



**INFORMATION IN SUPPORT OF AN
APPROPRIATE ASSESSMENT OF THE
POTENTIAL FOR KILLARNEY DRAFT
TOWN PLAN 2009-2015 TO
NEGATIVELY IMPACT UPON THE
CONSERVATION OBJECTIVES OF
NATURA 2000 SITES**

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1 INTRODUCTION

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

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

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

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

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

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

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

In addition to the advice available from NPWS, the EU has published a number of documents which provide guidance on the requirements of Appropriate Assessment, including, *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, which sets out the principles of how to approach decision making during the process and this have been followed as closely as possible. There are however a number of restrictions when attempting to apply this document in an Irish context, including first and foremost, the lack of formal statutory guidelines; and also, importantly, the relative lack of published data on many of the faunal and floral elements of the environment which comprise the conservation objectives of European sites. In the context of Killarney however, and of the *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC in particular, which is one of the most heavily studied and ecologically best understood parts of the country, this deficiency proved to be a relatively minor restriction to the process when compared to other locations in Ireland.

2 METHODOLOGY

The Appropriate Assessment process progresses through four stages as follows:

- Stage 1 – Screening of Killarney Draft Town Development Plan 2009 – 2015;
- Stage 2 – Appropriate Assessment of Killarney Draft Town Development Plan 2009 – 2015;
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Assessment of compensatory measures.

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

Stage 1 – Screening

The aim of Stage 1, ‘Screening’ is to determine whether or not Stage 2, the Appropriate Assessment is required, i.e. to determine whether or not the objectives and policies of the Draft Killarney Town Plan are likely to negatively affect the conservation objectives on any Natura 2000 site. This is done by examining the objectives and the policies of the plan; and the conservation objectives of any Natura 2000 sites that might potentially be affected.

Stage 2 – Appropriate Assessment

The aim of Stage 2, the ‘Appropriate Assessment’ proper, is to propose changes to the Town Plan that will Avoid and Mitigate any negative impacts on Natura 2000 sites and thereby avoid the need to progress to Stage 3, which would effectively constitute a rejection of the plan in its current form and require the Town Council to implement Compensatory measures for impacts on Natura 2000 sites.

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

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

A key consideration in Appropriate Assessment is that other plans and projects must be considered and that the assessment must take account of the impacts on Natura 2000 sites of these developments ‘in combination’ with the plan or project that is under consideration. In the case of Killarney, which lies some distance from any other major towns or areas of commercial or industrial development, few other significant plans or projects likely to have impacts on Natura 2000 sites in combination with Killarney Draft Town Plan have been identified. This is discussed in further detail in the Scoping and Appropriate Assessment sections of this report.

3 STAGE 1 – SCREENING OF THE KILLARNEY DRAFT DEVELOPMENT PLAN 2009 – 2015

3.1 INTRODUCTION TO THE SCREENING PROCESS

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

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

Table 1: Natura 2000 Sites Within 15km of Killarney Town, Co Kerry

Site Name	Site Type	Site Code (NPWS)	Distance Direction and From Killarney
Killarney National Park	SPA	004038	Partially within the town boundary, extends to the west
Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle	SPA	004161	15km to the northeast of the town
Blackwater River (Cork / Waterford)	cSAC	002170	12km to the northeast of the town
Sheheree (Ardagh) Bog	cSAC	000382	300m to the south of the town boundary
Castlemaine Harbour	cSAC	000343	3.75km to the north of the town and also 3.25km to the west of the town boundary (6.5km west of the town itself)
Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment	cSAC	000365	Partially within the town boundary, extends to the south, west and southeast

Screening also requires a review of all Natura 2000 sites that could potentially be subject to the impacts that have been identified. Clearly a key variable that will determine whether or not a particular Natura 2000 site is likely to be negatively effected by the draft plan's policies and objectives is its physical distance from Killarney, and it will generally, but not necessarily, be the case that the greater the distance the lower the possibility of impacts. It is not considered that any of the policies or objectives of Killarney Draft Town Plan have the potential to impact

upon any Natura 2000 sites more than 15km from the town. A total of six Natura 2000 sites are located within 15km of the town. These are shown in Table 1, which also gives the distance and direction of each site from Killarney. Each site is then discussed with respect to its requirement or not for Appropriate Assessment.

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

3.2 KILLARNEY NATIONAL PARK SPA

The key conservation objectives for this site are the protection of a small wintering flock of Greenland White-fronted Goose and small breeding populations of Peregrine and Merlin. In addition, the Natura 2000 Form mentions a good diversity of (breeding) upland and woodland birds, and wintering waterfowl. Breeding woodland bird species include Wood Warbler, which is listed in the Irish Red Data Book as 'Rare' (Whilde, 1993); and Redstart and Garden Warbler, both of which are of very restricted range in Ireland. Upland bird species include Ring Ouzel, which is of restricted range in Ireland and is listed on the BirdWatch/RSPB 'Red List' (Lynas *et. al.*, 2007) and in the Irish Red Data Book as 'Rare' (Whilde, 1993). Wintering waterfowl include Cormorant, Teal, Mallard, Pochard, Tufted Duck, Goldeneye and Coot, but all occur in relatively low numbers. The Greenland White-fronted Goose flock is unusual in that it is one of the few remaining flocks in Ireland that feeds solely on bogs and is also of importance as it is the most southerly flock in the country.

The Natura 2000 Form indicated that whilst the site is within a National Park and is therefore safe from most threats to its bird populations, such as major habitat change, and hunting; recreational activity can nevertheless cause disturbance to some species. It is not considered however that any of the policies or objectives of the Killarney Town Plan are likely to exacerbate this problem significantly and it is therefore considered unlikely that there will be any negative impacts on the conservation objectives of this site as result of implementation of the plan. The fact that the SPA is also a National Park also negates the likelihood of any 'in combination' impacts on the SPA as no developments are allowed within the park that would be likely to have negative impacts on flora and fauna. In addition, rural, mainly upland, sparsely populated areas where major developments are unlikely surround the SPA, and none are known of. **Appropriate Assessment of Killarney Town Plan 2009-2015 in relation to the potential for negative impacts on Killarney National Park SPA is not required.**

3.3 STACKS TO MULLAGHAREIRK MOUNTAINS, WEST LIMERICK HILLS AND MOUNT EAGLE SPA

This SPA was designated as recently as 2007, primarily for the protection of the Birds Directive Annex I species Hen Harrier, and it supports the largest concentration of this species in the country. The Annex I species Merlin and Short-eared Owl also occur as breeding species within the SPA. The SPA consists of upland bog, heath and grassland habitats on which these species depend during the breeding season. Due to the nature of these habitats and their distance from Killarney town, it is not considered that any of the policies or objectives of Killarney Draft Town Plan 2009-2015 could have impacts on these habitats or on these bird species, and hence could not have 'in combination' impacts either. **Appropriate Assessment of Killarney Town Plan 2009-2015 in relation to the potential for negative impacts on Stacks to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is not required.**

3.4 BLACKWATER RIVER (CORK / WATERFORD) cSAC

The sections of *Blackwater River (Cork / Waterford)* cSAC that lie closest to Killarney town consist of tributary watercourses at the western margins of this very large cSAC; Ballycullane Stream and Cullavaw Stream, which drain to the River Blackwater just to the east of the town of Rathmore.

