

SECTION E. APPROPRIATE ASSESSMENT

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SECTION E: APPROPRIATE ASSESSMENT

In addition to the foregoing, all sites (whether low, moderate or high risk) should be subject to screening for Appropriate Assessment in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). The results of any such screening should be submitted as part of this application. The screening should demonstrate whether the project is/is not likely, whether individually or in combination with other plans or projects, to have significant effects on any European Site or sites as defined in Regulation 2(1) of the Habitats Regulations (S.I. No. 477 of 2011) having regard to best scientific knowledge and its conservation objectives. Where, based on the Stage 1 screening, it is considered that an appropriate assessment *is not* required, a reasoned response should be provided.

Where screening has determined that an appropriate assessment *is* required, an appropriate assessment in accordance with Article 6(3) of the Habitats Directive (92/43/EEC) should be completed and a copy of the Natura Impact Statement submitted as part of this application. The assessment should consider the following impacts on any European Site(s):

1. The impact of the existing landfill on European sites;
2. The cumulative effects of the project combined with other plans or projects that might impact on the European site or sites;
3. An assessment of the implications of the project for the European site in view of the European site's conservation objectives;
4. The objectives of proposed remediation measures with regard to existing impacts identified in item 1;
5. The impact on the European site of any physical works carried out at the closed landfill as part of the remediation plan;
6. Details of any mitigation measures proposed at or in relation to the European site, including timeframes for the implementation and monitoring of the measures; and
7. Natura Impact Statement conclusion statement. The statement should conclude whether the project will or will not adversely affect the integrity of the European site(s) having regard to its conservation objectives.

While the appropriate assessment is subject to a separate report (the Natura Impact Statement), it should be carried out in tandem with the overall risk assessment. This is to ensure that a holistic approach is undertaken, whereby all relevant appropriate assessment and risk assessment parameters are addressed and to ensure that the remediation measures proposed address all risks identified.

Please refer to the guidance document '*Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*', issued in 2009 by the Department of the Environment, Heritage and Local Government, and revised in 2010 with regard to this assessment. This document is available at: http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf.

Two copies of the screening report and, where relevant, the Natura Impact Statement shall be submitted. The screening report/Natura Impact Statement shall also be provided on two CD-ROMs in searchable PDF format (no larger than 50MB for each electronic file).

The Appropriate Assessment (screening and, where relevant, Natura Impact Statement) should be submitted as **Attachment E.1.**

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MULROY
environmental



**TIER 2 SITE INVESTIGATION &
TIER 3 GQRA ASSESSMENT OF
FORMER TULLYVOGHEEN LANDFILL**

**APPROPRIATE ASSESSMENT
SCREENING REPORT**

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16TH April 2014

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1 INTRODUCTION

As part of the Tier 2 Site Investigation and follow up Tier 3 Generic Quantitative Risk Assessment (GQRA), an Appropriate Assessment Screen is required for the former Tullyvogheen Landfill. This is required as part of the application to the EPA for the Certificate of Registration. The purpose of this assessment is to ascertain whether the development complies with the Department of Environment, Heritage and Local Government 2009 publication, 'Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities.'

2 LEGISLATIVE BACKGROUND

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) provides legal protection for habitats and species of European importance. The main aim of this Directive is to 'contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies'. In order to meet the aims of the Directive, actions must be designed to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest (Habitats Directive).

Under the Habitats Directive, Special Areas of Conservation (SAC) or candidate Special Areas of Conservation (cSAC) have been selected as important examples of habitat types listed in Annex I, and the habitats of certain species listed in Annex II of the Habitats Directive. SACs (including cSACs) together with Special Protection Areas (SPAs) (including proposed SPAs) make up a network of European sites called the Natura 2000 network. SPAs are designated under the Council Directive on the Conservation of Wild Birds (79/409/EEC), otherwise known as the 'Birds Directive'.

