NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE	**IE0000296**
SITENAME	**Lisnageeragh Bog and Ballinastack Turlough SAC**

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1. SITE IDENTIFICATION

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1.1 Type	1.2 Site code
B	IE0000296

1.3 Site name

Lisnageeragh Bog and Ballinastack Turlough SAC

1.4 First Compilation date	1.5 Update date
1995-05	2018-09

1.6 Respondent:

Name/Organisation:	National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht
Address:	90 King Street North, Dublin 7, D07 N7CV, Ireland
Email:	datadelivery@chg.gov.ie

Date site proposed as SCI:	1998-05
Date site confirmed as SCI:	No data
Date site designated as SAC:	No data
National legal reference of SAC designation:	No data

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude	Latitude
-8.513994594	53.61915316

2.2 Area [ha]:

440.0031457

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code	Region Name
IE01	Border, Midland and Western

2.6 Biogeographical Region(s)

Atlantic (%)

3. ECOLOGICAL INFORMATION

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3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
3180			23.7		M	B	C	B	B
7110			29.6		G	B	C	B	B
7120			26.6		G	B	C	B	B
7150			1.4		M	B	C	B	B

- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive

92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A050	Anas penelope			w	100	500	i		G	C	B	C	C
B	A395	Anser albifrons flavirostris			w	45	100	i		G	C	B	C	B
B	A038	Cygnus cygnus			w	40	70	i		G	C	B	C	C
B	A140	Pluvialis apricaria			w	500	1000	i		G	C	B	C	C

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see reference portal)
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

3.3 Other important species of flora and fauna (optional)

Species					Population in the site				Motivation					
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories			
					Min	Max		C|R|V|P	IV	V	A	B	C	D
B		Lagopus lagopus									X			
B		Lagopus lagopus											X	
M		Lepus timidus hibernicus											X	
M		Lepus timidus hibernicus									X			
M		Lepus timidus hibernicus										X		
P	5213	Sphagnum austinii			0	0		P		X				X
P	5223	Sphagnum fuscum			0	0		P		X				X

- **Group:** A = Amphibians, B = Birds, F = Fish, Fu = Fungi, I = Invertebrates, L = Lichens, M = Mammals, P = Plants, R = Reptiles
- **CODE:** for Birds, Annex IV and V species the code as provided in the reference portal should be used in addition to the scientific name
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Unit:** i = individuals, p = pairs or other units according to the standard list of population units and codes in accordance with Article 12 and 17 reporting, (see reference portal)
- **Cat.:** Abundance categories: C = common, R = rare, V = very rare, P = present
- **Motivation categories: IV, V:** Annex Species (Habitats Directive), **A:** National Red List data; **B:** Endemics; **C:** International Conventions; **D:** other reasons

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N14	5.0
N06	5.0
N23	1.0
N09	1.0
N07	85.0
N20	3.0
Total Habitat Cover	100

