

# Irish Water Report

Natura Impact Statement as part of the Kilcar Waste Water  
Discharge Certificate of Authorisation Application – D0520-01

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# Introduction

This Natura Impact Statement provides an Appropriate Assessment (AA) of the existing primary waste water discharge from the Kilcar agglomeration, located east of Dundawoona Point, Tawny Bay, Kilcar, County Donegal, for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007), as amended. It assesses whether the primary discharge from the Kilcar agglomeration, alone or in combination with other plans and projects, is likely to have significant effects on a European Site(s) in view of best scientific knowledge and the conservation objectives of the site(s). European Sites are those identified as sites of European Community importance designated as Special Areas of Conservation under the Habitats Directive or as Special Protection Areas under the Birds Directive.

This report follows the guidance for AA published by the Environmental Protection Agency's (EPA) 'Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)' (EPA, 2009); and takes account of the Department of the Environment, Heritage and Local Government's guidelines 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities' (DoEHLG, 2009) and Circular L8/08 'Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments' (DoEHLG, 2008).

This Natura Impact Statement was completed by Nicholas O'Dwyer Ltd. on behalf of Irish Water.

## Legislative Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

*Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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.*

Article 6(4) states:

*If, in spite of a negative assessment of the implications for the [Natura 2000] 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, Member States 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.*

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# Methodology

## Guidance Followed

Both EU and national guidance exists in relation to Member States fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA has had regard to the following guidance:

- Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Environmental Protection Agency, (EPA, 2009).
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government, (DoEHLG, 2010).
- Circular L8/08 – Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Department of Environment, Heritage and Local Government, (DoEHLG, 2008).
- Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg, (EC, 2000a).
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg, (EC, 2000b).
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001).
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. Office for Official Publications of the European Communities, Luxembourg, (EC, 2007).
- Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg (EC, 2006).
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No.477 of 2011).
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).

## Stages Involved in the Appropriate Assessment Process

### Stage 1: Screening / Test of Significance

This process identifies whether the Kilcar primary discharge located east of Dundawoona Point at Tawny Bay (Donegal Bay Northern waterbody) is directly connected to or necessary for the management of a European Site(s), in this case the Slieve League SAC ((Site Code: 000189)) and West Donegal Coast SPA ((Site Code: 004150); and identifies whether the discharge is likely to have significant impacts upon the above European Sites either alone or in combination with other projects or plans.

The output from this stage is a determination for each European Site of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause that site to be brought forward to Stage 2.

The EPA as the Competent Authority completed the AA Screening for the Kilcar primary discharge and determined that:

*“That the **activity** is not directly connected with or necessary to the management of **those sites as European Sites** and that it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the **activity**, individually or in combination with other plans or projects, will have a significant effect on a European site and accordingly determined that an Appropriate Assessment of the activity is required, and for this reason determined to require the applicant to submit a **Natura Impact Statement, due to poor effluent quality and the proximity of discharge location to the European Sites**”.*

### Stage 2: Appropriate Assessment

This stage considers the impact of the waste water discharge from the Kilcar agglomeration on the integrity of a European Site(s), either alone or in combination with other projects or plans, with respect to (1) the site's conservation objectives; and (2) the site's structure and function and its overall integrity. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts

The output from this stage is a Natura Impact Statement (NIS). This document must include sufficient information for the EPA to carry out the Appropriate Assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must consider alternatives (Stage 3) or proceed to Stage 4.

### Stage 3: Assessment of Alternatives

This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European Site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European sites then the process either moves to Stage 4 or the project is abandoned.

### Stage 4: Assessment Where Adverse Impacts Remain

This process is an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

## Field Walkover Surveys

A field walkover survey was undertaken by Ecologist Tony Nagle on 4<sup>th</sup> of August 2014 to identify the potential for qualifying species and habitats in the surrounding environs of the Kilcar discharge location.

## Consultation

Consultation was undertaken with Inland Fisheries Ireland (IFI) in relation to the existing discharge from the Kilcar network. In their response to our consultation they noted that *“It would be useful to check with the Council on the non-domestic discharges to the network”* and they also noted that *“the Kilcar River discharges into Tawny Bay which forms a migratory pathway for fish species entering and leaving the river”*. The above has been taken into consideration in the preparation of this NIS.

No consultation was sought from NPWS as they have outlined that *“The EPA, as the competent authority, will seek NPWS advice as may be required in reaching their decision, and the NPWS can only communicate with the applicant on request from the competent authority, when the formal application process to the competent authority has already commenced”*.

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# Stage 1: Screening

Screening for Appropriate Assessment was undertaken by the Environmental Protection Agency who determined that an Appropriate Assessment of the existing discharge from the Kilcar catchment is required “*due to poor effluent quality and the proximity of discharge location to the European Sites*”. Therefore, applying the “*Precautionary Principle*” and in accordance with Article 6(3) of the Habitats Directive, the current discharge from the Kilcar catchment will be brought forward for a Stage 2 Appropriate Assessment.

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# Stage 2: Appropriate Assessment

Slieve League SAC and the West Donegal Coast SPA, which have been determined as requiring Appropriate Assessment, are described in the following section below and all the potential impacts resulting from the Kilcar discharge are detailed in relation to the conservation objectives of these designated sites.

## Description of the Project

Kilcar is a Gaeltacht village in Co. Donegal. The village is situated on the R263 regional road in the South West of Donegal. Kilcar is surrounded mainly by agricultural or undeveloped lands with minimal industrial sectors. The Kilcar discharge point is located on the Dundawoona Point at Tawny, to the south west of Kilcar village. Tawny Bay is part of the Donegal Bay Northern waterbody. Untreated effluent is discharged directly into the West Donegal Coast SPA and approximately 0.5 km east of the Slieve League SAC.