Appropriate Assessment is required under the Habitats Directive for any plan or project likely to have a significant effect on a Natura 2000 site. Article 6, paragraphs 3 and 4 of the Directive state:

'6(3) - Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 site) but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'

6(4)- If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of

overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.'

3 SCREENING

Screening involves the following:

1. Description of the plan/project including details of the local site or plan area characteristics.
2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives.
3. Assessment of likely effects (direct, indirect and cumulative) through the completion of a desk study or field survey.
4. Screening statement including conclusions

3.1 Description of Existing Site

According to Galway C.C., the former municipal landfill at Tullyvoheen, Clifden, County Galway, was in operation between the years of 1984 and 1999. During this period a maximum of 23,000 tonnes of mixed waste including domestic, commercial and construction & demolition waste per annum was deposited annually. The site area is 1.27 ha and the total waste body has been estimated by Galway C.C. to have a volume of 114,000m³ or 205,000 tonnes.

The site is approximately 2 km east of the town centre of Clifden. The site is located on a narrow country road that leads uphill approximately 660m from the Clifden to Galway Secondary Road (the N59). At a distance of approximately 600m from the N59 the country road turns eastwards. Where the site is located, this country road has been constructed at the edge of a valley between a small mountain to the south and a large hill to the north. The valley is orientated in an approximate west to east direction. The landfill to the south of the country road consists of a substantial infill operation where the valley was raised approximately 3.5m on the eastern boundary to 7-8m on the western boundary.

The landfill is located between Cooravoughil mountain to the south and small hills to the north on a where the valley widens out into upland bog.

The geology of the area consists of schists and quartzites, with Geological Survey of Ireland maps indicating that the site is underlain by psammitic schists. The bedrock map indicates that southern half of the site is underlain by the Streamstown Schist Formation (ST) with the northern half being underlain by the Bennabeola Quartzite Formation (BX).

These formations consist of Pre-cambrian quartzite, gneisses and schists. Aquifer vulnerability maps indicate bedrock is 'at surface' for the western part of the site (where the stream exits) and 'extreme' (less than 3 meters to bedrock) for the remainder of the site.

The stream running through the valley is culverted through the landfill before continuing in a south-westerly direction alongside the country road for a distance, then heading south-westwards and eventually joining the Owenglen River 735m to the south of the site.

3.2 Surrounding Property

The site is located in a rural and remote area and as a result there are very few properties located within its immediate vicinity. No residential or commercial property is located on the landfill site boundaries. The nearest inhabited property is located 415m 'as the crow flies' southwest of the site along the country road that leads to the N59 (main Clifden - Galway Road) located approximately 630m south of the site. Four residences exist along the N59 road to the southwest, a distance of 620m from the site. Cuirt Cregg, a medium sized housing estate, is located further to the west along the N59 road, with the nearest property in the estate located 630m 'as the crow flies' from the site, as shown on Figure 3.

Figure 3 also shows a Galway County Council compound containing a pumping station and an ESB substation located adjacent to the N69 at the bottom of the access road, 610m from the site.

3.3 Natura 2000 Sites

The Tullyvogheen site is located within the region of a number of Natura 2000 designated protected sites, including Special Areas of Conservation (SAC), Special Protected Areas (SPA) and proposed Natural Heritage Areas (pNHA). These are the West Connaught coast, Slyn Head peninsula, the Connemara Bog complex and The Twelve Bens/ Garaun complex.

The Twelve Bens/ Garaun Complex is the closest protected site to Tullyvogheen landfill site, located approximately 612m to the south of the site's southern boundary. This is protected as:

- A Special Area of Conservation (SAC) No. 002031; and
- A proposed Natural Heritage Area (pNHA) No. 002031.

The Site Synopsis and the Qualifying Interests for The Twelve Bens/ Garaun Complex are located in Appendix 1. The overarching Conservation Objective for The Twelve Bens/ Garaun Complex Special Protection Area is to ensure the maintenance of the habitats and species for which the SAC has been selected at favourable conservation status.