The specific reasons for the inclusion of these watercourses in the cSAC is not known, however a review of the Annex II species and Annex I habitats for which the site is designated indicates that these watercourses will have been included on the basis of the presence of one or more of the following riverine features:

- The aquatic Annex II fauna species, river lamprey, sea lamprey, brook lamprey, Atlantic salmon, Freshwater pearl-mussel and otter;
- The riverine Annex II plant species, Killarney Fern; and
- The Annex I habitats that might occur in these stream valleys; 'remnant alluvial woodlands', 'floating river vegetation' and 'old oak woodlands'.

None of the other Annexed species or habitats mentioned in the site Synopses for the cSAC is likely to occur in small stream valleys, and hence will not be situated in the sections of the cSACs that lie relatively close to Killarney.

Due to the relatively large distance from Killarney town; and the fact the site lies in a different river catchment from Killarney town, it is considered very unlikely that any policies or objectives of Killarney Draft Town Plan could have impacts within this cSAC, and hence could not have 'in combination' impacts either. **Appropriate Assessment of Killarney Town Plan 2009-2015 in relation to the potential for negative impacts on *Blackwater River (Cork / Waterford)* cSAC is not required.**

3.5 SHEHEREE (ARDAGH) BOG CSAC

This cSAC lies only 300m to the south of Killarney town boundary. The site consists of a 'ridge basin bog' within a depression in a high ridge and it is of a very unusual type resembling a raised bog. It also includes an intact lag system, the only remaining one in the country. The site supports the Flora (Protection) Order (1999) plant species Slender Cottongrass. It is designated on the basis of the presence of the Annex I habitats 'active raised bog' and 'degraded raised bog'.

The Natura 2000 Form for the site indicates that threats consist of eutrophication from agricultural run-off; the risk of fire; the possibility of drainage works and further rhododendron infestation.

The fact that this site lies in such close proximity (less than 300m) to areas zoned for residential development in the town plan means that there is potential for negative impacts as a result of increased disturbance and usage of the area, including, for example, the increased possibility of fires, and alterations to the hydrological regime. The possibility of 'in combination' impacts from the proposed south link road, and from the possibility of residential and other developments outside the town boundary in the vicinity of the site will also need to be considered in the context of this small and potentially vulnerable site. **Appropriate**

Assessment of Killarney Town Plan in relation to the potential for negative impacts on *Sheheree (Ardagh) Bog* cSAC is required.

3.6 CASTLEMAINE HARBOUR cSAC

This site is designated primarily on the basis of its coastal Annex II habitats including important sand dune systems, but also includes the River Laune and some of its tributaries. The sections of *Castlemaine Harbour* cSAC that lie closest to Killarney town are these watercourses, which lie at the eastern margins of the cSAC. The River Laune drains Lough Leane, and the boundary of *Castlemaine Harbour* cSAC meets the boundary of the *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC at Laune Bridge less than 1km downstream of the lough. Hence, any water quality issues that apply to Lough Leane will also apply to at least the upper reaches of the River Laune within *Castlemaine Harbour* cSAC, including 'in combination' impacts such as eutrophication of waters resulting from phosphate inputs from a number of different sources. To the north of Killarney town, the Gweestin River and Glanooragh River are also included in *Castlemaine Harbour* cSAC. These rivers drain into the River Laune and hence do not receive water from the Lough Leane catchment.

The River Laune valley includes an important area of the Annex I priority habitat 'residual alluvial forest', which lies between Lough Leane and Killorglin, which lies 17km downstream. The river also supports important populations of the Annex II fish species, river lamprey, sea lamprey, and Atlantic salmon and also the Annex II mammal species otter.

None of the other Annex II species or Annex I habitats mentioned on the Natura 2000 Form for this site is associated with riverine situations (all are estuarine or coastal) and hence will not occur in the sections of the cSACs that lie relatively close to Killarney, and none of the policies or objectives of Killarney Town Plan are considered likely to have impacts in these coastal sections of the cSAC, which lie approximately 20km downstream of Killarney. **Potential Impacts on the River Laune portion of the site require that Appropriate Assessment of Killarney Town Plan in relation to the potential for negative impacts on *Castlemaine Harbour* cSAC is required.**

3.7 KILLARNEY NATIONAL PARK, MACGILLICUDDY'S REEKS AND CARAGH RIVER CATCHMENT cSAC

This is a large site, which lies partly within Killarney Town boundary. It is designated on the basis of a large number of different Annex I habitats and Annex II species as follows,

- The Annex I habitats: 'blanket bog', 'yew woods', 'remnant alluvial forest', 'old oak woodland', 'juniper heath', 'alpine heath', 'wet heath', 'dry heath', '*Molinia* meadows', 'calaminarian grassland', 'oligotrophic lowland lakes', 'oligotrophic upland lakes', 'floating river vegetation', 'caves not open to the public';
- The Annex II flora species, Slender Naiad and Killarney Fern; and
- The Annex II fauna species, freshwater pearl-mussel, marsh fritillary, brook lamprey, river lamprey, sea lamprey, Killarney shad, Atlantic salmon, Kerry slug, otter and lesser horseshoe bat.

A number of these habitats and species occur in sections of the cSAC within or immediately adjacent to Killarney Town boundary. These include areas of the Annex II habitats, 'remnant

alluvial forest' 'oligotrophic lowland lakes', 'floating river vegetation' and 'old oak woodland', and the Annex I species Kerry slug, otter and lesser horseshoe bat. In addition, the aquatic habitats within the town boundary, Lough Leane and the Rivers Flesk, Woodford and Deenagh, support the Annex I species, Slender Naiad, freshwater pearl-mussel, brook lamprey, river lamprey, sea lamprey, Killarney shad and Atlantic salmon.

The presence within and close to the town boundary of such a large number of species and habitats which comprise some of the key conservation objectives of the cSAC means that there is potential for the policies and objectives of the plan to impact upon the conservation objectives of the cSAC. 'In combination' impacts such as eutrophication of waters resulting from phosphate inputs from a number of different sources will also need to be considered in the assessment. **Appropriate Assessment of Killarney Town Plan 2009-2015 in relation to the potential for negative impacts on Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment cSAC is required.**

4 STAGE 2 – APPROPRIATE ASSESSMENT

4.1 INTRODUCTION TO THE APPROPRIATE ASSESSMENT

The Screening Stage (Stage 1) has concluded that Appropriate Assessment (Stage 2) of Killarney Draft Town Plan 2009-2015 is required to identify policies, objectives and proposals (i.e. critical infrastructure) of the plan that might potentially impact negatively, including potential 'in combination' impacts, on the conservation objectives of the following Natura 2000 Sites:

- ***Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment cSAC;***
- ***Castlemaine Harbour cSAC; and***
- ***Sheheree (Ardagh) Bog cSAC.***

The negative impacts that have been identified, which are discussed in this section, require the implementation of 'Avoidance' or 'Mitigation' measures, which will require amendments to Draft Killarney Town Plan 2009-2015 in order to avoid the need to progress to Stages 3 and 4 of the Appropriate Assessment process; the assessment of alternative solutions and compensatory measures.

