

21 AUG 2014 562

For inspection purposes only.
Consent of copyright owner required for any other use.

Appropriate Assessment Screening Document

APPENDIX 3



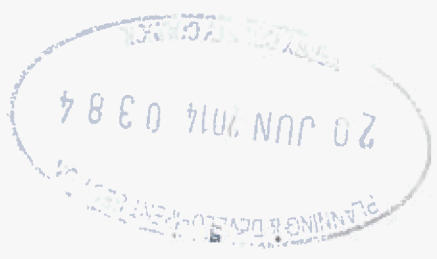
Brandon Products Ltd

Appropriate Assessment Screening for "New Stack at Brandon Products Ltd" Kilcolman, Asdee, Co. Kerry

May 2014

21 AUG 2014 5 6 2

Montgomery EHS
Kantcher Business Park
Killeedy, Ballagh,
Co. Limerick
Mob 087 239 0421
Email: irevor@jmehs.ie



Brandon Products Ltd, Kilcolman, Asdee, Co. Kerry
Appropriate Assessment Screening

Disclaimer

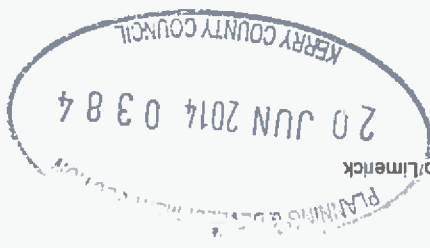
This document has been prepared on behalf of and for the exclusive use of Brandon Products Ireland Ltd by Montgomery EHS on the basis of an agreed scope of work for a submission to Kerry County Council as part of a planning application. Conclusions and recommendations contained in this Document are based on information supplied by the Client and others. Unless expressly stated otherwise, information provided by Third Parties has not been verified by Montgomery EHS. Montgomery EHS & Brandon Products Ireland Ltd accepts no liability or responsibility whatsoever in respect of any use of or reliance upon all or part of this Document by any third party.

Consent of copyright owner required for any other use
For inspection purposes only.

Document No. P014-033-02

Rev	Description	Origin	Review	Changes/Amendments	MEHS Approval	Date
1	Draft report	TM	MM		TM	27/04/14
2	Final	TM	MM	Review document	TM	04/05/14

21 AUG 2014 5 6 2



Montgomery EHS,
Registered Kantopher Business Park, Killeedy, Ballagh, Co.Limerick
Tel: 087 2390421 Email: revor@montgomerys.ie

Brandon Products Ltd, Kilcolman, Asdee, Co. Kerry

Appropriate Assessment Screening

May 2014

Contents

5	List of Abbreviations.....
6	Non-Technical Summary

7	1. Introduction.....
7	1.1 Background.....
7	1.2 Survey Methods.....
8	1.3 Survey Limitations.....
8	1.4 Purpose and Structure of the Written Submission.....
8	1.5 Qualifying Species and Conservation Objectives – Scope of AA.....
8	1.6 The Purpose of Appropriate Assessment.....
9	1.7 Overview of Appropriate Assessment Process.....
10	1.8 The Purpose of this Report
11	2.0 Brief Description of the Project.....
11	2.1 Consultation.....
11	2.2 European sites that may be affected.....
11	2.3 Existing legislation, plans and proposals.....
14	2.3.1 Convention on Biological Diversity (CBD)
14	2.3.2 Kerry County Council County Development Plan 2009 – 2015 (Kerry CC, 2009).....
14	2.3.3 Kerry County Council, Heritage & Bio-diversity Actions 2008 – 2012
18	2.3.4 National Sustainable Development Strategy
18	2.3.5 Long-term Strategy of the Environmental Protection Agency (EPA)
18	2.3.6 Shannon River Basin Management Plan.....
19	2.3.7 National Biodiversity Plan 2011 to 2016
20	2.4 Scoping of the study/Literature Review
20	2.4.1 NPWS Site Synopses.....

24	3.0 Baseline Data.....
24	3.1 Methodology.....
24	3.2 Constraints.....
24	3.3 Flora.....
24	3.3.1 Improved Grassland GA 1
26	3.4 Fauna.....
26	3.4.1 Mammals
27	3.4.2 Birds
27	3.4.3 Amphibians
27	3.4.4 Invertebrates

28	4.0 Screening Matrix.....
28	4.1 Brief description of the project

21 AUG 2014 5 6 2



4.2	Brief description of the Natura 2000 site.....	28
4.3	Assessment criteria.....	28
4.4	Describe any likely changes to the site arising as a result of:.....	30
4.5	Describe any likely impacts on the Natura 2000 site as a whole in terms of:.....	30
5.0	Finding of no significant effects report matrix.....	31
5.1	Name of project or plan.....	31
5.2	Name and Location of Natura 2000 sites.....	31
5.3	Description of the project or plan.....	31
5.4	Is this project directly connected with or necessary to the management of the sites (provide details)?.....	31
5.5	Are there other projects that together with the project or plan being assessed could affect the sites (provide details)?.....	32
5.6	The assessment of significance of effects.....	32
5.7	Explain why these effects are not considered significant.....	32
5.8	List of agencies consulted.....	32
5.9	Response to consultation.....	32
5.10	Data collected to carry out the assessment.....	33
5.11	Level of assessment completed.....	33
5.12	Where the full results of the assessment can be accessed and viewed?.....	33
6.0	Assessment of Likely Significant Effects.....	34
7.0	Conclusion.....	34
8.0	Bibliography.....	35
Appendix 1	Site Synopsis.....	37
Appendix 2	Figures.....	38

21 AUG 2014 5 6 2

20 JUN 2014 0 3 8 4

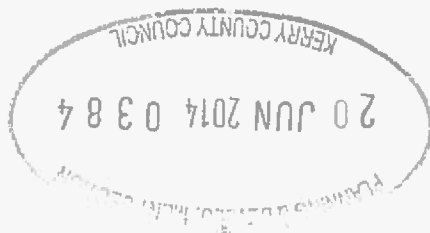
List of Abbreviations

AA	Appropriate Assessment
CBD	Convention on Biological Diversity
CSAC	Candidate Special Area of Conservation
DOEHLG	Department of the Environment, Heritage and Local Government
HDA	Habitats Directive Assessment
IRBD	International River Basin District
IROP	Imperative Reasons of Overriding Public Interest
NHA	Natural Heritage Area
PNHA	Proposed Natural Heritage Area
RBD	River Basin Districts
SAC	Special Area of Conservation
SHRFB	Shannon Regional Fisheries Board
SPA	Special Protection Area

For inspection purposes only.
Consent of copyright owner required for any other use.

21 AUG 2014

562



Non-Technical Summary

Brandon Products Ltd has been in operation since 2008 producing a variety of products from the processing of seaweed. The site operates a biological scrubber for odour control and currently has a stack 15 metres high which is planned to be replaced with a 25 m high stack. The Appropriate Assessment is a requirement of the planning process.

A Habitats Directive Assessment (HDA) is the process of assessing the impacts from a proposed development or plan on the surrounding Natura 2000 sites. If the impacts identified at the screening stage of the HDA process indicate likely significant effects on any of the Natura 2000 sites, an Appropriate Assessment (AA) is required. The assessment includes an assessment of the effects in combination with other plans and projects where these could combine to affect a Natura 2000 site. The first phase of an Appropriate Assessment is the screening phase to determine if an Appropriate Assessment is required.

The screening process has indicated that the proposed development does have the potential to affect the qualifying features of interest of the seven Natura 2000 sites, namely:

- River Shannon and River Fergus SPA (Site Code 004077)
- Lower River Shannon SAC (Site Code 002165)
- Tarbert Bay pNHA (Site Code 001386)
- Bunnaruddee Bog pNHA (Site Code 001352)
- Clonderalaw Bay pNHA (Site Code: 000027)
- Ballylongford Bay pNHA (Site Code: 001332)
- Scattery Island pNHA (Site Code: 001911)

1.9 km
5.4 km
15.8 km
9.6 km
9.0 km
6.9 km
7.3 km

21 AUG 2014



However, on examination it is clear, that due to combinations of the proposed mitigation measures, the magnitude of impacts and the positive changes from the current situation, the proposed activities will not have an adverse effect on the integrity of the site or the qualifying features of the conservation objectives of the Natura 2000 sites.

Therefore significant impacts are not likely to occur.

1. Introduction

This is an Appropriate Assessment Screening - in line with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) – for Kerry County Council to assess the planning application for a proposed 25 m stack.

This report was prepared in compliance with the European Communities (2002) 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 - the Screening matrix and the finding of no significant effects report matrix has been taken from Section 4 and 5 (Figures 1 to 6 see Appendix 2)

1.1 Background

The Site is an operating production facility at Kilcolman, Asdee, Co. Kerry.

1.2 Survey Methods

The site was surveyed on the 15th and 23rd of March 2012 and the 3rd of May 2014. The survey on the 15th commenced at 08:30 hrs. and finished at 11:00 hrs. and on the 23rd of March 2012 the survey took place at 10:30 hrs. and 12:30 hrs. and weather conditions on both days were dry. The weather conditions on the 3rd of May 2014 was fine with occasional showers.

The aim of the survey was to evaluate the ecological status of the site. This involved studying the types of habitats, flora and fauna present so as to determine the ecological diversity of this area. The site and surrounding area was walked with species and habitats recorded.

The survey method involved the following:

1. The site was walked and photographed with observations recorded.

2. The species of flora, fauna including avian species encountered were recorded.

3. Habitats were checked for evidence of mammals.

4. The diversity of habitats present was recorded.

5. Habitats were classified in accordance to the standard recommended by The Heritage

Council (Fossitt 2000).



1.3 Survey Limitations

Every effort has been made to provide an accurate assessment of the situation pertaining to the site at Kilcolman, Asdee, Co. Kerry at the time of the study.

1.4 Purpose and Structure of the Written Submission

The purpose of this written submission is to summarise the Appropriate Assessment Screening Report to be submitted to Kerry County Council. The submission addresses the impact of the existing site and associated infrastructure at Kilcolman, Asdee, Co. Kerry. The site is not within but approx. 1.9 km away from an SPA.

1.5 Qualifying Species and Conservation Objectives – Scope of Appropriate Assessment

The subject site itself is not designated under any Regional, National or European Environmental Designation. It does not therefore require assessment under the Wildlife (Amendment) Act 2000 (S.I. No. 38 of 2000) or the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997). But the Site is located approx. 1.9 kilometres from a SAC / SPA and is detailed in the Site Synopsis for the River Shannon (site Code: 002162) and is included in Appendix 1

1.6 The Purpose of Appropriate Assessment

The Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna – the 'Habitats Directive' provides legal protection for habitats and species of European importance. Article 2 of the Habitats Directive requires the maintenance or restoration of habitats and species of interest to the EU in a favourable condition. The Directive was transposed into Irish law by the European Communities (Natural Habitats) Regulations, SI 94/1997.

Articles 6(3) and 6(4) of the Habitats Directive require an Appropriate Assessment of plans to prevent significant adverse effects on European sites, also known as SAC or Natura 2000 sites. In this particular case the purpose of Appropriate Assessment is to assess the potential impacts of a land-use plan on the conservation objectives of European sites. The assessment must determine whether the plan would have significant adverse effects upon the integrity of each site in terms of its nature conservation objectives. The integrity of the site has been defined as "the coherence of the

20 JUN 2014 03 8 4

PLANNING & DEVELOPMENT SECTION

site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified". Where negative effects are identified other options should be thoroughly examined to avoid any potential damaging effects prior to implementing the plan.

The Natura 2000 network is a European network of ecologically important sites (SPAs and SACs) that have been designated for protection under either the Habitats Directive (Council Directive 92/43/EEC) or the Birds Directive (Council Directive 79/409/EEC). The statutory agency responsible for these designated areas is the National Parks & Wildlife Service of the Department of Environment, Heritage and Local Government.

Plans can only be permitted after having ascertained that there will be no significant adverse effect on the integrity of the site in question. Components within a plan, such as objectives or proposals, can be adjusted or removed to avoid significant adverse impacts prior to implementation. The plan may also proceed if sufficient mitigation or compensation measures are in place to ensure the overall integrity of the site.

1.7 Overview of Appropriate Assessment Process

In the preparation of this assessment reference has been made to the following documents:

European Commissions: *Managing Natura 2000 Sites. The provisions of Article 6, of the 'Habitats' Directive 92/43/EEC*

This screening should be based on any ecological information available to the authority and an adequate description of the plan and its likely environmental impacts. This should take into account any policies that will set the terms for future development. The results of the screening should be recorded and made available to the public.

In any case where, following screening, it is found that the project may have an impact on the conservation objectives of a Natura 2000 site or that such an impact cannot be ruled out, adopting a precautionary approach an appropriate assessment of the project must be carried out.



The European Commission's Methodological Guidance recommends a 4 stage approach:

Stage 1 Screening:

Determining whether the plan 'either alone or in combination with other projects' is likely to have a significant effect on a European site.

Stage 2 Appropriate Assessment:

Determining whether, in view of the site's conservation objectives, the plan 'either alone or in combination with other projects' would have an adverse effect (or risk of this) on the integrity of the site. If not, the plan can proceed.