The Conservation Objectives for The Twelve Bens/ Garaun Complex can be summarised as follows:

Objective 1: To maintain the Annex I habitats for which the SAC has been selected at favourable conservation status.

To be favourable the following habitat must remain intact and at their current percentage:

- Blanket bogs (active) (26% area of the site);
- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) (6% area of the site);
- Siliceous rocky slopes with chasmophytic vegetation (5% area of the site);
- Calcareous rocky slopes with chasmophytic vegetation (3% area of the site);
- Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) (1% area of the site);
- Alpine and Boreal heaths (2% area of the site);
- Old Oak Woods with *Ilex* and *Blechnum* in the British Isles (1% area of the site); and
- Depressions on peat substrates of the *Rhynchosporion* (1% area of the site).

Objective 2: To maintain the Annex II species for which the SAC has been selected at favourable conservation status.

To be favourable the following habitat must remain intact only.

- Slender Naiad;
- Otter;
- Freshwater Pearl mussel;
- Salmon.

Objective 3: To maintain the extent, species richness and biodiversity of the entire site.

Objective 4: To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

4 ASSESSMENT OF LIKELY EFFECTS

A review of the existing site indicates that there has not been:

- Any impact on an Annex I habitat;
- Any impact on the species living in the area;
- Any reduction in the area of a Natura 2000 site;
- Direct or indirect damage to the physical quality of the environment in the Natura 2000 site;
- Serious or ongoing disturbance to species or habitats for which Natura 2000 is selected;
- Direct or indirect damage to the size, characteristics or reproductive ability of populations on the Natura 2000 site; and
- Interference with mitigation measures put in place for other plans/projects.

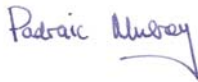
5 SCREENING CONCLUSION AND STATEMENT

The findings and conclusions of the screening process are as follows:

1. *No potential for significant effects/AA is not required*

Screening established that there is **no potential for significant effects** and the project/plan can proceed as proposed. However, no changes may be made after this as this will invalidate the findings of the screening.

Yours sincerely,



Padraic Mulroy

BSc., MSc., MIPSS, MIEI, IRCA, C.Sci., SiLC, GSAS-CGP

Managing Director

Mulroy Environmental

MULROY ENVIRONMENTAL SERVICE CONSTRAINTS

1. This report and the Environmental Site Assessment carried out in connection with the report (together the "Services") were compiled and carried out for Tom Brennan (the "client") in accordance with the terms of a contract, Proposal PRP198.11.05.2012, between Mulroy Environmental and the "client" dated 11th May 2012. The Services were performed by Mulroy Environmental with the skill and care ordinarily exercised by a reasonable Environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by Mulroy Environmental taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Mulroy Environmental and the client.

2. Other than that expressly contained in paragraph 1 above, Mulroy Environmental provides no other representation or warranty whether express or implied, in relation to the Services.

3. Unless otherwise agreed the Services were performed by Mulroy Environmental exclusively for the purposes of the client. Mulroy Environmental is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, Mulroy Environmental does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and Mulroy Environmental disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.

4. It is Mulroy Environmental understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without Mulroy Environmental be requested to review the report after the date hereof, Mulroy Environmental shall be entitled to additional payment at the then existing rates or such other terms as agreed between Mulroy Environmental and the client.

5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Mulroy Environmental. In the absence of such written advice of Mulroy Environmental, reliance on the report in the future shall be at the client's own and sole risk. Should Mulroy Environmental be requested to review the report in the future, Mulroy Environmental shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Mulroy Environmental and the client.