Kilcar Catchment is currently served by a gravity flow waste water network which was constructed in the mid 1980's. The current population equivalent has been estimated by Irish Water as 274. Parts of the network carries combined flow. The network terminates in a trunk sewer along the seashore at Tawny Bay. The trunk sewer carries the waste water to the Storm Water Overflow chamber and effluent pumping station. Waste water passes through a communitor at the Storm Water Overflow chamber before entry to the effluent pumping station wet well. There is an emergency by-pass of the Storm Water Overflow chamber and effluent pumping station just upstream of the site which discharges to the aquatic environment. The effluent pumping station lifts (comminuted) waste water to a terminal manhole at Tawny Hill from where it discharges by gravity through a circular outfall duct drilled through the cliffs to the submerged discharge point located just east of Dundawoona Point at Tawny Bay.

Waste water overflows at the Storm Water Overflow chamber discharge directly through a short outfall to the adjacent foreshore at the inner section of Tawny Bay. There is only one Storm Water Overflow on the network.

There are currently two Section 16 licenses to the Kilcar sewer network. Dun Mac Snaith Teoranta (Lsew25) trading as Kilcarra of Donegal and Cuan Tamhnaigh Teoranta (Lsew26) trading as Tawny Bay Finishing Company.

Kilcar effluent quality is sampled by IW/Donegal County Council as part of their monitoring programme. Results of this monitoring (2014) are detailed below in Table 1.0.

**Table 1.0: Average Kilcar WwTP Monitoring Data (mg/l) (January 2014 – July 2014)**

Parameter	Effluent
BOD	310
COD	1097
SS	91
Ammonia	14.3
Orthophosphate	0.94

## Description of the Receiving Environment and Monitoring Results

The discharge from the Kilcar network discharges directly to Donegal Bay Northern (WFD: coastal waters), east of Dundawoona Point at Tawny Bay (NGR 160127, 374837). The effluent is discharged directly to the West Donegal Coast SPA and is approximately 0.5 km from the Slieve League SAC.

There is no ambient monitoring currently being undertaken at the discharge location at Kilcar by IW or Donegal Co. Co.. However, the EPA classifies Donegal Bay Northern, to which Tawny Bay is a part, as “*unpolluted*”. This coastal water body is classified under the Water Framework Directive as “*not at risk*” and is predicted to maintain “*Good Status*” by 2015.

The Glenaddragh River which discharges to the Tawny Bay is classified as “*Poor Status*” and at risk of achieving “*Good Status*” by 2015. It has been noted by the IFI that this river forms a migratory pathway for fish species entering and leaving the river from Tawny Bay.

## Waste Assimilative Capacity

IW carried out a WAC calculation for the Kilcar discharge. Due to the lack of data for the Donegal Bay Northern/Tawny Bay receiving water body and as a worst case scenario assessment the assimilative capacity was assessed for the tidal estuary of the Glenaddragh River which discharges into Tawny Bay (less dilution and a lower mixing effect would exist within the River than in the open coastal waters of Tawny Bay). The application of the WAC assessment at this point is also useful to determine the effects of the overflow point from the network close to where the river meets to bay. The inner Tawny Bay is the receiving water body for the emergency overflow from the network.

Table 3.0 summarises the assimilative capacity calculations which are based on the current estimate loading of p.e. 274 (Source: IW), 95%ile river flow (0.141 m<sup>3</sup>/s, EPA HydroTool) and water quality standards in the European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009). Assimilative capacity calculations use both the estimated background concentrations and the “*notionally clean river*” approach.

**Table 3.0: Glenaddragh River Estuary assimilative capacity calculations at estimated loadings of 274 p.e. using estimated background concentrations and “notionally clean river” concentrations**

Parameter		Background (mg/l)	Predicted downstream quality (mg/l)	EQS* (mg/l)
<b>BOD</b>	Estimated Background**	1.0	2.21	4.0
	Notionally Clean	0.26	1.47	
<b>DIN</b>	Estimated Background	0.05	0.08	0.25
	Notionally Clean	0.02	0.05	
<b>Orthophosphate</b>	Estimated Background	0.01	0.02	0.04
	Notionally Clean	0.005	0.01	

\*European Communities Environmental Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009 (95%ile standards presented).

\*\* Estimated data for upstream water quality was assigned as no monitoring is available.

Due to the limited monitoring data available, the WAC calculations should be viewed as an indication of the actual scenario. As seen from Table 3.0 above, using the “*notionally clean river*” approach there is sufficient assimilative capacity for the Kilcar discharge within the receiving waterbody.

### Field Walkover Survey

A site walkover survey was conducted by Tony Nagle (Ecologist) on the 4<sup>th</sup> August 2014. The walkover survey was focussed on the Dundawoona Point Peninsula at Tawny Bay. This area consists of moderately sheep-grazed rough grassland and fragmented wet heath occasionally grading to dry siliceous heath. The area was formerly more intensively farmed and evidence of field boundaries remains throughout the site.

The predominant plants recorded included Ling, Cross-leaved Heath and Bell Heather, Tormentil, Marsh Thistle, Soft Rush and various Bent grasses, Yorkshire Fog, Marsh Foxtail and Fescues. Thrift is common closer to the sea. Bracken is the most common fern species.

No signs of sewage effluent were seen in the vicinity of the discharge. The surrounding rocks appeared to have healthy populations of barnacles, mussels and limpets.