Stage 3: Assessment of Alternative Solutions:

Where it has not been proven that measures considered will not avoid or mitigate the adverse effect on the Natura 2000 site, then an assessment of the alternatives will be required; and if none are acceptable then stage 4 is required to be considered.

Stage 4 Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain

This will involve assessment where the Plan is considered to result in adverse impacts on the Natura 2000 site and no alternative solutions remain – the imperative reasons of overriding public interest (IROPI) test must be met before authorisation, permission or adoption of the Plan is agreed. This includes the agreement of compensatory measures.

This report covers Stage 1 of Appropriate Assessment – Screening for Appropriate Assessment.

1.8 The Purpose of this Report

This Screening Report will be used to identify whether the existing operation and associated infrastructure at Kilcolman, Asdec, Co. Kerry either alone or in combination with other plans or projects is likely to have a significant effect on a European site. This report will include recommendations, if necessary, to avoid any significant adverse effects at the earliest possible stage in decision making. This report follows European Commission (2001) guidance which recommends that screening should:

- Determine whether the proposed development is directly connected with or necessary to the management of the site – if it is not, then no further assessment is necessary.
- Describe the proposed and other plans and projects that, 'in combination', have the potential to have significant effects on a European site.
- Identify the potential effects on the European site.
- Assess the significance of any effects on the European site.



2.0 Brief Description of the Project

The site is an operating company manufacturing seaweed based bio-stimulants at Kilcolman, Asdee, Co. Kerry. The site has been in place for over 40 years and has been modified in line with planning permission granted by Kerry County Council in 2008. The site is a producer of seaweed based bio-stimulants which are sold predominantly outside Ireland as high value crops.

The site is approximately 1.9 km away from the River Shannon and River Fergus SPA.

2.1 Consultation

Montgomery EHS consulted with the National Parks and Wildlife Service (hereafter NPWS) regarding the designated sites in the vicinity of Brandon Products Ltd.

2.2 European sites that may be affected

There are seven European sites which may potentially be affected by the existing development namely the:

- River Shannon and River Fergus SPA (Site Code 004077)
- 1.9 km
- Lower River Shannon SAC (Site Code 002165)
- 5.4 km
- Tarbert Bay pNHA (Site Code 001386)
- 15.8 km
- Bunnarudee Bog NHA (Site Code 001352)
- 9.6 km
- Clonderalaw Bay pNHA (Site Code: 000027)
- 9.0 km
- Ballylongford Bay pNHA (Site Code: 001332)
- 6.9 km
- Scatterry Island pNHA (Site Code: 001911)
- 7.3 km

A 'sphere of influence' of 10 kilometres was assessed, this being deemed as an area which the existing site may affect, either alone or in combination with other plans. The location of the European sites are illustrated in Table 1 and their qualifying features that could potentially be affected by the Brandon Products facility at Kilcolman, Asdee, Co. Kerry

21 AUG 2014 562

20 JUN 2014 0384

River Shannon and River Fergus Estuaries SPA (Site Code: 004077)

This site is of great ornithological interest, being of international importance on account of the numbers of wintering birds it supports. It also supports internationally important numbers of three species, i.e. Dunlin, Black-tailed Godwit and Redshank. In addition, there are 16 species that have populations of national importance. For several of the bird species, it is the top site in the country. Also of note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. The site is most effectively censused from the air and this is carried out in most winters.

Stacks to Mullaghareirks, West Limerick Hills and Mount Eagle SPA (Site Code: 004161). The site is a Special Protection Area (SPA) under the EU Birds Directive, of special conservation interest for Hen Harrier. This SPA is a stronghold for Hen Harrier and supports the largest concentration of the species in the country. A survey in 2005 resulted in 40 confirmed and 5 possible breeding pairs, which represents over 29% of the national total. A similar number of pairs had been recorded in the 1998-2000 period. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the EU Birds Directive.

Short-eared Owl, also listed on Annex I of the E.U. Birds Directive and very rare in Ireland, has been known to breed within the site. Merlin, a further E.U. Birds Directive Annex I species, also breeds but the size of the population is not known. Red Grouse is found on some of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed.

Lower River Shannon SAC (Site Code: 002165)

The site is a candidate SAC selected for lagoons and alluvial wet woodlands, both habitats listed on Annex I of the EU Habitats Directive. The site is also selected for floating river vegetation, Molinia meadows, estuaries, tidal mudflats, Atlantic salt meadows, Mediterranean salt meadows, Salicornia mudflats, sand banks, perennial vegetation of stony banks, sea cliffs, reefs and large shallow inlets and bays all habitats listed on Annex I of the EU Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Bottle-nosed Dolphin, Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Atlantic Salmon and Otter. There are also a number of species present within the site that are rare and listed in the Irish Red Data Book (1985) in addition to species protected under the Flora Protection Order (1999).



Tarbert Bay pNHA (Site Code: 001386)

The Tarbert Bay pNHA is located directly to the east of the Brandon Plant. The site consists of a sandy intertidal bay fringed by saline vegetation and also includes some deciduous woodland. The site is important for wintering waterfowl.

Bunnurdee Bog NHA (Site Code: 001352)

Bunnurdee Bog NHA is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site supports a diversity of raised bog microhabitats, including hummock/hollow complexes, as well as a number of scarce plant species. The bog is located in Kerry in the south-west extreme of the geographical range of raised bog habitat in Ireland.

Clondarlaw Bay pNHA (Site Code: 000027)

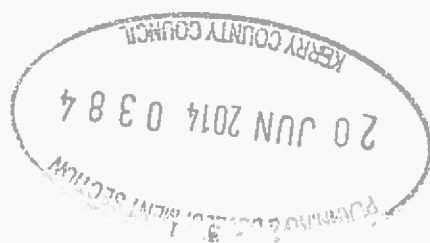
The site includes all of the intertidal mudflats of the bay. In 1973 a number of isolated patches of Cordgrass (*Spartina spp.*) occurred on the mudflats. The edges of the estuary had some small strips of saltmarsh vegetation. The site is an important bird site, as it is part of the internationally important Shannon-Fergus estuarine complex.

Ballylongford Bay pNHA (Site Code: 001332)

Ballylongford Bay is an inlet on the southern side of the Shannon Estuary and runs northwards from the town of Ballylongford in County Kerry. The scientific interest of the area lies in the large concentrations of waterfowl that feed on the mudflats there.

Scattery Island pNHA (Site Code: 001911)

Scattery Island is located near the mouth of the Shannon estuary, about 3 kilometres from Kilrush. Much of the island is grassland, which is generally species rich. Saltmarsh habitat is also present. The island is owned largely by the Office of Public Works and was acquired mainly for its early Christian to Medieval ecclesiastical structures. Further work is required to assess the ecological importance of the island.



2.3 Existing legislation, plans and proposals

2.3.1 Convention on Biological Diversity (CBD)

The protection of biodiversity is enshrined in the CBD to which Ireland is a signatory. As part of its commitment to this international treaty Ireland, as part of a wider European Union initiative, is committed to the halt in loss of biodiversity by the year 2010. The National Biodiversity Plan (Duchas, 2002), published in 2002, states that "each local authority is to prepare a local biodiversity action plan". All Local Authorities are or have completed the process of drawing up its first Biodiversity Action Plan. Kerry County Council have produced a Biodiversity actions plan 2008 to 2012. In addition, the Department of the Environment, Heritage and Local Government is currently preparing the second National Biodiversity Plan.

The plan aims to provide a framework for the conservation of nature and wildlife within the County, which will tie together the policy of national government with the issues that most affect us locally. Its implementation will contribute to achieving national and international targets for the conservation of biodiversity. This is in the context of constantly accelerating rates of species extinction and habitat loss globally.

2.3.2 Kerry County Council County Development Plan 2009 – 2015 (Kerry CC, 2009)

Chapter 11 of the Kerry County Development Plan 2009-2015 sets out the Local Authority's position on biodiversity.

It is an objective of the Council to:

EN 11-1

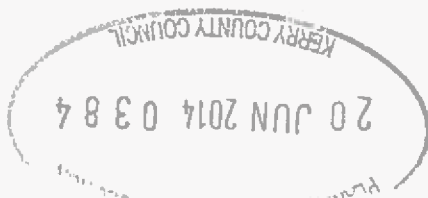
Take all necessary measures to prevent pollution in order to maintain the quality of the

environment of County Kerry.

EN 11-2

Ensure that policies to counter global warming and climate change are incorporated into

the policies and the development management system of Kerry County Council.



27 AUG 2014 5 6 2

Consent to copy right owner required for any other use.
For information only.
Not for publication or reproduction.

EN 11-3 Take all necessary measures to ensure that the Natural Environment of the County is managed and protected in a sustainable manner.

SAC's and SPA's together form part of the 'Natura 2000' network of sites throughout Europe. The SAC's, SPA's and NHA's designated throughout the County at time of publication are marked on Maps 11.1 - 11.3

Natural Heritage Areas

EN 11-22

(a) Ensure that development likely to have serious adverse effects on the areas listed will not normally be permitted. The designation of sites does not imply a total restriction on all development. Applicants must demonstrate that the proposed development will not have a negative impact on the fauna, flora or habitat being protected through an Appropriate Assessment under Article 6 of the Habitats Directive which is a requirement for development proposals affecting European Sites.

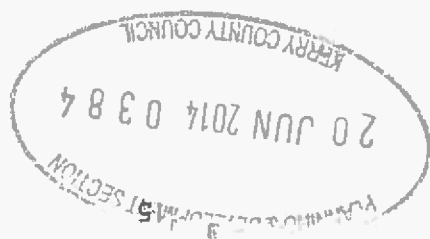
(b) Ensure that any development proposal in the vicinity of or affecting in any way a designated European Site or NHA provides sufficient information showing how its proposals will impact on the designated site. Appropriate mitigation measures must be indicated.

(c) Support and promote measures to control and manage the presence of alien/ invasive species and weeds in consultation with the National Parks and Wildlife Service.

Special Areas of Conservation

11.2.4 In 1992 the Council of the European Communities adopted the Habitats Directive (92/43/EEC), on the conservation of natural and semi-natural habitats and species of flora and fauna. It is the responsibility of each member state to designate Special Areas of Conservation (SACs) to protect habitats and species. The Commission of the European Union calls the sites 'candidate sites' because they are currently under consideration.

27 AUG 2014 5 6 2



Special Areas of Conservation

EN 11-23 Maintain the conservation value of those sites as defined in the Planning & Development Act 2000 (Special Areas of Conservation, Special Protected Areas or Lands Proposed for inclusion in such sites) identified by The National Parks and Wildlife Service of the Department of Environment, Heritage & Local Government, as well as any other sites that may be so designated during the lifetime of this plan.

Biodiversity

It is the policy of Kerry Council County to

EN 11-26 (a) Promote biodiversity throughout the County and implement the recommendations of the National Biodiversity Plan when made available.

(b) Support the preparation of a county-wide Habitat Mapping survey subject to consultation with the National Parks and Wildlife Service – Department of the Environment Heritage and Local Government, the Heritage Council and other relevant statutory and non statutory nature conservation interest groups.

(c) Facilitate the maintenance and development of an ecological network where necessary through the planning process.

(d) To consider the preparation of a Wetland Survey of the County subject to consultation with the National Parks and Wildlife Service – Department of the

Environment Heritage and Local Government, the Heritage Council, Waterways Ireland

and other relevant statutory and non-statutory nature conservation interest groups.

EN 11-27 Ensure that development does not have a significant adverse impact, on plant or animal (including bird) species protected by law.

EN 11-28 Consult with the National Parks and Wildlife Service and take account of any licensing requirements when undertaking, approving or authorizing development which is likely to affect plant, animal or bird species protected by law.

EN 11-29 Ensure that proposals for development protect and enhance biodiversity, wherever possible, by minimizing adverse impacts on existing habitats and by including mitigation and /or compensation measures, as appropriate, which ensure that biodiversity and landscape character is maintained.

Environment

The Local Agenda 21 Partnership Fund provides for projects on the theme of Biodiversity, as it is a fundamental part of sustainable development. Control of permits and licencing for waste disposal by this section, as well as enforcement, helps protect sensitive habitats. Provision of better information for the section on the location of locally important habitats would avoid habitat damage and loss and so avoid costly clean-up bills.

- To protect natural heritage sites designated in National and European legislation. This includes sites proposed to be designated or designated as Special Areas of Conservation (SAC), Natural Heritage Areas (NHA), Special Protection Areas (SPA) Nature Reserves and Wildfowl Sanctuaries. This protection will extend to any additions or alterations to sites that may arise during the lifetime of this plan.
- To assess all proposed developments (individually or in combination with other proposals, as appropriate) which are likely to impact on designated natural heritage sites or those sites proposed to be designated.
- To consult with the prescribed bodies and relevant government agencies when assessing developments which are likely to impact on designated natural heritage sites or those sites proposed to be designated.
- To ensure that any development in or near a designated natural heritage site will avoid any significant adverse impact on the features for which the site has been designated.
- To require an appropriate environmental assessment in respect of any-proposed development likely to have an impact on a designated natural heritage site, or those sites proposed to be designated.