APPENDIX 1

- SITE SYNOPSIS SAC NO. 002031
- QUALIFYING INTERESTS FOR THE TWELVE BENS/
GARAUN COMPLEX

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Conservation Objectives for The Twelve Bens/Garraun Complex SAC [002031]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

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

- ◆ [1029] *Margaritifera margaritifera*
- ◆ [1106] *Salmo salar* (only in fresh water)
- ◆ [1355] *Lutra lutra*
- ◆ [1833] *Najas flexilis*
- ◆ [3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- ◆ [4060] Alpine and Boreal heaths
- ◆ [7130] Blanket bogs (* if active only)
- ◆ [7150] Depressions on peat substrates of the *Rhynchosporion*
- ◆ [8110] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)
- ◆ [8210] Calcareous rocky slopes with chasmophytic vegetation
- ◆ [8220] Siliceous rocky slopes with chasmophytic vegetation
- ◆ [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

Citation:

NPWS (2011) Conservation objectives for The Twelve Bens/Garraun Complex SAC [002031]. Generic Version 3.0. Department of Arts, Heritage & the Gaeltacht.

For more information please go to: www.npws.ie/protectedsites/conservationmanagementplanning

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SITE SYNOPSIS

SITE NAME: THE TWELVE BENS/GARRAUN COMPLEX

SITE CODE: 002031

This is an extensive site situated in the north-west of Connemara, dominated by mountainous terrain. The site is bounded to the south by the Connemara Bog Complex, to the east by the Maumturk Mountains and to the north by Killary Harbour. Included within the site are the Twelve Bens mountain range, the mountains to the north of Kylemore (Doughruagh, Garraun and Benchoona), rivers including the Ballynahinch and Owenglin systems and an area of coastal heath and machair near Glassilaun. The site also includes some extensive tracts of lowland blanket bog which are continuous with the mountains. Most of the mountain summits reach a height in excess of 500 m, the highest being Ben Baun in the Twelve Bens which reaches 730 m. The site includes a large portion of the Connemara National Park and a Statutory Nature Reserve at Derryclare Wood.

Geologically, the site can be divided into two distinct parts. The Twelve Bens are composed of resistant quartzite with schists in the valleys while the mountains north of Kylemore are composed of gneiss and various types of sandstones and mudstones. There are also areas of gabbro (Doughruagh and Currywongaun), mica schist (Muckanaght) and marble outcrops (south of Kylemore Lough). The main soil type within the site is peat.

The site is a candidate SAC selected for active blanket bog a priority habitat on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for, alpine heath, calcareous rocky siliceous rocky and siliceous scree vegetation, lowland oligotrophic lakes, Rhynchosporion and old Oak woodlands all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Freshwater Pearl Mussel, Atlantic Salmon, Otter and the plant Slender Naiad.

The predominant vegetation type on the site is upland blanket bog/heath dominated by Heather (*Calluna vulgaris*), Deergrass (*Scirpus cespitosus*), Cross-leaved Heath (*Erica cinerea*) and the mosses *Racomitrium lanuginosum* and *Sphagnum capillifolium*). In places this vegetation can be rich in liverwort species such as *Adelanthus lindenbergianus* and *Bazzania pearsonii*. This unusual type of species-rich dwarf shrub heath is almost confined to the mountains of the west of Ireland and Scotland and is particularly well developed in the Twelve Bens. Close to the mountain summits this blanket bog/heath is often very thin with a high proportion of outcropping bedrock.

Another important and widespread habitat is lowland blanket bog dominated by Purple Moor-grass (*Molinia caerulea*), Black Bog-rush (*Schoenus nigricans*), Cross-leaved Heath and the liverwort *Pleurozia purpurea*. These areas of lowland blanket bog usually occur in the valleys between the mountains, e.g. the Gleninagh Valley.

Rhynchosporion vegetation is well represented around pools, in wet hollows and in quaking and flush areas associated with the lowland blanket bog. White Beak-sedge (*Rhynchospora alba*) occurs in association with such species as Bog Cotton (*Eriophorum angustifolium*), Bogbean (*Menyanthes trifoliata*), Black Bog-rush (*Schoenus nigricans*), and a range of bog mosses, including *Sphagnum auriculatum* and *S. cuspidatum*.

