quartertown included in the Draft Local Area Plan and areas at risk of flooding. These zonings stem from the Mallow Town Development Plan 2010, the life of which has been extended, by the provisions of the Electoral, Local Government and Planning and Development Act 2013, and the zonings have therefore been retained.

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators		
Environmental Protection Objective	**Targets**	**Indicators**
Population (P) **EPO 1:** To ensure the sustainable development of area so people have the opportunity to live in communities with high quality residential, working and recreational environments with sustainable travel patterns.	Deliver on the population target for the Municipal District, especially in the main towns. Promote the economic development of the area. Co-ordinate new housing development and the delivery of social and community infrastructure Decrease journey time and distance travelled to work during the lifetime of the plan. All large scale housing development to be accompanied by a Design Statement.	Significant increase in the population of the main towns. Distance and mode of transport to work/ school.
Human Health (HH) **EPO 2:** To protect and enhance human health and manage hazards or nuisances arising from traffic & incompatible land uses.	Avoid incompatible development nears SEVESO sites or IPPC licensed sites Ensure new development is well served with community facilities and facilitates including walking and cycling routes.	No of planning permissions granted within the consultation distance of Seveso sites/IPPC facilities. No of new primary health care/schools/creches/ community facilities provided. Amount of (Km) new cycleways provided.
Biodiversity, Flora and Fauna (BFF) **EPO 3**: Throughout the county, conserve and restore ecosystems, habitats and species in their natural surroundings, and ensure their sustainable management, including the ecological corridors between them.	• Maintain the favourable conservation status of all habitats and species, especially those protected under national and international legislation. • Implement the actions of the Cork County Biodiversity Action Plan. • Establishment of a Green Infrastructure Strategy for the County • Protect habitats from	• Number of developments receiving planning permission within designated sites or within the consultation distance of designated sites where the HDA process identified potential for impacts. • Reduction in the quantum of greenfield land in the county as measured by the increase in the amount of brownfield land associated

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators		
Environmental Protection Objective	**Targets**	**Indicators**
	invasive species	with each settlement and the no. of one off houses being built in the countryside. • Number of actions achieved in Biodiversity Action Plan • Progress on Green Infrastructure strategy
Soil (S) **EPO 4:** Protect the function and quality of the soil resource in the Kanturk Mallow Municipal District	Reduce the use of greenfield land by encouraging the reuse of brownfield sites. Encourage sustainable extraction of non-renewable sand, gravel and rock deposits and the reuse and recycling of construction and demolition waste.	No of brownfield sites that have been redeveloped. Volume of construction and demolition waste recycled. Reduction in number of vacant and derelict buildings.
Water (W) **EPO 5:** Maintain and improve the quality of water resources and improve the management and sustainable use of these resources to comply with the requirements of the WFD.	To achieve 'good' status in all bodies of surface waters (lakes rivers, transitional and coastal waters). Achieve compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC (protection of groundwater). Not to permit development where it would result in a WWTP exceeding the terms of its discharge license. Encourage future population growth in areas served by urban waste water treatment plants and public water supplies.	Trends in classification of overall status of surface water under Surface Water Regulations 2009 (SI No 272 of 2009) Trends in Classification of Bathing Waters as set by Directive 2006/7/EC. Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC. No of households served by urban waste water treatment plants/ septic tanks/ individual WWTP or other systems. No of households served by public water supplies. % of water unaccounted for.
Air Quality and Climate Factors (AQ/C) **EPO 6:** Protect and improve air quality.	Ensure air quality monitoring results are maintained within appropriate emission limits. Increase modal shift in favour of public transport, walking and cycling.	Trends in Air Quality monitoring data. Percentage of population travelling to work by public transport, walking or cycling.

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators		
Environmental Protection Objective	**Targets**	**Indicators**
EPO 7: Contribute to mitigation of, and adaptation to, climate change.	Encourage production and use of renewal energy. Encourage energy efficiency in building design and construction. Provide flood protection measures where appropriate. Avoid inappropriate development in areas of flood risk.	No of wind turbines permitted. No of developments permitted within areas at risk of flooding.
Cultural Heritage (CH) **EPO 8:** Protect and, where appropriate, enhance the character, diversity and special qualities of architectural, archaeological and cultural heritage (including Gaeltachtaí) in County Cork.	No loss of or adverse impact on the fabric or setting of monuments on the Record of Monuments (RMP). No loss of or adverse impact on the architectural heritage value or setting of protected structures. No loss of or adverse impact on structures recorded on the National Inventory of Architectural Heritage. Implement the Cork County Heritage Plan	Loss of or adverse impact on monuments on the Record of Monuments (RMP). Loss of or adverse impact on protected structures included on the RPS or structures included on the NIAH.
Landscape (L) **EPO 9:** Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in County Cork.	No large scale development permitted in areas of high landscape value.	Number of large scale developments permitted in areas of high landscape value.
Material Assets (MA) **EPO 10**: Make best use of the material assets of the area and promote the sustainable development of new infrastructure to provide for the current and future needs of the population.	Develop the road, rail and public transport infrastructure of the county to facilitate sustainable growth and travel patterns. Ensure appropriate water services infrastructure is delivered in areas targeted for population growth. Protect and optimise the use	New critical infrastructural projects completed (projects identified by the CDP).

Table 4.1; List of Environmental Protection Objectives, Targets and Indicators		
Environmental Protection Objective	**Targets**	**Indicators**
	of the existing building stock. Facilitate the sustainable expansion of production facilities to enable economic growth and create new employment opportunities. Protect and enhance green infrastructure. Protect existing recreational facilities and green infrastructure.	
Flooding (F) **EPO 11:** Protect flood plains and areas at risk of flooding from inappropriate development.	No inappropriate development permitted in areas at risk of flooding. All applications in areas at risk to be accompanied by detailed a flood risk assessment.	Number and nature of developments permitted in areas at risk

Section 5: Alternatives

Sub-Section

5 Alternatives

5.1 Introduction

5.1.1 The SEA Directive and Regulations require the Environmental Report to consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme' and the significant environmental effects of the alternatives selected. The alternatives must be reasonable and capable of implementation within the statutory and operational requirements of the Plan.

5.1.2 Three alternative scenarios have been considered during the drafting process for the preparation of the Draft Municipal District Local Area Plan. Each scenario was prepared having regard to Ministerial Guidelines, the National Spatial Strategy and the Regional Planning Guidelines for the South West Region, including its population targets, and the key aims of the County Development Plan 2014. Any scenario that runs counter to these higher level plans would not be reasonable and has not been considered as part of the Environmental Assessment process.

5.2 SEMPRe

5.2.1 The SEMPRe Settlement Sustainability project for Cork was completed in 2013. The study involved a detailed analysis of the sustainability of the 26 main towns in County Cork using Sustainability Evaluation Metric for Policy Evaluation (SEMPRe) which is an indicator based method of sustainability measurement. The study identified the relative sustainability of the 26 main towns using a series of 25 sustainable indicators, (Table 5-2) of which 5 were identified as key performance indicators (measure significant aspects of sustainability). Each settlement was assessed and awarded a score out of 100, enabling settlements to be ranked in terms of relative sustainability. The Sustainable Development Index (SDI) scores for the 26 main settlements in Cork are detailed in Table 5-1 and are organised into 3 categories. It can be observed that in general, larger settlements are more sustainable and as distance from Cork city increases, settlement sustainability decreases:

- Category 1 settlements have the highest SDI results,
- Category 2 have intermediate SDI results, and
- Category 3 has the lowest SDI results.

Table 5.1: Settlement Sustainable Development Indicators
Infrastructure and location
Infrastructural capacity for settlement expansion**
Connected to gas distribution network
Index of recycling facilities
Proportion of households with broadband internet
Presence of farmers markets
Water and wastewater
Water quality of water bodies
Wastewater treatment spare capacity
Unaccounted for water
Populated area at risk of flooding**
Urban wastewater treatment status
Population and urban form
Planned population density **
Proportion of population unemployed
Proportion of population with 3rd level education
Housing vacancy rate
Distance to nearest largest retail centre
Transport and energy
Average transport CO_2
Settlement walkability
Number of public transport services/1000 population**
Average household heating CO_2
Proportion of population travelling to work by private car
Livability
Distance to nearest acute hospital**
Tidy Towns points score
SAC, SPA, HA within 5km of settlement
Distance to nearest park, nature reserve or wildlife park
Presence of 24 hour Garda station
**** key performance indicators**

Table 5.2: Main Towns Sustainable Settlement Ranking

Settlement	*SDI* Score 2013	Category	Population 2011
Ballincollig	62.8	1	17,368
Blarney	61.5	1	2,437
Carrigaline	57.2	1	14,775
Carrigtwohill	56.8	1	4,551
Midleton	54.9	1	12,001
Cobh	54.8	1	12,347
Bandon	54.5	1	6,640
Mallow	53.6	1	11,605
Glanmire	53.5	1	8,924
Bantry	53.1	1	3,348
Clonakilty	50.3	2	4,721
Kinsale	50.3	2	4,893
Fermoy	49.6	2	6,489
Passage West	48.6	2	5,709
Macroom	46.7	2	3,879
Buttevant	46.1	2	945
Schull	43.8	2	658
Mitchelstown	42.8	2	3,677
Charleville	41.1	3	3,646
Newmarket	41.0	3	988
Skibbereen	39.2	3	2,670
Youghal	38.2	3	7,794
Dunmanaway	37.8	3	1,585
Castletownbere	37.7	3	912
Millstreet	36.7	3	1,574
Kanturk	35.3	3	2,263

5.2.2 In general Category 1 settlements are relatively large in terms of population size and are located in relatively close proximity to Cork city. Category 1 settlements benefit from economies of scale in terms of infrastructure and services. All settlements in the County Metropolitan Strategic Planning Area are Category 1 settlements with the exception of Passage West which falls into Category 2. Category 1 settlements outside of the Metropolitan SPA are: Mallow, Bandon and Bantry.

5.2.3 Category 2 settlements generally have smaller population sizes and are more peripheral relative to Cork City. Certain settlements such as Schull and Buttevant have population sizes of less than 1,000 persons and peripheral locations yet fall into the intermediate sustainability category.

5.2.4 Category 3 settlements are the least sustainable (with an average SDI of 38.4) and range in population size from Castletownbere (912 persons) to Youghal (7,794 persons) with an average of 2,682 persons. In general category 3 settlements are smaller settlements sited in more peripheral locations relative to Cork city, and are mainly located in the North and West Strategic Planning areas.

5.2.5 The score each town receives is determined by how the town measures up in relation to the indicators used in the study which were arrived at following consultation with a range of stakeholders. Indicators chosen were limited by data availability and applicability at the spatial scale of individual towns and it is acknowledged that the use of different indicators may yield different results. The lack of public transport provision and the high reliance on the private car as a means of travelling to work means that most settlements score poorly in terms of transportation while those with an older housing stock score poorly in terms of energy due to higher household heating CO2 emissions. Proximity to the city influenced two indicators (proximity to large retail centre and an acute hospital) so for some towns their sustainability automatically decreases with distance from the city. A sample of potential measures for enhancing the sustainability of these settlements is set out in Appendix B. The study has informed the consideration of alterative scenarios for development in the formulation of the Draft Plan.

5.3 Description of Alternative Plan Scenarios

5.3.1 The Kanturk Mallow MD has an extensive urban structure comprising towns and villages. The Draft Kanturk Mallow Municipal District Local Area Plan provides for the development of 5 main towns and 43 villages and smaller settlements and a number of specialist locations with specific industrial/tourism functions e.g. Dromalour, Sally's Cross. Table 3.7 show the network of settlements provided for within the current Draft Kanturk Mallow Municipal District Local Area Plan.

5.3.2 Successive County Development Plan strategies have sought to encourage balanced growth across the county to sustain the economies and service levels of the main towns and villages and the key aims of the Draft Plan support the continuation of this approach, seeking sustainable patterns of growth in urban and rural areas.

5.3.3 The Regional Planning Guidelines support this balanced approach to development in order to maintain vibrant rural communities with an equal level of urban and rural growth. The population targets set out in Regional Planning Guidelines distribute the population growth target for the SW Region to the Cork Gateway (including Metropolitan Cork), the Greater Cork Area, equivalent to the CASP Ring, the Northern Area which includes North Cork and parts of North and East Kerry, and the Western Area which includes West Cork and South and West Kerry. Targets for the North and West Areas have been allocated between Cork and Kerry in their respective County Development Plan strategies.

5.3.4 The scenarios considered in preparing this Draft Plan have therefore been prepared in this context. The overall level of growth allocated to each Municipal District is the same for each scenario, in line with targets of the Core Strategy in the County Development Plan and the Regional Planning Guidelines. The scenarios look at options for development within each MD. Scenarios which would be inconsistent with this approach, by focusing more growth on one MD over another for example, have not been considered.

Scenario 1: Public Transport

5.3.5 This scenario seeks to focus a greater proportion of development in a smaller number of settlements to enhance the viability of bus based inter-urban public transport services. Under this scenario the potential for growth is still dispersed over the entire settlement network but a greater proportion of the growth is focused on Mallow.

5.3.6 Very little growth has been allocated to the villages and rural area under this scenario. It is anticipated that the reduced growth targets for the rural areas combined with a revised approach to managing rural housing, would serve to further consolidate growth in those areas along the preferred public transport corridors in particular the N8.

5.3.7 In the Kanturk Mallow Municipal District, this scenario concentrates growth in fewer settlements, with most of the growth directed towards Mallow with the aim of delivering a sufficient critical mass of population in this town so as to justify further investments in bus and rail based public transport.

Environmental Impacts of Scenario 1

5.3.8 Scenario One allocates some growth to every settlement in the network and to villages and rural areas, while seeking to concentrate a greater proportion of the growth in a smaller number of settlements. Many of these settlements have inadequate drinking water supply and/or waste water treatment infrastructure, and significant public investment in infrastructure will be required to enable such development to take place. Such investment is essential to accommodate the growth and mitigate impacts on water quality, human health etc. This dispersed pattern of growth will generally give rise to some cumulative impacts on ground and surface water quality, heritage, landscape and biodiversity and will lead to increased levels of environmental effects associated with additional commuting such as increased energy consumption, emissions to air, road traffic noise etc.

5.3.9 In those areas where more intense levels of growth are promoted, there is greater potential for negative environmental impacts on soil, air quality, biodiversity and landscape. Such impacts can however be managed by adherence to good practice guidance and procedures in development management. Intense development in some areas would also be balanced with lower development pressures in other areas, particularly the villages and rural areas which will lead to less pressure on biodiversity, groundwater resources, flora and fauna etc. and the general rural amenities of the county.

5.3.10 Investment in infrastructure in the main growth centres can be more targeted, potentially leading to better quality provision/ design solutions/ economies of scale.

5.3.11 Within the main growth areas, the correlation between population growth and public transport infrastructure will have a neutral to positive environmental impact particularly on air quality, climatic factors and human health due to the reduction in the need to travel and road traffic emissions. The concentration of population within the built up area of the city and its environs might also encourage a greater proportion of people to consider a move to other modes of transport such as walking and cycling with positive benefits on human health, air quality etc.

Planning Effects of Scenario One

5.3.12 While the settlement pattern for the county remains dispersed, overall commuting should decrease as a greater proportion of population growth is accommodated in Mallow and other locations where public transport is available, reducing commuting distances and car dependency with associated positive benefits for the population.

5.3.13 The concentration of growth in the manner proposed by this strategy may lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the urban environment if there are higher levels of vacancy. The reduced population targets for towns

outside the corridor may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

5.3.14 Dispersed settlement pattern means limited resources for infrastructural investment have to be spread over a large number of settlements, leading to deficiencies in the level of service provided with potential for negative impacts on the environment (most likely in the area of waste water treatment and water quality). The reduced population targets for towns outside the corridor may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

Table 5.3: Scenario 1 Population Targets

	Census Population 2011	CDP 2014 2022 Target Population	Scenario 1 Population Target 2022	Scenario 1 Population Growth 2011 - 2022
Kanturk Mallow MD				
Mallow	11,605	20,000	20,750	9,145
Newmarket	988	1,189	1,113	125
Buttevant	945	1,501	1,395	450
Kanturk	2,263	2,400	2,363	100
Millstreet	1,574	1,756	1,688	114
Total Main Towns	17,375	26,846	27,309	9,934
Villages and Rural	29,930	30,593	30,130	200
Total Kanturk Mallow	**47,305**	**57,439**	57,439	10,134

Scenario 2: Employment Towns.

5.3.15 This Scenario looks at employment-led growth which focuses development in key locations where employment growth is more likely to be delivered and differs from previous Plan strategies which spread growth more evenly across all the Main Settlements.

5.3.16 Within the Kanturk Mallow MD this scenario focuses growth in Mallow, Kanturk and Millstreet with reduced growth targets in Newmarket, Buttevant and rural areas. Mallow is allocated the highest level of growth because of its designation as a "hub" town. It also enjoys access to planned M20, has a regional employment role and an existing hospital.

5.3.17 Kanturk is well positioned in the NW of the county to serve the wider rural hinterland and has a strong town centre and plentiful land supply to cater for future development. The town also provides an important agricultural-related employment base with the potential for further growth in this sector in the future. Millstreet to the west of the county also has some growth capacity.

Environmental Impacts Scenario Two

5.3.18 Scenario Two allocates growth across the full settlement network, while seeking to concentrate a greater proportion of the growth in a smaller number of settlements where economic/employment growth may be more easily achieved. Many of these settlements have inadequate drinking water supply and/or waste water treatment infrastructure, and significant public investment in infrastructure will be required to enable such development to take place. Such investment is essential to accommodate the growth and mitigate impacts on water quality, human health etc. This dispersed pattern of growth will

generally give rise to some cumulative impacts on ground and surface water quality, heritage, landscape and biodiversity and will lead to increased levels of environmental effects associated with additional commuting such as increased energy consumption, emissions to air, road traffic noise etc.

5.3.19 This scenario concentrates economic growth and employment growth in a smaller number of settlements, making them more self sufficient. This could potentially have negative impacts on soil, air quality, biodiversity and landscape but these impacts can be mitigated by implementing good proactive in development management and would be balanced with lower development pressures in other areas, particularly the villages and rural areas with less pressure on the water quality, biodiversity, landscape etc. in these areas. In addition more people will have the opportunity to work locally and possible switch to walking or cycling modes, thus reducing travel distances, traffic volumes and traffic emissions within positive benefits to air quality, climatic factors and human health.

5.3.20 The concentration of growth in the manner proposed by this strategy may lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the urban environment if there are higher levels of vacancy and reduced employment opportunities at these locations. The reduced population targets for towns outside the designated employment nodes may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

Planning Impacts

5.3.21 The concentration of growth in the manner proposed by this strategy will strengthen the economic position of these towns chosen as the main growth centres, underpinning further investment and making them more attractive places to live. The strategy may also lead to reduced levels of investment in the other areas which may have negative impacts on quality of life and the quality of the urban environment of those areas if there are higher levels of vacancy and reduced employment opportunities at these locations. The reduced population targets for some towns may also hinder their ability to secure investment in waste water infrastructure in the future if there are lower levels of population and employment growth.

5.3.22 Lower levels of development in the rural areas will help conserve the landscape and amenity of those areas, potentially making it more attractive for visitors.

Table 5.4: Scenario 2 Population Targets

	Census Population 2011	CDP 2014 2022 Target Population	Scenario 2 Population Target 2022	Scenario 2 Population Growth 2011 - 2022
Kanturk Mallow MD				
Mallow	11,605	20,000	20,308	8,703
Newmarket	988	1,189	1,112	124
Buttevant	945	1,501	1,109	164
Kanturk	2,263	2,400	2,700	437
Millstreet	1,574	1,756	1,913	339
Total Main Towns	17,375	26,846	27,142	9,767
Villages and Rural	29,930	30,593	30,297	367
Total Kanturk Mallow	**47,305**	**57,439**	**57,439**	10,134

Scenario 3: Balanced Growth

5.3.23 In this scenario, significant growth is allocated across the main settlements with lower levels of growth in the villages and rural areas. The principle strength of this scenario lies in the balanced approach allowing for the majority of growth to take place in the main settlements but at the same time allowing for continued, more modest growth in the villages and rural areas, continuing to support the economies of these areas to underpin local services and quality of life. The pattern of population distribution in this scenario is more dispersed than in the other scenarios as it seeks to support all the main towns. However this is balanced with an employment strategy which seeks to bring people and jobs closer together either in the same settlement or by high quality transport links connecting settlements together.

5.3.24 Within the Kanturk Mallow Municipal District Mallow as the hub town is allocated the greatest proportion of growth with more modest and relatively even growth levels for the other towns. Aside from this Buttervant is assigned the highest levels of growth with more modest growth targets in Kanturk, Millstreet and Newmarket and in the villages and rural area.

Environmental Impacts

5.3.25 The concentration of both population and employment growth in the main urban areas of the County would serve to reduce commuting patterns as more people would be afforded greater opportunities to live closer to their places of employment and/or travel using high quality public transport links. Such an approach would have a positive environmental effect by serving to reduce CO2 emissions and would enhance people's quality of life.

5.3.26 Focusing population growth across the settlement network will necessitate significant investment in water services infrastructure.

5.3.27 While allowing for growth in rural areas, this scenario will result in some negative impacts on the environment. It is unlikely that developments in rural area will be connected to public wastewater treatment networks. While not as significant on their own, the cumulative impact of rural development could have significant negative impacts both on biodiversity and particularly on water quality.

5.3.28 This scenario would still give rise to the growth of rural housing outside the settlement network which would contribute to further unsustainable commuting patterns and increased car dependency.

Planning Impacts

5.3.29 In common with the other scenarios, this scenario has a strong urban influence. It sets out population targets for the main settlements that, while ambitious, will ultimately help them perform their function as the primary growth centres in the county.

5.3.30 The scenario also recognises that there is a demand for growth in rural areas and provides for some additional growth in the key villages and lower order settlements in rural areas. Facilitating population growth in these areas would in turn encourage the retention of services in these locations. The scale of growth envisaged however is not of a scale that would serve to undermine the growth of the main urban centres in the county.

Table 5.5: Scenario 3 Population Targets				
	Census Population 2011	CDP 2014 2022 Target Population	Scenario 1 Population Target 2022	Scenario 1 Population Growth 2011 - 2022
Kanturk Mallow MD				
Mallow	11,605	20,000	20,000	8,395
Newmarket	988	1,189	1,189	201
Buttevant	945	1,501	1,501	556
Kanturk	2,263	2,400	2,400	137
Millstreet	1,574	1,756	1,756	182
Total Main Towns	17,375	26,846	26,846	9,471
Villages and Rural	29,930	30,593	30,593	663
Total Kanturk Mallow	**47,305**	**57,439**	**57,439**	10,134

5.4 Evaluation of Alternative Scenarios

5.4.1 The evaluation of the three proposed alternative scenarios for their respective impacts on the environment was undertaken utilising the Environmental Protection Objectives (EPOs) specifically developed to protect, maintain, conserve or restore environmental elements within the Municipal District. Each scenario was assessed as to whether it was likely to have a positive, negative, uncertain or neutral impact on the EPO's. The EPO's against which the three scenarios were assessed are set out in Section 4, Table 4.1 and are outlined below together with a matrix assessment of each scenario.

5.4.2 All scenarios are assessed on the basis **that appropriate water services infrastructure will be available to cater for growth and development will not be permitted in the absence of this critical infrastructure.**

EPO Reference number	Table 5.6: Environmental Objectives
EPO 1	To ensure the sustainable development of Cork County so the people of Cork have the opportunity to live in communities with high quality residential, working and recreational environments with sustainable travel patterns.
EPO 2	To protect and enhance human health and manage hazards or nuisances arising from traffic and incompatible land uses.
EPO 3	Throughout the county, conserve and restore ecosystems, habitats and species in their natural surroundings, and ensure their sustainable management, including the ecological corridors between them.
EPO 4	Protect the function and quality of the soil resource in County Cork
EPO 5	Maintain and improve the quality of water resources and improve the management and sustainable use of these resources to comply with the requirements of the WFD.
EPO 6	Protect and improve air quality.
EPO 7	Contribute to mitigation of, and adaptation to, climate change
EPO 8	Protect and, where appropriate, enhance the character, diversity and special qualities of architectural, archaeological and cultural heritage (including Gaeltachtaí) in County Cork.
EPO 9	Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in County Cork.
EPO 10	Make best use of the material assets of the county and promote the sustainable development of new infrastructure to provide for the current and future needs of the population.
EPO 11	Protect flood plains and areas at risk of flooding from inappropriate development.

5.5 The Preferred Scenario

5.5.1 The Planning Acts require that a Local Area Plan must be consistent with the objectives of the development plan, its core strategy and any regional spatial and economic strategy that applies to the area. This makes the consideration of alternative scenarios more difficult and the key parameters have already been determined. The provisions of the core strategy imply that higher level plans are the ones where the strategic alternative scenarios need to be considered and subjected to rigorous environmental assessment.

5.5.2 Given the parameters established by the Regional Planning Guidelines and the extensive nature of the designated settlement network within the county, the alternatives considered in preparing the draft plan are all rather similar in promoting balanced development across the county and have relatively similar impacts.

5.5.3 Scenario 3 is the one that places the most emphasis on building on what has already been achieved within the county in terms of supporting the network of settlements, the established employment areas while continuing to support the development of villages and rural areas and it is therefore the preferred scenario, giving the most positive interaction for most of the population with EPO 1. Scenarios 1 and 2 in promoting a more focused development pattern would inevitability lead to the decline and contraction of some of the other towns, villages and rural areas resulting in the loss of economic opportunities in those areas, reduced investment and an overall reduction in the quality of life for the people living in those areas.