2.3.3 Kerry County Council, Heritage & Bio-diversity Actions 2008 – 2012

Kerry County Council has produced a document Heritage and Bio-diversity Action Plan 2008 to 2012, which has three key objectives:

- Key Performance Areas - Education and Access
- Key Performance Areas - Research
- Key Performance Areas - Management

2.3.4 National Sustainable Development Strategy

The 2002 document: 'Making Ireland's Development Sustainable' (DOEHLG, 2002) highlights "respect for ecological integrity and biodiversity" as a core theme, while the associated principle is that: "the diversity of wildlife, habitats and species should be maintained and improved". An update to this document is to be published.

2.3.5 Long-term Strategy of the Environmental Protection Agency (EPA)

In 2007 the EPA published '2020 Vision: Protecting and Improving Ireland's Environment' (EPA, 2007) and identified the protection of soil and biodiversity as one of six environmental goals.

2.3.6 Shannon River Basin Management Plan

The Plan, produced in response to the EU Water Framework Directive 2000/60/EC (WFD) requires all waters to have 'good status' (unless classified as heavy modified in which case they must achieve 'good ecological potential' by 2015) and deterioration in existing water quality status is not acceptable. The Shannon IRBD is the largest in Ireland at more than 18,000 km² in area. It stretches from the source of the River Shannon in the Cuilcagh Mountains in counties Cavan and Fermanagh to the tip of the Dingle peninsula in north Kerry. As well as the natural drainage basin of the Shannon River itself, which drains an extensive area of central Ireland, it also includes coastal parts of Kerry and Clare which drain to the sea. It drains 18 local authority areas and is also an international district as a small portion of County Fermanagh in Northern Ireland drains underground to the source of the Shannon where it rises to the surface at the Shannon Pot in County Cavan. The Shannon IRBD is a largely rural district with many protected sites that depend on water (54% of rivers have protected areas associated with them). Water is critical to the economy of the Shannon IRBD, generating wealth through activities such as agriculture, forestry, aquaculture, power generation, industry, services, transport and tourism. However, water is a fragile resource that needs to be protected.

The River Basin Management Plan for the Shannon RBD sets out a number of measures to achieve 'good status'. Fish, aquatic invertebrates and aquatic plants all contribute to the 'biology' component of the ecological classification system.

2.3.7 National Biodiversity Plan 2011 to 2016

This sets out Ireland's biodiversity strategy in response to Article 6 of the Convention on Biological Diversity 1992. Its main goal is to secure conservation (and where possible enhancement) and sustainable use of biological diversity in Ireland and contribute to conservation and sustainability globally. It includes the statement that environmental policy in Ireland is now based on 'the precautionary principle' and includes key objectives to conserve habitats, species and genetic diversity.

In addition to biodiversity many important ecosystems exist which provide a variety of services which bring many benefits to society and the economy; there are four main categories:

- Provisioning services (production of food and water, etc.)
- Regulating services (e.g. the control of climate and disease)
- Supporting services (e.g. nutrient cycling and crop pollination)
- Cultural services (such as spiritual and recreational benefits)

The measures Ireland will take are presented as 102 actions under a series of 7 Strategic Objectives. Some of the actions within the plan are continuing elements of existing work and many are requirements under existing EU Directives. The objectives cover

- the conservation of biodiversity in the wider countryside and in the marine environment, both within and outside protected areas;
- the mainstreaming of biodiversity across the decision making process in the State;
- the strengthening of the knowledge-base on biodiversity;



121 AUG 2014 5 01 24

- increasing public awareness and participation; and Ireland's contribution to international biodiversity issues, including North South co-ordination on issues of common interest.

2.4 Scoping of the study/Literature Review

There is a good depth of specific information regarding the SAC/SPA/NHA/ but the site has had no ecological survey over the past 5 years. The National Parks and Wildlife Service (NPWS) of the Department of the Arts, Heritage and the Gaeltacht is the Government agency with responsibility for managing Special Protection Areas (SPAs) and candidate Special Areas of Conservation (cSACs). The site synopses have been developed for each SPA and cSAC together with the Conservation Objectives for the site, the NATURA 2000 Standard Data Form, and links to relevant statutory instruments under which the site is afforded protection. The NPWS website includes a viewer with both maps and aerial photographs of all of the protected sites.

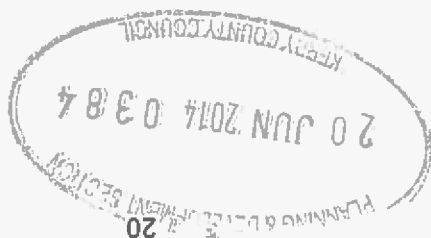
The EU Habitats Directive contains a list of habitats (Annex I) and species (Annex II) for which SACs must be established by Member States. Similarly, the EU Birds Directive contains lists of important bird species (Annex I) and other migratory bird species for which SPAs must be established. Those that are known to occur at a site are referred to as 'qualifying interests' and are listed in the Natura 2000 forms which are lodged with the EU Commission by each Member State. A 'qualifying interest' is one of the factors (such as the species or habitat that is present) for which the site merits designation. The qualifying interests and conservation objectives of these sites are presented in the site synopsis (Appendix I).

The Environmental Protection Agency (EPA) maintains a nationwide biological water monitoring programme and information is available for the area.

2.4.1 NPWS Site Synopsis

Information regarding the sites is available through site synopsis reports. These are

21 AUG 2014 5 6 2



reproduced as appendices to this report. To date, a management plan has not been published for the SAC, SPA or NHA's.

The Shannon River sites largely consist of Sandy beaches, upland forestry, improved grassland but also encompassing important areas of riparian, tidal and woodland habitats. These habitats support a number of species of conservation concern. The site is bounded by the SAC as shown by Figure 5.

Table 1 Conservation aspects of the Protected Site around Brandon Products

Annex I Habitat	Level of Protection	Relevance	Likelihood of Potential Impacts
Alluvial wet woodland (code: 91E0)	Habitats Directive Annex I priority	No	None
Petrifying springs with tufa formation (code: 7220)	No	None	None
Atlantic salt meadows (code: 1330)	Habitats Directive Annex I	No	None
Mediterranean salt meadows (code: 1410)	No	None	None
Old oak woodlands (code: 91A0)	No	None	None
Eutrophic tall herbs (code: 6430)	No	None	None
Floating river vegetation (code: 3260)	No	None	None
Estuary (code: 1130)	No	None	None
Salicornia mudflats (code: 1310)	No	None	None
Dry heath (code: 4030)	Yes	None	None
Tidal mudflats (code: 1140)	No	None	None
Sea Lamprey <i>Petromyzon marinus</i>	Habitats Directive Annex II	No	None
Brook Lamprey <i>Lampetra planeri</i>	No	None	None
Semi-aquatic snail <i>Vertigo moulinsiana</i>	No	None	None
River Lamprey <i>Lampetra fluviatilis</i>	Habitats Directive Annex II, V	No	None
Freshwater Pearl Mussel <i>Margaritifera margaritifera</i>	No	None	None

21 AUG 2014 5 6 2



Annex 1 Habitat	Level of Protection	Relevance	Likelihood of Potential Impacts
Freshwater Crayfish <i>Austropotamobium pallipes</i>	No	No	None
Twaité Shad <i>Alosa fallax fallax</i>	No	No	None
Atlantic Salmon <i>Salmo salar</i>	Habitats Directive Annex II, V	No	None
Otter <i>Lutra lutra</i>	No	No	None
Killarney fern <i>Trichomanes speciosum</i>	Habitats Directive Annex II, IV; Flora Protection Order, 1999	No	None
Daubenton's bat <i>Myotis daubentonii</i>	Habitats Directive Annex IV; Wildlife Act, 2000	No	None
Irish hare <i>Lepus timidus hibernicus</i>	Habitats Directive Annex V; Wildlife Act, 2000	No	None
Common frog <i>Rana temporaria</i>	Yes	Yes	None
Greenland white-fronted goose <i>Anser albifrons flavirostris</i>	No	No	None
Golden plover <i>Pluvialis apricaria</i>	No	No	None
Whooper swan <i>Cygnus cygnus</i>	Birds Directive Annex I; Wildlife Act, 2000	No	None
Kingfisher <i>Alcedo atthis</i>	No	No	None
Perigrine Falcon <i>Falco peregrinus</i>	No	No	None
Bewick's swan <i>Cygnus columbianus bewickii</i>	No	No	None
Killarney fern <i>Trichomanes speciosum</i>	Habitats Directive Annex II, IV; Flora Protection Order, 99	No	None

In terms of relevance to the site, it is interpreted as the likelihood of the presence or absence of a protected Annex 1 habitat/species within the study area. Sources of information for this assessment were collated from:

- Site Synopses,
- Natura 2000 forms,
- Conservation objectives and

21 Aug 2014

5 6 2

22

20 JUN 2014 03 04

KERRY COUNTY COUNCIL

- Ecological studies.
The likelihood of impact is based on the potential presence of habitats from site visits and aerial photography, showing the presence of suitable habitats for different species.

For inspection purposes only.
Consent of copyright owner required for any other use.

21 AUG 2014 562

23

3.0 Baseline Data

3.1 Methodology

A site visit was carried out on 15th and 23rd of March 2012 and the 3rd May 2014. The site was surveyed in accordance with the Heritage Council's draft Habitat Survey guidelines (Heritage Council, 2002) and the 'Guidelines for Baseline Ecological Assessment' from the Institute of Environmental Assessment (IEA, 1995). Habitats were identified in accordance with Fossitt's 'Guide to Habitats in Ireland' (Fossitt, 2000). A species list for each habitat was compiled and target notes were made.

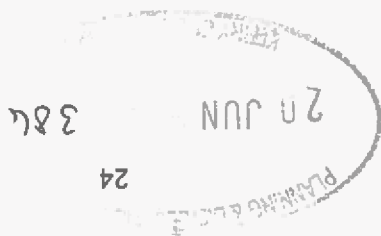
3.2 Constraints

The survey took place in March 2012 and May 2014 which is early in the growing season. It was therefore reasonable to expect that some floral species will not be apparent or will be difficult to identify.

3.3 Flora

3.3.1 Improved Grassland GA 1

In areas around the site comprises of improved agricultural grassland. The land has been reseeded and treated with fertilisers improving the soil condition. The land in summary is good grazing land. Vegetation is dominated by perennial rye grass (*Lolium perenne*). The photos below show the field at the rear of the Brandon Products site which is species poor and predominately perennial rye grass.



21 AUG 2014 5 6 2



Photo 1 Photo looking west, showing improved agricultural land to the north and east of the plant.



Photo 2 Photo looking south with improved grassland and the Brandon Products Site to the rear of the photo

21 AUG 2014 5:62

384 20 JUN

3.4 Fauna

3.4.1 Mammals

Since a dedicated fauna survey was not carried out, the presence of various species is deduced from the existence of suitable habitat and this is shown in Table 2. Otter (*Lutra lutra*) could occur along the rivers and within water bodies. During the site visits no Badger (*Meles meles*) droppings were recorded. While the Badger is protected under the Wildlife (Amendment) Act, 2000 it is not mentioned in the Habitats Directive.

Table 2 Mammals known from the Asdee Area and for which there is suitable habitat (Harris & Valden, 2008).

Level of Protection	Habitat	Annex II & IV Habitats Directive; Wildlife (Amendment) Act, 2000	Annex B Habitats Directive; Wildlife (Amendment) Act, 2000	Wildlife (Amendment) Act, 2000	Woodlands and hedgerows Woodlands, heathland, and wetlands Woodlands	Wide range of habitats Farmland, woodland and rivers
Otter <i>Lutra lutra</i>		Annex II & IV Habitats Directive; Wildlife (Amendment) Act, 2000				
Whiskered bat <i>Myotis mystacinus</i>						
Natterer's bat <i>Myotis nattereri</i>						
Leisler's bat <i>Nyctalus leisleri</i>						
Brown long-eared bat <i>Plecotus auritus</i>						
Leisler's bat <i>Nyctalus leisleri</i>						
Common pipistrelle <i>Pipistrellus pipistrellus</i>						
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>						
Daubenton's bat <i>Myotis daubentonii</i>						
Irish hare <i>Lepus timidus hibernicus</i>						
Hedgehog <i>Erinaceus europaeus</i>						
Pygmy shrew <i>Sorex minutus</i>						
Red squirrel <i>Sciurus vulgaris</i>						
Irish stoat <i>Mustela erminea hibernica</i>						
Badger <i>Meles meles</i>						

20 JUN 2014 03 84
MAMMALS & BIRDS
SECTION

3.4.2 Birds

Incidental recordings of birds were made and include many typical countryside species and these are detailed in Table 3. No dedicated bird survey was carried out and so this list is not exhaustive. Nearly all bird species and their nests are protected under the Wildlife (Amendment) Act, 2000. During the site visits no species listed under the Annex I of the Birds Directive were observed.

