

National Survey of Upland Habitats

(Pilot Survey Phase, 2009-2010)

Site Report No. 2:

Corraun Plateau cSAC (000485), Co. Mayo

(Revision)



Jenni R. Roche, Philip M. Perrin, Simon J. Barron and Orla H. Daly

January 2014

Commissioned by National Parks and Wildlife Service

Department of Environment, Heritage and Local Government

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Cover photo: Northern corries of the Corraun Plateau from Corraun Hill, taken by Jenni Roche.

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EXECUTIVE SUMMARY

- Corraun Plateau cSAC (000485), Co. Mayo was surveyed as part of the National Survey of Upland Habitats (NSUH) between April and July 2009. This report supersedes an original site report, by the same authors in 2009, by updating the format and assessment procedures to those finalised during Phase 3 of the NSUH (2012-2013).
- The area of the site is 38.9 km². Using GIS and aerial photograph interpretation, the site was divided into 428 polygons, each representing areas of relatively homogeneous habitat mosaic. Each polygon was surveyed on the ground to create a habitat map for the site.
- A total of 15 Annex I habitats, 34 Fossitt habitats and 64 provisional upland vegetation communities were recorded. Annex I habitats comprise 81.4 % of the site. The Annex I upland habitats present which are primary focus habitats for the NSUH are: 4010 Wet heath (53.6%), *7130 Active blanket bog (11.9%), 4060 Alpine and Boreal heath (7.2%), 4030 Dry heath (5.4%), 8110 Siliceous scree (0.8%), 8220 Siliceous rocky slopes (0.4%), 7130 Inactive blanket bog (0.2%), 7150 *Rhynchosporion* depressions (0.1%), 7230 Alkaline fens (0.1%), 7140 Transition mires (0.01%) and 8210 Calcareous rocky slopes (0.002%).
- Rare and notable species recorded during the survey include: *Arctostaphylos uva-ursi*, *Adelanthus lindenbergianus*, *Cetraria islandica*, *Cladonia zopfii* and *Cladonia rangiferina*.
- Areas of particular botanical interest include the summit of Corraun Hill and the northern edge of the Corraun Plateau, where a variety of arctic-alpine species are found, and the hepatic mats on the eastern slopes of Corraun Plateau.
- The conservation status of the upland Annex I habitats that form the primary focus of the NSUH was assessed but as assessment criteria for 8210 Calcareous rocky slopes and 8220 Siliceous rocky slopes had not been developed at the time of survey these habitats were not assessed. A total of 47 monitoring stops were recorded. The conservation status of 7140 Transition mires, 7150 *Rhynchosporion* depressions and 8110 Siliceous scree was assessed as Favourable and 4030 Dry heath was assessed as Unfavourable – Inadequate while that of the remaining primary focus habitats was assessed as Unfavourable – Bad.
- The main impacts/activities affecting the site are over-grazing, peat-erosion and peat-extraction.
- It is recommended that:

Whilst destocking levels implemented c. 2002 appear to have resulted in some improvement to Annex I habitats, continued monitoring is required to assess recovery of these habitats. The available data do not support an increase in stocking levels.

Appropriate regulation of turf-cutting by sausage machine and of machine-cutting of turf banks is required within the site.

The feasibility of active restoration measures in severely eroded bog should be examined if these areas are to achieve Favourable conservation status.

* Priority Annex I habitat

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ESRI format polygon shapefile with habitat data

ESRI format point shapefile with waypoint data

ESRI format point shapefile with monitoring stop / relevé data

ESRI format point shapefile with rare and notable species data

Microsoft Excel format polygon attributes table

Microsoft Excel format image databank

Microsoft Access condition assessment database

Turboveg relevé database

Site, relevé and waypoint photographs

1. INTRODUCTION

Overview

- 1.1 The principal objectives of the National Survey of Upland Habitats (NSUH) are to classify and map the location and extent of upland habitats within a range of sites using the schemes of Fossitt (2000) and Annex I of the EU Habitats Directive, and to assess the conservation status of a suite of upland Annex I habitats. Selected sites largely comprise upland candidate Special Areas of Conservation (cSACs). The assessment procedure involves evaluation of habitat condition indicators at a network of monitoring stops (point samples) distributed across the range of these habitats at the surveyed sites.
- 1.2 These data are required to provide a scientific basis for the development of policies and management practices for the maintenance (or restoration) of favourable conservation status of Annex I habitats and to provide a scientific basis for monitoring of their status into the future. This site report should be read in conjunction with Irish Wildlife Manual No. 48 (Perrin *et al.*, 2010) and No. 79 (Perrin *et al.*, 2014) which detail the methodologies used for all aspects of this survey. These were initially devised during the scoping study and pilot survey of upland habitats completed in 2009 (Perrin *et al.*, 2009).
- 1.3 This report summarises the results of the field survey of Corraun Plateau cSAC (000485) for the NSUH (Pilot Survey Phase, 2009-2010). It revises an original report, produced in 2009 by the same authors, by updating the format and assessment procedures to those finalised during Phase 3 of the NSUH.
- 1.4 Section 2 of this report presents a detailed description of the habitats within the site, which should be read in conjunction with the relevant O.S. Discovery Series map and the figures associated with the report. It also contains summary statistics on the extent of each habitat type recorded and a compilation of rare and notable floral records for the site.
- 1.5 Section 3 presents a detailed account of the conservation assessment for the upland Annex I habitats that are the primary focus of the NSUH. This is presented on a habitat-by-habitat basis and for each habitat the parameters structure and functions and future prospects are examined. Available data from the Commonage Framework Plan are also presented.
- 1.6 Section 4 of this report recommends amendments to the Natura 2000 Standard Data Form based on the results of this survey and makes additional recommendations in regard to monitoring and management.
- 1.7 NSUH fieldwork was conducted in Corraun Plateau cSAC between April and July 2009. The boundary of the cSAC as used in this survey was that provided by NPWS in early 2009.