Table 5.7: Alternative Scenarios interaction with Environmental Protection Objectives

	Positive Interaction with status of EPOs	Negative Interaction with status of EPOs	Uncertain Interaction with status of EPOs	Neutral Interaction with status of EPOs
Scenario 1	EPO 2, 6, 7, 10	EPO 1		EPO 3, 4, 5, 8, 9
Scenario 2	EPO 2, 6, 7, 10	EPO 1		EPO 3, 4, 5, 8, 9
Scenario 3	EPO 1, 2, 6, 7, 10			EPO 3, 4, 5, 8, 9

Section 6: Evaluation of the Draft Local Area Plan

Sub-Section

6 Evaluation of the Draft Local Area Plan

6.1 Introduction

6.1.1 SEA legislation requires the Environmental Report to include the likely significant effects on the environment of implementing the Plan. This includes secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects. The effects should be shown on issues such as 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.

6.2 Evaluation

6.2.1 The following section identifies the effects on the environment of implementing the Draft Kanturk Mallow Municipal District Local Area Plan. The assessment is done on a Section by Section basis, looking at the key provisions and individual objectives of each Section the expected outcome of implementing the Section and the implications for the environment. The Section is then assessed for its likely interaction with the Environmental Protection Objectives and the assessment concludes with recommendations for changes to the Draft Plan. Interactions are assessed on the basis of being:

- Positive (+)
- Negative (-)
- Uncertain (?), or
- Neutral (Ne)

6.2.2 This exercise will set out any environmental problems that are likely to arise from the implementation of the Draft Local Area Plan. Arising from this analysis, the Environmental Report provides recommendations on what mitigation measures will be taken. Mitigation measures can take the form of:

- Amend the wording of an existing objective
- Delete the objective
- Addition of a new objective

6.2.3 A column has been provided to show the Environmental Report's recommendations and another has been provided to display the resulting Local Area Plan's action or response to these recommendations. The Local Area Plan's action could be to reject, accept or to partly accept the Environmental Reports recommendation.

6.2.4 The Draft Kanturk Mallow Municipal District Local Area Plan 2016 document has been prepared by undertaking a review of the existing statutory plans for the area including the Kanturk and Mallow Electoral Area Local Area Plans 2011 (as amended), the Mallow Town Development Plan 2010 and updating the provisions of those plans as necessary to take account of changes in national planning policy, legislation, government guidelines etc which has taken place in the interim and by changes in local circumstances, needs etc. It is important to recognise that the current statutory plans for the area i.e. the Mallow and Kanturk Electoral Area Local Area Plans 2011, the Mallow Town Development Plan 2010 were themselves subject to Strategic Environmental Assessment and Habitats Directive Assessment prior to adoption, and many of the provisions of these plans have been carried forward,

unchanged, into the new Draft Plan 2016. Therefore there are few issues arising that need to be assessed *de novo.*

6.2.5 In addition, given the current body of planning knowledge gathered from previous planning work for the area, policy and objectives likely to give rise to significant environmental effect are simply not put forward in the first instance. In this way many of the possible environmental impacts of objectives were avoided or had previously been anticipated and mitigated for through the inclusion of objectives in the current statutory plans.

6.2.6 The County Development Plan 2014 includes many protective objectives in relation to issues such as Development Management and Protection of Amenities, Sustainable Residential Development, Natural, Built and Cultural Heritage, Landscape, Biodiversity, Water Quality, Pollution Control, protecting Air Quality, managing Noise and Light emissions, flood risk management, sustainable energy etc. All proposals for development under the Local Area Plan, must comply in the first instance, with the all the provisions of the County Development Plan.

6.2.7 All of the objectives of the Draft Plan were assessed for possible impacts within the context of these existing mitigation measures. As these mitigation measures negate or mitigate any significant negative impacts that could otherwise have been expected, there were few recommendations arising from the SEA process in relation to the Draft Local Area Plan.

6.2.8 Key mitigation measures included in previous plans, and carried forward in the current Draft Local Area Plan relate to issues such as timely delivery of key infrastructure needed to cater for new development. In relation to water quality for example the plan recognises that in some areas the water services infrastructure needed to facilitate planned growth is not currently in place. In response to this the Draft Plan includes strong objectives requiring that appropriate and sustainable water and waste water infrastructure is provided and operational in advance of the commencement of any discharges from the development. In addition the objectives provide that such infrastructure must be capable of treating discharges to ensure that water quality in the receiving water does not fall below legally required levels, while also meeting the objectives of the relevant River Basin Management Plan, and the requirements of any Natura sites in the area.

6.2.9 In relation to Traffic and Transportation the plan requires the submission of traffic impact assessments for key sites to ensure that these impacts are fully assessed and mitigated as appropriate, at the project stage.

6.2.10 In relation to Mallow, previous plans, and the current draft plan, have made provision for significant population growth within the town, accompanied by proposals for significant for new housing, employment and town centre development. The provisions of the draft plan have made it clear that significant new infrastructure is required in terms of water services and roads / transportation infrastructure to cater for this growth. In terms of the development of the Urban Expansion Areas to the east and west of the town centre, the objectives for the development of these lands in particular, make it clear that development of these areas is dependent on a number of issues being resolved.

Ecological Baseline Study for Main Towns in Kanturk Mallow Municipal District

6.2.11 Habitat Mapping for the towns of the Kanturk Mallow Municipal District is currently being prepared but was not complete in time to fully inform the preparation of the Draft Plan. Once complete any recommendations arising from the work will be considered at the amendment stage of the plan making process and can be integrated it to the plan, as appropriate, at that stage.

Evaluation of the Objectives of the Draft Local Area Plan

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Section 1 Introduction						
IN-01	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 6, EPO 8,	No change required	
GB1-1	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 4, EPO 6, EPO 8	No change required	
GB1-2	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 4, EPO 6, EPO 8	No change required	
Section 2 Local Area Strategy						
LAS-01	EPO 1, EPO 2, EPO 3, EPO 4, EPO 5, EPO 7, EPO 9, EPO 10, EPO 11			EPO 6, EPO 8	No change required	
Section 3 Main Towns						
General Objectives for Main Towns						
KK-G-O1 MS-G-01 NK-G-01 BV-G-01				EPO 1-EPO 11	No change required	
MW-G-02 KK-G-O2 MS-G-02 NK-G-02 BV-G-02	EPO 1-3,EPO 5, EPO 7, EPO 10			EPO 4,EPO 6,EPO 8,EPO 9, EPO 11	No change required	
MW-G-03 KK-G-O3 MS-G-03 NK-G-03 BV-G-03	EPO 1-10			EPO 11	No change required	
MW-G-04 KK-G-O5 MS-G-08 NK-G-08 BV-G-08	EPO 1- EPO 5,EPO 7,EPO 9,EPO 10, EPO 11			EPO 6, EPO 8	No change required	
MW-G-08 KK-G-O7 MS-G-05	EPO 1, EPO 2, EPO 6-10			EPO 3-5, EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
NK-G-05						
MW-G-13 KK-G-O6 MS-G-04 NK-G-04	EPO 1,EPO 8-10			EPO 2-7	No change required	
MW-G-11 KK-G-O8 MS-G-06 NK-G-06 BV-G-06	EPO 1,EPO 2,EPO 4,EPO 6,EPO 7,EPO 8, EPO 10			EPO 3,EPO 5,EPO 9, EPO 11	No change required	
MW-G-14 KK-G-O9	EPO 1-10			EPO 11	No change required	
MW-G-17 KK-G-10 MS-G-07 NK-G-07 BV-G-07	EPO 1,EPO 3, EPO 11			EPO 2,EPO 4,EPO 5-10	No change required	
MW-G-05	EPO 1-3,EPO 6,EPO 7,EPO 10-11			EPO 4-5,EPO 8-9	No change required	
MW-G-06 & MW-G-07	EPO 1			EPO 2-11	No change required	
MW-G-11	EPO 1,EPO 3,EPO 8,EPO 9, EPO 10			EPO 2,EPO 4,EPO 5-7,EPO 11	No change required	
MW-G-12	EPO 1,EPO 8-10			EPO 2-7,EPO 11	No change required	
MW-G-15 & MW-G-16	EPO 1-10			EPO 11	No change required	
KK-GO-04	EPO 1,EPO 3-11			EPO 2	No change required	
BV-GO-04	EPO 1-2			EPO 3-11	No change required	
BV-GO-05	EPO 1,EPO 3-11			EPO 2	No change required	
Section 3 Main Towns						
Mallow – Specific Zoning Objectives						
MW-R-01 to MW-R-05 and MW-R-08 to MW-R-15	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 4, EPO 5, EPO 8, EPO 9,	No change required.	
MW-R-06 & MW-R-07	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10		EPO 11	EPO 3, EPO 4, EPO 5, EPO 8, EPO 9,	No change required.	
MW-B-01 to MW-B-03	EPO 1			EPO 2-EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
MW-I-01 to MW-I-08	EPO 1			EPO 2-EPO 11	No change required	
MW-T-01 to MW-T-09	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
MW-C-01 to MW-C-03	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
MW-O-01 to MW-O-25	EPO 1-EPO 9, EPO 11			EPO 10	No change required	
Kanturk – Specific Zoning Objectives						
KK-R-01 to KK-R-08	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 4, EPO 5, EPO 8, EPO 9	No change required	
KK-B-01 to KK-B-04	EPO 1			EPO 2 - EPO 11	No change required	
KK-T-01 to KK-T-02	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
KK-C-01 to KK-C-03	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10,			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
KK-U-01 and KK-U-02	EPO 1			EPO 2 – EPO 11	No change required	
KK-U-03 and KK-U-05	EPO 1		EPO 3	EPO 2, EPO 4 – EPO 11	No change required	
KK-U-04	EPO 1			EPO 2 – EPO 11	No change required	
KK-0-01 to KK-0-08	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Millstreet – Specific Zoning Objectives						
MS-R-01 toMS-R-08	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 4, EPO 5, EPO 8, EPO 9,	No change required	
MS-B-01 to MS-B-03	EPO 1			EPO 2 - EPO 11	No change required	
MS-T-01	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
MS-C-01 to MS-C-04	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10,			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
MS-U-01 to MS-U-03	EPO 1		EPO 3	EPO 2, EPO 4 – EPO 11	No change required	
MS-U-05	EPO 1			EPO 2 – EPO 11	No change required	
MS-O-01 to MS-O-02	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
MS-X-01 to MS-X-02	EPO 1			EPO 2 – EPO 11	No change required	
NK-R-01 to NK-R-08	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 4, EPO 5, EPO 8, EPO 9	No change required	
NK-B-01 to NK-B-03	EPO 1			EPO 2 – EPO 11	No change required	
NK-T-01 to NK-T-03	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
NK-C-01 to NK-C-03	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10,			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
NK-O-01 to NK-O-05	EPO 1-EPO 9, EPO 11			EPO 10	No change required	
Buttevant – Specific Zoning Objectives						
BV-R-01 to BV-R-05	EPO 1, EPO 2, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 4, EPO 5, EPO 8, EPO 9	No change required	
BV-B-01 to BV-B-02	EPO 1			EPO 2 - EPO 11	No change required	
BV-T-01	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
BV-C-01	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10,			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
BV-U-01	EPO 1		EPO 3	EPO 2, EPO 4 – EPO 11	No change required	
BV-O-01 to BV-O-06	EPO 1-EPO 9, EPO 11			EPO 10	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
BV-X-01	EPO 1			EPO 2 to EPO 11	No change required	
Section 4 Key Villages						
GO-01	EPO 1, EPO 3, EPO 5, EPO 8, EPO 9, EPO 10, EPO 11		EPO 2,	EPO 4, EPO 6, EPO 7	No change required	
Ballydesmond						
DB-O1				EPO 1-EPO 11	No change required	
DB-02a	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-02b	EPO 1, EPO 2, EPO 3, EPO 5, EPO 111			EPO 4-10	No change required	
DB-02c	EPO 11			EPO 1-10	No change required	
B-01	EPO 1			EPO 2 – EPO 11	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Banteer						
DB-01				EPO 1-EPO 11	No change required	
DB-02 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-02 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-02 c)	EPO 11			EPO 1-10	No change required	
B-01	EPO 1			EPO 2 – EPO 11	No change required	
T-01	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Boherbue						
DB-01				EPO 1-EPO 11	No change required	
DB-02a	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
DB-02b	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-03	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
B-01	EPO 1			EPO 2- EPO 11	No change required	
T-01	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Dromina						
DB-01				EPO 1-EPO 11	No change required	
B-01	EPO 1			EPO 2, EPO 3, EPO 4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9, EPO 10, EPO 11	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Knocknagree						
DB-01				EPO 1-EPO 11	No change required	
DB-02a	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-02b	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	
X-01	EPO 1			EPO 2, EPO 3, EPO	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
				4, EPO 5, EPO 6, EPO 7, EPO 8, EPO 9, EPO 10, EPO 11		
Milford						
DB-01				EPO 1-EPO 11	No change required	
DB-02	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-03	EPO 11			EPO 1-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Villages						
GO-01	EPO 1, EPO 2, EPO 3, EPO 5, EPO 8, EPO 9, EPO 10, EPO 11			EPO 4, EPO 6, EPO 7,	No change required	
Ballyclough						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, 8			EPO 2-7, EPO 9-11	No change required	
DB-01 c)	EPO 11			EPO 1-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
Ballydaly						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
Burnfort						
DB-01 a)				EPO 1-EPO 11	No change required	
C-01 & C-02	EPO 1, EPO 3, EPO 5, EPO 7, EPO 9, EPO 10			EPO 2, EPO 4, EPO 6, EPO 8, EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Bweeng						
DB-01				EPO 1-EPO 11	No change required	
O-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
Castlemagner						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Cecilstown						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
Churchtown						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	
0-01 & 0-03	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
Cullen						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Derrinagree						
DB-01 a)	EPO 1-3			EPO 4-11	No change required	
DB-01 b)	EPO 11			EPO 1-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Dromahane						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
T-01	EPO 1, EPO 2, EPO 4, EPO 6, EPO 7, EPO 10, EPO 11			EPO 3, EPO 5, EPO 8, EPO 9,	No change required	
Freemount						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 e)	EPO 11			EPO 1-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Glantane						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	
Kilbrin						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Kilcorney						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Kiskeam						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01 & 0-02	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Liscarroll						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 c)	EPO 11			EPO 1-10	No change required	
0-01 to 0-03	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
C-01	EPO 1			EPO 2 – EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Lismire						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Lombardstown						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	
Lyre						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
Meelin						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 c)	EPO 11			EPO 1-10	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
0-02	EPO 1, EPO 2			EPO 3-11	No change required	
New Twopothouse						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 c)	EPO 11			EPO 1-10	No change required	
Rathcoole						
DB-01 a)				EPO 1-EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	
0-01 & 0-02	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Rockchapel						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	
0-01 & 0-02	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Tullylease						
DB-01				EPO 1-EPO 11	No change required	
0-01	EPO 1 - EPO 9, EPO 11			EPO 10	No change required	
Village Nuclei						
GO-01 a - m	EPO 1, EPO 3, EPO 5, EPO 8, EPO 9, EPO 10, EPO 11			EPO 2, EPO 4, EPO 6, EPO 7	No change required	
Aubane						
DB-01 a)				EPO 1-EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4-10	No change required	
Ballyhass						
DB-01 a)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-10	No change required	
Cloghboola						
DB-01 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
DB-01 c)	EPO 11			EPO 2-10	No change required	
Curraraigue						
DB-01 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
Dromagh/Dromtariff						
DB-01 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
Gortroe						
DB-01	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
Knockaclarig						
DB-01 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
DB-01 c)	EPO 11			EPO 1-10	No change required	
Laharn Cross Roads						
DB-01 a)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 b)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Lisgriffin						
DB-01	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
Mourneabbey						
DB-01 a)	EPO 1			EPO 2 – EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
Nad						
DB-01 a)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
DB-01 c)	EPO 1, EPO 2, EPO 3, EPO 5, EPO 11			EPO 4, EPO 6-10	No change required	
DB-01 d)	EPO 11			EPO 1-10	No change required	
Old Twopothouse						
DB-01	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
Taur						
DB-01 a)	EPO 1, EPO 2, EPO 3, EPO 5			EPO 4, EPO 6-11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	
Other Locations						
Dromalour						
DB-01 a)	EPO 1			EPO 2- EPO 11	No change required	
DB-01 b)	EPO 1, EPO 3, EPO 9, EPO 10			EPO 2, EPO 4, EPO 5-8, EPO 11	No change required	

Table 6.1: Evaluation of Kanturk Mallow Municipal District Local Area Plan Objectives						
Objectives	Positive (+)	Negative (-)	Uncertain (?)	Neutral (Ne)	SEA Recommendation	LAP Response
Sallys Cross						
DB-01	EPO 1, EPO 2, EPO 5			EPO 3-4, EPO 6-11	No change required	

6.3 Mitigation/Recommended Changes

6.3.1 The purpose of this section is to outline the mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of the Municipal District arising from the implementation of the LAP, thereby consolidating the SEA process. Environmental issues have been identified in Section 3 and the environmental impact of the plan has been analysed in section 6.

6.3.2 As outlined above, as this plan is a review of previous plans for the area which have already been through the SEA process, many of the possible environmental impacts of objectives were avoided or had previously been anticipated and mitigated for through the inclusion of objectives in the current statutory plans for the area. Protective mitigation measures are also contained in the County Development Plan 2014. All of the objectives of the Draft Plan were assessed for possible impacts within the context of these existing mitigation measures. As these mitigation measures negate or mitigate any negative impacts that could otherwise have been expected there were no recommendations arising from the SEA process.

Section 7: Monitoring and Next Steps

Sub-Section

7 Monitoring and Next Steps

7.1 Introduction

7.1.1 The SEA Directive requires that the significant environmental effects of the implementation of plans are monitored in order to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action. Monitoring can also be used to analyse whether the Local Area Plan is achieving its environmental protection objectives and targets, whether such objectives need to be re-examined and whether the proposed mitigation measures are being implemented.

7.1.2 Section 4 identifies the Strategic Environmental Protection Objectives used in the assessment of the Draft Plan. The Section also identifies a number of indicators that will be used to assess the environmental Impact of implementing the plan. In addition to the indicators set out in this Section, the evaluation of the plan also sets out additional indicators that can be used to monitor the impacts of the plan. A completed list of indicators that will be used to monitor the predicted environmental impacts of implementing the plan will be set out in the Environmental Statement that will be prepared in the final stages of the SEA process.

7.2 Next Steps

7.2.1 This Environmental Report forms a key element of the Strategic Environmental Assessment (SEA). However, the preparation of the environmental report does not bring the SEA process to an end. The SEA process should continue from the time the environmental report is completed through to the time Cork County Council monitors the implementation of the Municipal District Local Area Plan and will act as an important reference point for the continuing SEA of all policies, plans, strategies and programmes carried out by the Council.

Table 7.1: General Overview of the Process after the Environmental Report
A - Preparing the Environmental Report
B - Consulting on the Environmental Report and Draft Local Area Plan
C - Response of Consultation Authorities and the Public
D - Taking Account of Consultation Opinion
E - Adopting Local Area Plan
F - Providing Information
G - Monitoring plan

Preparing the Environmental Report

7.2.2 This Environmental Report has been produced to comply with the requirements of the Guidance for Regional Authorities and Planning Authorities on the Implementation of the SEA Directive (2001/42/EC). The Baseline analysis outlined the current state of the environment and was prepared using the most up to date information from a wide variety of state agencies. The evaluation of the plan as set out in Section 6, identifies a number of concerns with policies as they are presented in the draft plan and has suggested a number of changes that should be incorporated into the Draft Local Area Plan before publication.

Consulting on the Environmental Report and the Draft Plan

7.2.3 Consultation is an important element of the SEA process. The Environmental Report will be part of the consultation exercise for the Draft Municipal District Local Area Plan. Consultation will be carried out with a range of statutory bodies, including the Environmental Protection Agency and the National Parks and Wildlife Service and the public. As well as having an opportunity to comment on the Draft Plan, these bodies will have an opportunity to comment on the content of the environmental report and the overall SEA process.

Taking account of the consultation opinion

7.2.4 It is recognised that the opinion expressed through the public consultation exercise can be very useful in improving the quality of the plan being prepared. In order to track these changes, the consultation exercise will aim to include documentation of all the comments and the changes made.

Adopting Plan

7.2.5 The overriding aim of the SEA process is to improve the quality of the Draft Municipal District Local Area Plan and to ensure that it protects the environment; it is important that the relevant findings in the environmental report and any outcomes from the consultation process are incorporated into the plan before its adoption.

Providing information

7.2.6 Once the Draft Municipal District Local Area Plan is adopted a number of post-adoption steps are required to conclude the SEA process. The essence of this stage is to provide information regarding the difference the SEA process has made to the plan. This will involve the publication of an Environmental Statement which will specify: -

- How environmental considerations have been integrated into the plan;
- How the environmental report has been taken into account;
- How opinions expressed during various consultations have been taken into account;
- The reasons for choosing the plan as adopted in the light of other reasonable alternatives; and
- Measures to monitor significant environmental effects.

Monitor Plan

7.2.7 Once the plan is adopted and the necessary information is provided, the County Council will seek to monitor the significant environmental effects identified through the SEA process. The detail of the monitoring process will be included in the environmental statement. The framework for monitoring used in the environmental report /statement will be used to identify unforeseen adverse effects at an early stage so that, if necessary, the appropriate remedial action can be undertaken.

7.3 How to make a Submission

7.3.1 The Draft Kanturk Mallow Municipal District Local Area Plan is available from the Council website at www.corkcoco.ie. If required, a hard copy of the document may be inspected between the hours of 9.30 a.m. and 4.00p.m, from Wednesday 16th November 2016 to Friday 06th January 2017at the following locations:

- Planning Department, Floor 1, County Hall, and Cork.
- Planning Department, Norton House, Skibbereen, Co. Cork.
- Cork County Council Offices, Mallow
- Public Libraries – Please check libraries regarding opening times and availability.

7.3.2 CD copies of the documents may be requested by phone (Tel: 021-4285900) or collected from the Planning Department, Floor 1, County Hall between the hours of 9.30am and 4.00pm during the above period.

7.3.3 Submissions or observations regarding the Draft Kanturk - Mallow Cork Municipal District Local Area Plan document are hereby invited from members of the public, children, or groups or associations representing the interests of children and other interested parties during the period **Wednesday 16th November 2016 to 4pm on Friday 06th January 2017.**

7.3.4 Submissions may be made in either of the following two ways:

- On-line via www.corkcoco.ie following the instructions provided

  OR

- In written form to the Senior Planner, Planning Policy Unit, Cork County Council, Floor 13, County Hall, Cork. T12R2NC.

7.3.5 All such submissions lodged within the above period and prior to the close of business at **4.00pm on Friday 06th January 2017,** will be taken into consideration in the finalization of the Kanturk – Mallow Cork Municipal District Local Area Plan.

Section 8: Non Technical Summary

Sub-Section

8.1 Introduction
8.2 The Draft Kanturk- Mallow Municipal District Local Area Plan
8.3 Environmental Baseline
8.4 Environmental Protection Objectives
8.5 Alternatives
8.6 Evaluation of the Draft Local Area Plan
8.7 Monitoring & Next Steps

8 Non Technical Summary

8.1 Introduction

8.1.1 This is the Environmental Report on the Strategic Environment Assessment of the Draft Kanturk Mallow Municipal District Local Area Plan 2016 and it describes the assessment of the likely significant effects on the environment of implementing the Draft Plan.

8.1.2 This is the Environmental Report on the Strategic Environment Assessment of the Draft Kanturk Mallow Municipal District Local Area Plan 2016 and it describes the assessment of the likely significant effects on the environment of implementing the Draft Plan.

8.1.3 The most recent Local Area Plans were adopted in 2011. The Plans have a six year life and the Council is now commencing the process of preparing new plans which will be in place by August 2017. Following the re-organisation of local government in 2014, the electoral structure of the County is now based on eight Municipal Districts. A new Local Area Plan will be prepared for each of the eight Municipal Districts in the County.

8.1.4 Currently the Town Development Plans adopted by the nine former Town Councils of Cobh, Clonakilty, Fermoy, Kinsale, Macroom, Mallow, Midleton, Skibbereen and Youghal remain in force pending the making of the next Cork County Development Plan in 2020. It is proposed to Vary the Town Development Plans, such that the zoning provisions and associated policy objectives of the Town Development Plans are updated and incorporated into the new Local Area Plans. The Town Plans will remain in force but the relevant zonings provisions will be those of the new Local Area Plan.

Scoping

8.1.5 The process of scoping for SEA is defined as the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in consultation with the prescribed environmental authorities. Scoping is necessary in order to establish, with objectivity, the potential impacts of the implementation of the draft plan on a number of environmental elements from consultations with a range of environmental bodies and the incorporation of associated submissions into the draft plan by way of their inclusion in the Environmental Report.

8.1.6 Scoping for the current SEA was commenced with the circulation of a Draft Scoping Report to all the environmental authorities on the 22nd April 2016. A total of two (2) submissions were received from EPA and Irish Water respectively. The Scoping Report was finalised on the 31st May 2016 and issues raised were considered further in the preparation of this Draft Local Area Plan and SEA.