Table 3 – Incidental records of birds observed during the survey

Latin Name	English Name	Conservation Status
<i>Ardea cinerea</i>	Grey heron	Green
<i>Corvus frugilegus</i>	Rook	Green
<i>Eritacus rubecula</i>	Robin	Green
<i>Motacilla cinerea</i>	Grey wagtail	Green
<i>Turdus merula</i>	Blackbird	Green

Conservation status is derived from Bird Watch Ireland's list of Birds of Conservation Concern in Ireland (Lynas et al 2007) where green = low concern; amber = medium concern; and red = high concern.

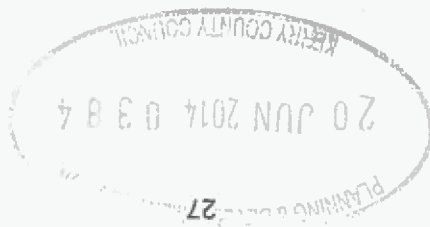
3.4.3 Amphibians

Neither Common frog (*Bombina orientalis*) nor Smooth newt (*Triturus vulgaris*) were recorded although they could breed in the marginal areas of the wetlands in the surrounding area where wetland vegetation has developed. Both are protected under the Wildlife (Amendment) Act, 2000 while the frog is also protected under Annex V of the Habitats Directive.

3.4.4 Invertebrates

A large number of insects are likely to be present in the area and all habitats present are suitable for a wide range of species. It is unlikely that protected species occur.

21 AUG 2014 5 52



4.0 Screening Matrix

4.1 Brief description of the project

The existing site at Kilcolman, Asdee, Co. Kerry consists of a boiler house, warehouse and production area at Kilcolman, Asdee, Co. Kerry

4.2 Brief description of the Natura 2000 site

The site is 1.9 kilometres from the River Shannon and Fergus SAC is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively.

A National Parks and Wildlife Service (NPWS) site synopsis for this site is given in Appendix 2, the location is presented in Figure 4, 5 & 6

4.3 Assessment criteria

- Describe the individual elements of the project (either alone or in combination with other projects) likely to give rise to impacts on the Natura 2000 site.
 - The continued use of the Brandon Products Site at Kilcolman, Asdee, Co Kerry and associated infrastructure will have a no impact on the designated habitats.

- Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:
 - size and scale;

- (a) Direct impacts
 - None
- (b) Indirect
 - None
- (c) Secondary
 - None
- Land-take;

21 AUG 2014 5 6 2

28

20 JUN 2014 03 04

21 AUG 2014 5 6 2

29

- Other
 - None
- Duration of construction, operation, decommissioning, etc.;
 - No construction works will take place; operation is in place, which includes periodic maintenance activity.
- Transportation requirements;
 - All materials and resources for construction are presently on site. Items for routine maintenance and repair will be transported using existing roads. The chemicals and raw materials required for the process and products from the process are transported using existing roads.
- Excavation requirements;
 - All necessary works are already in place.
- Emissions (disposal to land, water or air);
 - The site has emission to air from the boiler and bio-scrubber. The site has no discharge to surface waters. The domestic effluent is treated in an approved on-site treatment system.
- Resource requirements (water abstraction etc.);
 - The well on-site is used to supply process and potable water.
- Distance from the Natura 2000 site or key features of the site;
 - The nearest relevant site is over 1.9 kilometres away.
- No land take, site in existence.

For inspection purposes only
Consent of copyright owner required for all other uses



4.4 Describe any likely changes to the site arising as a result of:

- Reduction of habitat area:
 - None. Existing fencing and boundary will be retained.

- Disturbance to key species;
 - None

- Habitat or species fragmentation;

- The site is in place and no habitat or species fragmentation has occurred as the development has taken place. The site has been in existence for over 40 years as a creamery and was dormant for many years, the purchase and development is a sustainable option with potential provision of local jobs.

- Reduction in species density;

- None

- Changes in key indicators of conservation value (water quality etc.);

- No change as the production facility and infrastructure is already in place.

- Climate change.

- None

4.5 Describe any likely impacts on the Natura 2000 site as a whole in terms of:

- Interference with the key relationships that define the structure of the site;

- The site is over 1.9 km from the River Shannon and Fergus SAC,

therefore the will be no impact from the existing production plant.

- Interference with key relationships that define the function of the site;
 - None

5.0 Finding of no significant effects report matrix

5.1 Name of project or plan

Brandon Products Ireland Ltd Kilcolman Asdee, Co. Kerry.

5.2 Name and Location of Natura 2000 sites

- River Shannon and River Fergus SPA (Site Code 004077)
- Lower River Shannon SAC (Site Code 002165)
- Tarbert Bay pNHA (Site Code 001386)
- Bunnaruddee Bog NHA (Site Code 001352)
- Clonderalaw Bay pNHA (Site Code: 000027)
- Ballylongford Bay pNHA (Site Code: 001332)
- Scatterry Island pNHA (Site Code: 001911)

See Figures 1 to 6 (Appendix 2):

- Figure 1 – Location Map
- Figure 2 – Location Map
- Figure 3 – Aerial Photography
- Figure 4 – Protected Areas Overview
- Figure 5 – Designations Maps
- Figure 6 – Designations Maps – Aerial

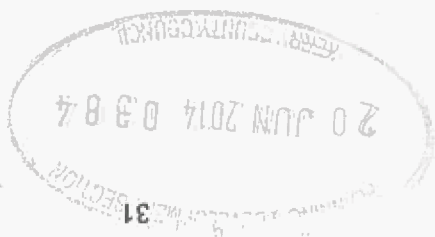
5.3 Description of the project or plan

The site is constructed with planning permission granted by Kerry CoCo to produce seaweed based products.

5.4 Is this project directly connected with or necessary to the management of the sites (provide details)?

The Brandon Products facility and design includes objectives to protect, conserve and manage in a prudent and sustainable manner. The development consisted of the retention of an old building and the construction of new buildings. This aided to reduce the visual impact of the site.

21 AUG 2014 5 6 2



5.5 Are there other projects that together with the project or plan being assessed could affect the sites (provide details)?

The operation at Brandon Products, Kilcolman, Asdee, Co Kerry has been formulated to ensure that uses, developments and effects arising from the operation shall not give rise to adverse impacts on the integrity of the SAC or protected sites in the area.

5.6 The assessment of significance of effects

Describe how the project (alone or in combination) is likely to affect the SAC.

The Brandon Products site has been designed to ensure that uses, developments and effects arising from the existing development shall not give rise to adverse impacts on the integrity of any SAC or protected sites in the area. The construction of a new 25 metre high stack will have no impact on protected habitat in the area.

5.7 Explain why these effects are not considered significant.

The Brandon Products facility was developed from the existing creamery which had been on the site for over 40 years. The current site has been developed to anticipate and avoid the need for impacts that would be likely to adversely affect the integrity of any SAC or Protected sites. The site is currently operational and every effort is made to ensure compliance with relevant regulatory provisions for the prevention of pollution, nuisance or other environmental effects likely to significantly and adversely affect the integrity of any SAC or protected site. The proposed 25 metre stack will replace the existing 15 metre high stack and this will not have a significant impact on the environment.

5.8 List of agencies consulted

NPWS

5.9 Response to consultation.

Consultation was held with NPWS.

21 AUG 2014 5 6 2





33

21 AUG 2014 5 6 2

5.12 Where the full results of the assessment can be accessed and viewed?
This screening report is to be submitted to Kerry County Council as part of the planning application for a proposed 25 metre stack

Consent of copyright owner required for any other use.
For inspection purposes only.

Site Visit and desktop study

5.11 Level of assessment completed

- Planning system of Kerry County Council
- National Parks and Wildlife Service Website and Mapping system
- Kerry County Council Bio-Diversity Plan
- IPPC License application

• Sources of data Documents supplied by

- Trevor Montgomery & Miriam Montgomery
- Who carried out this assessment?

5.10 Data collected to carry out the assessment

6.0 Assessment of Likely Significant Effects

The operations at Brandon Products, Kilcolman, Asdee, Co Kerry is over 1.9 km way from the SAC / SPA. The site is operational on a site which has been in the area for over 40 years and continues to be used. The continued operation is in line with good practice as the reuse of the existing facility rather than a new greenfield site which would have a larger environmental impact. The site has no significant effects on any protected site or the surrounding area as the SAC/SPA is over 1.9 kilometre away and is surrounded by agricultural land.

7.0 Conclusion

The outcome of the screening process is that there is no need therefore to proceed to stage 2 and ascertain the effect on site integrity or investigate mitigation measures or alternative solutions. Therefore, in accordance with the European guidance on Appropriate Assessment (European Commission Environment Division's Assessment of plans and projects significantly affecting Natura 2000 sites, 2001) it is concluded that an Appropriate Assessment (AA) is not required before Kerry County Council considers the planning application in full.

121 AUG 2014 5 6 2

20 JUN 2014 0 3 8 4

PLANNING & DEVELOPMENT SECTION

8.0 Bibliography

- Bang, P. & Dahlstrom, P. (2001) *Animal Tracks and Signs*. Oxford University Press, Inc., New York.
- Blamley, M. & Fitter, R. (1980) *Wild Flowers*. Collins and Co., Glasgow.
- Cabot D. 2004. *Irish Birds*. Collins.
- Clapham, Tutin and Warburg (CUP), Excursion Flora
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora Council Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy – more commonly known as the Water Framework Directive
- Croft P.S. 1986. *A Key to the Major Groups of British Freshwater Invertebrates*. Field Studies Council.
- Curtis T.G.F. & McGough H.N. 1988. *The Irish Red Data Book 1: Vascular Plants*. Stationary Office.
- Department of Environment, Heritage and Local Government, 2002. *Making Ireland's Development Sustainable*
- Dúchas. 2002. *National Biodiversity Action Plan*. Department of the Arts, Heritage, Gaeltacht and the Islands.
- Elliott J.M., Humpesch U.H. & Macan T.T. 1988. *Larvae of the British Ephemeroptera: A Key with Notes*. Freshwater Biological Association.
- Fitter R., Fitter A. & Farrer A. 1984. *Grasses, sedges, rushes and ferns of Britain and Northern Europe*. Collins.
- Fitter, R., Fitter, A. & Blamley, M. (1974) *The Wild Flowers of Britain and Northern Europe*. Collins, London.
- Fossitt J. 2000. *A Guide to Habitats in Ireland*. Heritage Council.
- Greenhalgh M. & Ovensen D. 2007. *Freshwater Life*. Collins.
- Harris S. & Yalden D.W. 2008. *Mammals of the British Isles: Handbook, 4th Edition*. The Mammal Society.
- Hendry K. & Cragg-Hine D. 2003. *Ecology of the Atlantic Salmon*. Conserving Natura 2000 Rivers Ecology Series No. 7. English Nature, Peterborough.
- Heritage Council. 2002. *Draft Habitat Survey Guidelines*. The Heritage Council.



562

21 AUG 2014

Hickie D. 2004. *Irish Hedgerows: Networks for Nature*. Networks for Nature.

IEEM. 2006. *Guidelines for Ecological Impact Assessment in the United Kingdom*. Institute of Ecology and Environmental Management.

Institute of Environmental Assessment, 1995. *Guidelines for Baseline Ecological Assessment* JNCC, 1993, Handbook for phase 1 habitat survey – a technique for environmental audit
NRA. 2006. *Guidelines for Assessment of Ecological Impacts of National Road Schemes*. National Roads Authority.

Olsen L., Sunesen J. & Pedersen B.V. 2001. *Small Freshwater Creatures*. Oxford University Press.

Oxford Brookes University. 2001. *Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. European Commission, Environment DG.

Phillips, R. (1980) *Grasses, Ferns, Mosses and Lichens of Great Britain and Ireland*. Pan Books, London.

Preston C.D., Pearman D.A. & Dines T.D. 2002. *New Atlas of the British & Irish Flora*. Oxford University Press.

Scannell M.J.P. & Synnott D.M. 1987. *Census catalogue of the Flora of Ireland*. Stationary Office.

Stace, C., 1999, *New Flora of the British Isles* (2nd edn).

Treweek J., 1999. *Ecological Impact Assessment*, Blackwell Science.

Walters, M. (1997) *The Pocket Guide to Birds of Britain and Europe*. Pargate Books, London.

Kerry County Council. 2009. *Kerry County Development Plan 2009 to 2015*.

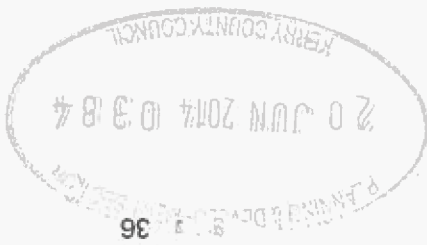
Kerry County Council, 2008 Heritage & Biodiversity Plan 2008-12

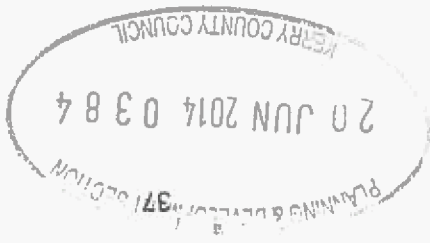
Webb D.A., Parnell J. & Doogue D. 1996. *An Irish Flora*. Dundalgan Press.