Seabird breeding sites were not visited as most species have completed their breeding cycle by late July and will have dispersed. A number of qualifying species for the West Donegal Coastal SPA were noted during the walkover visit and these included:

SPA Qualifying Species	Number Seen	Location
Cormorant	1	Flying toward Teelin Bay
Shag	3	Dundawoona
Herring Gull	17	Kilcar Pier
Herring Gull	9	Dundawoona discharge
Chough	2-3	Dundawoona and Kilbeg

Several other shore/seabird species were recorded during the survey and these included:

- Grey Heron (1)
- Oystercatcher (7)
- Great Black-backed Gull (3)

Twenty species of butterfly have been recorded in this part of Donegal (Butterfly Ireland, 2014) and six species were recorded during the walkover survey:

- Large White
- Green-veined White
- Small Copper
- Peacock
- Grayling
- Meadow Brown

## Description of the Natura 2000 Site Affected

### Slieve League SAC

Slieve League SAC encompasses the spectacularly scenic coastline from Glen Bay, at Glencolumbkille, around to a point south-east of Teelin, in south Co. Donegal. Inland, the uplands of Slieve League (595 m O.D.) and Leahan (427 m O.D.) are included, along with Loughs Agh and Auva. The site has important examples of reef communities, including two rare biotopes. A reef of cobbles, pebbles and boulders exposed to wave action, in 12-17 m of water, supports a community characterised by the brown alga *Laminaria saccharina* and ephemeral red algae. This is a rare community and the recently described red alga *Schmitzia hiscockiana* is present. *Halarachnion ligulatum* is also characteristic of the area. At depths of between 17 and 26 m the substratum is solid bedrock. The community present here is characterised by sponges, hydroids, the sea fan *Eunicella verrucosa*, the anthozoans *Alcyonium digitatum* and *Alcyonium glomeratum*, the fragile bryozoans *Pentapora foliacea* and *Porella compressa*, the bryozoan crust *Parasmittina trispinosa*, and the feather star *Antedon bifida*. A variety of red algae, including *Cryptopleura ramose*, and the brown alga *Dictyota dichotoma* are present. This site is one of the most northerly records for the sea fan *Eunicella verrucosa*. This biotope is similar to the biotope with erect sponges *Eunicella verrucosa* and *Pentapora foliacea* on slightly tide swept moderately exposed circalittoral rock, but is unusual in that it occurs in shallower water and has a variety of red algae present. Along the southern side of the site are very steep, often precipitous slopes and sea cliffs which are among the highest in Europe (590 m O.D.), rising from the sea almost to the summit of Slieve League. Mainly of quartzite, they are capped by an inlier of basal Carboniferous sandstones and conglomerates, a remnant of the Tertiary peneplain. Only parts of the less-steep slopes are vegetated. A heathy vegetation of Heather (*Calluna vulgaris*) and dwarf Bracken (*Pteridium aquilinum*) occurs, with Bearberry (*Arctostaphylos uva-ursi*) and Devil's-bit Scabious (*Succisa pratensis*), and coastal elements including Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*) and Rock Samphire (*Crithmum maritimum*). Where slopes are very sheer, there is no vegetation and the cliff faces and scree patches are exposed. On the northern slopes of the mountain is a fine, north-facing corrie, in which lies Lough Agh. The steep back wall of this corrie is also remarkable for its flora, which consists of an extremely species-rich assemblage of alpine plants, including a number of rare species, including some which are listed in the Irish Red Data Book. These include Alpine Bistort (*Polygonum viviparum*), Alpine Saw-wort (*Saussurea alpina*), Yellow Saxifrage (*Saxifraga aizoides*), Purple Saxifrage (*S. oppositifolia*) and Holly Fern (*Polystichum lonchitis*). A further species found on the coast at this site is Sea Pea (*Lathyrus japonicus* subsp. *maritimus*). This species is listed in the Red Data Book and the Flora (Protection) Order, 1999, as is Alpine Bistort. The remainder of the site is predominantly covered with blanket bog. In places, deep erosion channels in the peat expose the full peat profile. A fine example of undrained blanket bog with numerous pools occurs at Lough Auva. Wet heath occurs on the shallower peats in association with blanket bog and dry or alpine heaths. It is notable for the presence of Crowberry (*Empetrum nigrum*), along with more common species such as Heather, Purple Moor-grass (*Molinia caerulea*), Deergrass (*Scirpus cespitosus*), Cross-leaved Heath (*Erica tetralix*) and Tormentil (*Potentilla erecta*). This site is of major ecological importance. Slieve League supports good quality lowland and mountain blanket bog, wet heath and excellent quality alpine heath and sea cliff vegetation. The cliffs above Lough Agh support a very rich and diverse montane flora which includes some very rare vascular plants and bryophyte species. The site provides good breeding habitat for several seabird species, and also holds important populations of Chough and Peregrine, both listed on Annex I of the E.U. Birds Directive. The site is an important feeding site for Barnacle and Greenland White-fronted Goose.

### West Donegal Coast SPA

The West Donegal Coast SPA comprises separate sections of the Co. Donegal coastline and extends from Muckros Head in the south, northwards to Slieve League, Malin Beg, Rocky Point, Glen Head, Slieve Tooley, Maghera, Loughros Point, Dunmore Head, Aran Island, Magheradrumman, Carrickfin, Carnboy, Bunbeg, Magheragallan, Lunniagh, as far as Carrick, to the south of Bloody Foreland. The site includes the high coast areas and sea cliffs of the mainland and Aran Island, the land adjacent to the cliff edge (inland for 300 m), areas of sand dunes/machair at Maghera, Mullaghderg, Braade/Carrickfin/Carnboy, Magheragallan and Lunniagh/Carrick, and also several areas further inland of the coast at Croaghmuckros and Slieve League, north of Glencolumbkille and south of Dunmore Head. A low-lying area of land on the coast at Bunbeg used by roosting Chough is also included. The high water mark forms the seaward boundary, except at Tormore Island where the adjacent sea area to a distance of 500 m from the cliff base is included to provide areas for foraging and socialising activities for breeding seabirds. Most of the site is underlain by granite and quartzite, though various other, particularly metamorphic, rock types also occur; rocks of Carboniferous age are found at Muckros Head. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Chough, Peregrine, Fulmar, Cormorant, Shag, Herring Gull, Kittiwake and Razorbill.