Collection of Baseline Data, Assessment and Environmental Report

8.1.7 In order to assess the likely significant impacts of the Plan, baseline data on the current state of the environment has to be collected and evaluated and the potential effects of the plan predicted and considered. In accordance with legislation and guidance, the existing environment is described with respect to biodiversity, population, human health, fauna, flora, soil, water (surface freshwater, coastal, transitional, groundwater, bathing and water services (drinking water and waste water treatment), air, climatic factors, material assets (roads, transportation, energy etc), cultural heritage (including architectural and archaeological heritage), landscape and the interrelationships between these factors as appropriate. Any existing problems relevant to the new Plan are also identified at this baseline stage.

Documenting the SEA process

8.1.8 The SEA Process produces two documents – this environmental Report which is published with the Draft Municipal District Local Area Plan and an SEA statement which will be published at the end of the process, once the plan is adopted.

8.1.9 This Environmental Report will be submitted to the Elected Members with the Draft Municipal District Local Area Plan. The Members must take account of the Environmental Report before the Plan is adopted. When the Plan is adopted, an SEA Statement will be published, summarising, inter alia, how environmental considerations have been integrated into the Plan and the reasons for choosing the Plan as adopted over other alternatives considered in the Environmental Report.

8.1.10 Should alterations to the Draft Plan be proposed, there will be a further submission period of not less than four weeks during which time submissions and/or observations may be made on the proposed alterations. If material alterations are proposed they will need to undergo a screening process to determine if SEA is required. The proposed alterations, the screening document and SEA Environmental report, where relevant, will be sent to the Minister, the Board and the prescribed authorities and will be made available for public inspection.

8.2 The Draft Kanturk Mallow Municipal District Local Area Plan

8.2.1 The Kanturk – Mallow Municipal District is located to the north west of the county and in 2011 the population of the area stood at 47,305. This population is spread across a network of settlements including five towns and forty six villages and the open countryside, as detailed in Table 2.1. Outside the main towns the district is largely rural / agricultural in character and almost half the population of the Municipal District lives in the open countryside i.e. not within a settlement.

8.2.2 Mallow is the largest town in the Municipal District with a population of 11,605 in 2011 and the largest employment, service and retail base. All the other towns are significantly smaller in terms of population but offer services that support a significant rural hinterland.

Population trends

8.2.3 Within the Kanturk Mallow Municipal District the County Development Plan provides for growth in population of 10,134 persons. The number of households is expected to grow by 6,939 leading to a net requirement for 7,556 new houses within the Municipal District. The County Development Plan indicates that 270ha of residentially zoned land is required.

8.2.4 The population growth target will require the provision of 7,556 new housing units, with at least 5,323 units allocated to the 5 Main Towns. Housing growth of 1,361 units is also planned for the villages and rural areas.

8.2.5 At present planning policy for the settlements within the Kanturk Mallow Municipal District is spread across the Kanturk and Mallow Electoral Area Local Area Plans adopted in 2011 and the Mallow Town Development Plan 2010. The intention is that local planning policy for all settlements within the Municipal District will be contained within the new Kanturk Mallow Municipal District Local Area Plan 2017.

8.2.6 It is anticipated than many of the provisions of the current local area plans adopted in 2011 will be continued into the new Local Area Plan unless there is a specific requirement for change arising from changes in national planning policy, legislation, government guidelines, changes in local circumstances, needs etc or to reflect the provisions of the new County Development Plan adopted in 2014.

8.2.7 Through its County Development Plan 2014, the council has allocated the majority of this growth to the towns with 5,323 new houses required, the majority of which are planned for Mallow as well as Kanturk, Newmarket, Millstreet and Buttevant. Growth is also planned for the villages of the area.

8.2.8 This section also outlines the relationship that this plan has to other Relevant Plans and Programmes at a National and Regional level.

8.3 Environmental Baseline

8.3.1 The environmental baseline of this Municipal District is described in this section. This baseline information outlines the environmental context within which the Draft Kanturk Mallow Municipal District Local Area Plan will operate. The purpose of this section is to provide enough environmental baseline data to:

- support the identification of environmental problems;
- support the process of assessing the environmental effects;
- provide a baseline against which future monitoring data can be compared.

8.3.2 A number of key environmental issues set the context for the collection of the baseline data and each section includes an overview of the current situation, the key environmental problems and an analysis of the likely evolution in the absence of the Draft Plan. The Environmental issues are listed below:

- Population and Human Health,
- Biodiversity – Flora and Fauna,
- Soil,
- Water,
- Air and Climatic factors,
- Material Assets,
- Cultural Heritage,
- Landscape.

8.3.3 This section outlines the different environmental issues concerned above and highlights the most pertinent environmental issues within the Kanturk Mallow Municipal District.

8.4 Environmental Protection Objectives

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

8.4.2 The SEA Directive requires that the evaluation of plans and programmes be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. EPOs

are developed from international, national and regional policies including various European Directives which have been transposed into Irish law and which are intended to be implemented within the County. The EPOs selected have also been informed by Table 4B of the SEA Guidelines (DEHLG, 2004), those used in the preparation of the current County Development Plan and the issues arising from the baseline assessment. The use of EPOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

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

8.5 Alternatives

8.5.1 The SEA Directive and Regulations require the Environmental Report to consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme' and the significant environmental effects of the alternatives selected. The alternatives must be reasonable and capable of implementation within the statutory and operational requirements of the Plan.

8.5.2 Three alternative scenarios have been considered during the drafting process for the preparation of the Draft Municipal District Local Area Plan. Each scenario was prepared having regard to Ministerial Guidelines, the National Spatial Strategy and the Regional Planning Guidelines for the South West Region, including its population targets, and the key aims of the County Development Plan 2014. Any scenario that runs counter to these higher level plans would not be reasonable and has not been considered as part of the Environmental Assessment process.

Scenario 1: Public Transport

8.5.3 This scenario seeks to focus a greater proportion of development in a smaller number of settlements to enhance the viability of bus based inter-urban public transport services. Under this scenario the potential for growth is still dispersed over the entire settlement network but a greater proportion of the growth is focused on Mallow.

8.5.4 Very little growth has been allocated to the villages and rural area under this scenario. It is anticipated that the reduced growth targets for the rural areas combined with a revised approach to managing rural housing, would serve to further consolidate growth in those areas along the preferred public transport corridors in particular the N8.

8.5.5 In the Kanturk Mallow Municipal District, this scenario concentrates growth in fewer settlements, with most of the growth directed towards Mallow with the aim of delivering a sufficient critical mass of population in this town so as to justify further investments in bus and rail based public transport.

Scenario 2: Employment Towns

8.5.6 This Scenario looks at employment-led growth which focuses development in key locations where employment growth is more likely to be delivered and differs from previous Plan strategies which spread growth more evenly across all the Main Settlements.

8.5.7 Within the Kanturk Mallow MD this scenario focuses growth in Mallow, Kanturk and Millstreet with reduced growth targets in Newmarket, Buttevant and rural areas. Mallow is allocated the highest level of growth because of its designation as a "hub" town. It also enjoys access to planned M20, has a regional employment role and an existing hospital.

8.5.8 Kanturk is well positioned in the NW of the county to serve the wider rural hinterland and has a strong town centre and plentiful land supply to cater for future development. The town also provides an

important agricultural-related employment base with the potential for further growth in this sector in the future. Millstreet to the west of the Municipal Distirct also has some growth capacity.

Scenario 3: Balanced Growth

8.5.9 In this scenario, significant growth is allocated across the main settlements with lower levels of growth in the villages and rural areas. The principle strength of this scenario lies in the balanced approach allowing for the majority of growth to take place in the main settlements but at the same time allowing for continued, more modest growth in the villages and rural areas, continuing to support the economies of these areas to underpin local services and quality of life. The pattern of population distribution in this scenario is more dispersed than in the other scenarios as it seeks to support all the main towns. However this is balanced with an employment strategy which seeks to bring people and jobs closer together either in the same settlement or by high quality transport links connecting settlements together.

8.5.10 Within the Kanturk Mallow Municipal District Mallow as the hub town is allocated the greatest proportion of growth with more modest and relatively even growth levels for the other towns. Aside from this Buttervant is assigned the highest levels of growth with more modest growth targets in Kanturk, Millstreet and Newmarket and in the villages and rural area.

The Preferred Scenario

8.5.11 The Planning Acts require that a Local Area Plan must be consistent with the objectives of the development plan, its core strategy and any regional spatial and economic strategy that applies to the area. This makes the consideration of alternative scenarios more difficult and the key parameters have already been determined. The provisions of the core strategy imply that higher level plans are the ones where the strategic alternative scenarios need to be considered and subjected to rigorous environmental assessment.

8.5.12 Given the parameters established by the Regional Planning Guidelines and the extensive nature of the designated settlement network within the county, the alternatives considered in preparing the draft plan are all rather similar in promoting balanced development across the county and have relatively similar impacts.

8.5.13 Scenario 3 is the one that places the most emphasis on building on what has already been achieved within the county in terms of supporting the network of settlements, the established employment areas while continuing to support the development of villages and rural areas and it is therefore the preferred scenario, giving the most positive interaction for most of the population with EPO 1. Scenarios 1 and 2 in promoting a more focused development pattern would inevitability lead to the decline and contraction of some of the other towns, villages and rural areas resulting in the loss of economic opportunities in those areas, reduced investment and an overall reduction in the quality of life for the people living in those areas.

8.6 Evaluation of the Draft Local Area Plan

8.6.1 The purpose of this section is to outline the mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of the Municipal District arising from the implementation of the LAP, thereby consolidating the SEA process. Environmental issues have been identified in Section 3 and the environmental impact of the plan has been analysed in section 6.

8.6.2 As outlined above, as this plan is a review of previous plans for the area which have already been through the SEA process, many of the possible environmental impacts of objectives were avoided or had

previously been anticipated and mitigated for through the inclusion of objectives in the current statutory plans for the area. Protective mitigation measures are also contained in the County Development Plan 2014. All of the objectives of the Draft Plan were assessed for possible impacts within the context of these existing mitigation measures. As these mitigation measures negate or mitigate any negative impacts that could otherwise have been expected there were no recommendations arising from the SEA process.

8.7 Monitoring

8.7.1 Once the plan is adopted and the necessary information is provided, the County Council will seek to monitor the significant environmental effects identified through the SEA process. The detail of the monitoring process will be included in the environmental statement. The framework for monitoring used in the environmental report /statement will be used to identify unforeseen adverse effects at an early stage so that, if necessary, the appropriate remedial action can be undertaken.

Consulting on the Environmental Report and the Draft Plan

8.7.2 Consultation is an important element of the SEA process. The Environmental Report will be part of the consultation exercise for the Draft Municipal District Local Area Plan. Consultation will be carried out with a range of statutory bodies, including the Environmental Protection Agency and the National Parks and Wildlife Service and the public. As well as having an opportunity to comment on the Draft Plan, these bodies will have an opportunity to comment on the content of the environmental report and the overall SEA process.

Taking account of the consultation opinion

8.7.3 It is recognised that the opinion expressed through the public consultation exercise can be very useful in improving the quality of the plan being prepared. In order to track these changes, the consultation exercise will aim to include documentation of all the comments and the changes made.

Adopting the Plan

8.7.4 The overriding aim of the SEA process is to improve the quality of the Draft Municipal District Local Area Plan and to ensure that it protects the environment; it is important that the relevant findings in the environmental report and any outcomes from the consultation process are incorporated into the plan before its adoption.

Preparing the Environmental Report

8.7.5 This Environmental Report has been produced to comply with the requirements of the Guidance for Regional Authorities and Planning Authorities on the Implementation of the SEA Directive (2001/42/EC). The Baseline analysis outlined the current state of the environment and was prepared using the most up to date information from a wide variety of state agencies. The evaluation of the plan is set out in Section 6.

Appendices

Appendix A: Sample Settlement Enhancement Measures

Settlement Enhancement Measures

A sample of potential measures for enhancing the sustainability of these settlements is set out in Table D1 below. The key areas where the Plan can deliver enhanced sustainability outcomes are in the areas of transportation and Water and wastewater. The Plan's transportation policies now place a strong emphasis on modal shift targets to sustainable forms of movement especially prioritising walking and cycling for shorter trips and better access to public transport within the towns. A number of towns scored poorly in terms of settlement walkability and recommendations are made to undertake a movement audit at these locations. The audit of the pedestrian and cycling environment of the town should focus on improving the quality, safety, connectivity and attractiveness of the movement network within the town together with a complementary set of traffic calming and parking measures.

The provision of good quality public transport provision is inherently linked to density within the service catchment of an operator. Most of the County is starting from a low public transport base but a revised approach to density in the Plan should make the delivery of a more extensive high frequency bus service viable within the Metropolitan area where the largest proportion of the target growth is allocated. The integration of public transport services is also a key consideration at some locations to encourage modal shift together with the provision of stops at convenient locations. The delivery of these enhancement measures will help increase a modal shift to green travel modes and should consequently reduce car based commuting and associated CO2 emissions.

The Plan has identified the infrastructure status of all the main settlements allocated growth within the County. Where deficiencies have been identified the Plan has specified that development may only proceed where appropriate infrastructure is available which satisfies the environmental regulations and complies with EPA licensing. Water conservation is also identified as a key priority area of investment in the Plan and a number of Category 3 settlements in North Cork have been identified with significant water leakage issues. While investment in these deficiencies will be outside the scope of the Council, the Plan will not exacerbate the existing situation.

Table D1: Sample Sustainability Enhancement Measures

Town	*SDI score*	*Livability*		*Infrastructure & Location*		*Water & Wastewater*			*Population & Urban Form*		*Transport & Energy*	
		Provide public park	Local employment opportunities	Improve infrastructure Capacity	Provision of recycling facilities	Improve water quality	Compliance with Urban wastewater treatment	Water conservation measures	Address Housing Vacancy	Increase pop density	Improve walking & cycling network	Improve public transport
Ballincollig	1											X
Blarney	1										X	
Carrigaline	1			X								X
Carrigtwohill	1					X	X				X	X
Midleton	1			X	X	X			X		X	
Cobh	1		X	X	X			X			X	X
Bandon	1	X	X								X	X
Mallow	1		X				X			X	X	X
Glanmire	1				X		X				X	X
Bantry	1	X		X								X
Clonakilty	2		X	X			X					X
Kinsale	2				X						X	X
Fermoy	2					X						X
Passage West	2			X	X						X	X
Macroom	2			X					X	X		
Buttevant	2		X	X					X	X		
Schull	2			X					X	X		
Mitchelstown	2		X	X				X				
Charleville	3		X						X	X	X	X
Newmarket	3			X								X
Skibbereen	3			X						X		
Youghal	3		X									X
Dunmanway	3			X			X	X	X	X		X
Castletownbere	3	X		X			X			X		
Millstreet	3	X		X				X				
Kanturk	3		X	X			X	X	X	X		

Kanturk -Mallow Municipal District Draft Local Area Plan

Strategic Flood Risk Assessment

November 2016

Cork County Council
Planning Policy Unit

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Contents

Section 1 Introduction

1.1 Scope

1.1.1 This Strategic Flood Risk Assessment of the Draft Kanturk Mallow Municipal District Local Area Plan 2016 has been prepared in accordance, in so far as is practicable, with 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities', published in November 2009 by the DEHLG and the OPW, and having specific regard to the areas, within the settlements of this Municipal District, that have been identified as being at risk of flooding.

1.1.2 This report sets out how the Flood Risk Assessment was undertaken, as well as how its findings were addressed and integrated into the Draft Local Area Plan. The report should be read in conjunction with the Kanturk – Mallow Municipal District Draft Local Area Plan, and the associated maps.

1.2 Report Structure

1.2.1 Section 2 of this report provides a brief introduction to the Kanturk - Mallow Municipal District, identifying the settlement hierarchy and the key population and household growth targets for the respective categories of settlement with the settlement hierarchy.

1.2.2 Section 3 examines the main sources of flood risk within the Municipal District and recent flood events.

1.2.3 Section 4 examines how the issue of managing flood risk was addressed in the review of the Local Area Plan and outlines the main provisions of the flood risk management strategy.

1.2.4 Section 5 sets out what this assessment has achieved in terms of managing the adverse effects of flooding within the Kanturk – Mallow Municipal District. It also identifies how information on flood risk will be reviewed and monitored over the lifetime of the plan.

1.3 The Planning System and Flood Risk

1.3.1 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities', published in November 2009, describe flooding as a natural process that can occur at any time and in a wide variety of locations. Flooding can often be beneficial and many habitats rely on periodic inundation. However, when flooding interacts with human development, it can threaten people, their property and the environment. Flooding may be from rivers, the sea, groundwater, sewers or overland flow caused by intense or prolonged periods of rainfall. Climate change effects suggest that the frequency and severity of flooding is likely to increase in the future.

1.3.2 The Guidelines describe good flood risk practice in planning and development management and seek to integrate flood risk management into the planning process, thereby assisting in the delivery of sustainable development. Planning

Authorities are directed to have regard to the Guidelines in the preparation of Development Plans and Local Area Plans, and for development management purposes. For this to be achieved, flood risk must be assessed as early as possible in the planning process.

1.3.3 Paragraph 1.6 of the Guidelines states that the core objectives are to:

- avoid inappropriate development in areas at risk of flooding;
- avoid new developments increasing flood risk elsewhere, including that which may arise from surface run-off;
- ensure effective management of residual risks for development permitted in floodplains;
- avoid unnecessary restriction of national, regional or local economic and social growth;
- improve the understanding of flood risk among relevant stakeholders; and
- ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management".

1.3.4 The Guidelines aim to facilitate 'the transparent consideration of flood risk at all levels of the planning process, ensuring a consistency of approach throughout the country. The Guidelines work on a number of key principles, including:

- Adopting a staged and hierarchical approach to the assessment of flood risk;
- Adopting a sequential approach to the management of flood risk, based on the frequency of flooding (identified through Flood Zones) and the vulnerability of the proposed land use.

1.4 Definition of Flood Risk

1.4.1 Prior to discussing the management of flood risk, it is helpful to understand what is meant by the term. It is also important to define the components of flood risk in order to apply the principles of the Guidelines in a consistent manner.

1.4.2 Flood risk is generally accepted to be a combination of the likelihood of flooding and the potential consequences arising, and is normally expressed in terms of the following relationship:

Flood risk = Probability of flooding x Consequences of flooding

1.4.3 Likelihood of flooding is normally defined as the percentage probability of a flood of a given severity occurring in any given year. For example, a 1% probability indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 chance of occurring in any given year.

1.4.4 In the Local Area Plan, flood risks are defined in relation to the following zones;

- **Flood Zone A**: where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);

- **Flood Zone B**: where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding or between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding);
- **Elsewhere,** sometimes referred to as Zone C, the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). This zone covers all areas of the Plan which are not in zones A or B.

1.4.5 Consequences of flooding depend on the hazards caused by flooding (depth of water, speed of flow, rate of onset, duration, wave-action effects, water quality) and the vulnerability of receptors (type of development, nature, e.g. age-structure, of the population, presence and reliability of mitigation measures etc).

1.4.6 The 'Planning System and Flood Risk Management: Guidelines for Planning Authorities', provides three vulnerability categories, based on the type of development, detailed in Table 3.1 of the Guidelines, and are summarised as:

- Highly vulnerable, including residential properties, essential infrastructure and emergency service facilities;
- Less vulnerable, such as retail and commercial and local transport infrastructure
- Water compatible, including open space, outdoor recreation and associated essential facilities, such as changing rooms.

Section 2 Local Study Area

2.1 Introduction: The Kanturk – Mallow Municipal District

2.1.1 The Kanturk - Mallow Municipal District lies entirely within the North Strategic Planning area as defined in the County Development Plan 2014. It is a predominantly rural Municipal District that accommodates an extensive network of settlements as follows:

- **Five Main Settlements** comprising Mallow, Kanturk, Millstreet, Newmarket and Buttevant.
- **Six Key Villages** comprising Ballydesmond, Banteer, Boherbue, Dromina, Knocknagree and Milford.
- **Twenty Four Villages** comprising Ballydaly, Ballyclogh, Bweeng, Burnfort, Castlemagner, Churchtown, Cecilstown, Cullen, Dromahane, Derrinagree, Freemount, Glantane, Kilcorney, Kiskeam, Kilbrin, Liscarroll, Lismire, Lombardstown, Lyre, Meelin, New Twopothouse, Rathcoole, Rockchapel, Tullylease.
- **Thirteen Village Nuclei** comprising Aubane, Ballyhass, Cloghboola, Currariague, Dromagh/Dromtariff, Gortroe, Knockaclarig, Laharn Cross Roads, Lisgriffin, Mourneabbey (Athnaleenta), Nad, Old Twopothouse, Taur.
- **Two Other Locations** comprising Dromalour and Sally's Cross.

Figure 1 Kanturk Mallow Municipal District

2.2 Population and Household Growth

2.2.1 Within the Kanturk – Mallow Municipal District the County Development Plan provides for growth in population of 10,134 persons. The number of households is expected to grow by 6,939 leading to a net requirement for 7,556 new houses. The County Development Plan indicates that 270ha of zoned land are required to meet this level of housing provision in the main towns, in addition to housing opportunities in the villages and rural areas.

2.2.2 The majority of the growth is allocated to the towns, with 5,323 new houses proposed, of which 4,552 are proposed in Mallow, the designated Hub Town in the National Spatial Strategy, and in line with the South West Regional Planning Guidelines. Housing growth is also planned within the villages (1,361 units).

2.2.3 Arising from the County Development Plan 2014, Table 2.2 shows that there is a net requirement within the towns of the Municipal District for 5,323 new dwelling units and capacity, in terms of the current provision of zoned lands within the towns, to accommodate 8,592.

Table 2.2. Kanturk-Mallow Municipal District

	Housing Requirement					Housing Supply	
	Census 2011	Population Target	Total New Households	New Units Required	Net Estimated Requirement (ha)	Est. Net Residential area zoned in LAP / TCP (ha)	Estimated Housing Yield (LAPs and TCPs) (Units)
Buttevant	945	1,501	285	298	17	31.50	482
Kanturk	2,263	2,400	188	141	8	29.20	329
Mallow	11,605	20,000	4,154	4,552	228	332.45	6,750
Millstreet	1,574	1,756	166	177	10	19.62	350
Newmarket	988	1,189	141	155	9	24.90	345
Main Towns	17,375	26,846	4,934	5,323	270	437.67	8,592
Villages	6,727	8,796	1,247	1,361	--	--	987
Rural	23,203	21,798	758	872	--	--	--
Total Villages & Rural	29,930	30,593	2,005	2,233	--	--	987
Total for District	47,305	57,439	6,939	7,556	270	437.67	10,230

Current Estimated Strategic Land Reserve (LAPs and TCPs) for this Municipal District is 178.9 Ha

Source: Extract from Cork County Development Plan 2014- Appendix B, Table B 12

2.3 Environment and Heritage

2.3.1 European and National legislation now protects the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Areas, candidate Special Areas of Conservation and Special Protection Areas. The current list of protected sites is contained in the County Development Plan 2014 and is shown on the Heritage and Scenic Amenity Maps in Volume 3 in that Plan. Designated sites in the Kanturk – Mallow Municipal District are detailed in the table below.

Designated Sites in the Kanturk – Mallow Municipal District		
Code	**Description**	**Natura 2000 Site**
SPA 4161	Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	Yes
SPA 4162	Mullaghanish to Musheramore Mountains SPA	Yes
cSAC 2165	Lower River Shannon	Yes
cSAC 2170	River Blackwater	Yes
cSAC 365	Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment	Yes
NHA 2449	Mount Eagle Bogs	No
pNHA 1036	Banteer Ponds	No
pNHA 1072	Priory Wood, Lismire	No
NHA 2447	Boggeragh Mountains	No

2.3.2 To date, sites of geological interest have not been comprehensively covered by the existing nature conservation designations. Cork County Council recognises the importance of geological heritage and to this end has listed the important geological features within the County, in the County Development Plan 2014, with the intention of maintaining their possible conservation value. Geological features of interest in the Kanturk -Mallow Municipal District include; warm springs at Newmarket and Meelin, a Karst spring at Tubrid Millstreet, fluvial straths and Quaternary outwash deltas along the Blackwater, quaternary fossil pingos near Millstreet, fluvial meanders along the Owentaraglin River near Millstreet and Kanturk Coalfield near Dromagh.

2.3.3 In terms of built heritage, there are numerous recorded monuments and protected structures throughout the Municipal District and these are also detailed in the County Development Plan 2014.

2.4 Infrastructure

2.4.1 There are infrastructural deficiencies within the Municipal District in terms of waste water treatment and water supply services that will need to be addressed over the lifetime of the local area plan if the growth targets for the electoral area are to be achieved. Particular infrastructural improvements will include upgrading of waste water treatment plant facilities and the rolling out of water conservation measures across the Electoral Area.

2.4.2 In Mallow in particular, further investment in roads infrastructure is also needed to order to create capacity in the road network to accommodate the significant level of development provided for in the Local Area Plan. In particular delivery of a Northern Relief Road and the N20 is needed to relieve the town of through traffic from the N72 and to free up capacity within the road network of the town.

Section 3 Flood Risk in the Kanturk – Mallow Municipal District

3.1 Sources of Flooding

3.2.1 This SFRA has primarily reviewed flood risk from fluvial sources. Flood risks from pluvial and groundwater sources or from drainage systems, reservoirs and canals and other artificial or man-made systems have not been considered in detail in this study and such risks will need to be assessed at the project stage.