Other Site Characteristics

Lisnageeragh Bog and Ballinastack Turlough SAC consists of 2 raised bogs and a small turlough, situated about 3 km north-east of Glenamaddy in Co. Galway. The raised bogs include the main area, Lisnageeragh Bog and cutover, which covers approximately 383.5 ha and the smaller area c.0.9km to the east which comprises 4.27 ha and is within Keeloges Bog NHA (000281). Ballinastack Turlough lies at the north-west end of Lisnageeragh Bog and covers approximately 23.7 ha. The site includes almost 273 ha of uncut raised bog and approximately 114.77 ha of cutover bog.The remaining 48.3 ha of the SAC includes wet and dry grassland and conifer plantations developed on the bog margins. The bedrock geology of the site is carboniferous limestone. Lisnageeragh Bog is a good example of a Western raised bog that forms an irregular plateau blanketing low drumlin hills and hollows. The SAC section of Keeloges Bog NHA consists of 3.4 ha of high bog and 0.85 ha of cutover in Ballyhard townland which has been restored as part of an EU LIFE project (2011-15). This area was afforested with conifers in 1969 and was recently clear-felled and the drains blocked in an effort to restore raised bog vegetation as part of this EU project. Lisnageeragh Bog was also part of EU Cohesion Fund restoration project (in the 1990s) in the form of drain blocking on the high bog and another Coillte EU LIFE (2004-08) funded project, which included the felling of mature conifer plantations both on the high bog and cutover. This project was successful in restoring Active Raised Bog (ARB) supporting conditions on the high bog and restoring transitional areas between the high bog and adjacent mineral soils. Ballinastack Turlough occupies a depression and merges with the raised bog and cutover to the east and south and agricultural fields to the north and west. The soils of the turlough are peaty and the vegetation is sedge dominated. Lisnageeragh Bog is one of the most extensive raised bogs remaining in east Galway. It is relatively intact with 61% of the original bog still present but the quality of the habitat has been severely impacted by a long history of drainage and peat-cutting which continues at this site. The area of Active Raised Bog on this site has expanded by 16.6 ha between 1994 and 2012 due to the two EU funded restoration projects which blocked drains and felled conifer plantations on the bog. The wettest areas on the bog have well developed hummock/hollow/pool systems with bog moss Sphagnum species cover of up to 90% and inter-connecting pools covering over 25% of the bog surface.The presence of a number of flushes, some of which are dominated by Purple Moor-grass (Molinia caerulea), adds to the overall habitat diversity of the high bog. Associated with the bog, and to the north-east, is an area of wet grassland on heavy clay soil which grades into abandoned and regenerating cutover bog. This area is wet and rich in bog mosses. There is also an extensive area of cutover bog in the south-west, comprising a mixture of dry banks dominated by Heather, and wet pools. Ballinastack Turlough, whose winter floodwaters lap at the edge of the raised bog and cutover, has a vegetation dominated by Common Sedge (Carex nigra). The natural transition between

Ballinastack turlough and the bog has been altered to some extent by historic turf-cutting and agricultural land use. There is a well-defined zonation of the vegetation which relates to the depth and duration of flooding plus soil type and management. It extends downwards from cutover raised bog, through lightly grazed Purple Moor-grass and rush (Juncus spp.) dominated grassland on peat, to a less grazed tall Common Sedge, wet fen and swamp species dominated vegetation on more calcareous peat and finally a more grazed grassy and herb rich sward on silty peat which leads down to the swallow holes which drain the turlough. The sandy silty soils in the north west are more heavily used for agriculture and where not fertilised have the usual grass/sedge and herb rich sward typical of the upper edges of turloughs. The co-occurrence of turlough and raised bog is a very rare phenomenon and the maintenance/restoration of transitions between these two priority habitats is of high conservation significance. Site specific conservation objectives have been developed for Lisnageeragh Bog for Active Raised Bog habitat to help meet the national conservation objectives for raised bogs. One of the key objectives of the plan is to restore the area of Active Raised Bog to 58.8ha. There is also long-term potential for 2.6 ha of bog peat-forming habitats (BPFH) to develop if restoration measures are undertaken on cutover areas. Such detailed objectives have yet to be developed for the Keeloges Bog subsite of the SAC but will be produced as part of the restoration plan for the Keeloges Bog NHA site. Current information suggests that while raised bog vegetation will be restored to some of the site the current area restored is too small to support Active Raised Bog. The drain blocking on the high bog and cutover will reduce the impact of drainage on the ecology of this section of Keeloges Bog and may, in the long term, help support the eventual restoration of some of the Degraded Raised Bog on the open high bog in the NHA to Active Raised Bog. The SAC section of Keeloges Bog is being actively managed for conservation by the landowner, Coillte, as part of an EU LIFE Project and most of the required restoration measures have already been carried out. An After LIFE management plan is being developed by Coillte for the future conservation management of that part of the SAC.

4.2 Quality and importance

Lisnageeragh Bog and Ballinastack Turlough SAC is a large, composite site, which contains good examples of the priority Annex 1 habitats Active Raised Bog and Turlough, along with the non-priority habitats Degraded Raised Bog and Depressions on peat substrates of the Rhynchosporion. Raised bog is a rare habitat in the EU and one that is becoming increasingly scarce and under threat in Ireland. Ireland has a high proportion of the total EU resource of Atlantic raised bog (over 50%) and so has a special responsibility for its conservation at an international level. The bog is one of the most extensive remaining in east Galway and the quality of the habitat is generally good despite a long history of drainage and peat-cutting. The site already supports a significant area of high quality raised bog microhabitats. Although the turlough area is rather small it is unusual in that it lies adjacent to a raised bog, which requires very different hydrological conditions to develop. This makes the transition between the two ecosystems extremely rare and of high ecological value.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
L	J01.01		b
M	A04.01.01		b
M	A08		b
L	I01		b
H	C01.03.02		b
M	A02.01		b
L	I02		b
L	D02.01		i
H	J02.15		b