Vegetated sea cliffs are the predominant habitat of the site; these occur along its length and support a good variety of plant species typical of the habitat, including some rarities. The cliff tops support heath, blanket bog or coastal grassland. The northern section of the site includes several areas of machair. Apart from the sea cliffs and machair, the site includes areas of dry heath, wet heath, blanket bog, upland acid grassland, dense Bracken (*Pteridium aquilinum*), scrub, semi-improved and improved pasture grassland, fixed and mobile dune grassland, freshwater marsh, streams, oligotrophic lakes, bedrock shores and islets. The site supports an important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 39 breeding pairs were recorded from the site in the 1992 survey and 58 in the 2002/03 survey. Concentrations of breeding pairs occur on the Glencolumbkille Peninsula, from Killybegs in the south to Loughros Beg Bay in the north and on Aran Island. On Aran the exposed maritime situation coupled with sheep grazing has resulted in large areas of short sward suitable for foraging Chough. Flocking activity is centred on some of the extensive sand dune systems present; flocks of 76, 22 and 40 birds were recorded at Carrick, Dooey and Sheskinmore respectively in October 2004. At Sheskinmore, which is included in a separate SPA, larger flocks of as many as 140 birds have been previously reported. Up to 40 birds have been recorded roosting at Glen Head near Glencolumbkille and feeding in that area during September 2004. Flock birds feeding at Sheskinmore were roosting at nearby Dunmore Head during October 2004 and a communal roost site associated with dune feeding exists near Bunbeg, Gweedore within sight of the dunes at Magheragallan.

Land use at the site is predominantly grazing by stock. The grazing regime, which results in a tight vegetation sward, is beneficial to Chough. The habitats present are quite robust, and there are few noticeable activities negatively impacting on the Chough population. However, changes in land use, particularly a reduction in grazing levels, could pose a threat to the species. One other potential threat is the residue left in livestock dung due to the application of broad-spectrum anti-parasitic drugs.

The site supports a large and important Peregrine population (9 pairs in 2002); this species is listed on Annex I of the E.U. Birds Directive. The site also holds nationally important populations of Fulmar (1,879 pairs), Cormorant (71 pairs in 1999 and 2006), Shag (86 pairs), Herring Gull (229 pairs), Kittiwake (1,037 pairs), Razorbill (322 pairs) and Black Guillemot (155 individuals), as well as smaller populations of other breeding seabirds: Guillemot (366 pairs), Great Black-backed Gull (15 pairs) and Lesser Black-backed Gull (2 pairs) – all seabird data from 1999 except where indicated. The most important breeding seabird colony in the site is at Tormore Island, a small precipitous grassy sea stack rising to a peak of 139 m, on the north side of the Glencolumbkille Peninsula. Puffin have been recorded breeding on Tormore in the past, with an estimated 3,000 birds in 1970, though such high numbers are no longer considered to occur. Small groups of Barnacle Goose, also an E.U. Birds Directive Annex I species, occasionally graze on the sward on top of the stack. The West Donegal Coast SPA is also of importance for breeding Twite and Ring Ouzel, both Red-listed species.

The West Donegal Coast SPA contains nationally important breeding populations of both Chough and Peregrine. It also supports a range of breeding seabirds, including populations of Fulmar, Cormorant, Shag, Herring Gull, Kittiwake, Razorbill and Black Guillemot of national importance, as well as populations of the Red-listed Twite and Ring Ouzel. The presence of good populations of Chough and Peregrine, species that are listed on Annex I of the E.U. Birds Directive, is of particular significance.

### **Description of the Conservation Interests of the SAC**

#### **Annex I Habitats**

The qualifying habitats of the Slieve League SAC are listed below:

- Reefs [1170]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
- Northern Atlantic wet heaths with *Erica tetralix* [4010]
- Alpine and Boreal heaths [4060]
- Blanket bog (active only) [7130]
- Calcareous rocky slopes with chasmophytic vegetation [8210]
- Siliceous rocky slopes with chasmophytic vegetation [8220]

*Reefs [1170]*, are a qualifying interest of the Slieve League SAC, and are a marine water dependant habitat. The main water pollution pressure for this habitat type is Nutrient Enrichment (as N) and BOD from both diffuse and point-source nutrient and organic pollution. It is therefore considered that there is potential for adverse effects and potential for changes to the conservation status of this habitat from the Kilcar discharge.

*Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]* is a marine water dependent habitat. The main pressure on this habitat is coastal erosion. Water pollution impacts are not applicable to this habitat type. It is therefore considered that there is little/no potential for adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

*Northern Atlantic wet heaths with Erica tetralix [4010]* is a ground water dependant habitat at risk from nutrient enrichment to groundwater (dissolved and particulate P pollution and diffuse and point source N nutrient pollution). It is therefore considered that there is little/no potential for

adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

*Alpine and Boreal heaths [4060]* are not water dependant habitats and therefore it is considered that there is little/no potential for adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

*Blanket bog (\*active only) [7130]* is a groundwater dependant habitat and is at risk from groundwater nutrient enrichment (diffuse and point source nutrient pollution, N and P). It is therefore considered that there is little/no potential for adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

*Calcareous rocky slopes with chasmophytic vegetation [8210]* is not a water dependant habitat. Therefore there is little/no potential for adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

*Siliceous rocky slopes with chasmophytic vegetation [8220]* is not a water dependant habitat and thus has little/no potential for adverse effects and no potential for changes likely to the conservation status of this habitat from the Kilcar discharge.