The site contains a large range of other habitats, including upland grassland dominated by Sheep's Fescue (*Festuca ovina*) and Mat-grass (*Nardus stricta*), Sessile Oak (*Quercus petraea*) woodland, scree, oligotrophic (nutrient-poor) lakes, rivers, reedbeds, freshwater marshes, coastal heath, machair, sand dune and salt marsh.

A number of rare, Red Data Book plant species are found within the site: Alpine Saw-wort (*Saussurea alpina*), Holly Fern (*Polystichum lonchitis*), Purple Saxifrage (*Saxifraga oppositifolia*), and the legally protected (Flora Protection Order, 1999) Parsley Fern (*Cryptogramma crispa*). These are generally confined to mountains cliffs above 400 m, where a number of other scarce plant species, for example, Alpine Meadow-rue (*Thalictrum alpinum*), are also found. Other Red Data Book species have also been recorded from the site: Marsh Clubmoss (*Lycopodiella inundata*), Corncockle (*Agrostemma githago*) and the legally protected Heath Cudweed (*Omalotheca sylvatica*). The latter two species have not been recorded from the site in recent years. St. Dabeoc's Heath (*Daboecia cantabrica*), a species which in Ireland is restricted to Connemara and south Mayo, occurs commonly within the site.

The suite of lowland lakes that encircle the mountains represent some of the finest oligotrophic lakes in the country and two rare, Red Data Book plant species, Slender Naiad (*Najas flexilis*) and Pillwort (*Pillularia globulifera*) occur. Slender Naiad is rare in Europe and is listed on Annex II of the EU Habitats Directive.

The site contains several small areas of Sessile Oak woodland, a habitat which is particularly rare in Connemara. The best examples on the site of this habitat are found at Kylemore and on the north shore of Derryclare Lough. Derryclare Wood, a Statutory Nature Reserve, has been particularly well studied. It is composed mostly of Sessile Oak, with some Rowan (*Sorbus aucuparia*), Downy Birch (*Betula pubescens*) and occasional Ash (*Fraxinus excelsior*) forming the canopy layer. There is a well-developed lichen and fungus flora present. The fungal parasite, *Hemigrapha astericus*, a native of Australia and South America, was first recorded in the northern hemisphere from this wood. The Kylemore woods, though heavily infested by Rhododendron (*Rhododendron ponticum*), still retain a diverse flora and support interesting communities of mosses and liverworts, including such species as *Radula voluta*, *Lejeunea holtii*, *L. hibernica*, *L. flava* subsp. *moorei*, *Cephalozia hibernica*, *Teleranea nematodes*, *Campylopus setifolius*, *Oxystegus hibernicus*, *Grimmia hartmanii* and *G. funalis*.

Irish Hare, Otter, Freshwater Pearl-mussel and Common Frog have been recorded from the site. These species are protected under the 1976 Wildlife Act. The Owenglin River and Ballynahinch system supports an important population of Salmon and salmon nursery grounds. Arctic Charr, a species listed in the Irish Red

Data Book as threatened in Ireland, has been recorded from Lough Inagh, Kylemore Lough, Lough Muck and Lough Fee.

Birdlife reported from the site includes Raven, Wheatear, Stonechat, Meadow Pipit, Red Grouse, a declining species of Heather moorland, Snipe, Curlew, Woodcock, Hooded Crow, Twite, Ring Ouzel (the latter two both Irish Red Data Book species) and the EU Birds Directive Annex I species, Peregrine, Merlin, Golden Plover and Chough. The site provides excellent habitat for Peregrine and this species has traditionally bred at several locations within it.

The upland vegetation of the site is most threatened by overstocking with sheep and by afforestation with coniferous species.

The Twelve Bens/Garraun Complex includes a wide variety of habitat types, eight of which are listed on Annex I of the EU Habitats Directive, and populations of many rare or scarce plant and animal species. It is one of the largest and most varied sites of conservation interest in Ireland.