3.2.2 This approach has been adopted for two main reasons. Firstly, the review of flooding in the Kanturk – Mallow Municipal District shows rivers to be the most common source of damage and it is this source of flooding that has been taken into account in the Local Area Plan process. Other sources of flooding are considered to present a lesser risk in this Municipal District but should be considered at the planning application stage. Secondly, Flood Zones in the 'Planning System and Flood Risk Management' are defined on the basis of fluvial, and where appropriate, tidal flood risk.

3.2 Fluvial Flooding

3.2.3 Flooding of watercourses is associated with the exceedance of channel capacity during higher flows. The process of flooding on watercourses depends on a number of characteristics associated with the catchment including; geographical location and variation in rainfall, steepness of the channel and surrounding floodplain and infiltration and rate of runoff associated with urban and rural catchments. There are two main catchment types - large and relatively flat or small and steep, the two giving two very different responses during large rainfall events.

3.2.4 In a large, relatively flat catchment, flood levels will rise slowly and natural floodplains may remain flooded for several days, acting as the natural regulator of the flow. In small, steep catchments, local intense rainfall can result in the rapid onset of deep and fast-flowing flooding with little warning. Such “flash” flooding, which may only last a few hours, can cause considerable damage and possible threat to life.

3.2.5 The form of the floodplain, either natural or urbanised, can influence flooding along watercourses. The location of buildings and roads can significantly influence flood depths and velocities by altering flow directions and reducing the volume of storage within the floodplain. Critical structures such as bridge and culverts can also significantly reduce capacity creating pinch points within the floodplain. These structures are also vulnerable to blockage by natural debris within the channel or by fly tipping and waste.

3.2.6 Rivers are the primary cause of flooding in the Kanturk Mallow Municipal District with flood events attributed to fluvial sources ranging from the Blackwater River in particular to smaller tributaries and drains.

Rivers in the Kanturk - Mallow **Municipal District.**

3.2.7 The upper and mid reaches of the Blackwater River system runs north-south and west- east respectively through the Municipal District with the remainder of the District being mainly drained by the Allow, Dalua, Brogeen, Owentaraglin, Finnow, Glen and Rathcoole Rivers. These also join the Blackwater in a stretch from Rathmore to Banteer. The River Glen, Deel and Feale flow through the north of the Municipal District and emerge into the Shannon Catchment.

3.2.8 The Blackwater river rises in the Mullaghareirk mountains in Kerry and its upper course effectively forms the border between Kerry and Cork as it flows down through Ballydesmond, and to the west of Knocknagree, before turning east in the vicinity of Rathmore. This transition effectively marks the start of its mid reaches and it starts to grow significantly as it gathers tributaries in the following order- Owentaraglin, Finnow, Rathcoole, Allow, Glen. The Blackwater then flows towards Mallow and Fermoy. The Blackwater flows largely uninterrupted throughout the Municipal District save for several bridging points. The river has also formed significant flood plains, mainly in the Rathcoole-Banteer areas, and these plains follow the river course to Mallow, which also have a large floodplain. In terms of predicting flood events two monitoring stations are present at Duarrigle and Dromcummer. When a flood peaks at the latter station it is expected to reach Mallow approximately five hours later.

3.2.9 The Allow River forms in the Mullaghareirk mountains several miles to the north of Meelin and flows down to the south through Freemount village before gathering several tributaries and flowing through Kanturk where it meets with the Dalua and Brogeen rivers to form a flood plain between Kanturk town and the Blackwater to the south. Flooding has occurred in Kanturk from the Allow/Dalua confluence over previous decades and flood relief works are in place in this town. Similarly flooding has also taken place in Freemount in recent years.

3.2.10 The Dalua River emerges to the south west of Meelin village and also flows to the west of Newmarket village whilst gathering several tributaries. It joins with the Allow River at Kanturk before flowing into the River Blackwater. Flooding along the Dalua does not affect settlements save for when it merges with the Allow in the area near Kanturk.

3.2.11 The Brogeen river rises on the southern slopes of the Mullaghareirks and flows to the east past Boherbue to meet the Allow river in the flood plains between Kanturk and the Blackwater.

3.2.12 The Owentaraglin River emerges from the Mullaghareirks and flows south to meet the Blackwater via Kiskeam and Cullen. Its main flood risk is in these settlements.

3.2.13 The Finnow River forms to the south of Millstreet from several tributaries and flows to the north to meet the Blackwater. The Finnow represent a significant flood risk to the town, in combination with the Blackwater River.

3.2.14 The Glen River (south) flows from a valley in the Boggeragh mountains and thereafter flows around Banteer through a flood plain formed with the Blackwater. The river represents a significant flood risk to the village in combination with the Blackwater River.

3.2.15 The Rathcoole River is formed from several tributaries flowing from the Boggeragh Mountains and thereafter flows north through Rathcoole village to meet the Blackwater. The river represents a significant flood risk to the eastern side of the village.

3.2.16 The Deel River rises to the north of Dromina and flows through Milford village and then on into County Limerick. The river represents a significant flood risk to the centre of Milford Village.

3.2.17 The Feale River rises in the Mullaghareirk mountains and flows through Rockchapel village to the Limerick border where it forms part of the Shannon Catchment area.

The river poses a significant flood risk to Rockchapel and has flooded in previous decades.

3.2.18 Recent significant flood events have included significant inundation of the floodplain along the Blackwater between Millstreet and Mallow in 2009. It should be noted that such events occur frequently. Other recent notable events include flooding in Freemount from the Allow in 1997 and 2008. Periodic flooding has occurred in Kanturk in the past from the Allow, Dalua and Brogeen. However flood relief works have lessened if not eliminated the impacts of same. Flooding has occurred to the north, west and south of Millstreet at times of high flow from the Finnow and Blackwater and similar events have occurred in Banteer. Some road flooding has occurred in Newmarket from the Mill Stream. The River Feale has flooded in Rockchapel most notably in 1986 when significant damage occurred to a bridge.

3.3 Other Sources of Flooding

3.3.1 Other sources of flooding including pluvial, ground water, drainage systems and reservoirs are detailed below. Risks from these sources have not been specifically considered in the Strategic Flood Risk Assessment undertaken for the Kanturk – Mallow Municipal District and need to be addressed at the planning application stage.

- **Pluvial Flooding:** Pluvial flooding is a result of rainfall generated overland flows of water. Flooding of land from surface water runoff is usually caused by intense rainfall that may only last a few hours. The resulting water follows natural valley lines, creating flow paths along roads and through and around developments and ponding in low spots, which often coincide with fluvial floodplains in low lying areas.
- **Groundwater Flooding:** Groundwater flooding is caused by the emergence of water originating from underground, and is particularly common in karstic landscapes. This can emerge from either point or diffuse locations. The occurrence of groundwater flooding is usually very local and unlike flooding from rivers and the sea, does not generally pose a significant risk to life due to the slow rate at which the water level rises.
- **Flooding from Drainage Systems:** Flooding from artificial drainage systems occurs when flow entering a system, such as an urban storm water drainage system, exceeds its discharge capacity, it becomes blocked or it cannot discharge due to a high water level in the receiving watercourse. Sewer flooding problems will often be associated with regularly occurring storm events during which sewers and associated infrastructure can become blocked or fail.
- **Flooding from Reservoirs**, **Lakes and other Artificial Sources:** Reservoirs can be a major source of flood risk, as demonstrated in the 2009 flooding, when waters released from the Inniscarra Dam flooded sections of Cork City.

Section 4 Addressing Flood Risk in the Kanturk- Mallow Local Area Plan

4.1 Introduction

4.1.1 This section details the approach to Flood Risk Management adopted in the Kanturk – Mallow Municipal District Local Area Plan.

4.2 Collation of Flood Risk Data

4.2.1 In 2010, as part of the review of its Local Area Plans, and in order to meet the needs of the Strategic Environmental Assessment process and the requirements of the Department of the Environment, Heritage and Local Government / Office of Public Works Guidelines, "The Planning System and Flood Risk Management" (2009), Cork County Council undertook a county wide Strategic Flood Risk Assessment using data prepared on its behalf by JBA Consultants. The Council also conferred with OPW officials, the Lead Agency for Flood Risk Management in Ireland, in completing the county wide assessment of flood risks and in formulating the flood risk management strategy which informed the preparation the 2011 Local Area Plans.

4.2.2 For the purposes of the assessment, information about flood risks was collated from a number of sources including:

- 'Floodmaps.ie' – The national flood hazard mapping website operated by the Office of Public Works, where information about past flood events is recorded and made available to the public. 'Flood point' information available on this site has not been included for technical reasons.
- 'Flood Hazard Mapping' for fluvial and tidal areas commissioned by Cork County Council from JBA Consulting. These indicative flood extent maps provided flood extent information for river catchments where a more detailed CFRAMS study was not available.
- Draft River Lee Catchment Flood Risk Assessment and Management Study (Lee CFRAMS) data was used for areas within the catchment of the study.

4.2.3 This data was amalgamated into a single 'Indicative Flood Zone Map' for the County, which was then used as the basis for the flood risk assessment of the 2011 Local Area Plans. The flood zone map showed the areas known to be at risk of fluvial (river) or tidal flooding only. It should be noted that the flood zones are based on an undefended scenario and do not take the presence of flood protection structures such as walls or embankments into account. This is to allow for the fact that there is still a residual risk of flooding behind the defences due to overtopping or breach, and that there may be no guarantee that the defences will be maintained in perpetuity. This is accordance with the requirements of the Guidelines which specify an undefended assessment of risk.

4.2.4 In 2016, as part of the further review of the Local Area Plans the Council commissioned an update of the flood zone mapping used in the 2011 to take account of the information that has become available in the intervening period from other flood studies, including the outputs from the National CFRAM Programme (Catchment Flood Risk Assessment and Management), undertaken by the OPW.

4.2.5 The updated flood zone mapping provides information on the three main flood zones as follows:

- **Zone A** – High probability of flooding. Most areas of the County that are subject to flood risks fall into this category. Here, most types of development would be considered inappropriate. Development in this zone should be avoided and/or only considered in exceptional circumstances, such as in major urban or town centres, or in the case of essential infrastructure that cannot be located elsewhere. A Justification Test set out in Ministerial Guidelines applies to proposals in this zone. Only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in this zone.
- **Zone B** - Moderate probability of flooding. In most parts of the County this designation applies only to limited areas of land. In only a few locations do significant sites fall into this category. Here, highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate. Less vulnerable development, such as retail, commercial and industrial uses, sites used for short-let for caravans and camping and secondary strategic transport and utilities infrastructure, should only be considered in this zone if adequate sites are not available in Zone C, and subject to a flood risk assessment demonstrating that the risk can be appropriately managed".
- **Elsewhere** (referred to in the Guidelines as Flood Zone C) – Localised flooding from sources other than rivers and the coast can still occur and may need to be taken into account at the planning application stage. l

4.2.6 Extracts from the flood zone map are shown, where relevant, on the settlement maps included in the Local Area Plan. The maps are indicative in nature and are intended to primarily function as a screening tool. The areas at risk may be more or less extensive in practice than indicated in the flood mapping. The mapping may be refined where possible over time as other more detailed flood risk assessments are completed by the OPW.

4.2.7 Within areas not specifically identified by the plan as being at risk of fluvial or tidal flooding (i.e. within Zone C) a flood risk screening assessment may still be required to assess potential impact of development on adjoining Flood Zones A or B, particularly with respect to surface water management . An assessment of the risk of other sources of flooding such as pluvial or ground water flooding may also be needed.

4.2.8 The inclusion of the flood zone information on the settlement maps of the Municipal District is the first step in managing flood risk in the future. The updated mapping provides for an improved understanding of flood risk issues within the County. The maps indicate the extent of flood zones that should be safeguarded from development and will support the application of the sequential approach, and the justification test as appropriate, in areas where development is proposed.

4.2.9 As part of the review of the Local Area Plans, all zoned lands in areas at risk of flooding have been considered in the context of the updated indicative flood zone maps.

4.3 Flood Risk within the Kanturk – Mallow Municipal District

4.3.1 Flood risk to each settlement has been appraised based on the Indicative Flood Zones which cross the settlement boundary, and is summarised in Table 4.1.

Table 4.1: Flood Risk by Settlement in the Kanturk - Mallow Municipal District		
Settlement	**Indicative Fluvial/ Coastal Flood Risk within Development Boundary**	**Comment**
Main Settlements		
Mallow	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Kanturk	Yes	
Millstreet	Yes	
Newmarket	Yes	
Buttevant	Yes	
Key Villages		
Ballydesmond	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Banteer	Yes	
Boherbue	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Dromina	No	
Knocknagree	No	
Milford	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Villages		
Ballyclough	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment

Table 4.1: Flood Risk by Settlement in the Kanturk - Mallow Municipal District		
Settlement	**Indicative Fluvial/ Coastal Flood Risk within Development Boundary**	**Comment**
		procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Ballydaly	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Burnfort	No	
Bweeng	No	
Castlemagner	No	
Cecilstown	No	
Churchtown	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Cullen	Yes	
Derrinagree	Yes	
Dromahane	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Freemount	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Glantane	Yes	
Kilbrin	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Kilcorney	No	

Table 4.1: Flood Risk by Settlement in the Kanturk - Mallow Municipal District		
Settlement	**Indicative Fluvial/ Coastal Flood Risk within Development Boundary**	**Comment**
Kiskeam	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Liscarroll	Yes	
Lismire	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Lombardstown	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Lyre	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Meelin	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
New Twopothouse	Yes	
Rathcoole	Yes	
Rockchapel	Yes	
Tullylease	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.

Table 4.1: Flood Risk by Settlement in the Kanturk - Mallow Municipal District		
Settlement	**Indicative Fluvial/ Coastal Flood Risk within Development Boundary**	**Comment**
Village Nuclei		
Aubane	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Ballyhass	No	
Cloghboola	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Curraraigue	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Dromagh/Dromtarrife	No	
Gortroe	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate.
Knockaclarig	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Laharn Cross Rds	No	
Lisgriffin	No	
Mourneabbey	n/a	No development boundary in plan.
Nad	Yes	All development proposals within the Indicative Flood Zone Areas will need to comply with the flood risk assessment procedure detailed in Section 4.6 of this report i.e. verification of Indicative Flood Zone mapping, compliance with the requirements of the Development Plan

Table 4.1: Flood Risk by Settlement in the Kanturk - Mallow Municipal District		
Settlement	**Indicative Fluvial/ Coastal Flood Risk within Development Boundary**	**Comment**
		Justification Test, and detailed site specific assessment, as appropriate.
Old Twopothouse	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Taur	No	
Other Locations		
Dromalour	No	Indicative Flood Zone Mapping does not indicate a fluvial /coastal risk. See Paragraph 4.2.7. regarding the need for further assessment.
Sally's Cross	No	

4.4 Flood Risk Management Strategy

4.4.1 The assessment and management of flood risks in relation to planned future development is an important element of sustainable development. The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course. Similarly, in coastal areas, flooding can periodically occur following unusual weather or tidal events.

4.4.2 Generally, the purpose of zoning is to indicate to property owners and members of the public the types of development which the Planning Authority considers most appropriate in each land use category. Zoning is designed to reduce conflicting uses within areas, to protect resources and, in association with phasing, to ensure that land suitable for development is used to the best advantage of the community as a whole.

4.4.3 The approach adopted has generally been to

- Include, on the settlement maps, information on the areas at risk of flooding (extent of Flood Zones A and B),
- Avoid development in areas at risk of flooding; and
- Where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.

4.4.4 In response to local circumstances, particularly where there may be some uncertainties in relation to flood risk data or where land has been zoned in a previous plan or planning permission has already been granted, the approach has been modified and lands have been zoned for development with a requirement that

a detailed site specific flood risk assessment be carried out at the project stage. This is explained in more detail below.

4.5 The Approach to Zoning in Areas at Risk of Flooding.

4.5.1 Within the areas identified by the Indicative Flood Risk Mapping as being at risk (Zone A or B), all proposals for development will need to comply with the Ministerial Guidelines – 'The Planning System and Flood Risk Management. In this LAP, land use zoning objectives within the indicative Flood Risk Areas have been included in the plan where either:

- The land use zoning objective has been considered in the context of the "Development Plan Justification Test" set out in the Ministerial Guidelines;
- The zoning objective stemmed from a similar objective in a previous Plan and has been included in this Plan in order to facilitate the local verification of the indicative Flood Risk Maps at the project planning/planning application stage.

4.5.2 In the preparation of the Draft Kanturk – Mallow Municipal District LAP, proposed zonings were generally assessed relative to the provisions of the Guidelines and the Justification Test for Development Plans as detailed in the Guidelines. The Justification Test is generally required in situations where the planning authority needs to consider future development in areas at a high or moderate risk of flooding, for uses or development vulnerable to flooding that would otherwise be inappropriate. In such circumstances, all of the following criteria must be satisfied :

a) the urban settlement is targeted for growth in the NSS, RPGs, or statutory plans defined under the provisions of the Planning and Development Act, 2000, as amended.

b) the zoning is required to achieve the proper planning and sustainable development of an urban settlement and is

- Essential to facilitate the regeneration and/or expansion of the centre of the urban settlement;
- Comprises significant previously developed and/or under-utilised lands;
- Is within or adjoining the core of an established or designated urban settlement;
- Will be essential to achieving compact and sustainable urban growth; and
- There are no suitable alternative lands for the particular use in areas at lower risk of flooding within or adjoining the core of the urban settlement

c) A flood Risk Assessment to the appropriate level of detail has been carried out as part of the SEA, which demonstrates that flood risk to the development can be adequately managed and the development will not cause adverse impacts elsewhere.

4.4.5 In the preparation of the Draft Kanturk – Mallow Municipal District Local Areas Plan the final element of the Justification Test (part (c) above), which requires a site specific flood risk assessment to be carried out, was not undertaken. In some cases, certain zonings were included in areas at risk of flooding, even when such zoning did not pass the Justification Test, as a response to a desire to retain those zonings

where planning permission had been granted or where the zoning had already been made in a previous Plan.

4.4.6 Instead, the approach taken in the Draft Local Area Plan provides, in the first instance, for the detailed assessment of the extent of the actual flood risk relative to that indicated on the indicative mapping via a phased flood risk assessment procedure. The first stage of this assessment process provides a prospective developer with the opportunity to verify the Indicative Flood Zone Mapping in the first instance, and address any local ambiguities. Depending on the outcome of the verification stage, a prospective developer may then have the opportunity to demonstrate compliance with the requirements of the Development Plan Justification Test and carry out a detailed site specific assessment, as appropriate. This flood risk assessment process is set out in Chapter 11 of the County Development Plan 2014.

4.4.7 Development proposals on lands within areas at risk of flooding will also be subject to the 'Development Management Justification Test', details of which are set out in the Guidelines.

4.4.8 The Table below lists the specific zoned sites within the Kanturk – Mallow Municipal District that are located within either Flood Zone A or B and the circumstances of their inclusion.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B

Settlement	Zoning Objective	Development Plan Justification Test & Other Assessment Criteria	Reason for inclusion in the LAP	Comment
Buttevant	BV-T-01	Justification Test	Partially Applied	Part 3 of the test was not completed. Only a very small part of the edges of the zone have been identified as being at risk of flooding.
		Existing Zonings	✓	Previously zoned for Town Centre use in the Mallow Electoral Area Local Area Plan 2011. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Buttevant	BV-X-01	Justification Test	Partially Applied	Part 3 of the test was not completed. Only a very small part of the edges of the zone have been identified as being at risk of flooding – Zone B..
		Existing Zonings	✓	Previously zoned for the same use in the Mallow Electoral Area Local Area Plan 2011. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014
Buttevant	BV-C-01	Justification Test	Partially Applied	Part 3 of the test was not completed. Only a very small part of the edges of the zone have been identified as being at risk of flooding – Zone B.
		Existing Zonings	✓	Previously zoned for the same use in the Mallow Electoral Area Local Area

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				Plan 2011. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Kanturk	KK-T-01	Justification Test	Partially Applied	Part 3 of the test was not completed.
		Existing Zonings	✓	This is the existing town centre and was previously zoned for Town Centre use in the Kanturk Electoral Area Local Area Plan 2011. Part of the zone is at risk of flooding and inappropriate development should be avoided in that area A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Kanturk	KK-T-02	Justification Test	Not applied	
		Existing Zonings	✓	Previously zoned for Town Centre use in the Kanturk Electoral Area Local Area Plan 2011. Only part of the zone is at risk of flooding and inappropriate development should be avoided in that area. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Kanturk	KK-B-03	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for the same use in the Kanturk Electoral Area Local Area Plan 2011. Only part of the zone is at risk of flooding and inappropriate development should be

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				avoided in that area. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW R-04	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for the same use in the Mallow Electoral Area Local Area Plan 2011, as amended. Only part of the zone is at risk of flooding and inappropriate development should be avoided in that area. The lands are not defended. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW R-06	Justification Test	Not Applied	-
		Existing Zoning	✓	Previously zoned as residential in the Mallow Town Development Plan 2010. Part of the zone is at risk of flooding and it is not defended. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW R-07	Justification Test	Not Applied	
		Existing Zoning	✓	Previously zoned as residential in the Mallow Town Development Plan 2010. Part of the zone is at risk of flooding and it is

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				not defended. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014
Mallow	MW T-01	Justification Test	Partially applied	Part three of the test was not completed.
		Existing Zoning	✓	This is the existing town centre and was previously zoned for town centre uses in the Mallow Town Development Plan 2010. Only part of the area is subject to flood risk and it is defended. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW T-02	Justification Test	Partially applied	Part three of the test was not completed.
		Existing Zoning	✓	Previously zoned as town centre in the Mallow Town Development Plan 2010. Only part of the area is subject to flood risk and it is defended. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW T-03	Justification Test	Partially applied	Part three of the test was not completed.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
		Existing Zoning	✓	Previously zoned as town centre in the Mallow Town Development Plan 2010. Only part of the area is subject to flood risk. It is not defended. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW T-04	Justification Test	Partially applied	Zoning objective provides for car parking or other flood compatible uses only.
		Existing Zoning	✓	Previously zoned as town centre in the Mallow Town Development Plan 2010. Lands are substantially at risk of flooding (Zone A & B) and are not defended. Zoning objective provides for car parking or other flood compatible uses only. A site specific flood risk

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW T-05	Justification Test	Partially applied	Zoning objective provides for car parking or other flood compatible uses only.
		Existing Zoning	✓	Previously zoned as town centre in the Mallow Town Development Plan 2010. Lands are entirely within the area at risk of flooding (Zone A) and are not defended. Zoning objective provides for car parking or other flood compatible uses only. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW T-06	Justification Test	Partially applied	Part three of the test was not completed.
		Existing Zoning	✓	Previously zoned as mixed use in the Mallow Town Development Plan 2010. This is a key brownfield site within the town in need of redevelopment. Lands are partially within flood Zone B and are defended. Zoning objective provides for mixed use neighbourhood centre uses. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
Mallow	MWI-01	Justification Test	Not Applied	-
		Existing Zonings	✓	Brownfield site, part of the former Mallow Sugar Factory. Previously zoned for a mixed use employment / residential area in the Mallow Special local Area Plan 2007 and Mallow LAP 2011, as amended. Only a small part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW 1-02	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned as town centre in the Mallow Town Development Plan 2010. Part of the site is within the area at risk of flooding

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				(Zone A). Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW I-04	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for Industrial use in the Mallow Special Local Area Plan 2007 and Mallow Electoral Area Local Area Plan 2011.. Only a very small part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW-B - 02	Justification Test	Not Applied	-
		Existing Zonings (lands inside railway)	✓	Previously zoned for Industrial use in the Mallow Town Development Plan 2010. Only a very small part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW-B - 03	Justification Test	Not Applied	-

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
		Existing Zonings	✓	Previously zoned for Industrial use in the Mallow Special local Area Plan 2007 and the Mallow Electoral Area Local Area Plan 2011. Only a very small part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW-0-22	Justification Test	Not applied	
		Existing Zonings	✓	Previously zoned as open space with scope for some residential development in the Mallow Town Development Plan 2010. Part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Mallow	MW-0-23	Justification Test	Not applied	
		Existing Zonings	✓	Previously zoned as open space with scope for residential development in the Mallow Town Development Plan 2010. Part of the site is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Millstreet	MS-T-01	Justification Test	Partially Applied	Part 3 of the test was not completed.
		Existing Zonings	✓	This is the existing town centre area. Previously zoned for Town Centre use in the Kanturk Electoral Area Local Area Plan 2011. Part of the zone is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Millstreet	MS-B-02	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for Residential use in the Kanturk Electoral Area

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				Local Area Plan 2005 and for Business use in the Local Area Plan 2011. Part of the zone is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Millstreet	B-03	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for Business use in the Local Area Plan 2011. Part of the zone is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Millstreet	MS- X-02	Justification Test	Not Applied	Zoning objective provides for flood compatible uses.
		Existing Zonings	✓	This site is substantially within the area at risk of flooding. Previously zoned for Tourism uses in the 2005 & 2011 LAP Objective limits development of the site to flood compatible uses. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Millstreet	MS-U-05	Justification Test	Not Applied	Zoning objective provides for a car park which is generally accepted as being a flood compatible use.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
		Existing Zonings	✓	Previously zoned for the same use in the Local Area Plan 2011. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Newmarket	B-02	Justification Test	Not Applied	-
		Existing Zonings	✓	Previously zoned for industrial use in the 2005 Local Area Plan and for business use in the 2011 LAP. Only part of the zone is at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding. A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.
Liscarroll	C-01	Justification Test	Not Applied	-
		Existing Zonings	✓	This zoning is for an existing playground (community facility) A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014
Meelin	O-02	Justification Test	Not applied	
		Existing Zonings	✓	Previously zoned as open space with scope for some residential development in the Kanturk Electoral Area Local Area Plan 2011. The lands are at risk of flooding. Inappropriate development should be avoided in areas at risk of flooding.