**Table 5.0: Qualifying Habitats along Surveyed Stretch of Donegal Bay at the Kilcar Discharge Point**

Site	Qualifying Habitats	Present at Surveyed Stretch	Nearest Location
Slieve League SAC	Reefs	No	Several reef systems are located within 5 km of the discharge site
	Vegetated sea cliffs	No	Approximately 1 km west of discharge site
	Northern Atlantic wet heaths	No	Approximately 3 km northwest of discharge site
	Alpine and Boreal heaths	No	Approximately 4 km northwest of discharge site
	Blanket bog	No	Approximately 3 km northwest of discharge site
	Calcareous rocky slopes	No	Approximately 5 km northwest of discharge site
	Siliceous rocky slopes	No	Approximately 5 km northwest of discharge site

## Description of the Conservation Interests of the SPA

### Annex I Birds

The qualifying species of the West Donegal Coast SPA are listed below:

- Fulmar (*Fulmarus glacialis*) [A009]
- Cormorant (*Phalacrocorax carbo*) [A017]
- Shag (*Phalacrocorax aristotelis*) [A018]
- Peregrine (*Falco peregrinus*) [A103]
- Herring Gull (*Larus argentatus*) [A184]
- Kittiwake (*Rissa tridactyla*) [A188]
- Razorbill (*Alca torda*) [A200]
- Chough (*Pyrrhocorax pyrrhocorax*) [A346]

#### Fulmar (*Fulmarus glacialis*) [A009]

The Fulmar is a 'true seabird' and can often be seen many miles from the coast. Fulmars breed all around the Irish coast where suitable cliff habitats exist. Fulmars feed mostly on crustaceans, fish, trawler waste and carrion. Breeding sites are used annually. Fulmars are Green-listed in Ireland. The European population has been evaluated as Secure. Pollution is a risk to this species as it has the potential to reduce fish stocks.

#### Cormorant (*Phalacrocorax carbo*) [A017]

Approximately 4,500 pairs of cormorants exist in Ireland. Coastal breeding sites are on cliffs, stacks and rocky inlets. Cormorants feed on fish mainly. Cormorants are Amber-listed in Ireland due to their localised breeding colonies. The European population has been evaluated as Secure. Pollution is a risk to this species as it has the potential to reduce fish stocks.

#### Shag (*Phalacrocorax aristotelis*) [A018]

There are over 3,000 pairs of Shags in Ireland. They prefer coastal waters close to rocky coasts and islands and can withstand rough seas. Shags feed mostly on fish. Like all fish-eating sea birds, Shag conservation depends on a sufficient food supply. This species is Amber-listed in Ireland due to its localised breeding population. The European population has been evaluated as Secure. Pollution is a risk to this species as it could reduce fish stocks.

#### Peregrine (*Falco peregrinus*) [A103]

Peregrines are large falcons preferring solitary nesting sites including: rock faces, sea cliffs, offshore islands and quarries. Peregrines feed primarily by capturing birds in flight. Their breeding sites are usually on large cliff ledges. This species is Green-listed in Ireland. They are no longer considered a species of European conservation concern having suffered severe historic declines between the 1950s and 1970s due to the effects of agricultural chemicals on reproductive success. Peregrines are not likely to be impacted by the sewage outfall as they feed largely on avian prey and there is little/no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.

#### Herring Gull (*Larus argentatus*) [A184]

The Herring Gull is a large gull which nests in noisy colonies and uses communal roosts. They generally nest on vegetated sea cliffs but can also nest on roofs of buildings. They utilise a wide range of feeding sources including: fish, crustaceans, trawler waste, human refuse, invertebrates

and carrion. The Herring Gull is Red-listed in Ireland due to a large decline in the breeding population. This decline has occurred as a result of Herring Gulls feeding at refuse sites and contracting botulism. Subsequent closure of most landfill sites has largely removed the threat of botulism but has also led to the loss of an important food source for many Herring Gull populations. The European population has been assessed as Secure. This species could be affected by pollution from any potential reduction in fish stocks.

**Kittiwake (*Rissa tridactyla*) [A188]**

This medium sized gull mainly inhabits rocky coasts during the breeding season where it usually nests on tall sea cliffs. Most of their time is spent out at sea feeding on a variety of fish species and other marine creatures. This species is Amber-listed in Ireland, due to its localised breeding population. The European population is regarded as Secure. This species could be affected by pollution from any resultant reduction in fish stocks.

**Razorbill (*Alca torda*) [A200]**

The Razorbill only comes to shore to breed and it nests on rocky cliffs and among boulder scree close to the sea. Conservation risks include marine pollution. This species is dependent on sufficient fish stocks, the Razorbill's primary food source. This species is Amber-listed in Ireland as the majority of the population breeds at less than ten sites around the coast. The European population is considered to be Secure. The closest Razorbill colony to Kilcar discharge is Tormore Island, approximately 17 km to the northwest on the northern side of the Glencolumbkille Peninsula so therefore there is little or no potential for adverse effects and little or no potential for changes to the conservation status of this species from the Kilcar discharge during the breeding season.

**Chough (*Pyrrhocorax pyrrhocorax*) [A346]**

Chough distribution in Ireland is confined mainly to the rocky coasts of Munster, as well as parts of Connaught and Ulster. Their breeding sites can be located in caves or rock face crevices along the Irish south and west coasts. They feed mainly on insects and their larvae, worms and other subterranean invertebrates, using their curved bills to dig them out of the soil. They will also feed on berries, grain, small mammals and birds. This species is Amber-listed in Ireland. The European population has been evaluated as declining by BirdLife International, due to an ongoing moderate decline across much of its range. The Chough's diet is entirely terrestrial and therefore there is little or no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.