Kerry County Council 2008, *Biodiversity Actions 2008 – 2012*

Department of the Arts, Heritage and the Gaeltacht, 2011, *Actions for Biodiversity 2011 – 2016 Ireland's National Biodiversity Plan*

21 AUG 2014 5 6 2





21 AUG 2014 5 6 2

For inspection purposes only.
Consent of copyright owner required for any other use.

Appendix 1
Site Synopsis

SITE NAME: TARBERT BAY

SITE CODE: 001386

Tarbert Bay is located about 5 km west of Glin in the outer Shannon Estuary.

It is a sandy intertidal bay fringed by saline vegetation, which is best developed at Tarbert village. Some deciduous woodland is included in the site and this comes down to the estuary edge in places.

The site is important for wintering waterfowl and is part of the large Shannon-Fergus estuarine complex. Maximum numbers of wildfowl in the three winters 1972/73, 1973/74 and 1974/75 were 1,100, 1,000 and 2,000 respectively. The corresponding numbers for waders were 1,700, 2,500 and 2,100.

The oil-fired electricity generating station at Tarbert Island is immediately north of the site.

15 February, 1995

For inspection purposes only.
Consent of copyright owner required for any other use.

121 AUG 2014 562



SITE NAME : LOWER RIVER SHANNON

SITE CODE : 002165

This very large site stretches along the Shannon valley from Killaloe to Loop Head/ Kerry Head, a distance of some 120 km. The site thus encompasses the Shannon, Feale, Mulkear and Fergus Estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. The Shannon and Fergus flow through Carboniferous limestone as far as Foynes, but west of Foynes Namurian shales and flagstones predominate (except at Kerry Head, which is formed from Old Red Sandstone). The eastern sections of the Feale catchment flow through Namurian Rocks and the western stretches through Carboniferous Limestone. The Mulkear flows through Lower Palaeozoic Rocks in the upper reaches before passing through Namurian Rocks, followed by Lower Carboniferous Shales and Carboniferous Limestone. The Mulkear River itself, immediately north of Pallas Green, passes through an area of Rhyolites, Tuffs and Agglomerates. Rivers within the sub-catchment of the Feale include the Galey, Smearagh, Oolagh, Allaghau, Oweeg, Clydagh, Caher, Breanagh and Glenacorney. Rivers within the sub-catchment of the Mulkear include the Killeenagartiff, Annagh, Newport, the Dead River, the Bilboa, Glasshaclounaraveela, Gortnageragh and Cahernahalla.

The site is a candidate SAC selected for lagoons and alluvial wet woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for floating river vegetation, *Molinia* meadows, estuaries, tidal mudflats, Atlantic salt meadows, Mediterranean salt meadows, *Salicornia* mudflats, sand banks, perennial vegetation of stony banks, sea cliffs, reefs and large shallow inlets and bays all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Bottle-nosed Dolphin, Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Atlantic Salmon and Otter.

The Shannon and Fergus Estuaries form the largest estuarine complex in Ireland. They form a unit stretching from the upper tidal limits of the Shannon and Fergus Rivers to the mouth of the Shannon estuary (considered to be a line across the narrow strait between Killeedown Point and Killyconly Point). Within this main unit there are several tributaries with their own 'sub-estuaries' e.g. the Deel River, Mulkear River, and Maigue River. To the west of Foynes, a number of small estuaries form indentations in the predominantly hard coastline, namely Poulasherry Bay, Ballylongford Bay, Clonderrallaw Bay and the Feale or Cashen River Estuary.

Both the Fergus and inner Shannon estuaries feature vast expanses of intertidal mudflats, often fringed with saltmarsh vegetation. The smaller estuaries also feature mudflats, but have their own unique characteristics, e.g. Poulasherry Bay is stony and unusually rich in species and biotopes. Plant species are typically scarce on the mudflats, although there are some *El-grass* beds (*Zostera* spp.) and patches of green algae (e.g. *Ulva* sp. and *Enteromorpha* sp.). The main macro-invertebrate community, which has been noted from the inner Shannon and Fergus estuaries, is a *Macoma-Scrobicularia-Nereis* community. In the transition zone between mudflats and saltmarsh, specialised colonisers of mud predominate: swards of Common Cord-grass (*Spartina anglica*) frequently occur in the upper parts of the estuaries. Less common are swards of Glasswort (*Salicornia europaea* agg.). In the innermost parts of the estuaries, the tidal channels or creeks are fringed with species such as Common Reed (*Phragmites australis*) and Club-rushes (*Scirpus maritimus*, *S. tabernaemontani* and *S. triquetrus*). In addition to the nationally rare Triangular Club-rush (*Scirpus triquetrus*), two scarce species are found in some of these creeks (e.g. Ballinaacutra Creek): Lesser Bulrush (*Typha angustifolia*) and Summer Snowflake (*Leucojum aestivum*).

Saltmarsh vegetation frequently fringes the mudflats. Over twenty areas of estuarine saltmarsh have been identified within the site, the most important of which are around the Fergus Estuary and at Ringmoylan Quay. The dominant type of saltmarsh present is Atlantic salt meadow occurring over mud. Characteristic species occurring include Common Saltmarsh Grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea-milkwort (*Glaux maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*), Saltmarsh Rush (*Juncus gerardi*), Long-bracted Sedge (*Carex extensa*), Lesser Sea-spurrey (*Spergularia marina*) and Sea Arrowgrass- (*Triglochin maritima*). Areas of Mediterranean salt meadows, characterised by clumps of Sea Rush (*Juncus maritimus*)

21 Aug 2014 5 6 2

JUN 2014 03 84

occur occasionally. Two scarce species are found on saltmarshes in the vicinity of the Fergus Estuary: a type of robust Saltmarsh-grass (*Puccinellia foucaudii*), sometimes placed within the compass of Common Saltmarsh-grass (*Puccinellia maritima*) and Hard-grass (*Parapholis strigosa*).

Saltmarsh vegetation also occurs around a number of lagoons within the site. The two which have been surveyed as part of a National Inventory of Lagoons are Shannon Airport Lagoon and Cloonconeen Pool. Cloonconeen Pool (4-5 ha) is a natural sedimentary lagoon impounded by a low cobble barrier. Seawater enters by percolation through the barrier and by overwash. This lagoon represents a type which may be unique to Ireland since the substrate is composed almost entirely of peat. The adjacent shore features one of the best examples of a drowned forest in Ireland. Aquatic vegetation in the lagoon includes typical species such as Beaked Tasselweed (*Ruppia maritima*) and green algae (*Cladophora* sp.). The fauna is not diverse, but is typical of a high salinity lagoon and includes six lagoon specialists (*Hydrobia ventrosa*, *Cerastoderma glaucum*, *Lekanesphaera hookeri*, *Palaeomonetes varians*, *Sigara stagnalis* and *Enochrus bicolor*). In contrast, Shannon Airport Lagoon (2 ha) is an artificial saline lake with an artificial barrier and sluiced outlet. However, it supports two Red Data Book species of Stonewort (*Chara canescens* and *Chara* cf. *convivens*).

Most of the site west of Killeedau Point/Kilconly Point is bounded by high rocky sea cliffs. The cliffs in the outer part of the site are sparsely vegetated with lichens, Red Fescue, Sea Beet (*Beta vulgaris*), Sea Campion (*Silene maritima*), Thrift and Plantains (*Plantago* spp.). A rare endemic Sea Lavender (*Limonium recurvum* subsp. *pseudotranswallianum*) occurs on cliffs near Loop Head. Cliff-top vegetation usually consists of either grassland or maritime heath. The boulder clay cliffs further up the estuary tend to be more densely vegetated, with swards of Red Fescue and species such as Kidney Vetch (*Anhyllis vulneraria*) and Bird's-foot Trefoil (*Lotus corniculatus*).

The site supports an excellent example of a large shallow inlet and bay. Littoral sediment communities in the mouth of the Shannon Estuary occur in areas that are exposed to wave action and also in areas extremely sheltered from wave action. Characteristically, exposed sediment communities are composed of coarse sand and have a sparse fauna. Species richness increases as conditions become more sheltered. All shores in the site have a zone of sand hoppers at the top and below this each of the shores has different characteristic species giving a range of different shore types in the pcSAC.

The intertidal reefs in the Shannon Estuary are exposed or moderately exposed to wave action and subject to moderate tidal streams. Known sites are steeply sloping and show a good zonation down the shore. Well developed lichen zones and littoral reef communities offering a high species richness in the sublittoral fringe and strong populations of *Paracentrotus lividus* are found. The communities found are tolerant to sand scour and tidal streams. The infralittoral reefs range from sloping platforms with some vertical steps to ridged bedrock with gullies of sand between the ridges to ridged bedrock with boulders or a mixture of cobbles, gravel and sand. Kelp is very common to about 18m. Below this it becomes rare and the community is characterised by coralline crusts and red foliose algae.

Other coastal habitats that occur within the site include the following:

- stony beaches and bedrock shores - these shores support a typical zonation of seaweeds (*Fucus* spp., *Ascophyllum nodosum* and kelps).
- shingle beaches - the more stable areas of shingle support characteristic species such as Sea Beet, Sea Mayweed (*Maritica maritima*), Sea Campion and Curled Dock (*Rumex crispus*).
- Sandbanks which are slightly covered by sea water at all times - there is a known occurrence of sand/gravel beds in the area from Kerry Head to Beal Head.
- sand dunes - a small area of sand dunes occurs at Beal Point. The dominant species is Marram Grass (*Ammonophila arenaria*).

Flowing into the estuaries are a number of tidal rivers.

Freshwater rivers have been included in the site, most notably the Feale and Mulkear catchments, the Shannon from Killaloe to Limerick (along with some of its tributaries, including a short stretch of the Kilmaistulla River), the Fergus up as far as Ennis, and the Cloon River. These systems are very different in

20 JUN 2014 03 84

PLANNING AND ENVIRONMENT SECTION

21 AUG 2014 5 6 2

character: the Shannon being broad, generally slow-flowing and naturally eutrophic; the Fergus being smaller and alkaline; while the narrow, fast-flowing Cloon is acid in nature. The Fale and Mulkear catchments exhibit all the aspects of a river from source to mouth. Semi-natural habitats, such as wet grassland, wet woodland and marsh occur by the rivers, however, improved grassland is most common. One grassland type of particular conservation significance, *Molinia* meadows, occurs in several parts of the site and the examples at Worldsend on the River Shannon are especially noteworthy. Here are found areas of wet meadow dominated by rushes and sedges and supporting a diverse and species-rich vegetation, including such uncommon species as Blue-eyed Grass (*Sisyrinchium bermudiana*) and Pale Sedge (*Carex pallescens*).

Floating river vegetation characterised by species of Water-crowfoot (*Ranunculus* spp.), Pondweeds (*Potamogeton* spp.) and the moss *Fontinalis antipyretica* are present throughout the major river systems within the site. The rivers contain an interesting bryoflora with *Schistidium alpicola* var. *alpicola* recorded from in-stream boulders on the Bilboa, new to county Limerick.

Alluvial woodland occurs on the banks of the Shannon and on islands in the vicinity of the University of Limerick. The woodland is up to 50m wide on the banks and somewhat wider on the largest island. The most prominent woodland type is gallery woodland where White Willow (*Salix alba*) dominates the tree layer with occasional Alder (*Alnus glutinosa*). The shrub layer consists of various willow species with sally (*Salix cinerea* ssp. *oleifolia*) and what appear to be hybrids of *S. alba* x *S. viminalis*. The herbaceous layer consists of tall perennial herbs. A fringe of Bulrush (*Typha* sp.) occurs on the riverside of the woodland. On slightly higher ground above the wet woodland and on the raised embankment remnants of mixed oak-ash-alder woodland occur. These are poorly developed and contain numerous exotic species but locally there are signs that it is invading open grassland. Alder is the principal tree species with occasional Oak (*Quercus robur*), Elm (*Ulmus glabra*, *U. procera*), Hazel (*Corylus avellana*), Hawthorn (*Craegus monogyna*) and the shrubs Guelder-rose (*Viburnum opulus*) and willows. The ground flora is species-rich.

Woodland is infrequent within the site, however Cahinacree Wood contains a strip of old Oak woodland. Sessile Oak (*Quercus petraea*) forms the canopy, with an understorey of Hazel and Holly (*Ilex aquifolium*). Great Wood-rush (*Luzula sylvatica*) dominates the ground flora. Less common species present include Great Horsetail (*Equisetum telmateia*) and Pendulous Sedge (*Carex pendula*).

In the low hills to the south of the Slieve Donard mountains, the Cahernahalla River cuts a valley through the Upper Silurian rocks. For approximately 2km south of Cappagh Bridge at Knockanavar, the valley sides are wooded. The woodland consists of Birch (*Betula* spp.), Hazel, Oak, Rowan (*Sorbus aucuparia*), some Ash (*Fraxinus excelsior*) and Willow (*Salix* spp.). Most of the valley is not grazed by stock, and as a result the trees are regenerating well. The ground flora feature prominent Greater wood-rush and Bilberry (*Vaccinium myrtillus*) with a typical range of woodland herbs. Where there is more light available, Bracken (*Pteridium aquilinum*) features.