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	I02		i
M	I01		i
H	J02.15		i
M	J02.15		o
M	B02.02		i

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.4 Ownership (optional)

Type		[%]
Public	National/Federal	0
	State/Province	55
	Local/Municipal	0
	Any Public	0
Joint or Co-Ownership		0
Private		45
Unknown		0
sum		100

4.5 Documentation

CEC (2007). The Interpretation Manual of European Union Habitats. Version EUR 27. European Commission, DG Environment, Brussels, Nature and Biodiversity. http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/2007_07_im.pdf Coxon, C. (1986) A study of the geology, hydrology and geomorphology of turloughs. Unpublished Ph.D. Thesis, University of Dublin, Trinity College, Ireland. Coxon, C.E. (1987a) The spatial distribution of turloughs. Irish Geography 20: 11-23. Coxon, C.E. (1987b) An examination of the characteristics of turloughs using multivariate statistical techniques. Irish Geography 20: 24-42. Coxon, C. and Coxon, P.(1994) Carbonate deposition in turloughs (seasonal lakes) on the western limestone lowlands of Ireland II: the sedimentary record. Irish Geography 27: 28-35. Cross, J.R. (1990). The Raised Bogs of Ireland: their Ecology, Status and Conservation. Report to the Minister of State at the Department of Finance. Stationery Office, Dublin. Cummins, S., Bleasdale, A., Douglas, C., Newton, S., O'Halloran, J. & Wilson, H.J. (2010) The status of Red Grouse in Ireland and the effects of land use, habitat and habitat quality on their distribution. Irish Wildlife Manuals, No. 50. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland. Department of Arts, Heritage and Gaeltacht (2014). National Raised Bog SAC Management Plan - Draft for Consultation - 17 January 2014. This is available at: http://www.npws.ie/peatlandsturf-cutting/nationalraisedbogsacmanagementplan/ DEHLG (2000). National Parks and Wildlife Service Conservation Plan. Draft II. Lisnageeragh Bog and Ballinastack Turlough cSAC: Site Code 296, County Galway. Derwin J., Gabbett M., Keane S., Long, M. and Martin, J. (2002). Raised Bog Natural Heritage Areas Project. Unpublished report, NPWS, Dublin. Douglas, C. and Grogan, H. (1985). Survey to Locate Raised Bogs of Scientific Interest in Counties Galway (E) and Roscommon, Part II. Internal Report to the Forest and Wildlife Service, Dublin. Fernandez, F., Connolly K., Crowley W., Denyer J., Duff K. & Smith G. (2014a) Raised Bog Monitoring and Assessment Survey 2013 - Garrriskil Bog – Site Report. Irish Wildlife Manuals, No. 81. National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland. Fernandez, F., Connolly K., Crowley W., Denyer J., Duff K. & Smith G. (2014b) Raised Bog Monitoring and Assessment Survey 2013. Irish Wildlife Manuals, No. 81. National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland. Fernandez, F., Crowley W. & Wilson S. (2012) Raised Bog Monitoring Survey. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin. Fernandez Valverde, F.; Fanning, M.; McCorry, M.; Crowley, W., (2005). Raised bog monitoring project 2004-2005: Part 1 - Summary Report. Report to NPWS. Fernandez Valverde, F.; MacGowan, F.; Farrell, M.; Crowley, W.; Croal, Y.; Fanning, M.; McKee, A-M., (2006). Assessment of impacts of turf cutting on designated raised bogs. A Report to the Research Section of the National Parks and Wildlife Service. This is available at: http://www.npws.ie/publications/archive/Valverde_et_al_2006_Turf_cutting_assessment_Vol_1_-_Summary.pdf Fossitt, J. (2000). A Guide to Habitats in Ireland. The Heritage Council, Ireland. Fox, A.D., Norriss, D.W., Stroud, D.A. & Wilson, H.J. (1994). Greenland White-fronted Geese in Ireland and Britain 1982/83 - 1993/94. Greenland White-fronted Goose Study research report no. 8. Greenland White-fronted Goose Study, Wales and National Parks & Wildlife Service, Dublin. Goodwillie, R. (1992) Turloughs over 10 hectares: Vegetation survey and evaluation. Unpublished report to the National Parks and Wildlife Service, Dublin. Kelly, L.; Doak, M. and Dromey, M. (1995). Raised Bog Restoration Project, an investigation into the conservation and restoration of selected raised bog sites in Ireland. Internal report to the National Parks and Wildlife Service, Dublin. This is available at: http://www.npws.ie/publications/archive/Kelly_et_al_1995_Raised_Bog_Restoration_Vol_3_-_Site_reports.pdf National Parks and Wildlife Service (1992-1994). National Areas of Scientific Interest Survey. Unpublished report, National Parks and Wildlife Service, Dublin. NPW (1995 - 2002). Natura 2000 SAC Site Assessment Form. Unpublished report, National Parks and Wildlife, Dublin. NPWS (1992 - 1994). National ASI Re-survey. Unpublished report, National Parks and Wildlife Service, Dublin. NPWS (2007) Turloughs, Draft Backing Document. In: The Status of EU Protected Habitats and Species in Ireland. Backing Documents, Article 17 Forms, Maps. Volume 2. Unpublished National Parks and Wildlife Service Report, Dublin. pp. 510-550. NPWS (2008) The Status of EU Protected Habitats and Species in Ireland. Conservation Status in Ireland of Habitats and Species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. Unpublished National Parks and Wildlife Service Report, Dublin. NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2, Version 1.1. Unpublished