Table 4.2: Specific Land Use Zonings located within Flood Zone A or B				
Settlement	**Zoning Objective**	**Development Plan Justification Test & Other Assessment Criteria**	**Reason for inclusion in the LAP**	**Comment**
				A site specific flood risk assessment will be required i.e. verification of Indicative Flood Zone Mapping, compliance with the requirements of the Development Plan Justification Test, and detailed site specific assessment, as appropriate, in accordance with Objectives WS 6-1 and WS 6-2 as detailed in Chapter 11, Volume 1 of the Cork County Development Plan, 2014.

Note: Proposals for 'open space or outdoor recreation development have not been included in Table 4.2 because these are normally water compatible forms of development and, therefore, do not need to be subjected to the 'Development Plan' Justification Test. However, an appropriate flood risk assessment will be necessary at the project planning/ planning application stage.

4.6 Approach to Development in Areas at Risk of Flooding

4.6.1 Where development is proposed within an area at risk of flooding, either on land that is subject to a specific zoning objective, lands within the "existing built up area" of a town or within a development boundary of a village, intending applicants need to comply with the provisions of Chapter 11 of the Cork County Development Plan 2014 and Objectives WS 6-1 and WS 6-2, as appropriate, and with the provisions of the Ministerial Guidelines – 'The Planning System and Flood Risk Management'.

4.7 Flood Risk and Development Management

4.7.1 The following key requirements for the management of development in areas at risk of flooding shall be adhered to:

a) Minor proposals for development, for example small extensions to existing houses or changes of use, in areas at moderate to high risk of flooding should be assessed in accordance with Planning Guidelines: The Planning System and Flood Risk Management.

b) Where flood risk constitutes a significant environmental effect of a development proposal, a sub-threshold EIS may be triggered. Screening for EIA should be an integral part of all planning applications in areas at risk of flooding.

c) Any proposal in an area at risk of flooding that is considered acceptable in principle must demonstrate that appropriate mitigation measures can be put in place and that residual risks can be managed to acceptable levels. Addressing flood risk in the design of new development should consider the following:

- Locating development away from areas at risk of flooding, where possible.
- Substituting more vulnerable land uses with less vulnerable ones.
- Identifying and protecting land required for current and future flood risk management, such as conveyance routes, flood storage areas and flood protection schemes etc.
- Addressing the need for effective emergency response planning for flood events in areas of new development.

d) Site layout, landscape planning and drainage of new development must be closely integrated to play an effective role in flood-reduction. As such, proposals should clearly indicate:

- The use of Sustainable Drainage Systems (SuDS) to manage surface water run-off.
- Water conveyancing routes free of barriers such as walls or buildings.
- The signing of floodplain areas to indicate the shared use of the land and to identify safe access routes.

e) To ensure that adequate measures are put in place to deal with residual risks, proposals should demonstrate the use of flood-resistant construction measures that are aimed at preventing water from entering a building and that mitigate the damage floodwater causes to buildings. Alternatively, designs for flood resilient construction may be adopted where it can be demonstrated that entry of floodwater into buildings is preferable to limit damage caused by floodwater and allow relatively quick recovery. Such measures include the design and specification of internal building services and finishes. Further detail on flood resilience and flood resistance are included in the Technical Appendices of the Planning Guidelines, The Planning System and Flood Risk Management.

Section 5 Managing Flood Risk in the Future

5.1 What has the LAP Achieved

5.1.1 The inclusion of Indicative Flood Zone maps for the settlements of the Municipal District is the first step in managing flood risk in the future. The maps are primarily intended to function as a screening tool. They are not a substitute for detailed hydraulic modelling, such as may be required to assess the level of flood risk for a specific development. The flood maps should be used to guide decision making when determining whether a detailed Flood Risk Assessment is required for any given site. The maps are intended for guidance, and cannot provide details for individual properties.

5.2 Monitoring and Review

5.3.1 Information in relation to flood risk will be monitored and reviewed by the Council and the Flood Risk Assessment will be updated as appropriate as new information becomes available. There are a number of key outputs from possible future studies and datasets which could inform any update of the FRA as availability allows. A list of potential sources of information which will inform an FRA review is provided in the table below.

Potential Sources of Flood Risk Data		
Data	**Source**	**Timeframe**
Ongoing CFRAM Studies	OPW	End of 2016 / Early 2017
County Development Plan Updates	Cork County Council	2020
Flood maps of other sources, such as canal breach and drainage networks	Various	Unknown
Significant flood events	Various	Unknown
Changes to Planning and / or Flood Management Policy	DoEHLG /OPW /Cork County Council	Unknown
SFRAs for Local Area Plans	Cork County Council	Upon LAP review
Detailed FRAs	Various	Unknown
Flood Defence Feasibility / Design Reports	OPW primarily	Unknown

Draft Kanturk Mallow Municipal District Local Area Plan

Habitats Directive Assessment, Screening Report

Prepared by Cork County Council
Planning Policy Unit
November 2016

Contents

1 Introduction

1.1 Context

Cork County Council is in the process of preparing the Kanturk Mallow Municipal District Electoral Area Local Area Plan. This is a plan which will set development policy for the towns, villages and other settlements within the Kanturk Mallow Municipal District until 2023.

In accordance with requirements under the EU Habitats Directive (43/92/EEC) and EU Birds Directive (79/409/EEC) as provided for in part XAB of the Planning and Development Act 2010, the impacts of the policies and objectives of all statutory land use plans on certain sites that are designated for the protection of nature (Natura 2000 sites[1]), must be assessed as an integral part of the process of drafting of the plan. This is to determine whether or not the implementation of plan policies could have negative consequences for the habitats or plant or animal species for which these sites are designated. This assessment process is called a Habitats Directive Assessment (HDA) and must be carried out at all stages of the plan making process.

1.2 Legislative Background Habitats Directive Assessment

Habitats Directive Assessment is an iterative process which runs parallel to and informs the plan making process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard is had to the potential for policies and zoning proposals set out in the plan to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans, programmes , policies or projects.

The process may result in the development of new policy areas and/or the modification or removal of certain policies to be presented in the final plan. The results of this analysis and review are presented in Habitats Directive Reports which are produced for at each stage of the plan making process plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement or Screening Conclusion Statement will be produced which will contain a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the plan. The final Habitats Directive Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at that time.

[1] Natura 2000 sites include Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Birds Directive. Special Areas of Conservation are sites that are protected because they support particular habitats and/or plant and animal species that have been identified to be threatened at EU community level. Special Protection Areas are sites that are protected for the conservation of species of birds that are in danger of extinction, or are rare or vulnerable. Special Protection Areas may also be sites that are particularly important for migratory birds. Such sites include internationally important wetlands.

Article 6(3) of the Habitats Directive identifies what is required in terms of assessment of plans of projects.

Habitats Directive Article 6(3)

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.

EU and National Guidance sets out two main stages to the assessment process which are as follows:

Stage One: Screening

The process which identifies what might be likely impacts arising from a plan on a Natura 2000 site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant. No further assessment is required if no significant impacts on Natura 2000 sites are identified during the screening stage. The screening assessment is normally contained in a Habitats Directive Screening Report.

Stage Two: Appropriate Assessment

Where the possibility of significant impacts has not been discounted by the screening process, a more detailed assessment is required. This is called an Appropriate Assessment and involves the compilation of a Natura Impact Report by the Planning Authority which is a report of scientific evidence and data relating to European sites for which significant negative impacts have not been previously screened out. This is used to identify and classify any implications of the plan for these sites in view of their conservation objectives. The Appropriate Assessment must include a determination as to whether or not the plan or its proposed amendments would adversely affect the integrity of any European site or sites. The plan may be adopted if adverse effects on the integrity of European sites can be ruled out during the Appropriate Assessment process. The plan may not be adopted on foot of an Appropriate Assessment, if it is found that it will give rise to adverse impacts on one or more European sites, or if uncertainty remains in relation to potential impacts on one or more European sites.

The directive provides for a derogation procedure which can allow a plan or project to proceed in spite of a finding that the plan or project could / would give rise to adverse effects on the overall integrity of one or more Natura 2000 sites. Derogation procedures can only be progressed in very limited circumstances which are set out in Article 6(4) of the Directive (see below).

Habitats Directive Article 6(4)
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.

EU and National Guidance identifies the procedures which must be followed in circumstances where a derogation from the Habitats Directive is sought to allow a project or a plan to proceed, despite a finding that it will give rise to adverse effects on the integrity of one or more Natura 2000 sites. These procedures can only been invoked where it has been shown that there are no alternative ways to implement the plan/project which avoid adverse effects on the integrity of one or more European sites, where it has been demonstrated that there are imperative reasons of overriding public interest for which the plan/project must proceed and where measures have been developed and provided to compensate for any losses to be incurred. These further stages are described below.

Stage Three: Assessment of alternative solutions
In circumstances where the potential for a plan to give rise to adverse effects on the integrity of a European site or sites has not been ruled out during the appropriate assessment process, it can only be considered for authorisation where it is demonstrated that there are no alternative solutions and that there Imperative Reasons of Overriding Public Interest (IROPI) which can allow the plan or project to proceed. Stage three of a Habitats Directive Assessment involves the assessment of alternative solutions.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain
The fourth stage of the Habitats Directive Assessment process involves demonstrating that Imperative Reasons of Overriding Public Interest exist, and the assessment of the compensatory measures which are proposed to be implemented. In every case in which a local authority envisages approving or proceeding with a plan or project on grounds of IROPI, the Minister for Arts, Heritage and the Gaeltacht must be consulted.

The assessment may stop at any of the above stages if significant impacts on Natura 2000 sites can be ruled out.

This document represents the first phase of the Habitats Directive Assessment process for the Draft Kanturk Mallow Municipal District Local Area Plan – Consultation Draft. It contains the findings of the Habitats Directive screening assessment of this plan.

2 How this Report Was Prepared

2.1 Working Methods

The approach taken in the making of this assessment follows European Communities, 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, 2002, and on Local Government and Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, 2009.

2.2 Consultation

This report, with the draft Kanturk Mallow Municipal District Local Area Plan and the Environmental Report has been referred to statutory consultees and is available for public consultation from Wednesday 16th November 2016 to Friday 06th January 2017, so that the public or other interested stakeholders and statutory consultees have the opportunity to submit their comments and observations. These matters will then be considered and a decision made as to whether it is necessary to amend the draft plan to reflect the issues raised. The plan and this report are now available from the Council website at www.corkcoco.ie.

2.3 Data Sources, Gaps and Limitations

The information contained in this report is based on a desktop review of information relating to these sites and to the habitats and species that they support. References and data used are cited in the back of this report.

3 Draft Plan Screening

3.1 Screening Methodology

EU Guidelines (2001) set out a process for screening landuse plans, which involves four main steps as follows:

- Provide a description of the proposed plan.
- Identify relevant Natura 2000 sites, and compile information on their qualifying interests and conservation objectives.
- Identify the potential effects of the plan on the identified Natura 2000 sites.
- Assess of the significance of any effects on identified Natura 2000 sites, having regard to potential for 'in combination' effects.

This process is applied to all proposed plans or projects except those which are directly connected with the necessary management of a Natura 2000 site or sites. This report follows the steps set out above.

3.2 Description of the draft Plan

The **Kanturk Mallow Municipal District Local Area Plan** will be a strategic plan identifying where development is to be directed and how/where supporting infrastructure is to be provided within

the plan area from 2017 to 2023. The draft plan proposes population targets for settlements within the district and identifies where that development is proposed to be located through its zoning maps and corresponding policy objectives.

Section 1 Introduction

This section of the plan sets out the review process to date, the overall plan context and the overall approach/key policies that will influence the preparation of the Draft Plan namely the:

- Role of the Cork County Development Plan 2014
- Approach to deal with Town Council Development Plans
- Special Policy Areas-Framework Masterplans
- Settlement Network
- Infrastructure
- Water Services
- Flood Risk
- Regeneration Areas
- Quality in Urban Design
- Green Belts around Towns
- Environmental Assessment including
    - Strategic Environmental Assessment
    - Strategic Flood Risk Assessment
    - Habitats Directive Assessment

Section 2 Local Area Strategy

This section sets out the overall strategy for the Kanturk Mallow Municipal District. It sets out the housing requirements and zoned housing land supply for each of the five main towns (Buttevant, Kanturk, Mallow, Millstreet and Newmarket), sets out the appropriate scale of growth within the village network and the current infrastructure position for all the main towns and smaller settlements within the settlement network. It assesses the current employment position in the Municipal District and the key Environment and Heritage assets within the area. The key message is that sufficient land has been provided to meet population targets but that infrastructure remains a key constraint to delivering on those targets.

Section 3 Main Towns

The purpose of this section of the plan is to set out the policies and objectives including land use zoning maps for the five Main Towns of Buttevant, Kanturk, Mallow, Millstreet and Newmarket in the Kanturk Mallow Municipal District. Where appropriate Regeneration Areas have also been identified.

This section of the plan sets out proposals for population growth and other development objectives for the main towns.

Section 4 Key Villages
There are six Key Villages in the Kanturk Municipal District as follows - Ballydesmond, Banteer, Boherbue, Dromina, Knocknagree and Milford.

This section of the plan sets out proposed scale of growth and other development objectives for each of these main villages over the lifetime of the plan.

Section 5 Villages, Village Nuclei and Other Locations
There are 24 smaller villages and a number of other smaller village nuclei and other settlements in the Kanturk Mallow Municipal District as follows: Ballyclough, Ballydaly, Burnfort, Bweeng, Castlemagner, Cecilstown, Churchtown, Cullen, Derrinagree, Dromahane, Freemount, Glantane, Kilbrin, Kilcorney, Kiskeam, Liscarroll, Lismire, Lombardstown, Lyre, Meelin, New Twopothouse, Rathcoole, Rockchapel, Tullylease.

This section of the plan sets out proposed scale of development for each of the main villages and village nucleii and other settlements over the lifetime of the plan.

Section 6 Putting the Plan into Practice
This section of the plan assigns responsibility for the implementation of the Plan's policies to various agencies including the Local Authority. It also sets out the expected timeframes for the delivery of physical and social infrastructure, including the assignment of Plan priorities and funding streams necessary to secure key development objectives. It also outlines the approach to monitoring and how the Plan will inform other Plans within its functional area.

3.3 Natura 2000 Sites Within the Potential Impact Zone of the Plan

The Kanturk Mallow Municipal District covers the north west of the county extending to the county bounds with Kerry and Limerick. The plan encompasses the main towns of Kanturk, Mallow, Millstreet, Newmarket and Buttevant along with forty six villages /village nuclei and open countryside. The boundaries of the plan area are shown on **Figure 1** below. The Natura 2000 sites subject to screening are shown in **Figure 2**.

Figure 1: Cork Municipal Districts Areas

Figure 2 Natura Sites Subject to Screening

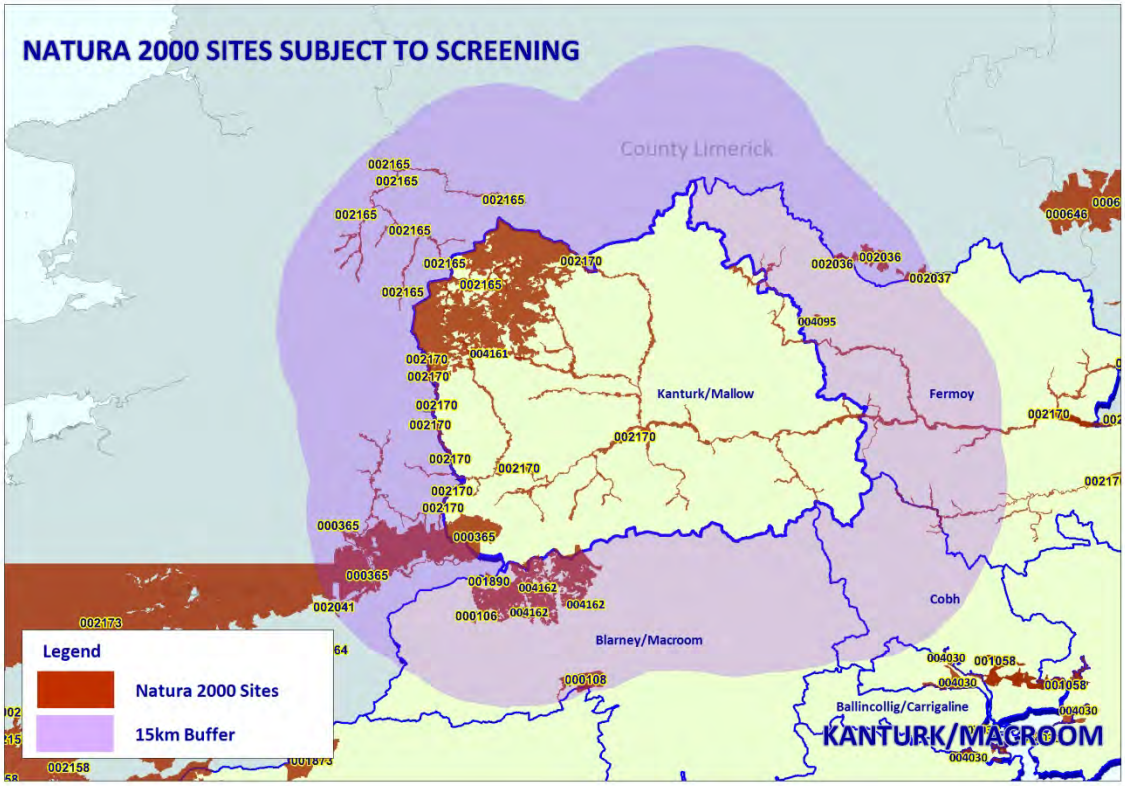

Table 1 sets out the Natura 2000 sites which are subject to screening in this report. It includes all Natura 2000 sites within the plan boundary area and Natura 2000 sites within 15km of the plan boundary. The habitats and species for which these sites are designated are also listed in Table 1 as are their Conservation Objectives. The potential for Natura 2000 sites that are >15km from the plan boundary area to be affected by policies set out in the draft plan was also considered. This could include sites which are hydrologically connected to watercourses or water bodies within the plan boundary area. No such sites were identified.

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
0106	St. Gobnet's Wood SAC	• Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] as set out in Conservation Objectives for St. Gobnet's Wood SAC February 13 2015 available at www.NPWS.ie
0108	The Gearagh SAC	• Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Rivers with muddy banks with Chenopodion rubric p.p. and Bientionp.p. vegetation [3270] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Rivers with muddy banks with Chenopodion rubric p.p. and Bientionp.p. vegetation [3270] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus*

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
		• *Lutra lutra* (Otter) [1355]	*excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Lutra lutra* (Otter) [1355] as set out in Conservation Objectives for the Gearagh SAC available at www.NPWS.ie
0365	Killarney National Park, Magillycuddy Reeks and Caragh River Catchment SAC	• Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] • Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • *Juniperus communis* formations on heaths or calcareous grasslands [5130] • Calaminarian grasslands of the Violetalia calaminariae [6130] • *Molinia* meadows on calcareous, peaty or	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] • Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • *Juniperus communis* formations on heaths or calcareous grasslands [5130]

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
		clayey-silt-laden soils (Molinion caeruleae) [6410] • Blanket bogs (* if active bog) [7130] • Depressions on peat substrates of the Rhynchosporion [7150] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Taxus baccata* woods of the British Isles [91J0] • *Geomalacus maculosus* (Kerry Slug) [1024] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Euphydryas aurinia* (Marsh Fritillary) [1065] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421] • *Najas flexilis* (Slender Naiad) [1833] • *Alosa fallax killarnensis* (Killarney Shad) [5046]	• Calaminarian grasslands of the Violetalia calaminariae [6130] • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] • Blanket bogs (* if active bog) [7130] • Depressions on peat substrates of the Rhynchosporion [7150] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Taxus baccata* woods of the British Isles [91J0] • *Geomalacus maculosus* (Kerry Slug) [1024] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Euphydryas aurinia* (Marsh Fritillary) [1065] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421]

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
			• *Najas flexilis* (Slender Naiad) [1833] • *Alosa fallax killarnensis* (Killarney Shad) [5046] as set out in Killarney National Park, Magillycuddy Reeks and Caragh River Catchment SAC Conservation Objectives February 13 2015 available at www.NPWS.ie
1890	Mullaghanish Bog SAC	• Blanket bogs (* if active bog) [7130]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • Blanket bogs (* if active bog) [7130] as set out in the Conservation Objectives for Mullaghanish Bog SAC February 13 2015 available at www.NPWS.ie
2036	Ballyhoura Mountains SAC	• Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030] • Blanket bogs (* if active bog) [7130]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030]

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
			• Blanket bogs (* if active bog) [7130] as set out in the Conservation Objectives for Ballyhoura Mountains SAC February 13 2015 available at www.NPWS.ie
2037	Carrigeenamronety Hill SAC	• *Trichomanes speciosum* (Killarney Fern) [1421]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • *Trichomanes speciosum* (Killarney Fern) [1421] as set out in the Conservation Objectives for Carrigeenamronety Hill SAC February 13 2015 available at www.NPWS.ie
2041	Old Domestic Building, Curraglass Wood SAC	• *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303]	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which this SAC has been selected: • *Rhinolophus hipposideros* (Lesser Horseshoe Bat) [1303] as set out in the Conservation Objectives for Old Domestic Building, Curraglass Wood SAC February 13

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
			2015 available at www.NPWS.ie
2165	Lower River Shannon SAC	• Sandbanks which are slightly covered by sea water all the time [1110] • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Coastal lagoons [1150] • Large shallow inlets and bays [1160] • Reefs [1170] • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • *Salicornia* and other annuals colonising mud and sand [1310] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	To maintain the favourable conservation condition of the following habitats and species for which the Lower River Shannon SAC is designated: • Sandbanks which are slightly covered by sea water all the time [1110] • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Large shallow inlets and bays [1160] • Reefs [1170] • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • *Salicornia* and other annuals colonising mud and sand [1310] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] • *Lampetra planeri* (Brook Lamprey) [1096]

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
		[6410] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • *Tursiops truncatus* (Common Bottlenose Dolphin) [1349] • *Lutra lutra* (Otter) [1355]	• *Lampetra fluviatilis* (River Lamprey) [1099] • *Tursiops truncatus* (Common Bottlenose Dolphin) [1349] and to restore the favourable conservation condition of • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Salmo salar* (Salmon) [1106] • *Coastal lagoons [1150] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • *Lutra lutra* (Otter) [1355] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] which are defined by attributes and targets set out in Conservation Objectives for Lower River Shannon SAC August 7 2012 available at www.NPWS.ie

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
2170	Blackwater River (Cork/Waterford) SAC	• Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Perennial vegetation of stony banks [1220] • *Salicornia* and other annuals colonising mud and sand [1310] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Taxus baccata* woods of the British Isles [91J0] • *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Petromyzon marinus* (Sea Lamprey) [1095] • *Lampetra planeri* (Brook Lamprey) [1096]	To maintain the favourable conservation condition of the following habitats and species for which the Blackwater River SAC is designated: • *Austropotamobius pallipes* (White-clawed Crayfish) [1092] • *Lampetra planeri* (Brook Lamprey) [1096] • *Lampetra fluviatilis* (River Lamprey) [1099] • *Salmo salar* (Salmon) [1106] • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Perennial vegetation of stony banks [1220] • *Salicornia* and other annuals colonising mud and sand [1310] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • *Trichomanes speciosum* (Killarney Fern) [1421] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] and to restore the favourable conservation condition of

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
		• *Lampetra fluviatilis* (River Lamprey) [1099] • Alosa fallax fallax (Twaite Shad) [1103] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355] • *Trichomanes speciosum* (Killarney Fern) [1421]	• *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] • *Petromyzon marinus* (Sea Lamprey) [1095] • Alosa fallax fallax (Twaite Shad) [1103] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Lutra lutra* (Otter) [1355] which are defined by attributes and targets set out in Conservation Objectives for Blackwater River SAC July 31 2012 available at www.NPWS.ie *status of *Taxus baccata* woods of the British Isles as a qualifying feature for this SAC is currently under review.
4028	Blackwater Estuary SPA	• Wigeon (*Anas penelope*) [A050] • Golden Plover (*Pluvialis apricaria*) [A140] • Lapwing (*Vanellus vanellus*) [A142] • Dunlin (*Calidris cygnus*) [A149]	To maintain the favourable conservation condition of the following bird species in the Blackwater Estuary SPA:

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
		• Black-tailed Godwit (*Limosa limosa*) [A156] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Curlew (*Numenius arquata*) [A160] • Redshank (*Tringa Tygnuss*) [A162] • Wetland and Waterbirds [A999]	• Wigeon (*Anas penelope*) [A050] • Golden Plover (*Pluvialis apricaria*) [A140] • Lapwing (*Vanellus vanellus*) [A142] • Dunlin (*Calidris cygnus*) [A149] • Black-tailed Godwit (*Limosa limosa*) [A156] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Curlew (*Numenius arquata*) [A160] • Redshank (*Tringa tygnuss*) [A162]and to maintain the favourable conservation condition of the wetland habitat in the Blackwater Estuary SPA as a resource for the regularly-occurring migratory birds that utilise it as defined by attributes and targets set out in Conservation Objectives Blackwater Estuary SPA May 17 2012 which are available at www.NPWS.ie
4095	Kilcolman Bog SPA	• Whooper Swan (*Cygnus cygnus*) [A038] • Teal (*Anas crecca*) [A052] • Shoveler (*Anas clypeata*) [A056] • Wetland and Waterbirds [A999]	To maintain or restore the favourable conservation condition of bird species listed as Special Conservation Interests for this SPA: • Whooper Swan (*Cygnus cygnus*) [A038] • Teal (*Anas crecca*) [A052] • Shoveler (*Anas clypeata*) [A056]

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
			and to maintain or restore the favourable condition of the wetland habitat at Kilcolman Bog as a resource for the regularly-occurring migratory waterbirds that utilise it as set out in the Conservation Objectives for Kilcolman Bog which are available at www.NPWS.ie
4109	The Gearagh SPA	• Wigeon (*Anas penelope*) [A050] • Teal (*Anas crecca*) [A052] • Mallard (*Anas platyrhynchos*) [A053] • Coot (*Fulica atra*) [A125] • Wetland and Waterbirds [A999]	To maintain or restore the favourable conservation condition of bird species listed as Special Conservation Interests for this SPA: • Wigeon (*Anas penelope*) [A050] • Teal (*Anas crecca*) [A052] • Mallard (*Anas platyrhynchos*) [A053] • Coot (*Fulica atra*) [A125] and to maintain or restore the favourable condition of the wetland habitat at the Gearagh as a resource for the regularly-occurring migratory waterbirds that utilise it as set out in the Conservation Objectives for the Gearagh SPA which are available at www.NPWS.ie

Table 1: All sites within the Kanturk-Mallow MD or otherwise identified as requiring screening			
Site Code	**Site Name**	**Qualifying Interests**	**Conservation Objectives**
4161	Stacks to Mullaghareirks Mountains, West Limerick Hills and Mountain Eagle SPA	• Hen Harrier (*Circus cyaneus*) [A082]	To maintain or restore the favourable conservation condition of bird species listed as Special Conservation Interests for this SPA: • Hen Harrier (*Circus cyaneus*) [A082] as set out in the Conservation Objectives for the Stacks to Mullaghareirks Mountains, West Limerick Hills and Mountain Eagle SPAwhich are available at www.NPWS.ie
4162	Mullaghanish to Musheramore Mountains SPA	• Hen Harrier (*Circus cyaneus*) [A082]	To maintain or restore the favourable conservation condition of bird species listed as Special Conservation Interests for this SPA: • Hen Harrier (*Circus cyaneus*) [A082] as set out in the Conservation Objectives for the Mullaghanish to Musheramore Mountains SPA which are available at www.NPWS.ie

3.4 Screening Assessment

Preliminary Screening

The purpose of this screening exercise is to identify whether any of the policies or zoning objectives set out in the draft plan could have the potential to give rise to negative effects on any of the Natura 2000 sites listed above.