Natura Site	Qualifying Species	Proximity to Discharge Site
<b>West Donegal Coast SPA</b>	Fulmar	Significant breeding populations exist at Dundawoona Point (92 pairs) and also within 5 km of the discharge site at Carrigan Head (40 Pairs) and Muckros Head (81 pairs) (Holohan, J., 2002).
	Cormorant	It is estimated that 60 pairs of Cormorants breed at Slieve League within 5 km of the discharge site (Mitchell <i>et al</i> 2004).
	Shag	Small numbers of Shags breed along the coast within 1 km of the discharge site

Natura Site	Qualifying Species	Proximity to Discharge Site
	Peregrine	At least three pairs of Peregrine breed within 10 km of the discharge site (NPWS, 2014).
	Herring Gull	Substantial numbers of Herring Gulls breed close to the discharge site at Dundawoona Point (83 pairs) and Carrigan Head (13 pairs) (Holohan, J., 2002).
	Kittiwake	There is a large colony of breeding Kittiwakes (424 pairs) at Dundawoona Point and a second colony at Muckros Head (106 pairs) (Holohan, J. 2002). Breeding success at Dundawoona Point was poor in 2006 with only 0.27 young fledging from 229 nests (Mavor <i>et al</i> , 2008).
	Razorbill	Razorbills do not breed within 10 km of the discharge site (Balmer <i>et al</i> , 2013).
	Chough	20+ pairs of Chough breed within 10 km of the discharge site (Gray <i>et al</i> , 2003).

## Conservation Objectives of the Natura 2000 sites

Article 6 of the Habitats Directive states that:

*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.*

The importance of a site designated under the Habitats Directive is defined by its qualifying features or interests. Qualifying interests for any Natura 2000 site are listed on a *pro forma*, called the Natura 2000 standard data form, which forms the basis of the rationale behind designation, and informs the Conservation Management Plan for targeted management and monitoring of key species and habitats.

### Slieve League SAC

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

- [1170] Reefs
- [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts
- [4010] Northern Atlantic wet heaths with *Erica tetralix*
- [4060] Alpine and Boreal heaths
- [7130] Blanket bogs(\* if active only)
- [8210] Calcareous rocky slopes with chasmophytic vegetation
- [8220] Siliceous rocky slopes with chasmophytic vegetation

## West Donegal Coast SPA

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

- Fulmar [breeding ]
- Cormorant [breeding ]
- Shag [breeding ]
- Peregrine Falcon [breeding ]
- Herring Gull [breeding ]
- Kittiwake [breeding ]
- Razorbill [breeding ]
- Chough [breeding ]

## Impact Prediction

### Impacts on Water Quality

The aquatic conservation interests of the Slieve League SAC are directly dependent on the aquatic environment and as the Kilcar waste water collection network discharges to Tawny Bay (Donegal Bay Northern) approximately 0.5 km from the SAC designation, there is a potential connection between this discharge and the ecological receptors in the Slieve League SAC.

Kilcar discharges directly into the West Donegal Coast SPA. A number of the bird species associated the West Donegal Coast SPA are directly dependent on the aquatic environment in terms of feeding (e.g. Fulmar, Herring Gull, Shag, Kittiwake and Cormorant). The Kilcar waste water discharge could have a localised impact on a number of bird species in terms of food sources.

The waste assimilative capacity calculations demonstrates using the “*notionally clean river*” approach that there is sufficient assimilative capacity for the Kilcar effluent discharge at the tidal estuary of the Glenaddragh River which discharges into Tawny Bay. However due to the limited data available at the time of writing this report, the “*Precautionary principal*” has been applied. Due to the gap in coastal ambient monitoring data, it is cannot be discounted that the Kilcar discharge is causing a localised impact on the water quality of the receiving waterbody.

The North Western IRBD Transitional and Coastal Waters Action Programme have not yet assigned an Ecological Status to the water body into which the Kilcar waste water discharges, Donegal Bay Northern (IE\_NW\_070\_0000). Furthermore, there is currently no objective set out within the Action Programme for the Kilcar waste water discharge. However, the water quality of Tawny Bay/Donegal Bay Northern is classified by the EPA as “*unpolluted*”. The current Water Framework status of this water body is 2b “*not at risk*” and is likely to maintain unpolluted status by 2015. The Kilcar discharge does not appear to be impacting the on overall WFD status of the receiving water body, Donegal Bay Northern/Tawny Bay as a whole.

Cumulative impacts in the catchment possibly pose the greatest risk to the conservation objectives of the SPA and SAC. The potential threat(s) of the Kilcar discharge on water quality (long term or single event) is greatly increased when taken in combination with other water

quality concerns in the catchment. There are two industrial plants which discharge industrial effluent to the Kilcar network.

Other impacts which are likely to act cumulatively and impact on water quality, and therefore with the potential to impact on the SAC/SPAs water dependent qualifying habitats and species will result from the following:

- Chemical fertiliser application to agricultural lands (the main fertilisers in use supply nitrogen, phosphorus, potassium and sulphur)
- Agricultural practices such as ploughing leads to greater mineralisation and nitrification, and in the case of old grassland, it can result in an increase in the release of nitrogen over a number of years (OECD, 1986)
- Artificial drainage increases nitrate leaching and reduces the morphological qualities of watercourses, thereby reducing the quality of habitat for flora and fauna
- Forestry may alter water quality indirectly through increased evaporation losses and hence an increase in solute concentrations
- On-site waste water treatment systems, poorly performing septic tank units and other small effluent systems can be significant sources of nutrients to rivers

In summary, the Kilcar discharge is not likely to be impacting the overall water quality of the Donegal Bay Northern waterbody due to the capacity of the coastal waters to assimilate the discharge but there is the potential that it is having a limited localised water quality effect and impacting on any water dependent species within the immediate vicinity of the outfall. This limited localised indirect impact may affect some bird species, in terms of food sources, however, given the extent of the habitat and food resources available to these species within the SPA, it is not considered to be significant.