Background site information

- 1.8 Corraun Plateau cSAC, Co. Mayo (Fig. 1) is a relatively small site, being 38.9 km² in extent and is located on the Corraun Peninsula, south-east of Achill Island. It stretches from the southern shoreline as far north as Lough Gall, and from the eastern shoreline at Bellacragher Bay as far

west as the local road between Corraun and Pollranny (O.S. Discovery Series map 30). The main peaks are an un-named summit on the plateau (alt. 541 m) and Corraun Hill (alt. 524 m). The geology is varied but is predominantly composed of Dalradian schist and quartzite. There are several corries on the northern side of the massif containing a number of lakes.

- 1.9 The site has been designated for a number of Annex I habitats (Table 1). The full category titles for Annex I habitats mentioned in this report are found in Appendix 1.

Table 1: Annex I habitat data from the Natura 2000 Standard Data Form for Corraun Plateau cSAC. Rep. = Representativity, Cons. = Conservation status, Surf. = Relative Surface, Glob. = Global Assessment. Data retrieved from <http://natura2000.eea.europa.eu> 20th January 2011

Annex I code	Habitat	Area (%)	Rep.	Surf.	Cons.	Glob.
3110	Lowland oligotrophic lakes	3	D	-	-	-
4010	Wet heath	25	B	B	C	C
4030	Dry heath	25	B	B	C	C
4060	Alpine and Boreal heath	8	B	B	C	C
5130	Juniper scrub	7	B	B	C	C
*7130/7130	Blanket bog	16	D	-	-	-

2. FIELD SURVEY

Description of habitats

- 2.1 Under Fossitt's (2000) habitat classification scheme, the site contained a varied mosaic of upland habitats but was dominated by **Wet heath (HH3)**, which dominated the western, southern and eastern slopes but was largely absent from the plateau. **Montane heath (HH4)** was frequent on the plateau and upper slopes, particularly to the north. **Lowland blanket bog (PB3)** was frequent on the lower slopes to the east and south of the site. **Siliceous scree and loose rock (ER3)** were particularly dominant on the Cuillaloughaun ridge, on the upper northern slopes and on Corraun Hill. **Dry siliceous heath (HH1)** was scattered throughout but was most frequent to the north of the site. **Upland blanket bog (PB2)** occurred on the upper slopes throughout the site.
- 2.2 **Eroding blanket bog (PB5)** was present. On the flat terrain in the north of the site, some areas had been severely eroded due to sheep trampling, particularly the "bottleneck" between Lough Laur and the adjacent **Conifer plantation (WD4)** (see Fig. 2). Areas of **Cutover bog (PB4)** were also present, ranging from active to old, abandoned, re-vegetating cutovers.
- 2.3 Small areas of **Dry-humid acid grassland (GS3)**, **Poor fen and flush (PF2)**, **Exposed siliceous rock (ER1)**, **Dystrophic lakes (FL1)**, **Non-calcareous springs (FP2)** and other habitats were also present.
- 2.4 Hepatic mat communities occurred as an element of **Dry siliceous heath (HH1)** and **Montane heath (HH4)** on the plateau, the slopes and within the corries of Corraun.
-
- 2.5 A selection of photographs taken during fieldwork of landscapes, habitats and species are presented in Appendix 2.

Habitat statistics

- 2.6 The NSUH maps habitats and vegetation communities on a polygon basis. Following aerial photograph interpretation, a survey site is divided into numerous polygons based on areas of homogeneous patternation and topography. The majority of these polygons represent mosaics of habitats rather than single habitats. Each polygon is surveyed on the ground and the habitats and vegetation communities present in each are listed and their percentage cover estimated. For further details see Perrin *et al.* (2009; 2014). The field maps for this site, which present the amended and numbered polygons, accompany this report (Field maps 1-8).
- 2.7 The most abundant habitat within a polygon is termed the primary habitat. The primary Fossitt habitat types for Corraun Plateau cSAC are shown in Fig. 2 and the primary Annex I habitat types are presented in Fig. 3. It is important to note that these maps do not convey the full complexity of habitats within the site. For full details of the habitat composition of each polygon refer to the polygon attribute table associated with the GIS. This information also accompanies this report in Microsoft Excel format.