4.2 KILLARNEY NATIONAL PARK, MACGILLICUDDY'S REEKS AND CARAGH RIVER CATCHMENT CSAC

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

This section provides details of the Annex I habitats and the Annex II species for which this very large and complex cSAC has been designated; and of the environmental factors which support these features (the conservation objectives of the site).

4.2.1.1 Annex I Habitats

This cSAC includes the whole of Killarney National Park (KNP); and much of the area of the cSAC that lies within and immediately adjacent to Killarney Town boundary also lies within the boundary of the National Park. Hence, a great deal of useful information in making this Appropriate Assessment is available from documents relating to the National Park, including in particular the *Management Plan for Killarney National Park 2005 – 2009*. Other documentation that has been referred to includes, the Natura 2000 Form and Site Synopsis for the site, Killarney Town Plan Strategic Environmental Assessment (RPS, 2008); the Lough Leane Catchment Monitoring and Management System, Final Report (DEHLG, 2003); First Interim Report (DEHLG, 1999) and Second Interim Reports (DEHLG, 2000). Consultation with NPWS was also undertaken in this regard, in the form of a meeting between Rick Mundy and Aileen McSwiney of RPS with Jervis Good, NPWS Regional Ecologist. At this stage RPS also consulted with park staff Eamonn Meskell and Pat Foley to discuss current potential pressures to the park.

The KNP Management Plan indicates that the nearest areas of bog and heath (within the National Park) are to the west and south of Lough Leane, and hence the Annex I habitats within this category including, 'wet heath', 'dry heath', 'blanket bog', 'alpine heath' and '*Molinia* grassland' do not lie within areas that will be directly affected by the plan. Similarly there are no 'upland oligotrophic lakes', 'Yew woods', 'caves not open to the public' or areas of 'calaminarian grassland' in the vicinity of Killarney town.

The Management Plan indicates the presence of Mixed Woodland, Wet Woodland and Demesne Grassland within the town boundary, and this is likely to include areas of 'old oak woodland'.

Lough Leane is a 'lowland oligotrophic lake' and 'floating river vegetation' is likely to occur in the River Flesk, the River Deenagh or in the upper reaches of the River Laune, all of which lie within the cSAC and may be impacted upon by the proposed town plan. Consultation with NPWS indicates that Bellview Woods in the northwestern part of the town corresponds to the Annex I Priority Habitat 'residual alluvial forest'.

4.2.1.2 Annex II species

Correspondence with NPWS indicates that woodland sections of the cSAC within the town boundary support Kerry slug and lesser horseshoe bat. Lough Leane supports the fish species sea lamprey, brook lamprey, river lamprey, Killarney shad and Atlantic salmon and the plant species, Slender Naiad. Otter is likely to be common on all of the waterbodies within the cSAC in the study area, including the Rivers Flesk and Deenagh. The Deenagh is also known to support important salmonid spawning habitat and brook lamprey. Freshwater pearl-mussel is present in the Owenreagh River, but is not known from either the Flesk or the Deenagh. Killarney Fern and marsh fritillary butterfly are not present in the vicinity of Killarney town.

4.2.1.3 Environmental Factors that might be affected by the plan

Available land area

All habitats and species require sufficient land area to maintain a healthy conservation status.

Disturbance

All ecosystems and their habitats and species are to some extent sensitive to human disturbance, and an absence of excessive disturbance constitutes a key environmental factor for all of the species and habitats discussed above.

Water quality

Many of the Annex I habitats and Annex II species are aquatic, and good water quality is essential for most of them. Lough Leane is subject to ongoing water quality problems in terms of high Biochemical Oxygen Demand, high phosphate levels and high nitrate levels. This is discussed further in Section 4.2.2. The conservation objectives of the cSAC would include improvements in the water quality of Lough Leane and maintenance of the water quality of the River Flesk and Deenagh River. Significant water quality impacts can also result from ingress of fine sediments, which can result from works in the vicinity of watercourses.

Lighting

Bats and to a lesser extent other fauna species including fish and otter can be negatively affected by artificial lighting.

The Hydrological Regime

A number of the habitats listed here are sensitive to changes in groundwater levels or patterns. This includes the priority habitat 'residual alluvial forest', a section of which is located within the town boundary at Bellview Woods.

4.2.2 Summary of Policies and Objectives of the Draft Killarney Town Plan 2009-2015 that may impact upon the Conservation Objectives of the site.

The following section details potential negative impacts of the plan on the conservation objectives of the site.

The Killarney National Park Management Plan includes the following passage under the heading 'Urban Pressures': "*As mentioned in the introduction, KNP immediately adjoins and is intimately associated with the town of Killarney. This brings benefits such as the provision of accommodation and services for National Park visitors, but it also poses problems not experienced by National Parks in more remote places. These include intensive pressures at particular locations, such as urban road proposals, treatment and discharge of town sewage and housing and other building development. It is essential that the significance for the National Park of developments within adjacent urban areas are recognised and taken into account.*"

The Management Plan states that two of the main challenges for the National Park are the control of pollution of Lough Leane and control of visitor usage, and it is reasonable to suppose that similar challenges face the Annexed habitats and species within KNP. An objective of the Management Plan is the "*Control of nutrient inputs from sewage, farming and other activities into lakes, rivers and wetlands.*" Also discussed is the threat of Zebra Mussel introduction to Lough Leane. This highly invasive bivalve is not yet present in the Lough, but increased boat usage, which may result from increased visitor numbers, is a potential threat to all of the aquatic species mentioned as the mussel could be imported on dirty boat hulls.

Whilst most of the Management Issues discussed in Section 8.1 of KNP Management Plan are not influenced by objectives or policies of Killarney Town Plan, a number are, and they are relevant to this assessment as they are likely to impact upon Annex I habitats and Annex II species within the cSAC. These relate in particular to water quality in Lough Leane, which is discussed further below.

Tourism

The town plan includes policies and objectives designed to encourage tourism and to therefore increase visitor numbers to the town. Such increases will inevitably lead to some increase in the number of people visiting areas that support (non-aquatic) Annex I habitats and Annex II species and thereby increasing disturbance pressures on these features. The town plan does not make any predictions about future tourist numbers and the policies and objectives of the town plan cannot reasonably be viewed as being directly responsible for such increases should they occur, however it is proposed that the town council should monitor the numbers of visitors involved and to assess any negative impacts on Annex I

habitats and Annex II species that may result from their policy of expanding and encouraging tourism in the town.

Population Increases

The projected increase in population described in the town plan between 2009 and 2015 is 12.7%, equivalent to approximately 1,300 persons. It is not considered likely that increases of this order will result in a significant increase in direct disturbance pressure any distance away from Killarney itself, so no impacts on, for example, heath and bog habitats are likely to occur as a result of this population increase. There are, however secondary effects of this increased population that need to be considered, such as the increased demands placed on the sewage treatment system, direct land take for additional housing and services, and the associated increase in hardstanding areas and therefore changes in storm water run-off patterns. It is estimated in the plan that 1,700 new houses will be required in Killarney during the period 2006 to 2015. These issues are considered further below.