As a preliminary assessment, the Natura 2000 sites were assessed to identify whether there was any hydrological or other linkage between them and the plan areas, or whether implementation of the plan would require exploitation of resources (e.g. water) from within any Natura 2000 site (identifying potential pathways for impact). The results of this preliminary screening are set out in **Table 2 below**.

Table 2: Preliminary Screening Assessment

Site Name	**Screening Determination**
St. Gobnet's Wood SAC (0106)	This site is approximately 7km from the boundary of the Kanturk-Mallow MD. There are no proposals in the plan which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required in respect of this SAC. **No further assessment required.**
The Gearagh SAC (0108)	This SAC is located approximately 14km south of the Kanturk-Mallow MD. There is no overlap between the catchment of the Gearagh and the Kanturk-Mallow MD. There are no proposals in the plan which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required in respect of this SAC. **No further assessment required.**
Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC (0365)	The portion of this large SAC which occurs in Cork is located in the uplands on the Cork Kerry border within the Kanturk-Mallow MD. However it is not located proximal to any settlements for which policy is proposed in the plan. There are no proposals in the plan which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required

Table 2: Preliminary Screening Assessment	
Site Name	**Screening Determination**
	in respect of this SAC
Mullaghanish Bog SAC (1890)	This is a small SAC located in the uplands north of Ballyvourney on the Cork Kerry border. The Cork portion of the site is located within the Blarney-Macroom MD, approximately 2km from the SAC. The SAC is not located proximal to any settlements for which policy is proposed in the plan. There are no proposals in the plans which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required in respect of this SAC. **No further assessment required.**
Ballyhoura Mountains SAC (2036)	This is an upland SAC located on the Cork Limerick border north of Doneraile. The Cork portion of the SAC is located in the Fermoy MD Electoral Area. The SAC is approximately 7km from the boundary of the Kanturk-Mallow MD. There are no proposals in the plans which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required in respect of this SAC. **No further assessment required.**
Carrigeenamronety Hill SAC (2037)	This is an upland SAC located on the Cork Limerick border north of Doneraile. The Cork portion of the SAC is located in the Fermoy MD Electoral Area. The SAC is approximately 14km from the boundary of the Kanturk-Mallow MD. There are no proposals in the plans which relate to the use of resources from within the site or which direct activity into the SAC. No potential for impacts are identified and no further assessment is required in respect of this SAC. **No further assessment required.**
Lower River Shannon SAC (2165)	The Cork portion of this large SAC is located in the north-west portion of the Kanturk- Mallow MD. The settlement boundary of **Rockchapel** overlaps with the SAC and treated wastewater from this settlement discharges directly to the Feale River which forms part of the SAC.

Table 2: Preliminary Screening Assessment	
Site Name	**Screening Determination**
	Further assessment is required.
Blackwater River SAC (2170)	This is a large SAC which includes the main channel of the Blackwater as well as the Owenagappul, Allow, Awbeg, Funshion and the Bride Rivers as well as their tributaries. The SAC runs through the Kanturk-Mallow MD. The boundaries of a number of settlements within the Municipal District overlap with the SAC. These include the settlements boundaries of **Mallow, Kanturk, Buttevant, Millstreet, Ballydesmond, Freemount, Kishkeam, Kilcorney, Lombardstown, Nad, Cullen** and **Dromalour**. Further assessment is required in respect of policies associated with these settlements. Waste water treatment plants associated with a number of settlements within the Municipal District discharge treated wastewater directly to the SAC. These include treatment plants in the settlements of **Buttevant, Kanturk (and Sally's Cross), Mallow, Newmarket, Ballydesmond, Banteer, Boherbue, Knocknagree, Cullen, Dromahane, Freemount, Kilcorney, Kishkeam, Lombardstown, Rathcool** and **Nad** A number of settlements have a hydrological connection to the SAC. Some of these have WWTPs discharging to watercourses within the catchment of the SAC. Further assessment is required in respect of policies associated with these settlements. These settlements are **New-Twopothouse, Meelin, Ballyclough, Banteer**, **Derrinagree, Burnfort, Lyre, Aubane, Curraraigue, Gortroe and Lisgriffen**. Discharges from treatment plants or surface water discharges could have the potential to affect water quality in the SAC and/or could have the potential to affect hydrological processes in the river. Further screening is required in respect of policies proposed for the above listed settlements. There are two surface water abstractions which provide drinking water to settlements within this MD area from watercourses within the SAC. These are on the Clyda River supplying **Mallow** and on Allow River supplying **Freemount**. Drinking water for a number of other settlements is provided from wells located within the SAC at **Ballydesmond**, **Kiskeam** and **Newmarket** which also require further consideration.

Table 2: Preliminary Screening Assessment	
Site Name	**Screening Determination**
	Riverside walks are proposed in a number of towns and villages within this MD. Some of these run through the Blackwater River SAC which will require further consideration. The relevant settlements are **Kanturk, Millstreet**, **Buttevant** and **Killavullen**. There are no direct hydrological linkages between the settlements of **Ballydaly, Cloghboola, Lismire, Taur, Ballyhass, Dromagh/Dromtariff, Laharn Cross Roads** and **Old Twopothouse (Hazelwood)** and the SAC and there are no proposals in the plan which relate to the use of resources from within this site or which direct activity into the SAC. No potential for impact is identified and no further assessment is required. **Further assessment is required.**
Blackwater Estuary SPA (4028)	This SPA is located at the mouth of the Blackwater River in Youghal. It overlaps with the Blackwater River SAC. It has a hydrological connection to all of the settlements situated on the Blackwater and the Bride including those within the Fermoy MD area. The largest of these being **Killavullen**, **Castletownroche**, **Ballyhooly**, **Fermoy, Ratchcormac** and **Castlelyons**. Discharges from treatment plants in these settlements could have the potential to contribute to elevated nutrients within this catchment which could have the potential to affect the quality or extent of wetland habitats within this SPA. **Further assessment is required.**
Kilcolman Bog SPA (4095)	The nearest settlement to this site is Buttevant which is over 3.5km from the site. There are no proposals in the plan which relate to the use of resources from within this site or which direct activity into the SPA. No potential for impact is identified and no further assessment is required in respect of this SPA. **No further assessment is required.**
The Gearagh SPA 94109)	This SPA is located approximately 14km south of the Kanturk-Mallow MD. There is no overlap between the catchment of the Gearagh and the

Table 2: Preliminary Screening Assessment	
Site Name	**Screening Determination**
	Kanturk-Mallow MD. There are no proposals in the plan which relate to the use of resources from within the site or which direct activity into the SPA. No potential for impacts are identified and no further assessment is required in respect of this SPA. **No further assessment is required.**
Mullaghanish to Mushermore SPA (4162)	This SPA lies primarily within the Blarney-Macroom MD, with a very small overlap into the Kanturk-Mallow MD. The nearest settlement to this site is **Cloghboola** which is over 2km from the SPA. There are no proposals in the plan which relate to the use of resources from within this site or which direct activity into the SPA. No potential for impact is identified and no further assessment is required in respect of this SPA. **No further assessment is required.**
Stack's to Mullaghareirks Mount Eagle Bog and West Limerick Hills SPA (4161)	This is a large SPA which lies in the north west of Cork and whose boundaries extend into Kerry and Limerick. The development boundaries of **Ballydesmond**, **Rockchapel Taur** and **Knockaclarig** overlap with or bound the SPA. Further assessment is required in relation to these three settlements. The settlements of **Newmarket, Meelin, Tullylease** and **Kishkeam** are located in excess of 1km from the SPA. There are no proposals in the plan which relates to the use of resources from within these sites or which direct activity into the SPA. No potential for impact is identified and no further assessment is required in respect of these settlements. **No further assessment is required.**

Potential for significant negative effects were screened out as a result of preliminary screening for the following Natura 2000 sites:

Code	**Site Name**
0106	St.Gobnet's Wood Special Area of Conservation
0108	The Gearagh Special Area of Conservation
0365	Killarnery National Park, Macgillicuddy's Reeks and Caragh River Catchment SAC
1890	Mullaghanish Bog Special Area of Conversation

2036 Ballyhoura Mountains Special Area of Conservation
2037 Carrigeenamronety Hill Special Area of Conservation
4095 Kilcolman Bog Special Protection Area
4109 The Gearagh Special Protection Area
4162 Mullaghanish to Mushermore Special Protection Area

Detailed Screening

Further screening was then completed for the remaining sites. These are sites which are located in areas where hydrological or other possible ecological linkages have been identified between them and settlements for which policy is proposed at preliminary screening stage. Screening has been completed having regard to plan policies and zoning objectives. Particular attention has been paid in this exercise to policies which could

- direct development into areas within or adjacent to Natura 2000 sites;
- give rise to a risk of increased levels of disturbance affecting populations of species in any Natura 2000 site;
- encourage increased recreational or other human activity within or near any Natura 2000 sites;
- give rise to increased pressure on environmental resources (e.g. water) which could affect any Natura 2000 sites;
- increase risk of spread of invasive species within or near Natura 2000 sites; or
- influence how land within or close to Natura 2000 sites is developed and managed in the future.

The focus of detailed screening is on the following sites:

Code	**Site Name**
2165	Lower River Shannon Special Area of Conservation
2170	Blackwater River Special Area of Conservation
4028	Blackwater Estuary Special Protection Area
4161	Stack's to Mullaghareirks Mount Eagle Bog and West Limerick Hill Special Protection Area

The qualifying interests and conservation objectives which have been set for each of these sites are summarised in **Appendix I.** The outcomes of screening assessments completed for each of these sites is set out below.

Lower River Shannon SAC (2165) - Screening Assessment
SAC Description and Key Concerns
This is a very large SAC, most of which is located in Co's Clare and Limerick, but which

incorporates the River Feale, the headwaters of which rise in the north west of Co. Cork. The SAC is designated for a large number of coastal and marine habitats and species, woodland habitats as well as freshwater habitats and species. The Cork portion of the site (the Feale) is an important Salmonid river. This portion of the site is of importance for some of the freshwater species for which the SAC is designated including Salmon, Lamprey species and Otter. The site is designated for the protection of Freshwater Pearl Mussel, however this species is associated with a small sub catchment of the SAC (Cloon River) in Co. Clare which is unconnected to the Feale. The qualifying features for which this site is designated, and their associated Conservation Objectives are listed in **Appendix I** of this report.

The targets which are required to be met to protect freshwater habitats and species within this SAC are to ensure that water quality reaches a minimum of **Q4 – Good Status**; to maintain a stable hydrological regime; to protect the natural extent and quality of riverbed habitats with low levels of sediment and algal and macrophyte growth; and to maintain open channels and free passage of fish.

The portion of the Feale which lies in Co. Cork is assigned Good to High Status (EPA Envision Maps, 2012 data).

In the context of the LAP, and having regard to the Conservation Objectives which apply to this site, the key concerns are to ensure that

- zoning policies for lands within settlements with boundaries which overlap with the SAC are compatible with the protection of the SAC;
- policies in the plan will not result in increased nutrient loading to aquatic systems within the SAC or its catchment;
- policies in the plan will not affect natural hydrological processes within the receiving catchment; and
- policies within the plan will not put undue recreational pressure on river bank habitats or associated species.

Assessment

Boundary Issues: The SAC runs through the village of **Rockchapel**. Designated land within the SAC within the village boundary comprises the main channel of the river and its associated riparian zone. This land is zoned as Open Space – unsuited to development. The DB-01 objective for Rockchapel clarifies that development in the village can only be progressed where it is shown to be compatible with the requirements of the Habitats Directive. It is considered that lands within the SAC which lie within the Rockchapel settlement boundary are adequately protected against pressure for development.

Water Quality Issues – Waste-water Treatment: The waste-water treatment plant for Rockchapel discharges directly to the Feale on the western boundary of the village. The discharge is certified by the EPA. Table 2.3 of the plan identifies which WWTP's in the Kanturk-Mallow MD have capacity to cater for the proposed additional growth. The Rockchapel plant is coded green (broadly adequate water services capacity). While the plant may have capacity to cater for the proposed growth, it is not known whether the discharge from the plan is affecting water quality, and the EPA Inspectors Report for the certificate indicates that there was an issue downstream of the plant at the time the report was completed (2011). There is no more recent information readily available to determine whether the discharges from this plant are affecting water quality in the Feale, this will need to be assessed as and when development proposals arise in this settlement.

Issues Relating to Hydrology:
The maintenance of open water and stable hydrological processes in the Feale is an important component in ensuring the protection of river substrates which can support healthy freshwater habitats and sustainable populations of freshwater species. In order to ensure that new development in Rockchapel can be accommodated without affecting natural hydrological processes in the Feale, it will be important to ensure that new development provided for by this plan will be designed to ensure the protection of riparian areas and compliance with flood risk policy. New development will also need to integrate sufficient attenuation measures to prevent increases in surface water run-off.

Flood Policy is set out in Section 1 (Policy Ref IN-01) of the plan and the requirement to ensure that new development incorporates an acceptable means of surface water disposal is referenced in General Objectives associated with individual settlements and flood plain lands which lie within the SAC in Rockchapel are zoned as Open Space, not suitable for development. General Objective Villages GO-01(f) clarifies requirements in relation to surface water management and attenuation in the villages within the *Blackwater* catchment. It is recommended that this be extended to include the settlements within the catchment of the Lower River Shannon (ie Rockchapel). This would ensure that new development within the village would not pose a risk of increasing volumes of surface water run off to the SAC.

There are no surface water abstractions from the Feale.

Developments Within the SAC:
The plan does not propose the development of walkways or any other amenities within the boundaries of the SAC.

Conclusion

Nutrients Issues:

DB-01(c) clarifies that new development in Rockchapel can only proceed where appropriate waste water infrastructure is in place which can accommodate same. Subject to adherence to this policy position, it is considered that development in Rockchapel which is proposed through this plan can be accommodated without giving rise to significant negative effects on this SAC.

Hydrological Issues:
General Objective Villages GO-01(f) clarifies requirements in relation to surface water management and attenuation in the villages within the *Blackwater* catchment. It is recommended that this be extended to include the settlements within the catchment of the Lower River Shannon (ie Rockchapel). This would ensure that new development within the village would not pose a risk of increasing volumes of surface water run off to the SAC.

Overall Conclusion:
Some changes to the draft plan are required to ensure compliance with the Habitats Directive. It is recommended that these changes would be made at the amendments stage. Subject to the implementation of these changes and adherence to protective policies set out in the LAP, it is considered that potential for development supported by this plan to give rise to significant negative effects on the Lower River Shannon can be ruled out.

Blackwater River SAC (2170) - Screening Assessment

SAC Description and Key Concerns

The Blackwater River Special Area of Conservation is a very large site extending from its headwaters on the Cork Kerry border to its estuary at Youghal on the Cork Waterford border. It incorporates the main channels of the Blackwater, Bride, Allow and Awbeg as well as their many tributaries and to the Licky River (Co. Waterford) which meets the sea upstream of Youghal. The site is designated for the protection of a number of freshwater and estuarine habitat types, woodland habitat types, freshwater mammalian, fish and invertebrate species as well as the protected plant species the Killarney Fern.

The qualifying features and conservation objectives of this SAC are listed in **Appendix I** of this report and include the freshwater invertebrate species Freshwater Pearl Mussel. The conservation objective for this species as currently published, requires the restoration of its favourable conservation status in the entire Blackwater catchment. However, the Department of Arts, Heritage, Rural, Regional and Gaeltacht affairs has notified Cork County Council of its intention to amend this objective and the Freshwater Pearl Mussel Regulations of 2009, so that they apply only to the Allow River upstream of Kanturk and to the Licky River. **Freemount** village is the only settlement in the Kanturk-Mallow MD which lies within that portion of the SAC to which the Freshwater Pearl Mussel Conservation Objective applies.

The targets which are required to be met to protect freshwater habitats and species within this SAC (other than in the Allow upstream of Kanturk and in the Licky), are to ensure that water quality reaches a minimum of **Q4 – Good Status**; to maintain a stable hydrological regime; to protect the natural extent and quality of riverbed habitats with low levels of sediment and algal and macrophyte growth; and to maintain open channels and free passage of fish. The targets which are required to be met to restore the favourable conservation condition of Freshwater Pearl Mussel in the Allow River, will require the restoration of water quality to **Q5 – High Status** in respect of macroinvertebrates and phytobenthos; restoration of substratum quality so that there are well oxygenated, have low levels of sediments and algal and macrophyte growth and that host fish populations are maintained and protected.

Water quality in the catchment is variable. Much of the main channel of the Blackwater is assigned Good to High Status, however some sections of the river and some of its tributaries have been assigned Moderate to Poor Status only. Much of the main channel of the Bride River is assigned Good Status, however one of its tributaries (Flesk) is assigned Poor status (EPA 2012). The Allow River is assigned Good – High Status along most of its length. The Awbeg is assigned Good status along most of its length (EPA Envision Maps, 2012 data).

In the context of the LAP, and having regard to the Conservation Objectives which apply to this site, the key concerns are to ensure that

- zoning policies for lands within settlements with boundaries which overlap with the SAC are compatible with the protection of the SAC;
- the river systems which form part of or feed into the Blackwater River SAC have sufficient assimilative capacity to cope with the additional nutrient loading which will be generated by the increased population growth provided for in this plan;
- policies in the plan will not result in increased nutrient loading to aquatic systems within the SAC or its catchment;
- policies in the plan will not affect natural hydrological processes within the receiving catchment; and
- policies within the plan will not put undue recreational pressure on river bank habitats or associated species.

Assessment

Boundary Issues:

Settlements within the Kanturk-Mallow MD whose boundaries overlap with the Blackwater River Special Area of Conservation are **Mallow**, **Kanturk**, **Buttevant**, **Millstreet**, **Ballydesmond**, **Freemount**, **Kiskeam**, **Kilcorney**, **Lombardstown** and **Nad.**

Some of these lands lie within areas zoned as Open Space and are unlikely to come under pressure for development. While no SAC lands within these settlements are zoned specifically

for development, lands within the SAC without a specific Open Space zoning could come under pressure to be developed. In respect of these areas, Development boundary (DB) and General (G) objectives in the plan clarify that development in these settlements can only be progressed where it is shown to be compatible with the requirements of the Habitats Directive. In order to reduce pressure for development in these areas, it is recommended that consideration be given to zoning SAC land within the settlement boundaries of these towns as Open Space - not suitable for development, at the amendments stage.

Water Quality Issues – Waste-water Treatment:
Many of the freshwater species for which the SAC is designated are sensitive to changes in water quality and have the potential to be affected by changes in water quality which could be brought about by increasing nutrient inputs. Waste water treatment plants associated with a number of settlements within the Kanturk-Mallow MD discharge treated wastewater directly to the SAC. These include the settlements of **Buttevant, Kanturk (and Sally's Cross), Mallow, Newmarket, Ballydesmond, Banteer, Boherbue, Knocknagree, Cullen, Dromahane, Freemount, Kilcorney, Kishkeam, Lombardstown, Rathcool** and **Nad.**

Waste-water treatment plants associated with the settlements of **Millstreet, Ballyclogh, Bweeng, Cecilstown, Churchtown, Castlemagner**, **Glantane, Kilbrin, Liscarroll, Lyre** and **Meelin,** discharge to watercourses within the catchment of the SAC.

The plan proposes population target increases for these settlements in accordance with the Core Strategy set out in the 2014 County Development Plan. The catchment must have sufficient assimilative capacity to cater for the additional loading which will arise from growth proposed in these settlements (Note: this is not assessed in this report), and the respective WWTP's must not only have capacity, but must be operating in accordance with their license conditions and be shown not to be having a negative effect on water quality, in order to be satisfied that the proposed growth established in the plan can be accommodated, while ensuring compliance with the Habitats Directive and with the Water Framework Directive.

Table 2.3 of the plan identifies which of the plants associated with the settlements identified above have capacity to cater for the additional growth during the lifetime of the plan and which of the plants will require further investment to increase capacity, through a colour coding system. While plants coded green in the draft LAP do not have capacity issues, there may be other issues pertaining to these plants which have resulted in lack of compliance with their license conditions, or, in some cases, where the plants are identified to be affecting downstream water quality. These plants will require investment and upgrading to ensure not only that capacity issues are addressed, but also that issues relating to license compliance and impacts on water quality are addressed. It is stated in relevant Development Boundary and General Objectives in the plan that development will not be permitted unless it can be shown that wastewater infrastructure is in place which will secure the objectives of the Habitats Directive

and the Water Framework Directive. In the interest of clarity, it is recommended that consideration be given at the amendments stage to identifying the WWTPs which have issues (other than capacity issues) which may require investment or further improvements at the plant in order to accommodate proposed growth.

Licensed WWTP's in the Blackwater Catchment which were identified to be having an observable negative effect on water quality and/or where there were issues relating to license compliance in 2015 are **Buttevant, Kanturk, Mallow, Millstreet, Newmarket, Banteer, Boherbue** and **Bweeng.**

Settlements which have a certified waste waters discharge to riverine systems within the SAC or its catchment are **Ballydesmond**, **Knocknagree , Ballyclogh, Castlemagner, Ceclistown, Churchtown, Cullen, Dromahane, Freemount, Glantane, Kilbrin, Kilcorney, Kiskeam, Liscarroll, Lombardstown, Lyre, Meelin** and **Rathcoole**. There is no information readily available to determine whether the discharges from WWTPs in these settlements are affecting water quality. This will need to be assessed as and when development proposals arise in these settlements which requires connection to the WWTP. Other smaller settlements in the catchment also have hydrological connectivity to the SAC although they do not have WWTP's.

Issues Relating to Hydrology:
The maintenance of open water and stable hydrological processes in freshwater river systems within the SAC is an important component in ensuring the protection of river substrates which can support healthy freshwater habitats and sustainable populations of freshwater species. Many of the settlements in the Kanturk-Mallow MD are located along river systems and some of the land within these settlements is identified to be at risk of flooding. Surface water running off these settlements is generally discharged to the nearest watercourse. Some of the settlements rely on the rivers of the SAC for their drinking water supply. Both surface water inputs and abstractions from rivers can have the potential to affect natural hydrological processes in rivers.

In order to ensure that new development can be accommodated without affecting natural hydrological processes, it will be important to ensure that surface water discharges are maintained at Greenfield rates and that increased levels of water abstraction from SAC rivers does not affect natural hydrological processes.

General objectives for each of the main towns (KK-GO-05, MW-GO-04, MS-GO-08, NK-GO-08 and BV-GO-08) clearly state that adequate provision must be made for surface water management and disposal, as do general objectives for the villages (Key Village (GO-01-d) and Other villages (GO-01-f). Flood Policy is set out in Section 1 (Policy Ref IN-01) of the plan. Compliance with these policies should ensure that new development provided for in this plan will not increase hydrological pressures on the Blackwater River SAC.