### Impacts on Annex I Habitats

The qualifying interests of the Slieve League SAC are listed above (Section: “*Description of the Conservation Interests of the SAC*”), Reefs are marine water dependant and at risk from pollution pressures. This habitat was therefore identified as “*at risk*” from impacts from the Kilcar discharge. Potential impacts are discussed below for this habitat and detailed in Table 7.0 for all remaining qualifying features of the SAC.

#### *Reefs [1170]*

Reef habitats are widespread marine features with immobile hard substrate available for colonisation by epifauna. Reef habitat in Irish waters ranges from the intertidal zone to 4500 m below the sea surface and some reefs are located more than 400 km from the coast. Intertidal Reefs are familiar and widespread habitats characterised by hard rock washed by the tide. There are a number of factors that influence this habitat type including tidal immersion, influence of freshwater (riverine and rainwater), variation in temperature, desiccation, exposure to waves, stability of substrate, and weathering of substrate. With distance from the intertidal zone these parameters become less active in influencing the habitat.

A range of fish species are associated with this habitat including Rock Gunnel *Pholis gunnellus*, Common Ling *Molva molva*, Worm Pipefish *Nerophis lumbriciformis*, Pollack *Pollachius poliachius*, Conger *Conger conger* and Wrasses *Labridae* spp..

The main threat to this habitat type (high importance) is considered to be fishing and harvesting of aquatic resources and pollution to surface waters (limnic & terrestrial, marine & brackish). The overall conservation status of this habitat type is bad (U2). The overall trend in conservation status is declining.

The Kilcar discharge is relatively close to the Slieve League SAC (0.5 km) and to some reef habitats, however due to the low volume of effluent (c. 274 PE) and the likely marine/coastal mixing effect no adverse impact on this habitat is predicted based on current discharge volumes.

**Table 7.0: Qualifying Habitats Potentially Impacted by Kilcar Discharge**

Qualifying Habitats	Potential Impacts	Brief Explanation	Mitigation required
Reefs	Yes. Marine/Coastal Water Dependent	One of the main threat to this habitats is pollution to surface waters. Therefore any discharge has the potential to impact on this habitat type. The Kilcar discharge is relatively close to some reef habitats, however due to the low volume of effluent, high dilution and the likely marine/coastal mixing effect no adverse impact on this habitat is predicted.	No
Vegetated sea cliffs	No	Marine water dependent habitat. The main pressure on this habitat is coastal erosion. Water pollution impacts are not applicable to this habitat type.	No
Northern Atlantic wet heaths	No	Terrestrial habitat. Not marine/coastal water dependent	No
Alpine and Boreal heaths	No	Terrestrial habitat. Not marine/coastal water dependent	No
Blanket bogs	No	Terrestrial habitat. Not marine/coastal water dependent	No
Calcareous rocky slopes	No	Terrestrial habitat. Not marine/coastal water dependent	No
Siliceous rocky slopes	No	Terrestrial habitat. Not marine/coastal water dependent	No

## Impacts on Annex I Birds

### *Fulmar [A009]*

Fulmars have varied diets that can include marine zooplankton, small fish such as sandeels, fish discards and fish offal (Mitchell *et al*, 2004). Fulmars have increased greatly in number around the British and Irish coasts since the early nineteenth century and much of this growth has been aided by a growth in commercial fishing. Numbers are continuing to rise in Ireland, especially in Donegal and Mayo (Mitchell *et al*, 2004). It is likely that Fulmars nesting along the South Donegal coast rely substantially on fish discards and offal from the large fishing fleet based in or operating from nearby Killybegs. Taking the precautionary principal, there is the potential for some localised quality impacts impact from the untreated effluent discharge. Food sources for the Fulmar, such as sandeels, could potentially be impacted by the Kilcar untreated effluent or any toxic substances within the effluent from industries discharging to the network. The current effluent discharge therefore has the potential to have a limited localised impact on the Fulmar population of the West Donegal Coast SPA. However, given the extent of habitats and food resources available to this species within the SPA, it is not considered to be significant.

### *Cormorant [A017]*

Cormorants feed largely on bottom-dwelling fish such as Flounder and Dab in sheltered bays and estuaries. They may forage considerable distances from their nest sites. The Kilcar discharge is unlikely to have any negative effect on the Slieve League colony, as a whole, however there is the potential for limited localised impacts on this species due to any water quality impacts and any knock on effects on their food sources e.g. Flounder. However, given the extent of habitat and food resources available to this species within the SPA, it is not considered to be significant.

### *Shag [A018]*

Shags feed on a variety of small fish species but Sandeels tend to be the most important source of food (Mitchell *et al*, 2004). In some areas Shags tend to breed in small groups over wide areas as occurs in Donegal Bay (Balmer *et al*, 2013). Several Shags were seen in the vicinity of the Kilcar discharge during the walkover survey and one individual foraged close to the outfall, presumably in pursuit of fish that may have been attracted by nutrients in the sewage. Shag could therefore potentially be impacted by the Kilcar untreated effluent or any toxic substances within the effluent and water quality impacts from the discharge may have a limited localised impact on their food source and therefore result in a localised impact on the Shag population. However, given the extent of habitat and food resources available to this species within the SPA, it is not considered to be significant.