Direct Land take

A number of the policies of the town plan require land acquisition. Whilst land take within the boundary of the cSACs will be restricted by the notifiable actions process under the Habitats Directive, land use changes in areas close to, but outside, the cSACs will not be liable to such a process, particularly for works that will not be subject to planning permission, for example, improvement of rough areas to provide public open spaces or recreation grounds. It must be specified that development of lands in locations where there might be impacts on Natura 2000 sites (for example by application of large quantities of fertilizer) will be subject to Appropriate Assessment. This includes the following areas:

- The western part of the Northern Gateway AAP area, adjacent to Bellview Woods;
- The eastern part of the Northern Gateway AAP area, adjacent to the Deenagh River; and
- Portions of the Flesk AAP area, adjacent to the River Flesk.

New Access Proposals

Green routes, cycle routes, walk-ways, the proposed extension to the Fossa heritage trail, and the proposed new Jarvey route, are planned in areas immediately adjacent to, or within the cSAC. These policies have potential to increase disturbance within the cSAC and may open up areas to public access that are currently undisturbed. There is also the potential for these policies to result in direct land take or habitat change within the boundary of the cSAC.

Water Quality Issues

Lough Leane, the River Flesk and the Deenagh River all lie within the cSAC and all support Annex II species. Waste water treatment, additional residential areas, additional hardstanding surfaces and other planning issues within the plan have potential to impact upon water quality in these water bodies. KNP Management Plan states that: *"Factors that affect the water quality of lakes and rivers within KNP come from sources which are primarily outside the National Park, making their control difficult. Lough Leane is particularly threatened by eutrophication due to nutrient inputs arising outside the National Park. A number of species requiring protection under the EU Habitats and Birds Directives, are also threatened."*

Discussions with NPWS and other parties indicates that a key cause of the pollution of the Folly Stream and of Lough Leane is the ingress of storm water into foul sewers during periods of heavy rainfall, resulting in mixing and hence contamination of the storm water system with sewage and policies to address this issue in the plan need to be strengthened. Lough Leane Catchment Monitoring and Management System (LLCMMS) was funded to develop the South Western River Basin District Management System under Water Framework Directive of 2000. The recommendations of the LLCMMS should be implemented immediately and this will require strengthening of policies and objectives of the town plan. In particular, the LLCMMS requirement to “Investigate Killarney WWTP’s capacity and performance including provision of additional levels of P [Phosphorus] removal and stormwater tanks”, which was in progress in 2003 needs to be repeated/continued.

An additional problem associated with storm water run-off is siltation of some streams and habitat areas. This occurs when storm waters carry heavy loads of suspended solids from areas of exposed substrate associated with various building and other works.

Zoning Issues

A clear distinction needs to be made between the cSAC and other zonings. Paragraph 12.10 of the plan describes the zoning ‘Amenity Area of Special Control’, under which most of the cSAC is zoned, as being under special ownership and control. It states that, ‘In principle the uses defined in the Zone Amenity and Open Space apply’. This zoning includes the majority of the cSAC lands within the town and is not appropriate to these lands as ‘Amenity and Open Space’ includes provision for a wide range of developments that are not permitted within a cSAC.

Some residential and industrial zoning are too close to the cSACs, particularly within the river Flesk and Northern Gateway AAPs. The plan includes large areas of land zoned for residential development that lie adjacent to Natura 2000 sites, along the Rivers Flesk and Deenagh and adjacent to Bellview Woods. Such development could have a number of secondary impacts on these sites, such as, increased disturbance from people, cats and dogs, increased potential for fires, potential impacts on the hydrological regime.

Northern Gateway AAP Area

The River Deenagh and its banks in this area lie within the cSAC. Whilst the area zoned as ‘existing vegetation to be retained and reincorporated into green fabric’ broadly mirrors the boundary of the cSAC, this is not exact, and a clear distinction needs to be made between the cSAC and ‘green spaces’ or ‘amenity areas’. The cSAC should not be viewed as an amenity area, it is a scientific designation for the purposes of species and habitat conservation, not for the purposes of public recreation. This is an important distinction. Whilst the cSAC does provide a valuable ‘green fabric’ and ‘green linkage’ within the Northern Gateway AAP, it should be viewed as a constraint within which no development including pedestrian and cycle routes, or other public amenities will be allowed.

Buffers in the form of land zoned as ‘Green fabric’ need to be widened between the Deenagh River corridor and areas zoned for residential and other development, particularly on the south side of the river where the proposed link road is too close to the river.

No planning applications that include in-stream works or works on the riverbanks in this area should be accepted. This includes discharges of any sort to the river.

Flesk AAP Area

The River Flesk and its banks in this area lie within the cSAC and is zoned 'Amenity Area of Special Control'. As discussed above, Paragraph 12.10 of the plan describes the zoning 'Amenity Area of Special Control' as being under special ownership and control. It states that, 'In principle the uses defined in the Zone Amenity and Open Space apply.' This is not appropriate to the cSAC as 'Amenity and Open Space' includes provision for a wide range of developments that are not permitted within a cSAC. The cSAC should not be viewed as an amenity area, it is a scientific designation for the purposes of species and habitat conservation, not for the purposes of public recreation. This is an important distinction. Whilst the cSAC does provide a valuable 'green fabric' and 'green linkage' within the Northern Gateway AAP, it should be viewed as a constraint within which no development including pedestrian and cycle routes, or other public amenities will be allowed.

A buffer in the form of land zoned as 'Green fabric' is required between the cSAC and adjacent 'Residential' and 'Tourism and Related Facilities' zones.

Restrictions must include the cSAC designation and mention of the specific features for which the cSAC is designated.

No planning applications that include in-stream works or works on the riverbanks in this area should be accepted. This includes discharges of any sort to the river.

Lighting

Proposals for increased lighting on footpaths and cycle paths may have negative impacts on bats within the cSAC.

New Bridge Across Flesk

The possibility of a new bridge across the River Flesk associated with the new Jarvey route has potential for negative impacts on the conservation objectives of the cSAC. Any planning application in this regard must be subject to Appropriate Assessment under the Habitats Directive.

Various Works on Buildings and Structures

A number of the policies of the plan discuss renovation, removal of dereliction and other works to existing buildings in the town. Such works may have negative impacts on bats, including populations that use the cSAC.

4.2.3 Appropriate Assessment of Killarney Town Plan in relation to the potential for negative impacts on *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC.

Table 4.1 brings together in tabular form the details described in Section 4.2.1 and 4.2.2. The matrix identifies the key features for which the cSAC is designated; the environmental factors on which those features depend; the elements of the plan that may result in negative impacts on those environmental factors; the avoidance and mitigation measures required and the actions required to implement these measures, namely additional policies and amendments to existing policies in the plan, and changes to zonings.