6.10.2006

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NATURA 2000
STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)

FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF
COMMUNITY IMPORTANCE (SCI)

AND

FOR SPECIAL AREAS OF CONSERVATION (SAC)

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1. SITE IDENTIFICATION

| <i>1.1. TYPE</i> | <i>1.2. SITE CODE</i> | <i>1.3. COMPILATION DATE</i> | <i>1.4. UPDATE</i> |
|------------------|-----------------------|------------------------------|--------------------|
| B | IE0002031 | 199511 | |

1.5. RELATION WITH OTHER NATURA 2000 SITES:**1.6. RESPONDENT(S):**

National Parks & Wildlife Service of the Department of the Environment, Heritage and Local Government. 7 Ely Place, Dublin 2, Ireland.

1.7. SITE NAME:

The Twelve Bens/Garraun Complex

1.8. SITE INDICATION AND DESIGNATION/CLASSIFICATION DATES:**DATE SITE PROPOSED AS ELIGIBLE AS SCI:**

199805

DATE CONFIRMED AS SCI:**DATE SITE CLASSIFIED AS SPA:****DATE SITE DESIGNATED AS SAC:**

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2. SITE LOCATION

2.1. SITE CENTRE LOCATION

LONGITUDE

W 9 52 45

W/E (Greenwich)

LATITUDE

53 32 18

2.2. AREA (HA):

16170.08

2.3. SITE LENGTH (KM):

2.4. ALTITUDE (M):

MINIMUM

0

MAXIMUM

730

MEAN

350

2.5. ADMINISTRATIVE REGION:

NUTS CODE

IE013

REGION NAME

West

% COVER

99

Marine area not covered by a NUTS-region

2.6. BIOGEOGRAPHIC REGION:

Alpine

Atlantic

Boreal

Continental

Macaronesian

Mediterranean

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3. ECOLOGICAL INFORMATION

3.1. HABITAT types present on the site and assessment for them:

ANNEX I HABITAT TYPES:

| CODE | %COVER | REPRESENTATIVITY | RELATIVE SURFACE | CONSERVATION STATUS | GLOBAL ASSESSMENT |
|------|--------|------------------|------------------|---------------------|-------------------|
| 7130 | 44 | B | B | C | C |
| 3110 | 6 | A | B | A | A |
| 8220 | 2 | A | B | A | A |
| 7150 | 1 | A | C | B | A |
| 91A0 | 1 | A | B | B | A |
| 4060 | 1 | B | B | B | B |
| 8110 | 1 | A | B | A | A |
| 8210 | 1 | A | B | A | A |

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3.2. SPECIES

covered by Article 4 of Directive 79/409/EEC

and

listed in Annex II of Directive 92/43/EEC

and

site assessment for them

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3.2.a. BIRDS listed on Annex I of Council directive 79/409/EEC

| CODE | NAME | POPULATION | | | SITE ASSESSMENT | | |
|------|------------------|------------|-----------|-------|-----------------|--------------|-----------|
| | | Resident | Migratory | | Population | Conservation | Isolation |
| | | Breed | Winter | Stage | | | |
| A103 | Falco peregrinus | 3 | p | | C | A | C |

3.2.b. Regularly occurring Migratory Birds not listed on Annex I of Council directive 79/409/EEC

3.2.c. MAMMALS listed on Annex II of Council directive 92/43/EEC

| CODE | NAME | POPULATION | | | SITE ASSESSMENT | | |
|------|-------------|------------|-----------|-------|-----------------|--------------|-----------|
| | | Resident | Migratory | | Population | Conservation | Isolation |
| | | Breed | Winter | Stage | | | |
| 1355 | Lutra lutra | p | | | C | A | C |

3.2.d. AMPHIBIANS and REPTILES listed on Annex II of Council directive 92/43/EEC

| CODE | NAME | POPULATION | SITE ASSESSMENT | | |
|------|----------------|------------|-----------------|--------------|-----------|
| | | | Population | Conservation | Isolation |
| 1833 | Najas flexilis | P | B | A | C |