The valley sides of the Bilboa and Gortnageragh Rivers, on higher ground north east of Cappamore, support patches of semi-natural broadleaf woodland dominated by Ash, Hazel, Oak and Birch. There is a good scrub layer with Hawthorn, Willow, Holly and Blackthorn (*Prunus spinosa*) common. The herb layer in these woodlands is often open with a typically rich mixture of woodland herbs and ferns. Moss species diversity is high. The woodlands are ungrazed. The hazel is actively coppiced in places. There is a small area of actively regenerating cut away raised bog at Ballyrotheren. It is situated approx. 5km north west of Cappamore Co. Limerick. The bog contains some wet areas with good moss (*Sphagnum*) cover. Species of particular interest include the Cranberry (*Vaccinium oxycoccos*) and the White Sedge (*Carex curta*) along with two other regionally rare mosses including *S. fimbriatum*. The site is being invaded by Birch (*Betula pubescens*) scrub woodland. Both commercial forestry and the spread of rhododendron has greatly reduced the overall value of the site.

A number of plant species that are Irish Red Data Book species occur within the site - several are protected under the Flora (Protection) Order, 1999:

- Triangular Club-rush (*Scirpus triquetrus*) - in Ireland this protected species is only found in the Shannon Estuary, where it borders creeks in the inner estuary.
- Opposite-leaved Pondweed (*Groenlandia densa*) - this protected pondweed is found in the Shannon where it passes through Limerick City.

PLANNING & DEVELOPMENT SECTION

20 JUN 2014 03 84

21 Aug 2014 562

- Meadow Barley (*Hordeum secalinum*) - this protected species is abundant in saltmarshes at Ringmoylan and Mantlehill.
- Hairy Violet (*Viola hirta*) - this protected violet occurs in the Askeaton/Foynes area.
- Golden Dock (*Rumex maritimus*) - noted as occurring in the River Fergus Estuary.
- Bearded Stonewort (*Chara canescens*) - a brackish water specialist found in Shannon Airport lagoon.
- Convergent Stonewort (*Chara connivens*) - presence in Shannon Airport Lagoon to be confirmed.

Overall, the Shannon and Fergus Estuaries support the largest numbers of wintering waterfowl in Ireland. The highest count in 1995-96 was 51,423 while in 1994-95 it was 62,701. Species listed on Annex I of the E.U. Birds Directive which contributed to these totals include: Great Northern Diver (3; 1994/95), Whooper Swan (201; 1995/96), Pale-bellied Brent Goose (246; 1995/96), Golden Plover (11,067; 1994/95) and Bar-tailed Godwit (476; 1995/96). In the past, three separate flocks of Greenland White-fronted Goose were regularly found but none were seen in 1993/94.

Other wintering waders and wildfowl present include Greylag Goose (216; 1995/96), Shelduck (1,060; 1995/96), Wigeon (5,976; 1995/96), Teal (2,319; 1995-96), Mallard (528; 1995/96), Pintail (45; 1995/96), Shoveler (84; 1995/96), Tufted Duck (272; 1995/96), Scaup (121; 1995/96), Ringed Plover (240; 1995/96), Grey Plover (750; 1995/96), Lapwing (24,581; 1995/96), Knot (800; 1995/96), Dunlin (20,100; 1995/96), Snipe (719; 1995/96), Black-tailed Godwit (1062; 1995/96), Curlew (1504; 1995/96), Redshank (3,228; 1995/96), Greenshank (36; 1995/96) and Turnstone (107; 1995/96). A number of wintering gulls are also present, including Black-headed Gull (2,216; 1995/96), Common Gull (366; 1995/96) and Lesser Black-backed Gull (100; 1994/95). This is the most important coastal site in Ireland for a number of the waders including Lapwing, Dunlin, Snipe and Redshank. It also provides an important staging ground for species such as Black-tailed Godwit and Greenshank.

A number of species listed on Annex I of the E.U. Birds Directive breed within the site. These include Peregrine Falcon (2-3 pairs), Sandwich Tern (34 pairs on Rat Island, 1995), Common Tern (15 pairs; 2 on Sturamus Island and 13 on Rat Island, 1995), Gull (14-41 pairs, 1992) and Kingfisher. Other breeding birds of note include Kittiwake (690 pairs at Loop Head, 1987) and Guillemot (4010 individuals at Loop Head, 1987).

There is a resident population of Bottle-nosed Dolphin in the Shannon Estuary consisting of at least 56-68 animals (1996). This is the only known resident population of this E.U. Habitats Directive Annex II species in Ireland. Otter, a species also listed on Annex II of this directive, is commonly found on the site.

Five species of fish listed on Annex II of the E.U. Habitats Directive are found within the site. These are Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*Lampetra fluviatilis*), Twait Shad (*Allosa fallax fallax*) and Salmon (*Salmo salar*). The three lampreys and Salmon have all been observed spawning in the lower Shannon or its tributaries. The Fergus is important in its lower reaches for spring salmon while the Mulkear catchment excels as a grise fishery though spring fish are caught on the actual Mulkear River. The Feale is important for both types. Twait Shad is not thought to spawn within the site. There are few other river systems in Ireland which contain all three species of Lamprey.

Two additional fish of note, listed in the Irish Red Data Book, also occur in the site. The former has been observed spawning in the Shannon. *Coregonus autumnalis pollan* and Pollan (*Coregonus autumnalis pollan*). Only the former has been observed spawning in the

Freshwater Pearl-mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs abundantly in parts of the Cloon River.

There is a wide range of landuses within the site. The most common use of the terrestrial parts is grazing by cattle and some areas have been damaged through over-grazing and poaching. Much of the land adjacent to the rivers and estuaries has been improved or reclaimed and is protected by embankments (especially along the Fergus Estuary). Further, reclamation continues to pose a threat as do flood relief works (e.g. dredging of rivers). Gravel extraction poses a major threat on the Feale.

20 JUN 2014 03 84

24 AUG 2014 15 06

In the past, Cord-grass (*Spartina* sp.) was planted to assist in land reclamation. This has spread widely, and may oust less vigorous colonisers of mud and may also reduce the area of mudflat available to feeding birds.

Domestic and industrial wastes are discharged into the Shannon, but water quality is generally satisfactory - except in the upper estuary, reflecting the sewage load from Limerick City. Analyses for trace metals suggest a relatively clean estuary with no influences by industrial discharges apparent. Further industrial development along the Shannon and water polluting operations are potential threats.

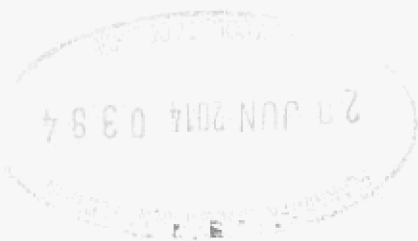
Fishing is a main tourist attraction on the Shannon and there are a large number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The River Feale is a designated Salmonid Water under the E.U. Freshwater Fish Directive. Other uses of the site include commercial angling, oyster farming, boating (including dolphin-watching trips) and shooting. Some of these may pose threats to the birds and dolphins through disturbance. Specific threats to the dolphins include underwater acoustic disturbance, entanglement in fishing gear and collisions with fast moving craft.

This site is of great ecological interest as it contains a high number of habitats and species listed on Annexes I and II of the E.U. Habitats Directive, including the priority habitat lagoon, the only known resident population of Bottle-nosed Dolphin in Ireland and all three Irish lamprey species. A good number of Red Data Book species are also present, perhaps most notably the thriving populations of Triangular Club-rush. A number of species listed on Annex I of the E.U. Birds Directive are also present, either wintering or breeding. Indeed, the Shannon and Fergus Estuaries form the largest estuarine complex in Ireland and support more wintering wildfowl and waders than any other site in the country. Most of the estuarine part of the site has been designated a Special Protection Area (SPA), under the E.U. Birds Directive, primarily to protect the large numbers of migratory birds present in winter.

6.10.2006

For inspection purposes only.
Consent of copyright owner required for any other use.

121 AUG 2014 5 6 2



SITE NAME: RIVER SHANNON AND RIVER FERGUS ESTUARIES SPA

SITE CODE: 004077

The estuaries of the River Shannon and River Fergus form the largest estuarine complex in Ireland. The site comprises all of the estuarine habitat west from Limerick City and south from Ennis, extending west as far as Killadysert and Foynes on the north and south shores respectively of the River Shannon (a distance of some 25 km from east to west). Also included are several areas in the outer Shannon estuary, notably Clonderalaw Bay and Poulinaherry Bay, as well as the intertidal areas on the south shore of the Shannon between Tarbert and Beal Point.

The site has vast expanses of intertidal flats. The main macro-invertebrate community present is a *Macoma-Scrobicularia-Nereis* community which provides a rich food resource for the wintering birds. Other species occurring include Common Cockle (*Cerastoderma edule*), Lugworm (*Arenicola marina*), the polychaete *Nephtys hombergii*, the gastropod *Hydrobia ulvae* and the crustacean *Corophium volutator*.

Elggrass (*Zostera* spp.) is present in places, along with green algae (e.g. *Ulva* spp. and *Enteromorpha* spp.). Salt marsh vegetation frequently fringes the mudflats and this provides important high tide roost areas for the wintering birds. Characteristic species occurring include Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea-milkwort (*Glaux maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*) and Saltmarsh Rush (*Juncus gerardi*). In the innermost parts of the estuaries, the tidal channels or creeks are fringed with species such as Common Reed (*Phragmites australis*) and club-rushes (*Scirpus maritimus*, *S. lacustris* subsp. *tabernaemontani*). Also found is the nationally rare Triangular Club-rush (*Scirpus triquetus*). Elsewhere in the site the shoreline comprises stony or shingle beaches.

The site is the most important coastal wetland site in the county and regularly supports in excess of 50,000 wintering waterfowl (mean of 59,183 for the 4 seasons 1996-97 to 1999/00), a concentration easily of international importance. The site has internationally important populations of Dunlin (14,987), Black-tailed Godwit (706) and Redshank (1,983) - all figures are average peaks for 3 of the 5 seasons in the 1995/96-1999/00 period. A further 16 species have populations of national importance, i.e. Cormorant (148), Whooper Swan (141), Greylag Goose (88), Shelduck (895), Wigeon (3,025), Teal (1,558), Pintail (40), Shoveler (56), Scaup (76), Golden Plover (4,073), Grey Plover (564), Lapwing (13,007), Knot (686), Bar-tailed Godwit (481), Curlew (1,231) and Greenshank (33). The site is among the most important in the county for several of these species, notably Dunlin (11% of national total), Grey Plover (7.5% of total), Lapwing (6.5% of total), Redshank (6% of total) and Shelduck (6.0% of total). The site is also used by Oystercatcher (363), Ringed Plover (70), Brent Goose (135), Great Crested Grebe (47), Red-breasted Merganser (14), Mallard (247), Turnstone (71), Mute Swan (54), Grey Heron (25), Black-headed Gull (1,233) and Common Gull (194). The Shannon / Fergus system was formerly frequented by a Greenland Whitefronted Goose population but this declined during the 1980s and 1990s and the birds now appear to have abandoned the area. The site provides both feeding and roosting areas for the wintering birds. Habitat quality for most of the estuarine habitats is good. Some species, particularly Whooper Swan and Greylag Goose, utilise areas outside of the site for feeding.

Apart from the wintering birds, large numbers of some species also pass through the site whilst on migration in spring and/or autumn. Regular species include Blacktailed Godwit, Whimbrel and Greenshank.

Much of the land adjacent to the rivers and estuaries has been reclaimed and improved for agriculture and is protected by embankments (especially along the River Fergus estuary). Further reclamation, especially near to the urbanised and industrial areas continues to pose a threat. The site receives pollution from several sources, including industry and agriculture, but it is not known if this has any significant impacts on the wintering birds. Aquaculture occurs in some areas of the site - future increases in this activity could cause disturbance to the habitats and the associated birds. Common Cord-grass (*Spartina anglica*) is well-established and may threaten some of the estuarine habitats. Some disturbance occurs from boating activities.



This site is of great ornithological interest, being of international importance on account of the numbers of wintering birds it supports. It also supports internationally important numbers of three species, i.e. Dunlin, Black-tailed Godwit and Redshank. In addition, there are 16 species that have populations of national importance. For several of the bird species, it is the top site in the country. Also of note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. The site is most effectively censused from the air and this is carried out in most winters.

14.2005

For inspection purposes only.
Consent of copyright owner required for any other use.

21 AUG 2014 5 6 2



SITE NAME: BUNARUDEE BOG

SITE CODE: 001352

Bunaruddee Bog NHA is situated approximately 4 km west of Moyvane in the townlands of Bunaruddee, Leitrim West and Lamore, Co. Kerry. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is surrounded by streams to the east and west and a river to the south.

The site consists of a Western Raised Bog, which has developed on a floodplain of the Galley River. It supports a range of characteristic species of bogs including western indicator species and lichens. The southern section of the bog is the most intact. There was a small central quaking area, with hummock/hollow complexes but no pools, which has been more actively cut and drained since the last survey. The bog had a good complement of *Sphagnum* species.