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
<p>Priority Annex I habitat: 'remnant alluvial forest' at Bellview Woods, within the town boundary (RPS, 2008).</p>	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.) Unaltered, natural hydrological system. Natural sedimentation patterns. 	<ul style="list-style-type: none"> Increased disturbance and damage due to increased local population, increased access and increases in the numbers of visiting tourists. Changes to hydrological regime. Changes to sedimentation patterns. 	<p>None known</p>	<ul style="list-style-type: none"> Appropriate Assessment of any land use changes in the western part of the Northern Gateway AAP area. Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> Inclusion of new policies, NH 03n and 11.29.6, is required (see Section 5.7). A new policy, Policy Tour 02, is required (see Section 5.3). The following policies require amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Sections 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitat:: 'oligotrophic lowland lakes', at Lough Leane (partially within the town boundary).	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • An absence of invasive exotic species. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration .	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5).
Annex I habitat:: 'old oak woodland' (partially within the town boundary).	<ul style="list-style-type: none"> • Lack of serious human disturbance, (fires, vandalism, etc.) • An absence of invasive exotic species. 	<ul style="list-style-type: none"> • Increased disturbance and damage due to increases in the numbers of visiting tourists. • Increased disturbance and damage due to increased local population and increased access. 	None known	<ul style="list-style-type: none"> • Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. • Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4). • The following policies require amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Section 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitat: 'floating river vegetation'	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • An absence of invasive exotic species. • Suitable riparian corridors with the correct balance of shaded and unshaded areas. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. • Potential impacts on the riparian corridor of the Deenagh River as a result of inappropriate land use changes adjacent to river within the Northern Gateway AAP area. • Potential impacts on the riparian corridor of the River Flesk as a result of inappropriate land use changes adjacent to river within the Flesk AAP area. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5). • Inclusion of new policies, NH 03n; 11.5.3 and 11.29.6, is required (see Section 5.7).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitat:: 'wet heath'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increase s in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: 'dry heath'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increase s in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: 'Juniper heath'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increase s in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: 'blanket bog'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increase s in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitat:: 'Yew woods'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increases in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: ' <i>Molinia</i> meadows'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increases in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: 'alpine heath'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increases in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat:: 'calaminarian grassland'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.). 	<ul style="list-style-type: none"> Increases in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitat: 'oligotrophic upland lakes'	None	None	None	None	None
Annex I habitat: 'caves not open to the public'	None	None	None	None	None
Annex II plant species: Slender Naiad, present in Lough Leane, which lies partially within the town boundary	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II plant species: Killarney fern	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.), including deliberate removal by collectors. 	<ul style="list-style-type: none"> Increases in the numbers of visiting tourists. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4).
Annex II invertebrate species: Kerry slug which is likely to occur in all high quality mature woodlands in the area.	<ul style="list-style-type: none"> Suitable woodland and heathland habitat. 	<ul style="list-style-type: none"> Removal of potentially suitable sites within Killarney town during dereliction clearance or similar works. Increased visitor access to previously undisturbed habitat resulting in habitat degradation. 	None	<ul style="list-style-type: none"> Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> A new policy, Policy Tour 02, is required (see Section 5.4). The following policies required amendments: HSG 07; SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Section 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II invertebrate species: freshwater pearl-mussel which is known from the Woodford River.	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Suitable riparian corridors with the correct balance of shaded and unshaded areas. • A healthy / thriving salmonid population. • Low sediment loading at all times. Even brief temporary sedimentation can be disastrous for this species. 	None	None	None	None
Annex II invertebrate species: Marsh Fritillary	<p>Complex requirements are not fully understood but include:</p> <ul style="list-style-type: none"> • Large areas with numerous suitable breeding sites for maintenance of a metapopulation. • An abundance of the foodplant Devil's-bit Scabious. • Low levels of trampling in the breeding areas balanced with low levels of grazing to prevent overgrowth of vegetation. 	None	None	<ul style="list-style-type: none"> • Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II fish species: Killarney shad, present in Lough Leane, which lies partially within the town boundary	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5).
Annex II fish species: sea lamprey, present in Lough Leane, which lies partially within the town boundary	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Healthy salmonid or other suitable host species populations. • Suitable, undisturbed spawning substrate. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. • Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5). • The following policies require amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Section 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgilllicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II fish species: river lamprey, present in Lough Leane, which lies partially within the town boundary	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Healthy salmonid or other suitable host species populations. • Suitable, undisturbed spawning substrate. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. • Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5). • The following policies require amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Section 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
<p>Annex II fish species: Brook lamprey, present in Lough Leane, which lies partially within the town boundary and known from the Deenagh River, which is within the town boundary and within the Northern Gateway AAP area.</p>	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Healthy salmonid or other suitable host species populations. • Suitable, undisturbed spawning substrate. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. • Potential impacts on the riparian corridor of the Deenagh River as a result of inappropriate land use changes adjacent to river within the Northern Gateway AAP area. 	<p>No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.</p>	<ul style="list-style-type: none"> • Appropriate Assessment of any land use changes close to the River Deenagh in the Northern Gateway area. • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. • Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> • Inclusion of new policies, NH 03n and 11.29.6, is required (see Section 5.7). • The following policies require amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Sections 5.2 and 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
<p>Annex II fish species: Atlantic salmon, which lies partially within the town boundary and in important numbers in the Deenagh River, where there is excellent spawning habitat, which is within the town boundary and within the Northern Gateway AAP.</p>	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Suitable, undisturbed spawning substrate. • An absence of non-sustainable fishing activity. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. • Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. • Potential impacts on the riparian corridor of the Deenagh River as a result of inappropriate land use changes adjacent to river within the Northern Gateway AAP area. • Potential impacts on the riparian corridor of the River Flesk as a result of inappropriate land use changes adjacent to river within the Flesk AAP area. 	<p>No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.</p>	<ul style="list-style-type: none"> • Appropriate Assessment of any land use changes close to the Rivers Deenagh or Flesk in the Northern Gateway or Flesk AAP areas. • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. • Avoidance of opening up of ecologically sensitive areas for public access. 	<ul style="list-style-type: none"> • Inclusion of new policies, NH 03n; 11.5.3 and 11.29.6, is required (see Section 5.7). • The following policies required amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Sections 5.2 and 5.5) and a new policy, EE 12e, is required (see Section 5.3). • A new policy, Infra 07n, is required (see Section 5.5).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II mammal species: otter, which is likely to occur on all watercourses and water bodies in the area.	<ul style="list-style-type: none"> • Healthy fish populations (for food). • Suitable, undisturbed riverbanks. 	<ul style="list-style-type: none"> • Increased direct disturbance of otters due to increases in the numbers of visiting tourists. • Increased disturbance and damage to riverbanks due to increased local population and increased access. • Potential impacts on the riparian corridor of the River Flesk as a result of inappropriate land use changes adjacent to river within the Flesk AAP area. • Potential impacts on the riparian corridor of the Deenagh River as a result of inappropriate land use changes adjacent to river within the Northern Gateway AAP area. 	None known	<ul style="list-style-type: none"> • Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. • Avoidance of opening up of ecologically sensitive areas to public access. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4). • The following policies required amendments: HSG 07; SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; and a new policy, EE 12e, is required (see Section 5.3).

Table 4.1: Potential Impacts on the Conservation Features of *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II mammal species: lesser horseshoe bat, part of the metapopulation of which is known to roost in buildings within the town.	<ul style="list-style-type: none"> • Suitable dark woodland areas for feeding. • Suitable undisturbed buildings for summer roosting. • Suitable undisturbed cellars, caves or buildings for winter roosting. • Intact commuting routes. • Lack of risk of traffic collisions or significant predation. 	<ul style="list-style-type: none"> • Increases in the numbers of visiting tourists. • Increased disturbance and damage due to increased local population and increased access. • New lighting in sensitive areas. • Renovation of buildings and removal of dereliction. 	None known	<ul style="list-style-type: none"> • Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. • Avoidance of opening up of ecologically sensitive areas to public access. • Avoidance of removal of roosting structures. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4). • The following policies required amendments: SI 09a; SI 09b; SI 10a; SI 15a; Infra 04f; Infra 04j (see Sections 5.2 and 5.5). • Policy HSG 07 requires an amendment and a new policy, EE 12e, is required (see Section 5.3).