3.2.e. FISHES listed on Annex II of Council directive 92/43/EEC

| CODE | NAME | POPULATION | | | SITE ASSESSMENT | | |
|------|-------------|------------|-----------|-------|-----------------|--------------|-----------|
| | | Resident | Migratory | | Population | Conservation | Isolation |
| | | Breed | Winter | Stage | | | |
| 1106 | Salmo salar | C | | | C | B | C |

3.2.f. INVERTEBRATES listed on Annex II of Council directive 92/43/EEC

| CODE | NAME | POPULATION | | | SITE ASSESSMENT | | |
|------|-----------------------------|------------|-----------|-------|-----------------|--------------|-----------|
| | | Resident | Migratory | | Population | Conservation | Isolation |
| | | Breed | Winter | Stage | | | |
| 1029 | Margaritifera margaritifera | P | | | B | B | B |

3.2.g. PLANTS listed on Annex II of Council directive 92/43/EEC

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3.3. Other Important Species of Flora and Fauna

| GROUP | SCIENTIFIC NAME | POPULATION | MOTIVATION |
|---------------|--------------------------|------------|------------|
| B M A R F I P | | | |
| P | Pilularia globulifera | P | A |
| P | Saussurea alpina | P | A |
| P | Omalotheca sylvatica | P | A |
| P | Cryptogramma crispa | R | A |
| P | Agrostemma githago | P | A |
| P | Lycopodiella inundata | P | A |
| P | Polystichum lonchitis | P | A |
| I | Stethophyma grossum | P | D |
| I | Conops vesicularis | P | D |
| I | Epistrophe nitidicollis | P | D |
| I | Ctenophora atrata | P | D |
| F | Salvelinus alpinus | P | A |
| A | Rana temporaria | P | A |
| M | Lepus timidus hibernicus | P | A |
| A | Rana temporaria | P | C |
| M | Lepus timidus hibernicus | P | B |
| M | Lepus timidus hibernicus | P | C |

(B = Birds, M = Mammals, A = Amphibians, R = Reptiles, F = Fish, I = Invertebrates, P = Plants)

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4. SITE DESCRIPTION

4.1. GENERAL SITE CHARACTER:

| Habitat classes | % cover |
|---|--------------|
| Marine areas, Sea inlets | 1 |
| Coastal sand dunes, Sand beaches, Machair | 1 |
| Inland water bodies (Standing water, Running water) | 7 |
| Bogs, Marshes, Water fringed vegetation, Fens | 46 |
| Heath, Scrub, Maquis and Garrigue, Phygrana | 34 |
| Humid grassland, Mesophile grassland | 1 |
| Broad-leaved deciduous woodland | 1 |
| Inland rocks, Scree, Sands, Permanent Snow and ice | 9 |
| Total habitat cover | 100 % |

Other site characteristics

An extensive area incorporating the predominantly quartzite mountains of the Twelve Bens and encompassing a range of habitat types, including blanket bog, oligotrophic lakes, heath, exposed rock and scree, acid grassland and remnants of oak woodland. The northern part of the site is bounded by coastline and includes rocky shore and small areas of sandy beach, machair, tidal river, mud flats and saltmarsh. Several river headstreams are also within the site.

4.2. QUALITY AND IMPORTANCE:

One of the largest and most varied sites of conservation interest in Ireland, including the scenically renowned Twelve Bens mountain range, which support extensive areas of blanket bog, heath and exposed rock and a range of arctic-alpine plants. Rhynchosporion vegetation is well represented in the wet areas of blanket bog. The suite of lowland lakes that encircle the mountains represent some of the finest oligotrophic lakes in the country and support several rare species such as *Pilularia globulifera* and populations of *Salvelinus alpinus*. The site also has a significant population of *Lutra lutra*, and an important population of *Salmo salar*. The site includes a large portion of the Connemara National Park and a National Nature Reserve at Derryclare Wood. Additional areas are included in the site under EU LIFE funded restoration projects.