There are two surface water abstractions which provide drinking water to settlements within this MD area. These are on the Clyda River supplying **Mallow** and on Allow River supplying **Freemount**. It is unclear at this point whether the increased growth proposed for these settlements will require increasing the volume of water to be abstracted from these sources. It will be necessary to carry out ecological assessment in respect of any proposals to increase the volume of water to be abstracted from watercourses within the SAC to facilitate new development proposed in this plan. It is recommended that this would be clarified in the plan.

Freshwater Pearl Mussel Catchment Issues:

The only settlement within the LAP area which lies within the catchment of the Freshwater Pearl Mussel is **Freemount**. The plan allows for the development of up to twenty new dwellings in this settlement, although Table 2.3 identifies that there may not be sufficient capacity in the WWTP to allow for this. Development boundary objective DB-01(d) for this settlement clarifies that a wastewater and stormwater plan will be produced for Freemount during the lifetime of the LAP. The purpose of the plan will be to be to establish standards which will be required in terms of both surface water management and waste water management to be met to ensure that this development target can be met without interfering with the achievement of the Conservation Objective which has been set for the Freshwater Pearl Mussel in this catchment. It should be possible to confirm through the preparation of this plan whether the development targets proposed with this settlement can be progressed without interfering with the achievement with the Conservation Objective which have been set for this portion of the SAC. Strict adherence to policy DB-01d – Freemount will be required to ensure compliance with the requirements of the Habitats Directive.

Developments Within the SAC:

Riverside walks can provide an attractive amenity for residents and visitors to towns and villages and a number are proposed through this plan. It will be important that any such walks are designed sensitively to ensure that impacts on riverside and riverbank habitats and disturbance to species such as Otter are avoided. Riverside walks are proposed in the towns of **Kanturk (**KK U-04), **Millstreet (**MS U-03) and **Buttevant** (U-01). Where such walks/cycleways are linked to river banks, it is recommended that consideration would be given to adding explanatory text to their related objectives to clarify that such walks must be designed sensitively to ensure that their development and use will not cause damage to sensitive habitats or disturbance to freshwater fauna.

Conclusion

Nutrients Issues:

It is stated in relevant Development Boundary and General Objectives for relevant settlements in the plan that development will not be permitted unless it can be shown that wastewater infrastructure is in place which will secure the objectives of the Habitats Directive and the Water

Framework Directive. For some settlements, additional capacity may need to be provided to allow development to proceed in accordance with the plan. For other settlements there may be assimilative capacity, plant design or outfall location issues which will also need to be addressed. In the interest of clarity, it is recommended that consideration be given at the amendments stage to identifying the WWTPs which have issues (other than capacity issues) which may require investment or further improvements at the plants in order to accommodate proposed growth.

Subject to adherence to DB and GO objectives which clarify the constraints on development associated with provision of appropriate wastewater treatment infrastructure, and provided it can be shown that the receiving watercourses have sufficient assimilative capacity to cater for the additional growth which is proposed in the individual settlements within this MD which are within the Blackwater catchment, it is considered that the growth which is proposed in this plan can be accommodated without giving rise to significant negative effects on the Blackwater River SAC.

Hydrological Issues:
Development objectives clarify that new development within settlements must make adequate provision for stormwater disposal. General objectives for each of the main towns (KK-GO-05, MW-GO-04, MS-GO-08, NK-GO-08 and BV-GO-08) clearly state that adequate provision must be made for surface water management and disposal, as do general objectives for the villages (Key Village (GO-01-d) and Other villages (GO-01-f). Flood Policy is set out in Section 1 (Policy Ref IN-01) of the plan. Subject to adherence to these policies should it is considered that new development provided for in this plan will not increase hydrological pressures on the Blackwater River SAC.

Boundary Issues:
In order to reduce pressure for development within this SAC, where the boundaries of the SAC overlap with settlement boundaries, it is recommended that these areas be zoned as Open Space - not suitable for development. This applies to land within the settlements of **Mallow**, **Kanturk**, **Buttevant**, **Millstreet**, **Ballydesmond**, **Freemount**, **Kiskeam**, **Lombardstown** and **Nad**.

Abstraction Issues:
It is recommended that it would be clarified in the plan that increasing abstractions from freshwater sources within the SAC (Clyda River for Mallow, Allow River for Freemount) will be subject to Habitats Directive Assessment and will only be permitted where it is shown that the abstraction can be achieved without interfering with the achievement of the Conservation Objectives which are established for this SAC.

Walkways:
It is recommended that explanatory text would be added to objectives **Kanturk** (KK U-04),

Millstreet (MS U-03) and **Buttevant** (U-01) to clarify that these walks must be designed sensitively to ensure that their development and use will not cause damage to sensitive habitats or disturbance to freshwater fauna within the Blackwater River SAC.

Overall Conclusion:
Some changes to the draft plan are required to ensure compliance with the Habitats Directive. It is recommended that these changes would be made at the amendments stage. Subject to the implementation of these changes and adherence to protective policies set out in the LAP, it is considered that potential for development supported by this plan to give rise to significant negative effects on the Blackwater River SAC can be ruled out.

Blackwater Estuary SPA (4028) - Screening Assessment

SPA Description and Key Concerns
This is a sheltered south-facing estuary, located on the eastern boundary of Co. Cork. The principle habitat types are mudflats and sandflats, with saltmarsh fringing the estuarine channels. The site is of high ornithological importance for its variety and numbers of wintering waterfowl, in particular its internationally important population of Black-tailed Godwit, as well as a range of other species. This site overlaps with the estuarine portion of the Blackwater River SAC. The qualifying interests of the SPA and their Conservation Objectives are set out in **Appendix 1** of this report.

This SPA is approximately 60 km downstream from the Kanturk-Mallow MD. However, all discharges to river systems in the catchment of the Blackwater will pass through the estuary, and consideration must be given to potential for discharges associated with development provided for by this plan, to contribute to cumulative negative effects on water quality and estuarine habitats within the SPA, and ultimately on the health of populations of birds reliant on those habitats.

Water quality in the estuary was assessed to be reaching Moderate status (EPA Envision Maps, 2010-2012). The primary potential source of impact on the SPA relates to the growth targets for settlements in the Kanturk-Mallow MD area which have treatment plants discharging into the rivers within the catchment of the Blackwater. Unless these rivers have sufficient assimilative capacity and the settlements have appropriate treatment infrastructure to cater for the additional growth, there is a risk that new development would give rise to increased nutrient inputs to the system, affecting water quality and potentially affecting estuarine habitats and their dependant bird species.

Assessment
Policies in the plan require the provision of appropriate waste-water treatment infrastructure to

be provided in all settlements within the MD, which can cater for the additional growth proposed in the area. The infrastructure must be in place in advance of new development progressing and must be capable of treating effluent to a standard to ensure it can comply with WFD and Habitats Directive requirements.

Table 2.3 of the plan identifies which of the plants associated with the settlements identified above have capacity to cater for the additional growth during the lifetime of the plan and which of the plants will require further investment to increase capacity, through a colour coding system. While plants coded green in the draft LAP do not have capacity issues, there may be other issues pertaining to these plants which have resulted in lack of compliance with their license conditions, or, in some cases, where the plants are identified to be affecting downstream water quality. These plants will require investment and upgrading to ensure not only that capacity issues are addressed, but also that issues relating to license compliance and impacts on water quality are addressed. It is stated in relevant Development Boundary and General Objectives in the plan that development will not be permitted unless it can be shown that wastewater infrastructure is in place which will secure the objectives of the Habitats Directive and the Water Framework Directive. In the interest of clarity, it is recommended that consideration be given at the amendments stage to identifying the WWTPs which have issues (other than capacity issues) which may require investment or further improvements at the plant in order to accommodate proposed growth.

Licensed WWTP's which were identified to be having an observable negative effect on water quality and/or where there were issues relating to license compliance in 2015 are **Buttevant, Kanturk, Mallow, Millstreet, Newmarket, Banteer, Boherbue** and **Bweeng.**

Settlements which have a certified waste waters discharge to riverine systems within the SAC or its catchment are **Ballydesmond**, **Knocknagree , Ballyclogh, Castlemagner, Ceclistown, Churchtown, Cullen, Dromahane, Freemount, Glantane, Kilbrin, Kilcorney, Kiskeam, Liscarroll, Lombardstown, Lyre, Meelin** and **Rathcoole**. There is no information readily available to determine whether the discharges from WWTPs in these settlements are affecting water quality. This will need to be assessed as and when development proposals arise in these settlements. Other smaller settlements in the catchment also have hydrological connectivity to the SAC although they do not have WWTP's.

Conclusion

Nutrients Issues:

It is stated in relevant Development Boundary and General Objectives for relevant settlements in the plan that development will not be permitted unless it can be shown that wastewater infrastructure is in place which will secure the objectives of the Habitats Directive and the Water

Framework Directive. For some settlements, additional capacity may need to be provided to allow development to proceed in accordance with the plan. For other settlements there may be assimilative capacity, plant design or outfall location issues which will also need to be addressed. In the interest of clarity, it is recommended that consideration be given at the amendments stage to identifying the WWTPs which have issues (other than capacity issues) which may require investment or further improvements at the plants in order to accommodate proposed growth.

Subject to adherence to DB and GO objectives which clarify the constraints on development associated with provision of appropriate wastewater treatment infrastructure, and provided it can be shown that the receiving watercourses have sufficient assimilative capacity to cater for the additional growth which is proposed in the individual settlements within this MD which are within the Blackwater catchment, it is considered that the growth which is proposed in this plan can be accommodated without giving rise to significant negative effects on the Blackwater Estuary SPA.

Overall Conclusion:
Some changes to the draft plan are required to ensure compliance with the Habitats Directive. It is recommended that these changes would be made at the amendments stage. Subject to the implementation of these changes and adherence to protective policies set out in the LAP, it is considered that potential for development supported by this plan to give rise to significant negative effects on the Blackwater Estuary SPA can be ruled out.

Stack's to Mullaghareirks, West Limerick Hills and Mountain Eagle SPA (4161) – Screening Assessment

SPA Description and Key Concerns
This is a very large upland site which is located across the borders of Cork, Kerry and Limerick. The site was designated as it was known to support the largest concentration of breeding Hen Harrier in the country, however the population of breeding Hen Harrier within the area has been in significant decline since the designation of the SPA. Short-eared Owl, a species which is very rare in Ireland and also listed on Annex I of the Birds Directive has also been known to breed in this site. The site is designated for the protection of Hen Harrier. Designation criteria and other information about this site is included in Appendix I of this report.

In the context of this report, the key requirements will be to ensure that

- policy in the plan does not encourage or direct development into SPA;
- policy in the plan will not encourage activities within the SPA which could have the potential to give rise to significant disturbance related impacts on Hen Harrier.

Assessment The boundaries of the settlements of **Rockchapel** and **Taur** overlap with the SPA. Most of the land designated as SPA in **Rockchapel** is zoned as Open Space not suitable for development, with only a very small parcel of SPA land occurring outside this zone. It is considered unlikely that these minor boundary overlaps will result in significant pressure for development within the SPA or could result in significant loss of availability of breeding or foraging habitat to Hen Harrier within the SPA. No other policies in the plan are identified which could result in negative effects on the SPA.
Conclusion No policies in the plan have been identified which could pose a risk of impact on this SPA. No further assessment is required.

4 Screening Conclusions and Recommendations

Kanturk-Mallow Municipal District Local Area Plan – Consultation Draft Screening Conclusion	
Natura 2000 sites subject to Screening for Appropriate Assessment	St. Gobnet's Wood 0106 The Gearagh SAC 0108 Killarney National Park, Magillycuddy Reeks and Caragh River Catchment SAC 0365 Mullaghanish Bog 1890 Ballyhoura Mountains 2036 Carrigeenamronety Hill 2037 Old Domestic Building, Curraglass Wood 2041 Lower River Shannon 2165 Blackwater River (Cork/Waterford) SAC 2170 Blackwater Estuary SPA 4028 Kilcolman Bog 4095 The Gearagh 4109 Stacks to Mullaghareirks Mountains, West Limerick Hills and Mountain Eagle SPA 4161 Mullaghanish to Musheramore Mountains SPA 4162
Description of the Plan	See Section 2 of this report.
Is the Plan Directly Connected with Or	No

Necessary to the Management of the Natura 2000 sites identified above	
Are there other projects or plans that together with this plan could give rise to cumulative impacts on any of the above listed sites.	Other plans that set land use policy and promote the intensification of economic, tourism, agriculture and forestry activity in within the catchments of Cork Harbour, South East Cork and the Blackwater River, may include policies whose implementation could result in negative 'in combination' effects on habitats and species for which the above listed sites are designated include *inter alia*: • Atlantic Gateways Initiative 2006 • Common Agricultural Policy (2014-2020) • Cork Area Strategic Plan (2008) • Cork County Development Plan 2015 • Fermoy MD Draft Local Area Plan 2016 • East Cork MD Local Area Plan • Forests, products and people – Irelands forest policy-a renewed vision 2014 • Harvest 2020-A Vision for Irish Agri-Food and Fisheries • National Climate (2007-2012) Climate Adaptation Framework (2012) • National Development Plan 2007-2013 • National Renewable Energy Action Plan • National Spatial Strategy • National Tourism Action Plan 2016-2018 • National Waste Management Plan 2004-2009 • North and West Cork Strategic Plan 2002-2020 • Smarter Travel. A New Transport Policy for Ireland 2009-2020 • South Western Regional Planning Guidelines 2010-2022 The primary issues of concern are • policies which could result in increased pressure for development within Natura 2000 sites; • policies resulting in an increased pressure on water quality in sensitive catchments; • policies which may hinder natural hydrological processes

	in freshwater systems;
Assessment of Significant Effects	
Describe how the plan (alone or in combination is likely to affect Natura 2000 sites)	The key policy areas which were identified at the draft plan screening stage which could have the potential to give rise to impacts on the Natura 2000 networks were: • policies which could result in increased pressure for development within Natura 2000 sites; • policies resulting in an increased pressure on water quality in sensitive catchments; • policies which may hinder natural hydrological processes within the in freshwater systems; and
Recommended Changes to the plan	A number of recommendations for modifications to the draft plan are proposed to ensure compliance with the Habitats and Birds Directives. These are summarised below. **Lower River Shannon SAC –** Modify General Objective GO-01(f) for the villages to include the catchment of the Feale River as well as the rivers of the Blackwater catchment. **Blackwater River SAC –** Zone undeveloped SAC land identified as exiting built up area in Mallow, Kanturk, Buttevant, Millstreet, Ballydesmond, Freemount, Kiskeam, Kilcorney, Lombardstown and Nad as Open Space not suitable for development; Identify WWTP's in the plan where there are water quality impacts and/or license compliance issues to be addressed in order to facilitate development as proposed to proceed **Buttevant, Kanturk, Mallow, Millstreet, Newmarket, Banteer, Boherbue** and **Bweeng**; Clarify that any proposals to increase volumes of abstraction of water from the Clyda (Mallow supply) or Allow (Freemount) must be subject to Habitats Directive Assessment; Modify objectives KK-U-04, MS U-03 and Buttevant U-01 relating to proposed walks within the SAC to clarify that these must be designed sensitively to ensure that their development and use will not cause damage to sensitive habitats or disturbance to freshwater fauna.

	Blackwater Estuary SPA - Identify in the plan WWTP's where there are water quality impacts and/or license compliance issues to be addressed in order to facilitate development as proposed to proceed; **Stack's to Mullaghareirks Mount Eagle Bog and West Limerick Hills SPA –** No changes required.
List of Agencies Consulted	The draft plan and this report will be referred to all of the relevant Statutory Authorities and will available for consideration by the general public from November 16th 2016.
Conclusion	Subject to adherence to protective policies in the plan relating to provision of appropriate waste water infrastructure and management of surface water, and to adoption of recommended changes as set out above, it is considered that potential for this plan to give rise to significant negative effects on the Natura 2000 network can be screened out.
Data Collected to Carry Out the Assessment	
Who carried out the assessment	Planning Policy Unit Cork County Council
Sources of Data	See references
Level of Assessment Completed	Screening for Appropriate Assessment
Where can the full results of the assessment be accessed and viewed	Habitats Directive Assessment will continue through the process of making this plan. All documents associated with the process will be available at www.corkcoco.ie

5 Next Steps

5.1 Post Consultation

Submissions or observations regarding the **Kanturk Mallow Municipal District Draft Local Area Plan** document and to the Environmental Report and Habitats Directive Screening Report are now welcome up to 4pm on Friday 6th January 2017.

All such submissions lodged within the above period and prior to the close of business at 4.00pm on Friday 06th January 2017, will be taken into consideration in the finalisation of the Local Area Plan, and proposed amendments will be published during a second round of public consultation which will commence in the spring of 2017. Proposed amendments will be subject to Habitats Directive Screening Assessment and the findings of that assessment will be published alongside the proposed amendments.

6 Sources of Information

6.1 National Parks and Wildlife Service Data

Information relating to individual Natura 2000 sites including Article 17 Conservation Assessment Reports for Habitats and Species In Ireland (2013), individual site synopses, Natura 2000 data forms, and information relating to the qualifying features and conservation objectives of individual sites was sourced from the NPWS database (www.NPWS.ie)

6.2 Guidance

Guidance used in the preparation of this report included the following:

European Communities, Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Communities, 2000.

European Communities, 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. European Communities, 2001.

Environment, Heritage and Local Government. Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. 2009.

Appendix I

Lower River Shannon SAC (Site code2165)

Qualifying Interests

1110 Sandbanks which are slightly covered by sea water all the time
1130 Estuaries
1140 Mudflats and sandflats not covered by seawater at low tide
1150 Coastal lagoons
1160 Large shallow inlets and bays
1170 Reefs
1220 Perennial vegetation of stony banks
1230 Vegetated sea cliffs of the Atlantic and Baltic coasts
1310 *Salicornia* and other annuals colonising mud and sand
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
1410 Mediterranean salt meadows (Juncetalia maritimi)
3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation
6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)
91E0 *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)
1029 Freshwater Pearl Mussel
1095 Sea Lamprey
1096 Brook Lamprey
1099 River Lamprey
1106 Atlantic Salmon
1349 Common Bottlenose Dolphin
1355 Otter

Conservation Objectives - Attributes and Targets (summary)

***Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029]**					
Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Lower River Shannon SAC					
Attribute/Target					
Distribution	**Population Size**	**Population Structure: recruitment**	**Population Structure: adult mortality**	**Habitat Extent**	**Water quality: macroinverts and phytobenthos (diatoms)**
Maintain at 7km (Cloon River Co. Clare)	Restore to 10,000 adults.	Restore to least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	Restore suitable habitat in more than 3.3km and any additional stretches necessary for salmonid spawning	Restore water quality macroinvertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93

***Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] cont'd**				
Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Lower River Shannon SAC				
Attribute/Target				
Substratum quality: filamentous algae (macroalgae), macrophytes (rooted higher plants)	**Substratum quality: sediment**	**Substratum quality: oxygen availability**	**Hydrological regime: flow variability**	**Host Fish**
Restore substratum quality-filamentous algae: absent or trace (<5%); macrophytes: absent or traces (<5%)	Restore substratum quality-stable cobble and gravel substrate with very little fine material; no artificially	Restore to no more than 20% decline from water column to 5cm depth in substrate	Restore appropriate hydrological regimes	Maintain sufficient juvenile salmonids to host glochidial larvae

	elevated levels of fine sediment			

***Petromyzon marinus* (Sea Lamprey) [1095]**				
Conservation Objective: To restore the favourable conservation condition of Sea Lamprey in the Lower River Shannon SAC				
Attribute/Target				
Distribution: extent of anadromy	**Population structure of juveniles**	**Juvenile density in fine sediment**	**Extent and distribution of spawning habitat**	**Availability of juvenile habitat**
Greater than 75% of main stem length of rivers accessible from estuary	At least three age/size groups present	Juvenile density at least 1/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive

***Lampetra planeri* (Brook Lamprey) [1096]**				
Conservation Objective: To maintain the favourable conservation condition of Brook Lamprey in the Lower River Shannon SAC				
Attribute/Target				
Distribution: extent of anadromy	**Population structure of juveniles**	**Juvenile density in fine sediment**	**Extent and distribution of spawning habitat**	**Availability of juvenile habitat**
Access to all watercourses down to first order streams	At least three age/size groups of brook/river lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive

***Lampetra fluviatilis* (River Lamprey) [1099]**
Conservation Objective: To maintain the favourable conservation condition of River Lamprey in the Lower River Shannon SAC

Attribute/Target				
Distribution: extent of anadromy	**Population structure of juveniles**	**Juvenile density in fine sediment**	**Extent and distribution of spawning habitat**	**Availability of juvenile habitat**
Access to all watercourses down to first order streams	At least three age/size groups of river/brook lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive

***Salmo salar* (Salmon) [1106]**					
Conservation Objective: To restore the favourable conservation condition of Salmon in the Lower River Shannon SAC					
Attribute/Target					
Distribution: extent of anadromy	**Adult spawning fish**	**Salmon fry abundance**	**Out-migrating smolt abundance**	**Number and distribution of reeds**	**Water quality**
100% of river channels down to second order accessible from estuary	Conservation Limit (CL) for each system consistently exceeded	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5min sampling	No significant decline	No decline in number and distribution of spawning reeds due to anthropogenic causes	At least Q4 at all sites sampled by EPA

Sandbanks which are slightly covered by sea water all the time [1110]		
Conservation Objective: To maintain the favourable conservation condition of Sandbanks with are slightly covered by sea water all the time in the Lower River Shannon SAC		
Attribute/Target		
Habitat Distribution	**Habitat Area**	**Community Distribution**

The distribution of sandbanks is stable, subject to natural processes	The permanent habitat area is stable or increasing, subject to natural processes	Conserve the following community type in a natural condition: Subtidal sand to mixed sediment with *Nephtys* spp. community complex.

Estuaries [1130]	
Conservation Objective: To maintain the favourable conservation condition of Estuaries in the Lower River Shannon SAC	
Attribute/Target	
Habitat Area	**Community Distribution**
Permanent habitat area is stable or increasing, subject to natural processes	Conserve the following community types in natural conditions: Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex; Estuarine subtidal muddy sand to mixed sediment with gammarids community comlex; subtidal sand to mixed sediment with *Nucula nucleus* community complex; Subtidal sand to mixed sediment with *Nephtys* spp. community complex; Fucoid-dominated intertidal reef community complex; Faunal turf-dominated subtidal reef community; and Anemone-dominated subtidal reef community.

Mudflats and sandflats not covered by seawater at low tide [1140]	
Conservation Objective: To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide for the Lower River Shannon SAC	
Attribute/Target	
Habitat Area	**Community Distribution**
The permanent habitat is stable or increasing subject to natural processes	Conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates* spp. community; and Intertidal sand to mixed sediment with polychaetes, molluscs and

	crustaceans community complex

***Coastal lagoons [1150]**					
Conservation Objective: To restore the favourable conservation condition of Coastal lagoons in the Lower River Shannon SAC					
Attribute/Target					
Habitat Area	**Habitat Distribution**	**Salinity Regime**	**Hydrological Regime**	**Barrier connectivity between lagoon and sea**	**Water quality chlorophyll a**
Area stable or increasing, subject to natural processes.	No decline subject to natural processes	Median annual salinity and temporal variation within natural ranges	Annual water level fluctuations and minima within natural ranges	Appropriate hydrological connections between lagoons and sea, including where necessary, appropriate management	Annual median chlorophyll a within natural ranges and less than 5µg/l

***Coastal lagoons [1150] cont'd**					
Conservation Objective: To restore the favourable conservation condition of Coastal lagoons in the Lower River Shannon SAC					
Attribute/Target					
Water quality: Molybdate Reactive Phosphorus	**Water quality: Dissolved Inorganic Nitrogen**	**Depth of macrophyte colonisation**	**Typical plant species**	**Typical animal species**	**Negative indicator species**
Annual median MRP within natural ranges and less than 0.1mg/l	Annual median DIN within natural ranges and less than 0.15mg/l	Macrophyte colonisation to maximum depth of lagoons	Maintain number and extent of listed lagoonal specialists, subject to natural	Maintain listed lagoon specialists, subject to natural variation	Negative indicator species absent or under control

			variation		

Large shallow inlets and bays [1160]	
Conservation Objective: To maintain the favourable conservation condition of Large shallow inlets and bays in the Lower River Shannon SAC	
Attribute/Target	
Habitat Area	**Community Distribution**
The permanent habitat area is stable or increasing, subject to natural processes	Conserve the following community types in a natural condition: Intertidal sand with *Scolelepis squamata* and *Pontocrates* spp. community; Intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans community complex; Subtidal sand to mixed sediment with *Nucula nucleus* community complex*;* Subtidal sand to mixed sediment with Nephytys *spp.* community complex; Fucoid-dominated intertidal reef community complex; Mixed subtidal reef community complex; Faunal turf-dominated subtidal reef community; Anemone-dominated subtidal reef community; and *Laminaria*-dominated community complex

Reefs [1170]		
Conservation Objective: To maintain the favourable conservation condition of Reefs in Lower River Shannon SAC		
Attribute/Target		
Habitat Distribution	**Habitat Area**	**Community Structure**
The distribution of reefs should remain stable subject to natural processes.	The permanent habitat area is stable, subject to natural processes.	Conserve the following community types in a natural condition: Fucoid-dominated intertidal reef community complex; Mixed subtidal reef community complex; Faunal turf-dominated subtidal reef community; and *Laminaria*-dominated community complex.