4.3 CASTLEMAINE HARBOUR cSAC

4.3.1 Summary of the Key Features of the Site and of the Environmental Conditions which Support Them

This section provides details of the Annex I habitats and the Annex II species for which this cSAC has been designated; and of the environmental factors which support these features (the conservation objectives of the site).

4.3.1.1 Annex I Habitats

Documentation that has been referred to includes, the Natura 2000 Form and Site Synopsis for the site, Killarney Town Plan Strategic Environmental Assessment (RPS, 2008); the Lough Leane Catchment Monitoring and Management System, Final Report (DEHLG, 2003); First Interim Report (DEHLG, 1999) and Second Interim Reports (DEHLG, 2000). Consultation with NPWS was also undertaken in this regard, in the form of a meeting between Rick Mundy and Aileen McSwiney of RPS with Jervis Good, NPWS Regional Ecologist.

The majority of the Annex I habitats present at the site are coastal and will not be impacted negatively upon by any policies, objectives or zoning in Killarney town Plan. Only the annex I Priority Habitat 'remnant alluvial forest' is close enough to Lough Leane that it may potentially experience negative impacts, but this is considered unlikely.

4.3.1.2 Annex II species

The River Laune supports the fish species sea lamprey, river lamprey, Atlantic salmon and otter, all of which could potentially be subject to increased disturbance or declines in water quality as a result of the provisions of the town plan. The coastal dunes support the lichen species Petalwort, which will not potentially be impacted upon by the town plan.

4.3.1.3 Environmental Factors that might be affected by the plan

Disturbance

All ecosystems and their habitats and species are to some extent sensitive to human disturbance, and an absence of excessive disturbance constitutes a key environmental factor for all of the species and habitats discussed above.

Water quality

Many of the Annex I habitats and Annex II species are aquatic, and good water quality is essential for most of them. Lough Leane is subject to ongoing water quality problems in terms of high Biochemical Oxygen Demand, high phosphate levels and high nitrate levels. This is discussed further in Section 4.3.2. The conservation objectives of the cSAC would include improvements in the water quality of the River Laune.

4.3.2 Summary of Policies and Objectives of the town plan that may impact upon the Conservation Objectives of the site

The following section details potential negative impacts of the plan on the conservation objectives of the site.

Tourism

The town plan includes policies and objectives designed to encourage tourism and to therefore increase visitor numbers to the town. Such increases might lead to some increase in the number of people visiting the areas of the cSAC that support the Annex I Priority Habitat 'remnant alluvial forest', although this is considered unlikely; and to riverbanks and other areas that support the Annex II species otter. The town plan does not make any predictions about future tourist numbers and the policies and objectives of the town plan cannot reasonably be viewed as being directly responsible for such increases should they occur, however it is considered to be the responsibility of the town council to monitor the numbers of visitors involved and to assess any negative impacts on Annex I habitats and Annex II species that may result from their policy of expanding and encouraging tourism in the town.

Population Increases and Water Quality

The projected increase in population described in the town plan between 2006 and 2015 is 12.7%, equivalent to approximately 1,300 persons. It is not considered likely that increases of this order will result in a significant increase in direct disturbance pressure any distance away from Killarney itself, so no impacts on the area of 'remnant alluvial forest' upstream of Killorglin are anticipated. There are, however secondary effects of this increased population that need to be considered, including the increased demands placed on the sewage treatment system, and the associated increase in hardstanding areas and therefore changes in storm water run-off patterns which might impact upon water quality and the Annex II species in the Laune River. It is estimated in the plan that 1,700 new houses will be required in Killarney during the period 2006 to 2015. These issues are considered further below.

Discussions with NPWS and other parties indicates that a key cause of the pollution of the Lough Leane is the ingress of storm water into foul sewers during periods of heavy rainfall, and policies to address this issue in the plan need to be strengthened. Lough Leane Catchment Monitoring and Management System (LLCMMS) was funded to develop the South Western River Basin District Management System under Water Framework Directive of 2000. The recommendations of the LLCMMS should be implemented immediately and this will require strengthening of policies and objectives of the town plan. In particular, the LLCMMS requirement to "Investigate Killarney WWTP's capacity and performance including provision of additional levels of P [Phosphorus] removal and stormwater tanks", which was in progress in 2003, needs to be repeated.

An additional problem associated with storm water run-off is siltation of some streams and habitat areas. This occurs when storm waters carry heavy loads of suspended solids from areas of exposed substrate associated with various building and other works.

4.3.3 Appropriate Assessment of Killarney Town Plan in relation to the potential for negative impacts on *Castlemaine Harbour* cSAC.

Table 4.2 brings together in tabular form the details described in Section 4.3.1 and 4.3.2. The matrix identifies the key features for which the cSAC is designated; the environmental factors on which those features depend; the elements of the plan that may result in negative impacts on those environmental factors; the avoidance and mitigation measures required and the actions required to implement these measures, namely additional policies and amendments to existing policies in the plan, and changes to zonings.

Table 4.2: Potential Impacts on the Conservation Features of *Castlemaine Harbour* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Priority Annex I habitat: 'remnant alluvial forest'	<ul style="list-style-type: none"> Lack of serious human disturbance, (fires, vandalism, etc.) Unaltered, natural hydrological system. Natural sedimentation patterns. 	None likely due to relatively large distance from Killarney town	None known	Precautionary monitoring of tourist numbers and of their activity patterns.	A new policy, Policy Tour 02, is required (see Section 5.4).
Annex I habitat: 'mudflats and sandflats'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'estuaries'	<ul style="list-style-type: none"> Lack of significant contamination of waters. Lack of major disruption to food chains from, for example, over-fishing. Lack of excessive human disturbance. 	None	None	None	None
Annex I habitat: 'fixed dunes'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'dunes with <i>Salix repens</i> '	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None

Table 4.2: Potential Impacts on the Conservation Features of *Castlemaine Harbour* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued)

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance Mitigation Required and Measures	Actions Required
Annex I habitat: 'shifting dunes'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: ' <i>Spartina</i> swards'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: ' <i>Salicornia</i> flats'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'Mediterranean salt meadows'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'Atlantic salt meadows'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'humid dunes'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'perennial vegetation of stony banks'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'annual vegetation of drift lines'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex I habitat: 'embryonic dunes'	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None

Table 4.2: Potential Impacts on the Conservation Features of *Castlemaine Harbour* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued).

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II lichen species: Petalwort (<i>Petalophyllum ralfsii</i>)	<ul style="list-style-type: none"> Lack of serious human disturbance, (trampling, fires, vandalism, etc.) 	None	None	None	None
Annex II fish species: sea lamprey, present in the Laune River	<ul style="list-style-type: none"> Low levels of nutrient (particularly Phosphorus) input to the water body. No changes to the natural hydrological balance. Healthy salmonid or other suitable host species populations. Suitable, undisturbed spawning substrate. 	<ul style="list-style-type: none"> Increased eutrophication problems as a result of increased population and associated increases in sewage load. Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> A new policy, Infra 07n, is required (see Section 5.5).

Table 4.2: Potential Impacts on the Conservation Features of *Castlemaine Harbour* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued).