### *Peregrine [A103]*

Peregrines feed primarily on birds in flight and therefore there is little or no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.

### *Herring Gull [A184]*

Herring Gulls were the most numerous seabird species seen in the vicinity of the Kilcar discharge during the walkover survey on August 4<sup>th</sup> and nine individuals were recorded in the immediate vicinity of the outfall. Ferns and Mudge (2000) found that Herring Gull abundance was positively correlated to the volumes of sewage discharged at sites in England and Wales. It is likely that at least part of the local population of Herring Gulls are benefitting to some degree by the sewage discharge as they use it as a source of food but fish discards and offal are likely to be of much

greater significance to the nearby colony. However, there is the potential for limited localised impacts on this species due to any water quality impacts from the untreated effluent discharge and any subsequent knock on effects on their food sources. However, given the extent of habitat and food resources available to this species within the SPA, it is not considered to be significant.

*Kittiwake [A188]*

Kittiwakes feed largely on Sandeels during the breeding season and recent declines in some Scottish populations have been linked to over-exploitation of Sandeel stocks (Mitchell *et al*, 2004). Kittiwakes occasionally feed at sewage outfalls but to a much lesser extent than Herring Gulls and other gull species (Burton *et al*, 2001). The Kilcar discharge is not likely to be a significant food source to the local Kittiwake colony given the low loading of effluent. There is the potential for limited localised impacts on this species due to any water quality impacts from the untreated effluent discharge and any subsequent knock on effects on their food sources e.g. fish and marine invertebrates. However, given the extent of habitat and food resources available to this species within the SPA, it is not considered to be significant.

*Razorbill [A200]*

Razorbills are extremely unlikely to be adversely impacted by the Kilcar discharge due to the low levels of effluent being discharged and the distance to the closest colony located at Tormore Island (Balmer *et al*, 2013) approximately 17 km to the northwest and on the northern side of the Glencolumbkille Peninsula.

*Chough [A346]*

The Chough's diet is entirely terrestrial and therefore there is little or no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.

**Table 8.0: Qualifying Birds Potentially Impacted by WwTP Discharge**

Qualifying Species	Potential Impact	Brief Explanation	Mitigation Required
Fulmar	Yes	Food sources such as Sandeels could potentially be impacted by untreated effluent or any toxic substances within the effluent.	Yes
Cormorant	Yes	Food sources such as Flounder could potentially be impacted by increased levels of effluent or toxic substances within the effluent.	Yes
Shag	Yes	Food fish such as Sandeels could potentially be impacted by increased levels of effluent or toxic substances within the effluent.	Yes
Peregrine	No	Peregrines are not likely to be impacted by the sewage outfall as they feed largely on avian prey and there is little/no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.	No
Herring Gull	Yes	Food sources such as Sandeels could potentially be impacted by increased levels of effluent or toxic substances within the effluent.	Yes
Kittiwake	Yes	Food sources such as Sandeels and marine invertebrates could potentially be impacted by increased levels of effluent or toxic substances within the effluent.	Yes

Qualifying Species	Potential Impact	Brief Explanation	Mitigation Required
Razorbill	No	Due to the distance between the Kilcar discharge and the nearest Kittiwake colony (approximately 17 km) there is little/no potential for adverse effects and little/no potential for changes to the conservation status of this species from the outfall during the breeding season.	No
Chough	No	The Chough's diet is entirely terrestrial and therefore there is little/no potential for adverse effects and no potential for changes to the conservation status of this species from the Kilcar discharge.	No

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## Mitigation Measures

The current residential population equivalent served by the waste water network is approximately 274 p.e.

Applying the waste assimilative capacity calculations as an indication of the current scenario, the receiving water has adequate capacity for the Kilcar discharge. However, no treatment is currently being provided to the waste water arising from the Kilcar catchment. Furthermore, cumulative impacts from Section 16 licensed facilities discharging to the Kilcar network could result in an impact on water quality and water quality dependent species.

Mitigation Measures recommended for the ongoing operation of the existing effluent discharge are as follows:

- Strict regulation of Section 16 licensed facilities discharging to the network
- Continuation of monitoring of the discharge (monthly).
- Regular ambient water quality monitoring of the Donegal Bay Northern ensuring that the standards as set in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 for coastal waters are met
- The waste water discharge effluent must be in compliance with any future EPA Waste Water Discharge COA conditions to ensure the environmental quality standards for the receiving waters are met.

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## Stage 2 Appropriate Assessment Conclusion Statement

The current Appropriate Assessment has been prepared following the EPA (2009) '*Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)*'. The Department of the Environment, Heritage and Local Government guidance '*Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*' (DoEHLG, 2009a) has also been taken into account. The current assessment for the Waste Water Discharge Certificate Application investigates the potential adverse effects on the aquatic qualifying interests of the Natura 2000 network arising from the Kilcar discharge, in combination with other plans/projects affecting the aquatic environment. The assessment considers whether the discharge, alone or in combination with other projects or plans, will have adverse effects on the *integrity* of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects.

When the above mitigation measures are implemented in full, it is envisaged that there will be no significant adverse effects on the integrity of the Slieve League SAC or the West Donegal Coast SPA in view of the site's conservation objectives and that the conservation status of the Annex I habitats and Annex II species will not be compromised by the Kilcar discharge either directly, indirectly or cumulatively.

It is therefore concluded that the Kilcar discharge, alone or in-combination with other plans and/or projects will not give rise to significant effects on the integrity of the Slieve League SAC or the West Donegal Coast SPA, as long as the mitigation measures as listed above are implemented in full. Stage 2 concludes the Appropriate Assessment process of the Kilcar Waste Water Discharge Certificate of Authorisation Application and further assessment is not considered necessary.

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