Perennial vegetation of stony banks [1220]					
Conservation Objective: To maintain the favourable conservation condition of Perennial vegetation of stony banks for the Lower River Shannon SAC					
Attribute/Target					
Habitat Area	**Habitat Distribution**	**Physical structure: functionality and sediment supply**	**Vegetation structure: zonation**	**Vegetation composition: typical species and sub-communities**	**Vegetation composition: negative indicator species**
Area stable or increasing, subject to natural processes including erosion and succession	No decline, or change in habitat distribution, subject to natural processes.	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain the typical vegetated shingle flora including the range of sub-communities within the different zones	Negative indicator species (including non-natives) to represent less than 5% cover

Vegetated Sea Cliffs of the Atlantic and Baltic coasts [1230]							
Conservation Objective: To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in Lower River Shannon SAC							
Attribute/Target							
Habitat Length	**Habitat Distribution**	**Physical structure: functionality and hydrological regime**	**Vegetation structure: zonation**	**Vegetation structure: vegetation height**	**Vegetation composition: typical species and sub-communities**	**Vegetation composition: negative indicator species**	**Vegetation composition: bracken and woody species**
Area stable, subject to	No decline subject to	No alteration to natural functioning of	Maintain range of sea cliff	Maintain the structural	Maintain the range of sub	Negative indicator species	Cover of bracken on grassland

natural processes	natural processes	geomorphological and hydrological processes due to artificial structures	habitat zonations including transitional zones, subject to natural processes due to natural processes including erosion and succession	variation within sward	communities with typical species listed in the Irish Sea Cliff Survey	(including non natives) to represent less than 5% cover	and/or heath less than 10%. Cover of woody species on grassland and/or heath less than 20%

***Salicornia* and other annuals colonising mud and sand**									
Conservation Objective: To maintain the favourable conservation condition of *Salicornia* and other annuals colonising mud and sand in Lower River Shannon SAC									
Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition: typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina anglica***
Stable or increasing	No decline or change in habitat distribution	Maintain natural circulation of sediments and organic matter, without any	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain the range of coastal habitats including transitional zones,	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain the presence of species-poor communities listed in SMP	No significant expansion of common cordgrass with an annual

		physical obstructions			subject to natural processes including erosion and succession				spread of less than 1% where it is known to occur

Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae) 1330									
Conservation Objective: To restore the favourable conservation condition of Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae) for Lower River Shannon SAC									
Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition: typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina anglica***
Area stable or increasing subject to natural processes including erosion and succession	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass, with an annual spread of less than 1%

					succession				

***Tursiops truncatus* (Common Bottlenose Dolphin) [1349]**		
Conservation Objective: To maintain the favourable conservation condition of Common Bottlenose Dolphin in the Lower River Shannon SAC		
Attribute/Target		
Access to suitable habitat	**Habitat use: critical areas**	**Disturbance**
Species range within the site should not be restricted by artificial barriers to site use	Critical areas, representing habitat used preferentially by bottlenose dolphin, should be maintained in a natural condition	Human activities should occur at levels that do not adversely affect the bottlenose dolphin population at the site

Lutra Lutra (*Otter*)							
Conservation Objective: To restore the favourable conservation condition of Lutra Lutra (*Otter*) in the Lower River Shannon SAC							
Attribute/Target							
Distribution	**Extent of terrestrial habitat**	**Extent of marine habitat**	**Extent of freshwater (river) habitat**	**Extent of freshwater (lake/lagoon) habitat**	**Couching sites and holts**	**Fish biomass available**	**Barriers to connectivity**
No significant decline	No significant decline	No significant decline	No significant decline	No significant decline	No significant decline	No significant decline	No significant increase

Mediterranean salt meadows (Juncetalia maritimi) [1410]
Conservation Objective: To restore the favourable conservation condition of Mediterranean salt meadows (Juncetalia maritimi) for Lower River Shannon SAC

Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition: typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina Anglica***
Area stable or increasing subject to natural processes including erosion and succession	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain / restore creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass, with an annual spread of less than 1%

Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]

Conservation Objective: To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

Attribute/Target									
Habitat area	**Habitat distribution**	**Hydrological regime: river flow**	**Hydrological regime: tidal influence**	**Hydrological regime: freshwater**	**Substratum composition: particle size**	**Water quality nutrients**	**Vegetation composition: typical**	**Floodplain connectivity**	**Riparian habitat**

				seepages	**range**		**species**		
Area stable or increasing subject to natural processes	No decline, subject to natural processes	Maintain appropriate hydrological regimes	Maintain natural tidal regime	Maintain appropriate freshwater seepage regimes	The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition	Typical species of the relevant habitat sub-type should be present and in good condition	They are of active floodplain at and upstream of the habitat should be maintained	The area of riparian woodland at and upstream of the bryophyte-rich sub-type should be maintained

***Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]**									
Conservation Objective: To maintain the favourable conservation condition of *Molinia* meadows on calcareous, peaty or clayey-silt laden soils (*Molinion caeruleae*) in the Lower River Shannon SAC									
Attribute/Target									
Habitat area	**Habitat distribution**	**Vegetation structure: broadleaf herb: grass ratio**	**Vegetation structure: sward height**	**Vegetation composition: typical species**	**Vegetation composition: negative indicator species**	**Vegetation composition: negative indicator moss species**	**Vegetation structure: woody species and bracken**	**Physical structure: bare ground**	**Physical structure: bare ground**
No decline subject to natural processes	No decline, subject to natural processes	Broadleaf herb component of vegetation between 40 and 90%	30-70% of sward between 10 and 80cm high	At least 7 positive indicator species present, including 1 'high quality' species	No decline, subject to natural processes	Negative indicator species collectively not more than 20% cover, with cover by an individual	Bog mosses (*Sphagnum*) not more than 10% cover; hair mosses (*Polytrichum* spp) not more than 25%	Cover of wood species and bracken not more than 5% cover	Not more than 10% bare ground

						species less than 10%. Non-native invasive species, absent or under control	cover		

***Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]**					
Conservation Objective: To restore the favourable conservation condition of *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Lower River Shannon SAC					
Attribute/Target					
Habitat Area	**Habitat Distribution**	**Woodland size**	**Woodland structure: cover and height**	**Woodland structure: community diversity and extent**	**Woodland Structure: natural regeneration**
Area stable or increasing subject to natural processes	No decline	Area stable or increasing. Where topographically possible 'large' woods at least 25ha in size and 'small woods' at least 3 ha in size	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi-mature trees and shrubs; and well developed herb layer	Maintain diversity and extent of community types	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] cont'd
Conservation Objective: To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Lower River Shannon SAC

Attribute/Target						
Hydrological regime: Flooding depth/height of water table	**Woodland structure: dead wood**	**Woodland structure: veteran trees**	**Woodland structure: indicators of local distinctiveness**	**Vegetation composition: native tree cover**	**Vegetation composition: typical species**	**Vegetation composition: negative indicator species**
Appropriate hydrological regime necessary for maintenance of alluvial vegetation	At least $30m^3$/ha of fallen timber; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)	No decline	No decline.	No decline. Native tree cover not less than 95%	A variety of typical native species present, depending on woodland type, including alder, willows, and locally, oak and ash	Negative indicator species, particularly non-native invasive species, absent or under control

NPWS (2012) Conservation Objectives: Lower River Shannon SAC 2165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Blackwater River SAC (Site Code 2170)

Qualifying Interests

1130 Estuaries
1140 Mudflats and sandflats not covered by seawater at low tide
1220 Perennial vegetation of stony banks
1310 *Salicornia* and other annuals colonising mud and sand
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
1410 Mediterranean salt meadows (Juncetalia maritimi)
3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation
91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
91E0 *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)
91J0 **Taxus baccata* woods of the British Isles
1029 Freshwater Pearl Mussel
1092 White-clawed Crayfish
1095 Sea Lamprey
1096 Brook Lamprey
1099 River Lamprey
1103 Twaite Shad
1106 Atlantic Salmon
1355 Otter
1421 Killarney Fern

Conservation Objectives - Attributes and Targets (summary)

Margaritifera margaritifera **(Freshwater Pearl Mussel) [1029]**
Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Blackwater River SAC

Attribute/Target					
Distribution	**Population Size**	**Population Structure: recruitment**	**Population Structure: adult mortality**	**Habitat Extent**	**Water quality: macroinverts and phytobenthos (diatoms)**
Maintain at 161km	Restore to 35,000 adult mussels.	Restore to least 20% of population no more than 65mm in length; and at least 5% of population no more than 30mm in length	No more than 5% decline from previous number of live adults counted; dead shells less than 1% of the adult population and scattered in distribution	Restore suitable habitat in more than 35km and any additional stretches necessary for salmonid spawning	Restore water quality macroinertebrates: EQR greater than 0.90; phytobenthos: EQR greater than 0.93

Margaritifera margaritifera **(Freshwater Pearl Mussel) [1029] cont'd**

Conservation Objective: To restore the favourable conservation condition of Freshwater Pearl Mussel in the Blackwater River SAC

Attribute/Target				
Substratum quality: filamentous algae (macroalgae), macrophytes (rooted higher plants)	**Substratum quality: sediment**	**Substratum quality: oxygen availability**	**Hydrological regime: flow variability**	**Host Fish**
Restore substratum quality- filamentous algae: absent or trace (<5%); macrophytes: absent or trace (<5%)	Restore substratum quality- stable cobble and gravel substrate with very little fine material; no artificially elevated levels of fine sediment	Restore to no more than 20% decline from water column to 5cm depth in substrate	Restore appropriate hydrological regimes	Maintain sufficient juvenile salmonids to host glochidial larvae

***Austropotamobius pallipes* White-clawed Crayfish 1092**					
Conservation Objective: To maintain the favourable conservation condition of White-clawed Crayfish in the Blackwater River SAC					
Attribute/Target					
Distribution	**Population Structure Recruitment**	**Negative Indicator Species**	**Disease**	**Water Quality**	**Habitat Quality Heterogeneity**
No reduction from baseline	Juveniles and/or females with eggs in at least 50% of positive samples	No alien crayfish species	No instances of disease	At least Q 3-4 at all sites sampled by EPA	No decline in heterogeneity or habitat quality

***Petromyzon marinus* (Sea Lamprey) [1095]**				
Conservation Objective: To restore the favourable conservation condition of Sea Lamprey in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	**Population structure of juveniles**	**Juvenile density in fine sediment**	**Extent and distribution of spawning habitat**	**Availability of juvenile habitat**
Greater than 75% of main stem length of rivers accessible from estuary	At least three age/size groups present	Juvenile density at least 1/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive

***Lampetra planeri* (Brook Lamprey) [1096]**				
Conservation Objective: To maintain the favourable conservation condition of Brook Lamprey in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of	**Population structure of**	**Juvenile density in fine**	**Extent and distribution of**	**Availability of juvenile**

anadromy	juveniles	sediment	spawning habitat	habitat
Access to all watercourses down to first order streams	At least three age/size groups of brook/river lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive

***Lampetra fluviatilis* (River Lamprey) [1099]**				
Conservation Objective: To maintain the favourable conservation condition of River Lamprey in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	**Population structure of juveniles**	**Juvenile density in fine sediment**	**Extent and distribution of spawning habitat**	**Availability of juvenile habitat**
Access to all watercourses down to first order streams	At least three age/size groups of river/brook lamprey present	Mean catchment juvenile density of brook/river lamprey at least 2/m^2	No decline in extent and distribution of spawning beds	More than 50% of sample sites positive for brook/river lamprey juveniles

***Alosa fallax* (Twaite Shad) [1099]**				
Conservation Objective: To restore the favourable conservation condition of Twaite Shad in the Blackwater River SAC				
Attribute/Target				
Distribution: extent of anadromy	**Population structure: age classes**	**Extent and distribution of spawning habitat**	**Water quality and oxygen levels**	**Spawning habitat quality: Filamentous algae; macrophytes; sediment**
Greater than 75% of main stem length of rivers accessible from estuary	More than one age class present	No decline in extent and distribution of spawning habitats	No lower than 5mg/l	Maintain stable gravel substrate with very little fine algal (macroalgae growth and macrophyte (rooted higher plant) growth

***Salmo salar* (Atlantic Salmon) [1106]**					
Conservation Objective: To maintain the favourable conservation condition of Salmon in the Blackwater River SAC					
Attribute/Target					
Distribution: extent of anadromy	**Adult spawning fish**	**Salmon fry abundance**	**Out-migrating smolt abundance**	**Number and distribution of reeds**	**Water quality**
100% of river channels down to second order accessible from estuary	Conservation Limit (CL) for each system consistently exceeded	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5min sampling	No significant decline	No decline in number and distribution of spawning reeds due to anthropogenic causes	At least Q4 at all sites sampled by EPA

Estuaries [1130]			
Conservation Objective: To maintain the favourable conservation condition of Estuaries in the Blackwater River SAC			
Attribute/Target			
Habitat Area	**Community Extent**	**Community Structure: *Mytilus edulis* density**	**Community Distribution**
Permanent habitat area is stable or increasing, subject to natural processes (1208ha)	Maintain the extent of the *Mytilus edulis* – dominated community, subject to natural processes.	Conserve the high quality of the *Mytilus edulis* – dominated community, subject to natural processes.	Conserve the following community types in natural conditions: Intertidal estuarine sandy mud community complex; Subtidal estuarine fine sand with *Bathyporeia* spp. community complex; Sand and mixed sediment with polychaetes and crustaceans community complex; Coarse sediment community complex.

Mudflats and sandflats not covered by seawater at low tide [1140]				
Conservation Objective: To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide for the Blackwater River SAC				
Attribute/Target				
Habitat Area	**Community extent**	**Community structure: *Zostera* shoot density**	**Community structure: *Mytilus edulis* density**	**Community Distribution**
The permanent habitat is stable or increasing subject to natural processes 284ha.	Maintain the extent of the *Zostera* and *Mytilus edulis* dominated communities, subject to natural processes	Conserve the high quality of the *Zostera* dominated community, subject to natural processes	Conservation the high quality of the *Mytilus edulis* dominated community, subject to natural processes	The following community types should be conserved in a natural condition: Intertidal estuarine sandy mud community complex and Sand and mixed sediment with polychaetes and crustaceans community complex

Perennial vegetation of stony banks [1220]					
Conservation Objective: To maintain the favourable conservation condition of Perennial vegetation of stony banks for the Blackwater River SAC					
Attribute/Target					
Habitat Area	**Habitat Distribution**	**Physical structure: functionality and sediment supply**	**Vegetation structure: zonation**	**Vegetation composition: typical species and sub-communities**	**Vegetation composition: negative indicator species**
Area stable or	No decline, or change in	Maintain the natural	Maintain the range of	Maintain the typical	Negative indicator

increasing, subject to natural processes including erosion and succession	habitat distribution, subject to natural processes.	circulation of sediment and organic matter, without any physical obstructions	coastal habitats including transitional zones, subject to natural processes including erosion and succession	vegetated shingle flora including the range of sub-communities within the different zones	species (including non-natives) to represent less than 5% cover

***Salicornia* and other annuals colonising mud and sand**									
Conservation Objective: To maintain the favourable conservation condition of *Salicornia* and other annuals colonising mud and sand in Blackwater River SAC									
Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition : typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina anglica***
Stable or increasing subject to natural processes	No decline or change in habitat distribution, subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain the presence of species-poor communities listed in SMP	No significant expansion of common cordgrass with an annual spread of less than 1% where it is known to occur

Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae) 1330									
Conservation Objective: To restore the favourable conservation condition of Atlantic Salt Meadows (Glauco-Puccinellietalia maritimae) for the Blackwater River SAC									
Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition: typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina anglica***
Area stable or increasing subject to natural processes including erosion and succession (min 30.90ha)	No decline or change in habitat distribution subject to natural processes	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Maintain natural tidal regime	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Maintain structural variation in sward	Maintain more than 90% of area outside creeks vegetated	Maintain range of sub-communities with typical species listed in SMP	No significant expansion of common cordgrass, with an annual spread of less than 1%

Lutra Lutra (*Otter*)							
Conservation Objective: To restore the favourable conservation condition of Lutra Lutra (*Otter*) in the Blackwater River SAC							
Attribute/Target							
Distribution	**Extent of terrestrial habitat**	**Extent of marine habitat**	**Extent of freshwater (river) habitat**	**Extent of freshwater (lake) habitat**	**Couching sites and holts**	**Fish biomass available**	**Barriers to connectivity**
No significant decline	No significant decline. Area mapped and calculated as 103ha above HWM; 1165.7ha along river banks/around ponds	No significant decline. Area mapped as 647.2ha	No significant decline. Length mapped and calculated as 599.54km	No significant decline. Area mapped and calculated as 25.06ha	No significant decline	No significant decline	No significant increase

Mediterranean salt meadows (Juncetalia maritimi) [1410]									
Conservation Objective: To restore the favourable conservation condition of Mediterranean salt meadows (Juncetalia maritimi) for Kenmare River SAC									
Attribute/Target									
Habitat Area	**Habitat Distribution**	**Physical Structure: sediment supply**	**Physical structure: creeks and pans**	**Physical structure: flooding regime**	**Vegetation structure: zonation**	**Vegetation structure: height**	**Vegetation structure: vegetation cover**	**Vegetation composition: typical species and sub-communities**	**Vegetation structure: negative indicator species – *Spartina Anglica***
Area stable or increasing	No decline or change in	Maintain natural	Maintain creek and	Maintain natural tidal	Maintain range of	Maintain structural	Maintain more than	Maintain range of sub-	No significant expansion of

subject to natural processes including erosion and succession	habitat distribution subject to natural processes	circulation of sediments and organic matter, without any physical obstructions	pan structure, subject to natural processes, including erosion and succession	regime	coastal habitats including transitional zones, subject to natural processes including erosion and succession	variation in sward	90% of area outside creeks vegetated	communities with typical species listed in SMP	common cordgrass, with an annual spread of less than 1%

Killarney Fern (*Trichomanes speciosum*)							
Conservation Objective: To maintain the favourable conservation condition of Killarney Fern in the Blackwater River SAC							
Attribute/Target							
Distribution	**Population size**	**Habitat Extent**	**Hydrological conditions: visible water**	**Hydrological conditions: water**	**Hydrological conditions: humidity**	**Light levels: shading**	**Invasive Species**
No decline. Two locations known within the SAC	Maintain size and extent of existing colonies, including sporophyte from counts and number of gametophyte patches	No loss of suitable habitat, such as shaded rock crevices, caves or gullies in, or near to, known colonies. No loss of woodland canopy at or near to known	Maintain hydrological conditions at the locations so that all colonies are in dripping or damp seeping habitats, and water is visible at all locations	No increase. Presence of desiccated sporophyte mats indicates conditions are unsuitable	No increase. Presence of dessicated sporophyte fronds or gametophyte mats indicates conditions are unsuitable	No changes due to anthropogenic impacts	Absent or under control

		locations					

Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]							
Conservation Objective: To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in the Blackwater River SAC							
Attribute/Target							
Habitat area	**Habitat area**	**Hydrological regime: river flow**	**Hydrological regime: tidal influence**	**Substratum composition: particle size range**	**Water quality nutrients**	**Vegetation composition: typical species**	**Floodplain connectivity**
Area stable or increasing subject to natural processes	No decline, subject to natural processes	Maintain appropriate hydrological regimes	Maintain natural tidal regime	The substratum should be dominated by the particle size ranges, appropriate to the habitat sub-type (typically sands, gravels and cobbles)	The concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition	Typical species of the relevant habitat sub-type should be present and in good condition	The area of active floodplain at and upstream of the habitat should be maintained

Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles					
Conservation Objective: To maintain the favourable conservation condition of Old Sessile Oak Woods in the Blackwater River SAC					
Attribute/Target					
Habitat Area	**Habitat Distribution**	**Woodland Size**	**Woodland Structure: cover and height**	**Woodland Structure; community diversity and extent**	**Woodland Structure: natural regeneration**

Area stable or increasing, subject to natural processes at least 263.7ha for subsites surveyed	No decline	Area stable or increasing. Where topographically possible, ''large'' woods at least 25ha in size and ''small'' woods at least 3ha in size	Diverse structure with a relatively closed canopy containing mature trees; sub-canopy layer with semi mature trees and shrubs; and well-developed herb layer	Maintain diversity and extent of community types	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy

Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles cont'd					
Conservation Objective: To maintain the favourable conservation condition of Old Sessile Oak Woods in the Blackwater River SAC					
Attribute/Target					
Woodland Structure: dead wood	**Woodland Structure: veteran trees**	**Woodland Structure: indicators of local distinctiveness**	**Vegetation composition: native tree cover**	**Vegetation composition: typical species**	**Vegetation composition: negative indicator species**
At least 30m3/ha of fallen timber greater than 10cm diameter; 30 snags/ha;; both categories should include stems greater than 40cm diameter	No decline	No decline	No decline. Native tree cover not less than 95%	A variety of typical native species present, depending on woodland type, including Sessile Oak and Birch	Negative indicator species, particularly non-native invasive species , absent or under control

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
Conservation Objective: To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Blackwater River SAC

Attribute/Target					
Habitat Area	**Habitat Distribution**	**Woodland size**	**Woodland structure: cover and height**	**Woodland structure: community diversity and extent**	**Woodland Structure: natural regeneration**
Area stable or increasing subject to natural processes, at least 19.2ha for sites surveyed	No decline	Area stable or increasing. Where topographically possible 'large' woods at least 25ha in size and 'small woods' at least 3 ha in size	Diverse structure with a relatively closed canopy containing mature trees; sub-canopy layer with semi-mature trees and shrubs; and well developed herb layer	Maintain diversity and extent of community types	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy

Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) [91E0] cont'd

Conservation Objective: To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) in the Blackwater River SAC

Attribute/Target						
Hydrological regime: Flooding depth/height of water table	**Woodland structure: dead wood**	**Woodland structure: veteran trees**	**Woodland structure: indicators of local distinctiveness**	**Vegetation composition: native tree cover**	**Vegetation composition: typical species**	**Vegetation composition: negative indicator species**
Appropriate hydrological regime necessary for maintenance of alluvial vegetation	At least 30m^3/ha of fallen timber; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter	No decline	No decline.	No decline. Native tree cover not less than 95%	A variety of typical native species present, depending on woodland type, including alder, willows, and locally, oak and ash	Negative indicator species, particularly non-native invasive species, absent or under control

	in the case of alder)					

NPWS (2012) Conservation Objectives: Blackwater River SAC 2165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Screening Report for Blackwater Estuary SPA 004028

Qualifying Interests

Wigeon(Anas Penelope) {A050}
Golden Plover (Pluvialis apricaria) {A140}
Lapwing (Vanellus vanellus) {A142}
Dunlin (Calidris alpine alpine) {A149}
Black-tailed Godwit (Limosa limosa) {A156}
Bar-tailed Godwit (Limosa lapponica) {A157}
Curlew (Numenius arquata) {A160}
Redshank (Tringa tetanus) {A162}
Wetland and Waterbirds {A999}

Conservation Objectives - Attributes and Targets (summary)

{A050} Wigeon *Anas Penelope*			
Conservation Objective: To maintain the favourable conservation condition of Wigeon in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document

Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by teal, other than that occurring from natural patterns of variation	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objective: To maintain the favourable conservation condition of Golden Plover in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by Golden Plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

[A142] Lapwing *Vanellus vanellus*			
Conservation Objective: To maintain the favourable conservation condition of Lapwing in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of	No significant decrease in the range,	Waterbird distribution from the

	areas	timing or intensity of use of areas by Lapwing, other than that occurring from natural patterns of variation	2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

[A149] Dunlin *Calidris alpina alpina*			
Conservation Objective: To maintain the favourable conservation condition of Dunlin in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by Black-tailed Godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

[A156] Black-tailed Godwit *Limosa limosa*			
Conservation Objective: To maintain the favourable conservation condition of Black-tailed Godwit in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by	Waterbird distribution from the 2009/2010 waterbird survey

		Black-tailed Godwit, other than that occurring from natural patterns of variation	programme is discussed in part five of the conservation objectives supporting document

[A157] Bar-tailed Godwit *Limosa lapponica*			
Conservation Objective: To maintain the favourable conservation condition of Bar-tailed Godwit in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by Bar-tailed Godwit other than that occurring from natural patterns of variation	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

[A160] Curlew *Numenius arquata*			
Conservation Objective: To maintain the favourable conservation condition of Curlew in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by curlew, other than that occurring	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five

		from natural patterns of variation	of the conservation objectives supporting document

[A162] Redshank *Tringa totanus*

Conservation Objective: To maintain the favourable conservation condition of Redshank in Blackwater Estuary SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by Black-tailed Godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objectives supporting document

[A999] Wetlands

Conservation Objective: To maintain the favourable conservation condition of wetland habitat in Blackwater Estuary SPA, as a resource for the regularly occurring migratory birds that utilise it. This is defined by the following attribute and target:

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 281 hectares, other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2009/2010 waterbird survey programme is discussed in part five of the conservation objective supporting document.

NPWS (2015) Conservation objective for Blackwater Estuary SPA {4028} Version 1 .Department of Arts, Heritage and the Gaeltacht

Stack's to Mullaghareirks Mount Eagle Bog and West Limerick Hills SPA (Site code 4161)

Qualifying Interests

A082 Hen Harrier

Conservation Objectives

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Code	Common Name	Scientific Name
A082	Hen Harrier	*Circus cyaneus*

NPWS (2016) Conservation objectives for Stack's to Mullaghareirk Mountains, West Limerick Hill and Mount Eagle SPA {4161}. Version 5. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.