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II fish species: river lamprey, present in the Laune River	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Healthy salmonid or other suitable host species populations. • Suitable, undisturbed spawning substrate. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5).
Annex II fish species: Atlantic salmon, present in the Laune River	<ul style="list-style-type: none"> • Low levels of nutrient (particularly Phosphorus) input to the water body. • No changes to the natural hydrological balance. • Suitable, undisturbed spawning substrate. • An absence of non-sustainable fishing activity. 	<ul style="list-style-type: none"> • Increased eutrophication problems as a result of increased population and associated increases in sewage load. Additional hardstanding areas will result in increased run-off and increased potential for storm water overflow into foul sewers. 	No plans or projects are known of but other sources of Phosphates such as agricultural run-off are an important consideration.	<ul style="list-style-type: none"> • Avoidance of nutrient pollutants, particularly Phosphorus, entering water bodies. 	<ul style="list-style-type: none"> • A new policy, Infra 07n, is required (see Section 5.5).

Table 4.2: Potential Impacts on the Conservation Features of *Castlemaine Harbour* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan (continued).

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives) which might be potentially affected by the town plan	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex II mammal species: otter, present along the Laune River	<ul style="list-style-type: none"> • Healthy fish populations (for food). • Suitable, undisturbed riverbanks. 	<ul style="list-style-type: none"> • Increased direct disturbance of otters due to increases in the numbers of visiting tourists. • Increased disturbance and damage to riverbanks due to increased local population and increased access. 	None known	<ul style="list-style-type: none"> • Avoidance of increased human disturbance, including monitoring of tourist numbers and of their activity patterns. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4).

4.4 SHEHEREE (ARDAGH) BOG cSAC

4.4.1 Summary of the Key Features of the Site and of the Environmental Conditions which Support Them

This section provides details of the Annex I habitats and the Annex II species for which this cSAC has been designated; and of the environmental factors which support these features (the conservation objectives of the site).

4.4.1.1 Annex I Habitats

Documentation that has been referred to includes, the Natura 2000 Form and Site Synopsis for the site, Killarney Town Plan Strategic Environmental Assessment (RPS, 2008). Consultation with NPWS was also undertaken in this regard, in the form of a meeting between Rick Mundy and Aileen McSwiney of RPS with Jervis Good, NPWS Regional Ecologist.

This cSAC lies only 300m to the south of Killarney town boundary. The site consists of a 'ridge basin bog' within a depression in a high ridge and it is of a very unusual type resembling a raised bog. It also includes an intact lag system, the only remaining one in the country. The site is designated on the basis of the presence of the Annex I habitats 'active raised bog' and 'degraded raised bog'.

4.4.1.2 Annex II species

The Natura Form for the site does not list any Annex II species, however the site does support the Flora (Protection) Order (1999) plant species Slender Cottongrass.

4.4.1.3 Environmental Factors that might be affected by the plan

The Natura 2000 Form for the site indicates that threats consist of eutrophication from agricultural run-off; the risk of fire; the possibility of drainage works and further rhododendron infestation. Hence, a lack of human disturbance, a lack of introduced invasive species and an undisturbed groundwater regime can be viewed as the key conservation objectives of the site.

4.4.2 Summary of Policies and Objectives of the town plan that may impact upon the Conservation Objectives of the site

The following section details potential negative impacts of the plan on the conservation objectives of the site.

Tourism

The town plan includes policies and objectives designed to encourage tourism and to therefore increase visitor numbers to the town. Such increases might lead to some increase in the number of people visiting the cSAC. The town plan does not make any predictions about future tourist numbers and the policies and objectives of the town plan cannot reasonably be viewed as being directly responsible for such increases should they occur, however it is considered to be the responsibility of the town council to monitor the numbers of visitors

involved and to assess any negative impacts on Annex I habitats and Annex II species that may result from their policy of expanding and encouraging tourism in the town.

Population Increases and Disturbance

The projected increase in population described in the town plan between 2006 and 2015 is 12.7%, equivalent to approximately 1,300 persons. It is estimated in the plan that 1,700 new houses will be required in Killarney during the period 2006 to 2015. It is not considered likely that increases of this order will result in a significant increase in direct disturbance pressure any distance away from Killarney itself, however, as this site lies in such close proximity (less than 300m) to areas zoned for residential development in the town plan, there is potential for negative impacts as a result of increased disturbance and usage of the area, including, for example, the increased possibility of fires, and alterations to the hydrological regime. The possibility of 'in combination' impacts from the proposed south link road, and from the possibility of residential and other developments outside the town boundary in the vicinity of the site will also need to be considered in the context of this small and potentially vulnerable site.

4.4.3 Appropriate Assessment of Killarney Town Plan in relation to the potential for negative impacts on *Castlemaine Harbour* cSAC.

Table 4.3 brings together in tabular form the details described in Section 4.4.1 and 4.4.2. The matrix identifies the key features for which the cSAC is designated; the environmental factors on which those features depend; the elements of the plan that may result in negative impacts on those environmental factors; the avoidance and mitigation measures required and the actions required to implement these measures, namely additional policies and amendments to existing policies in the plan, and changes to zonings.

Table 4.3: Potential Impacts on the Conservation Features of *Sheheree (Ardagh) Bog* cSAC Resulting From the Policies and Objectives of Killarney Draft Town Plan

Qualifying Features (Conservation Objectives)	Conditions that support the qualifying feature (conservation objectives)	Possible Impacts of Killarney Town Plan	Possible 'in combination' Impacts From Other Plans and Projects	Avoidance and Mitigation Measures Required	Actions Required
Annex I habitats: 'active raised bogs' and 'degraded raised bogs'	<ul style="list-style-type: none"> • Unaltered hydrological regime in the surrounding catchment. • Lack of intense human pressure including a lack of man-induced fire. 	<p>—None are considered likely however:</p> <ul style="list-style-type: none"> • Residential development in the Flesk AAP area may increase recreational usage of the vicinity and may thereby increase disturbance, trampling and the risk of fire or water quality deterioration. • Changes to the local hydrological regime as a result of any extensive area of building works are a possibility. 	<ul style="list-style-type: none"> • Proposed south Link road route lies within 500m of the site which may further increase the risk of fire or further increase the risk of hydrological alterations to the natural system. • Planning applications in the vicinity of the site but outside the Town Council's jurisdiction, which might further increase housing density and associated effects in the vicinity. 	<ul style="list-style-type: none"> • Avoidance of excessive development in the vicinity. • Avoidance of changes to the hydrological regime. 	<ul style="list-style-type: none"> • A new policy, Policy Tour 02, is required (see Section 5.4).

5 REQUIRED ACTIONS

As a result of the Appropriate Assessment, the following changes should be made to the Policies and Objectives of Killarney Town Plan in order to mitigate and avoid potential negative impacts on the conservation objectives of, *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC; *Castlemaine Harbour* cSAC; or *Sheheree (Ardagh) Bog* cSAC.