Much of the high bog has vegetation typical of a Western Raised Bog. The high bog is dominated by Ling Heather (*Calluna vulgaris*), Cottongrass (*Eriophorum angustifolium* and *Eriophorum vaginatum*) with abundant Bog Myrtle (*Myrica gale*). There is a good layer of bog moss growing underneath the Ling Heather. Bunaruddee Bog also supports a good cover of Lichen (*Cladonia* spp.) as it has not been burnt in a while. Western indicators present on the bog include Carnation Sedge (*Carex panicea*), Lousewort (*Pedicularis sylvatica*), the moss *Racomitrium lanuginosum* and the liverwort *Pleurozia purpurea*. The wet central area with quaking bog and hummock/hollow complexes prior to being developed for peat cutting supported *Sphagnum cuspidatum* in the hollows with frequent *Sphagnum imbricatum* hummocks. Other species of interest recorded on the high bog include Great Sundew (*Drosera anglica*), Cranberry (*Vaccinium oxycoccos*) and seven species of *Sphagnum* including *Sphagnum subnitens* and *S. tenellum*.

The cutover supports a range of habitats including humid grasslands, improved grassland, forestry, old peat-cutting and active peat-cutting. There are extensive areas of humid grassland with Purple Moor-grass (*Molinia caerulea*) to the north, west and north-east. In places, cutover supports Ling Heather.

Current landuse on the site comprise active peat-cutting on all margins. Areas of cutover have been reclaimed for agricultural purposes to the south-east, west and north of the site. There is a small conifer plantation on the eastern margin of the high bog. Damaging activities associated with these landuses include drainage and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.

Bunaruddee Bog NHA is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site supports a diversity of raised bog microhabitats, including hummock/hollow complexes, as well as a number of scarce plant species. The bog is located in Kerry in the south-west extreme of the geographical range of raised bog habitat in Ireland. Ireland has a high proportion of the total E.U. resource of this habitat type (over 50%) and so has a special responsibility for its conservation at an international level.

15.11.2002

21 Aug 2014 5 6 2

SITE NAME: BALLYLONGFORD BAY**SITE NO: 001332**

Ballylongford Bay is an inlet on the southern side of the Shannon Estuary and runs northwards from the town of Ballylongford in County Kerry.

The scientific interest of the area lies in the large concentrations of waterfowl that feed on the mudflats there. Hutchinson (1979) records an average peak of 566 individuals of wildfowl and 2,300 waders for all the counts made between 1972/73 and 1974/75.

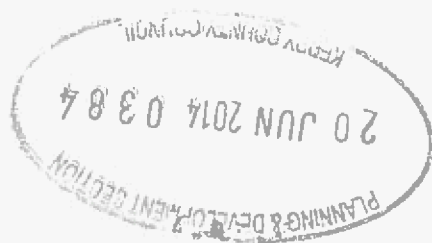
Recent figures specifically for the birds of Ballylongford Bay are not available as the whole of the Shannon estuary is treated as one wetland. Indeed, it constitutes the largest estuarine complex in the country and is of international importance for Black-tailed Godwit (5,370) and Redshank (1,880) and national importance for Cormorant (200), Greylag Goose (69), Shelduck (502 - two seasons only), Wigeon (2,229), Teal (1,277), Mallard (509), Scaup (206), Golden Plover (5,361), Grey Plover (63), Lapwing (13,029), Knot (513), Dunlin (7,149), Bar-tailed Godwit (625), and Curlew (1,180). All are average peaks from 6 counts between 1984/85 and 1986/87, apart from Shelduck.

Major threats to the estuary are industrial development and pollution, the latter of which is potentially devastating depending on the tidal conditions.

The importance of the Shannon estuary is underlined by its proposal as a Special Protection Area. The Ballylongford Bay NHA makes up a valuable part of this unit and cannot be considered out of context of the whole Shannon estuary.

For inspection purposes only.
Content of copyright owner required for any other use.

21 AUG 2014 5 6 2



SITE NAME: CLONDERALAW BAY

SITE NAME: 000027

This narrow bay off the Shannon estuary is situated east of Knock and west of Labasheeda. It is the estuary of the Crompaun and Cloon Rivers.

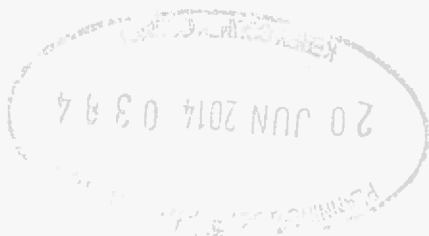
The site includes all of the intertidal mudflats of the bay. In 1973 a number of isolated patches of Cordgrass (*Spartina* spp.) occurred on the mudflats. The edges of the estuary had some small strips of saltmarsh vegetation, with Sea Poa (*Puccinellia* spp.), Sea Aster (*Aster tripolium*), Scurvy Grass (*Cochlearia officinalis*) and Distant Sedge (*Carex distans*).

The site is an important bird site, as it is part of the internationally important Shannon-Fergus estuarine complex. Maximum numbers of wildfowl in the three winters 1972/73, 1973/74 and 1974/75 were 1,100, 1,700 and 1,500 respectively. The corresponding maximum wader counts were 3,200, 2,400 and 1,100.

Although this site is primarily important as an ornithological site, it is also a fine example of a high quality estuarine site.

For inspection purposes only.
Consent of copyright owner required for any other use.

21 AUG 2014 5 6 2



SITE NAME: SCATTERY ISLAND

SITE CODE: 001911

Scattery Island is located near the mouth of the Shannon estuary, about 3 km from Kilrush. The solid geology appears to be Carboniferous (Namurian) but there is little or no out-cropping bed-rock. The island is largely composed of glacial till with gley soils and poor drainage. On the high western side where earthen cliffs rise to c.10 m, serious erosion has taken place, exposing a marley substrate underlying the glacial till. The highest point on the island is estimated at 15-20 m. A tidal lagoon at the north-east corner of the island appears to have been formed by storm beach deposition on its north and east sides.

Much of the island is grassland, which is generally species rich. Some of the fields had areas of Silverweed (*Potentilla anserina*), Clovers (*Trifolium* spp.) and Sedges (*Carex* spp.). Other species recorded included Primrose (*Primula vulgaris*), Bird's-foot trefoil (*Lotus corniculatus*), Dog Violet (*Viola riviniana*) and Lesser Celandines (*Ranunculus ficaria*).

Some of the grass fields have been invaded by Bracken (*Pteridium aquilinum*) and Brambles (*Rubus* spp.) and some Gorse (*Ulex europaeus*). In areas of poor drainage, patches of Rushes (*Juncus* spp.) and Yellow Iris (*Iris pseudacorus*).

Some small areas of saltmarsh had Thrift (*Armeria maritima*) and a few patches of Cordgrass (*Spartina* spp.). The saltmarsh at the south end of the island had reedbeds (*Phragmites australis*).

Sea Campion (*Silene maritima*) occurred on the highest levels of the storm beaches, along with Teasel (*Dipsacus fullonum*) and Goosefoot/Ox-eye (*Chenopodium triplex* spp.).

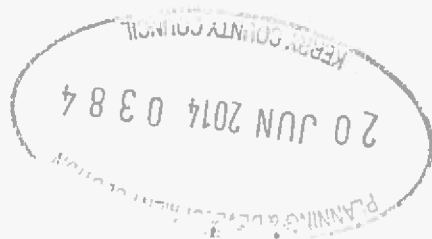
On 3 May 1991 and 10 July 1991, 41 species of birds were recorded during brief visits. These were fairly typical for such an island with Shelduck, Oystercatcher and Ringed Plover probably breeding. Other species included Stock Dove, Skylark, Swallow, Meadow Pipit, Rock Pipit, Pied Wagtail, Wren, Dunnock, Robin, Blackbird, Song Thrush, Wheatear, Stonechat, Sedge Warbler, Chiffchaff, Raven and Reed Bunting. A Peregrine Falcon was recorded but was not considered to be breeding.

Rabbits and Goats occur on the island, while a few Grey Seals regularly haul out on the beaches.

The island is owned largely by the Office of Public Works and was acquired mainly for its early Christian to Medieval ecclesiastical structures. Further work is required to assess the ecological importance of the island.

13 February, 1995.

27 AUG 2014 5 6 2



SITE SYNOPSIS

SITE NAME: BUNARUDDEE BOG

SITE CODE: 001352

Bunarruddee Bog NHA is situated approximately 4 km west of Moyvane in the townlands of Bunarruddee, Leitrim West and Lamore, Co. Kerry. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is surrounded by streams to the east and west and a river to the south.

The site consists of a Western Raised Bog, which has developed on a floodplain of the Galey River. It supports a range of characteristic species of bogs including western indicator species and lichens. The southern section of the bog is the most intact. There was a small central quaking area, with hummock/hollow complexes but no pools, which has been more actively cut and drained since the last survey. The bog had a good compliment of *Sphagnum* species.

Much of the high bog has vegetation typical of a Western Raised Bog. The high bog is dominated by Ling Heather (*Calluna vulgaris*), Cottongrass (*Eriophorum angustifolium* and *Eriophorum vaginatum*) with abundant Bog Myrtle (*Myrica gale*). There is a good layer of bog moss growing underneath the Ling Heather.

Bunnaraddee Bog also supports a good carpet of Lichen (*Cladonia* spp.) as it has not been burnt in a while. Western indicators present on the bog include Carnation Sedge (*Carex panicea*), Lousewort (*Pedicularis sylvatica*), the moss *Racomitrium lanuginosum* and the liverwort *Pleurozia purpurea*. The wet central area with squaking bog and hummock/hollow complexes prior to being developed for peat cutting supported *Sphagnum cuspidatum* in the hollows with frequent *Sphagnum imbricatum* hummocks. Other species of interest recorded on the high bog include Great Sundew (*Drosera anglica*), Cranberry (*Vaccinium oxycoccos*) and seven species of *Sphagnum* including *Sphagnum subitens* and *S. tenellum*.

The cutover supports a range of habitats including humid grasslands, improved grassland, forestry, old peat-cutting and active peat-cutting. There are extensive areas of humid grassland with Purple Moor-grass (*Molinia caerulea*) to the north, west and north-east. In places, cutover supports Ling Heather.

Current landuse on the site comprise active peat-cutting on all margins. Areas of cutover have been reclaimed for agricultural purposes to the south, east, west and north of the site. There is a small conifer plantation on the eastern margin of the high bog. Damaging activities associated with these landuses include drainage and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.

Bunuraddee Bog NHA is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site supports a diversity of raised bog microhabitats, including hummock/hollow complexes, as well as a number of scarce

as well as a number of scarce

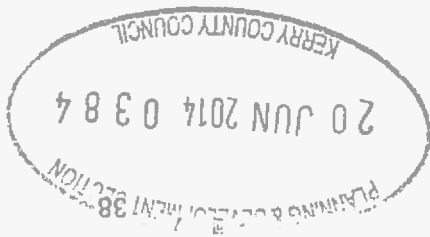
plant species. The bog is located in Kerry in the south-west extreme of the geographical range of raised bog habitat in Ireland. Ireland has a high proportion of the total E.U. resource of this habitat type (over 50%) and so has a special responsibility for its conservation at an international level.

For inspection purposes only.
Consent of copyright owner required for any other use.