4.3. VULNERABILITY

Large tracts of blanket bog are currently overgrazed by sheep and are vulnerable to erosion, a problem that could be accentuated by the striping of commonage which is taking place in some areas. Other threats are the further expansion of commercial afforestation on blanket bog, and the development of fish-farming in the oligotrophic lakes.

4.4. SITE DESIGNATION:

4.5. OWNERSHIP

National Parks and Wildlife Service (14%)
 Department of the Environment (9%)
 Privat : Multiple (77%)

4.6. DOCUMENTATION

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Roden, C.M. (1986). A Survey of the Flora of some Mountain Ranges in the West of Ireland. Irish Naturalists' Journal, 22 (2) : 52-59.

Scannell, M.J.P. and White, J. (1975). *Cryptogramma crispum* In West Galway. Irish Naturalists' Journal, 18 : 336.

Tangney, D.E. & Fairley, J.S. (1994). Otter signs and diet in Connemara National Park and its environs. Irish Naturalists' Journal 24: 434 -440.

Webb, D.A. and Scannell, M.J.P. (1983). Flora of Connemara and the Burren. Royal Dublin Society and Cambridge University Press, Cambridge.

5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES

5.1. DESIGNATION TYPES at National and Regional level:

| CODE | % COVER |
|------|---------|
| IE01 | 1 |
| IE03 | 13 |

5.2. RELATION OF THE DESCRIBED SITE WITH OTHER SITES:

designated at National or Regional level:

| TYPE CODE | SITE NAME | OVERLAP TYPE | % COVER |
|-----------|---------------------------|--------------|---------|
| IE01 | Derryclare Nature Reserve | + | 1 |
| IE03 | Connemara National Park | * | 13 |

designated at International level:

5.3. RELATION OF THE DESCRIBED SITE WITH CORINE BIOTOPE SITES:

| CORINE SITE CODE | OVERLAP TYPE | % COVER |
|------------------|--------------|---------|
| 800000208 | | |
| 800000182 | | |
| 800000243 | | |

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6. IMPACTS AND ACTIVITIES IN AND AROUND THE SITE

6.1. GENERAL IMPACTS AND ACTIVITIES AND PROPORTION OF THE SURFACE OF THE SITE AFFECTED

IMPACTS AND ACTIVITIES WITHIN the site

| CODE | INTENSITY | % OF SITE | INFLUENCE |
|------|-----------|-----------|-----------|
| 140 | A B C | 90 | + 0 - |
| 200 | A B C | 1 | + 0 - |
| 220 | A B C | 5 | + 0 - |
| 230 | A B C | 10 | + 0 - |
| 301 | A B C | 1 | + 0 - |
| 311 | A B C | 1 | + 0 - |
| 312 | A B C | 1 | + 0 - |
| 501 | A B C | 1 | + 0 - |
| 502 | A B C | 1 | + 0 - |
| 622 | A B C | 5 | + 0 - |
| 900 | A B C | 30 | + 0 - |
| 954 | A B C | 1 | + 0 - |

IMPACTS AND ACTIVITIES AROUND the site

| CODE | INTENSITY | INFLUENCE |
|------|-----------|-----------|
| 140 | A B C | + 0 - |
| 161 | A B C | + 0 - |
| 311 | A B C | + 0 - |
| 312 | A B C | + 0 - |
| 403 | A B C | + 0 - |
| 502 | A B C | + 0 - |
| 610 | A B C | + 0 - |
| 622 | A B C | + 0 - |

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6.2. SITE MANAGEMENT AND PLANS

BODY RESPONSIBLE FOR THE SITE MANAGEMENT

National Parks and Wildlife Service (c. 14%)
Private ownership (77%)
Department of Environment (9%)

SITE MANAGEMENT AND PLANS

A management plan is being prepared.

7. MAPS OF THE SITE

- *Physical map*

- *Aerial photograph(s) included:*

8. SLIDES

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