5.1 CHAPTER 3 HOUSING

The wording of Policy HSG 07: *"To use it's power under the Derelict sites Act 1990 to remove dereliction in the town."* should be amended to:

"To use it's power under the Derelict sites Act 1990 to remove dereliction in the town. Derelict sites within the boundary of the cSAC will be subject to appropriate ecological survey for the Habitats Directive Annex I species, otter, Kerry slug and lesser horseshoe bat and for other wildlife species of conservation concern, prior to the commencement of such works; and appropriate mitigation or restrictions on site clearance will be implemented based upon the findings of such surveys. All sites, whether within or outside the boundary of the cSAC will be surveyed for otter and lesser horseshoe bat prior to the commencement of such works and appropriate mitigation or restrictions on site clearance will be implemented based upon the findings of such surveys."

5.2 CHAPTER 4 SOCIAL INCLUSION

The wording of Policy SI 09a: *"To promote Killarney as a 'green town' through the designation and development of a network of green routes incorporating a myriad of landscape features around Killarney, such as urban woodlands, river corridor heritage trails, in the creation of a tangible and usable environmental route around Killarney."* should be amended to:

"To promote Killarney as a 'green town' through the designation and development of a network of green routes incorporating a myriad of landscape features around Killarney, such as urban woodlands, river corridor heritage trails, in the creation of a tangible and usable environmental route around Killarney. Any such 'green routes' within the boundary of, or immediately adjacent to, the *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC will be developed in consultation with National Parks and Wildlife Service."

The wording of Policy SI 09b: *"To develop Axial Green Routes and Boulevards so as to unify different areas of Killarney through a network of both existing and proposed green spaces and linkages as an alternative route for walkers and cyclists."* should be amended to:

"To develop Axial Green Routes and Boulevards so as to unify different areas of Killarney through a network of both existing and proposed green spaces and linkages as an alternative route for walkers and cyclists. Any such Axial Green Routes and Boulevards within the boundary of, or immediately adjacent to, the *Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment* cSAC will be developed in consultation with National Parks and Wildlife Service."

The wording of Policy SI 09d: *"To liaise with the South Western Regional Fisheries Board and the National Parks and Wildlife Services for the potential development of a board walk along the Deenagh River at Port Rd."* should be amended to:

“If the development of such a board walk has any potential impact on the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC, then the proposal will be subject of Appropriate Assessment.”

The wording of Policy SI 10a: “*To consider extending the Fossa heritage trail along the fringes of the town, in the formation of a trail network in complementing the natural and historic designed landscapes.*” should be amended to:

“To consider, in consultation with National Parks and Wildlife Service, extending the Fossa heritage trail along the fringes of the town, in the formation of a trail network in complementing the natural and historic designed landscapes.”

The wording of Policy SI 15a: “To preserve and protect existing pedestrian walkways/rights-of-way and create new ones in the interests of amenity as the opportunity or need arises.” should be amended to:

“To preserve and protect existing pedestrian walkways/rights-of-way and create new ones in the interests of amenity as the opportunity or need arises, provided those new pedestrian walkways/rights-of-way do not have to the potential to negatively impact upon the conservation objectives of the cSAC.”

5.3 CHAPTER 5 ENTERPRISE AND DEVELOPMENT

A new Policy, EE 12e, is required as follows:

“Brownfield sites within the boundary of the cSAC will be subject to appropriate ecological survey for the Habitats Directive Annex I species, otter, Kerry slug and lesser horseshoe bat and for other wildlife species of conservation concern, prior to the commencement of such works; and appropriate mitigation or restrictions on site clearance will be implemented based upon the findings of such surveys. All sites, whether within or outside the boundary of the cSAC will be surveyed for otter and lesser horseshoe bat prior to the commencement of such works and appropriate mitigation or restrictions on site clearance will be implemented based upon the findings of such surveys.”

5.4 CHAPTER 7 TOURISM

New text is advised as follows:

7.8.3 “The council is acutely aware of the nationally important ecological resources that are present within and around Killarney, and that this natural wealth is one of the key factors that brings tourists to the town. The council is also aware that many of the plants and animals that make up this resource are highly sensitive to excessive human disturbance. The council is therefore conscious of the importance of maintaining a balance between tourism and ecology and propose to monitor tourist numbers and the possibility that increasing numbers of tourists could potentially disturb these vital ecological resources.

A new Policy, Tour 02, is required as follows:

“To establish, in consultation with National Parks and Wildlife Service, a strategy to monitor the tourist usage of sensitive ecological areas within *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC. The strategy will take account of the possibility

that Killarney-based tourists could cause disturbance in other ecologically sensitive areas including *Castlemaine Harbour* cSAC and *Sheheree (Ardagh) Bog* cSAC.

5.5 CHAPTER 8 INFRASTRUCTURE

The wording of Infra 04f: “*To develop separate jarvey routes and to pursue the possibility of a new bridge across the Flesk, west of the existing Mucross Bridge (R18).*” should be amended to:

“To develop separate jarvey routes and to pursue the possibility of a new bridge across the Flesk, west of the existing Mucross Bridge (R18). As the route will lie within the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC, and the River Flesk also lies within the cSAC, investigation of this possibility will be carried out in full consultation with NPWS, and an Appropriate Assessment will be carried out of any actual proposal that results from this investigation.”

The wording of Infra 04j: “To provide a new pedestrian link from the town centre to the National Park.” should be amended to:

“To provide a new pedestrian link from the town centre to the National Park. As the route will lie within the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC, design of the route will be carried out in full consultation with NPWS, and an Appropriate Assessment of the proposal will be carried out.”

A new Policy, Infra 07n, is required as follows:

“To ensure that water quality, particularly with respect to Phosphorus, is sufficiently good to maintain a positive conservation status for the aquatic habitats and species under which *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC; and *Castlemaine Harbour* cSAC are designated.”

5.6 CHAPTER 9 NATURAL HERITAGE, BIODIVERSITY AND CONSERVATION

A new Policy, NH 03n, is required as follows:

“In addition to other required statutory assessments such as EIA, and developments proposed in areas where there are potential impacts on nearby section of the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC will be subject to Appropriate Assessment under the provisions of the EU Habitats Directive. This will include all development within the flood plains of the Rivers Flesk and Deenagh, and developments adjacent to Bellview Woods in the western part of the Northern Gateway AAP area.”

5.7 CHAPTER 11 AREA ACTION PLANS

A new Policy, 11.5.3, is required as follows:

“In addition to other required statutory assessments such as EIA, due to the potential for negative impacts on the nearby section of the *Killarney National Park, Macgillicuddy’s Reeks*

and Caragh River Catchment cSAC, any developments proposed within the flood plain of the River Flesk will be subject to Appropriate Assessment under the provisions of the EU Habitats Directive.”

A new Policy, 11.29.6, is required as follows:

“In addition to other required statutory assessments such as EIA, due to the potential for negative impacts on the nearby section of the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC, any developments proposed within the flood plain of the River Deenagh, or in the western part of the AAP area, adjacent to Bellview Woods, will be subject to Appropriate Assessment under the provisions of the EU Habitats Directive.”

5.8 FIGURES

The following maps should include a specific Zone entitled “*Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC” indicating the boundary of the cSAC as provided by NPWS.

- Land Use Zoning Map;
- Flesk Action Area Plan; and
- Northern Gateway Action Area Plan.

No other zonings should overlap this Zone included Amenity Areas of Special Control and Area of Special Amenity as these zonings include “permitted uses” that are incompatible with the cSAC designation.

Attached is a map showing the boundary of the *Killarney National Park, Macgillicuddy’s Reeks and Caragh River Catchment* cSAC, as provided by NPWS.