21 AUG 2014 5 6 2

20 JUN 2014 03 84
KERRY COUNTY COUNCIL
PLANNING & DEVELOPMENT SECTION

15.11.2002

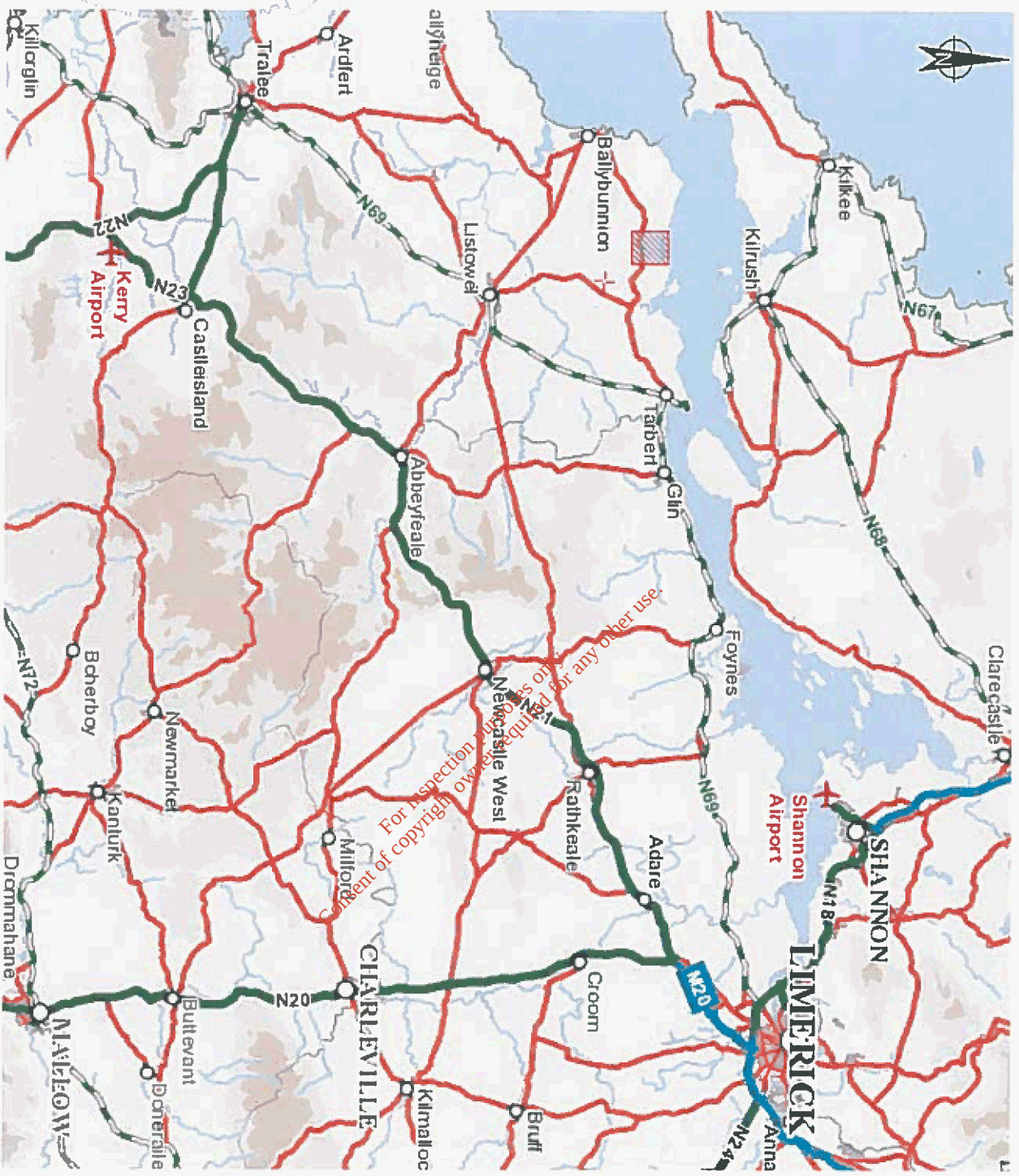


21 AUG 2014 5 6 2

For inspection purposes only.
Consent of copyright owner required for any other use.

Appendix 2-
Figures

20 JUN 2014 03 8 4
KERRY COUNTY COUNCIL



Legend
Site Location

21 AUG 2014
562



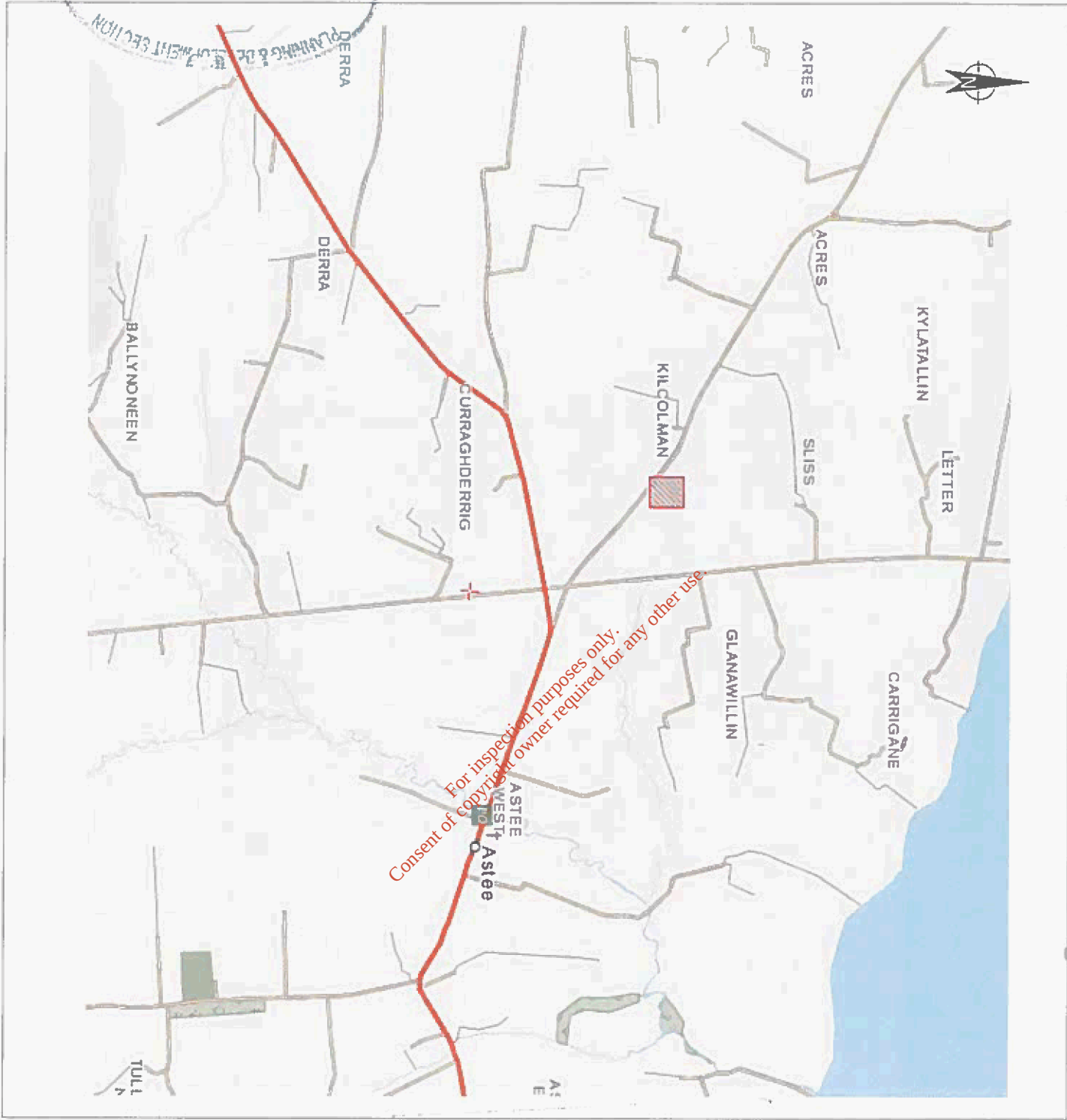
Environmental Health and Safety Engineering Project Management
McDonough EHS, Keshore Business Park, Keshore, Sligo, Co. Sligo
Tel: 003 230 0021 Email: info@mehs.ie

Client: Brandon Products

Title: Figure 1 - Location Map

Scale: 1:50,000 Project No: P011 016

Figure No: P012-009A Rev: A



Legend

 **Site Location**

MEHS
ENVIRONMENT, HEALTH & SAFETY

Environmental Health and Safety Engineering Project Management
Manufacturing EHS Keshore Business Park, Keshore, Sligo, Co. Donegal
Tel: 003 750 0421 Email: info@mehs.ie

Client
Brandon Products

Title
Figure 2 – Location Map

Scale
1:25,000

Project No.
P011 016

Figure No.
P012-009B

Rev.
A

Date	By	Checked	Approved	Note Ref	Drawn

21 AUG 2014 5 6 2

20 JUN 2014 03 84
KERRY COUNTY COUNCIL



Legend
 Site Location

21 AUG 2014
562



Environmental Health and Safety Engineering Project Management
Management EHS, Integrated Business Plan, Delivery, Co. Limerick
Tel: 087 238 0471 Email: info@mehs.ie

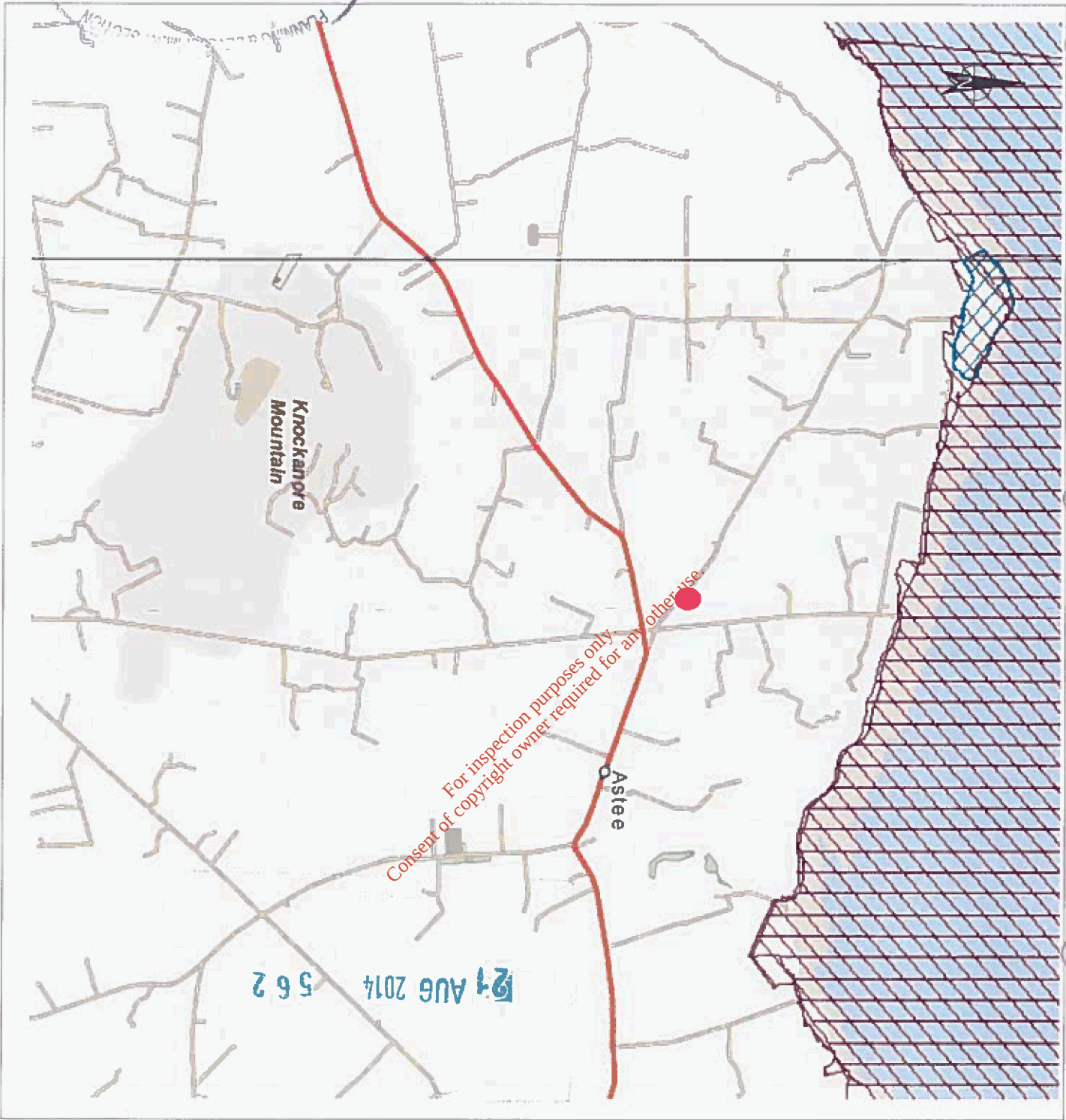
Client: Brandon Products

Title: Figure 3 – Aerial Photography

Scale: 1:5000 Project No. P011 016

Figure No. P012-009C Rev. A

Issue no. Date By Checked Approved Name Rd. Status



Legend

● Site Location

- Special Protection Areas
- Proposed Natural Heritage Areas
- Natural Heritage Areas
- Special Areas of Conservation

Issue No.	Date	By	Checked	Approved	Non-Rd	Screened

MEHS
ENVIRONMENT, HEALTH & SAFETY

Environmental Health and Safety Engineering Project Management
Accreditation EHS, Keshige Business Park, Keshige, Co. Limerick
Tel: 087 239 0421 Email: info@mehs.ie

Client **Brandon Products**

Title **Figure 5 - Designations Maps**

Scale 1:5000 **Project No.** P010 016

Figure No. P012-09E **Rev.** A



An aerial photograph of a rural landscape, likely a farm or agricultural area. The terrain is a mix of green fields, brown patches, and some buildings. A prominent red diagonal watermark is overlaid across the center of the image, reading: "For inspection purposes only. Consent of copyright owner required for any other use." The watermark is written in a bold, sans-serif font. The background shows a mix of green and brown fields, with some buildings and structures visible in the distance. The overall tone is somewhat muted, typical of an aerial photograph.

21 Aug 2014

-  Special Protection Areas
 Proposed Natural Heritage Area
 Natural Heritage Areas
 Special Areas of Conservation

Menu no.	Date	By	Checked	Approved	Notes Ref	Class Scanned
----------	------	----	---------	----------	-----------	------------------



T-MEHS
ENVIRONMENT, HEALTH & SAFETY

Environmental Health and Safety Engineering Project Management
McGraw-Hill, Karloof Business Park, Kalamazoo, Co. Michigan
Tel 081 238 0421 Email tomc@mcgraw-hill.com

Client
Brandon Products

Figure 6 – Designations Maps – Aerial

Scale	1:25,000	Project No.	P010 016
-------	----------	-------------	----------

Figure No.	P012-09F	Rev	A
------------	----------	-----	---