Report, National Parks and Wildlife Services, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland. 390-408. NPWS (2013). The Status of EU Protected Habitats and Species in Ireland. Version 1.0. Unpublished Report, National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland. NPWS (2016a). Lisnageeragh Bog and Ballinastack Turlough SAC (site code 000296) Conservation objectives. National Parks and Wildlife Service, Ireland. NPWS (2016b). Lisnageeragh Bog and Ballinastack SAC (site code 000296) Conservation objectives supporting document - raised bog habitats. National Parks and Wildlife Service, Ireland. NPWS (2016b). Lisnageeragh Bog and Ballinastack SAC (site code 000296) Conservation objectives supporting document - Turloughs. National Parks and Wildlife Service, Ireland. NPWS (in prep.). Lisnageeragh Bog and Ballinastack SAC (site code 000679) Draft Raised Bog Restoration Plan. National Parks and Wildlife Service, Ireland. Schouten M.G.C. (2002). Conservation and Restoration of Raised Bogs: Geological, Hydrological and Ecological Studies. Department of Environment and Local Government, Dublin, Ireland/ Staatabosbeheer, The Netherlands. Link(s): Coillte LIFE Project website - Demonstrating Best Practice in Raised Bog Restoration in Ireland: http://www.raisedbogrestoration.ie/

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
IE98	1.1				

5.2 Relation of the described site with other sites:

designated at national or regional level:

Type code	Site name	Type	Cover [%]
IE98	Keeloges Bog NHA	*	1.1

5.3 Site designation (optional)

The Coillte Ballyhard section of the SAC is within Keeloges Bog NHA (000281), which was designated in 2002.

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Coillte
Address:	Coillte, Dublin Road, Newtownmountkennedy, Co. Wicklow, A63 DN25, Ireland
Email:	info@coillte.ie

Organisation:	
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

- [ ] Yes
- [X] No, but in preparation
- [ ]

☐ No

6.3 Conservation measures (optional)

Restoration work has been carried out at both bogs but significant amounts of drain blocking is required on both the high bog and the cutover at Lisnageeragh. Tree-felling and most of the drain-blocking, except for the boundary drains, have been completed at Coillte's Ballyhard site in Keeloges Bog. The blocking of high bog, cutover and boundary drains will require ongoing consultation with other stakeholders. The control of regenerating conifers and birch at Keeloges, and dam maintenance and vegetation monitoring at both sites is ongoing. When the conservation management plan is completed for Keeloges Bog NHA (000281), it will include the management requirements of the section of the SAC at Ballyhard. There are conservation objectives but no restoration plan for Ballinastack Turlough.

7. MAP OF THE SITES

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INSPIRE ID: IE.NPWS.PS.NATURA2000.SAC.IE0000296

Map delivered as PDF in electronic format (optional)

☐ Yes ☒ No

Reference(s) to the original map used for the digitalisation of the electronic boundaries (optional).