- 2.8 A total of 34 Fossitt (2000) habitats were recorded from Corraun Plateau cSAC. Details of the area of each of these habitats are given in Table 2. The most extensive of these was **Wet heath (HH3)**, followed by **Montane heath (HH4)**, **Lowland blanket bog (PB3)**, **Siliceous scree and loose rock (ER3)**, **Dry heath (HH1)** and **Upland blanket bog (PB2)**.

Table 2: Extent of Fossitt habitats within the Corraun Plateau cSAC

Fossitt code	Habitat	Total area (ha)	% of site
BL3	Buildings and artificial surfaces	19.1	0.49
CB1	Shingle and gravel banks	2.8	0.07
ED1	Exposed sand, gravel or till	40.2	1.03
ED2	Spoil and bare ground	18.9	0.49
ED3	Recolonising bare ground	1.2	0.03
ER1	Exposed siliceous rock	38.9	1.00
ER2	Exposed calcareous rock	0.1	0.002
ER3	Siliceous scree and loose rock	281.1	7.23
FL1	Dystrophic lakes	1.3	0.03
FL2	Acid oligotrophic lakes	44.6	1.15
FP2	Non-calcareous springs	4.3	0.11
FW1	Eroding/upland rivers	2.1	0.06
GS1	Dry calcareous and neutral grassland	0.4	0.01
GS3	Dry-humid acid grassland	66.9	1.72
GS4	Wet grassland	3.7	0.10
HD1	Dense bracken	26.7	0.69
HH1	Dry siliceous heath	207.9	5.35
HH3	Wet heath	2082.4	53.6
HH4	Montane heath	339.8	8.74
LR2	Moderately exposed rocky shores	24.0	0.62
MW1	Open marine water	15.1	0.39
MW2	Sea inlets and bays	3.5	0.09
PB2	Upland blanket bog	195.8	5.04
PB3	Lowland blanket bog	277.7	7.14
PB4	Cutover bog	29.2	0.75
PB5	Eroding blanket bog	52.5	1.35
PF1	Rich fen and flush	19.7	0.51
PF2	Poor fen and flush	66.2	1.70
PF3	Transition mire and quaking bog	0.3	0.01
WD4	Conifer plantation	1.5	0.04
WN1	Oak-birch-holly woodland	2.9	0.08
WS1	Scrub	6.2	0.16
WS2	Immature woodland	8.5	0.22
WS3	Ornamental/non-native shrub	1.9	0.05
	Total site area	3887.0	

- 2.9 A total of 15 Annex I habitats were recorded at Corraun Plateau cSAC, covering over 80% of the survey area (Table 3). The dominant Annex I habitat was **4010 Wet heath**, which covered

over 50% of the survey area. The next most extensive Annex I habitat was ***7130 Active blanket bog**, followed by **4060 Alpine and Boreal heath** and **4030 Dry heath**. A small area of the site was described as **6150 Siliceous alpine and boreal grassland**, a habitat type which had not been recorded in the Republic of Ireland prior to the NSUH. Note that significant areas of non-Annex habitats may occur within an SAC. These may occur in intimate mosaic with Annex I habitats. They may have an important protective or support function in relation to associated Annex habitats, be the target of restoration objectives or improve the coherence and connectivity between fragmented areas of Annex I habitat.

- 2.10 A total of 64 provisional upland vegetation communities and sub-communities (Perrin *et al.*, 2014) were recorded within Corraun Plateau cSAC. Details of their coverage are presented in Table 4.
- 2.11 Gradated maps displaying the cover of Annex I habitats currently assessed under the NSUH plus **6150 Siliceous alpine and boreal grassland** are shown in Figs. 4a-l. These maps present the actual distributions of individual habitats within the site which may be masked in the primary habitat maps which show only the most extensive habitat in each polygon.

Table 3: Extent of Annex I habitats within Corraun Plateau cSAC. * denotes priority habitat.

Annex I code	Habitats	Total area (ha)	% of site
3110	Lowland oligotrophic lakes	10.9	0.28
3130	Upland oligotrophic lakes	33.7	0.87
3160	Dystrophic lakes	1.3	0.03
4010	Wet heath	2082.4	53.57
4030	Dry heath	207.9	5.35
4060	Alpine and Boreal heath	278.3	7.16
6150	Siliceous alpine and boreal grasslands	30.2	0.78
*7130	Active blanket bog	461.1	11.86
7130	Inactive blanket bog	6.1	0.16
7140	Transition mires	0.3	0.01
7150	<i>Rhynchosporion</i> depressions	4.6	0.12
7230	Alkaline fens	2.3	0.06
8110	Siliceous scree	30.3	0.78
8210	Calcareous rocky slopes	0.1	0.002
8220	Siliceous rocky slopes	15.0	0.39
	non-Annex I habitats	722.6	18.59
	Total site area	3887.0	
	Total area of Annex I habitats	3164.3	81.41

Table 4: Extent of provisional vegetation communities within Corraun Plateau cSAC.

Code	Provisional communities and sub-communities	Area (ha)	% of site	% of habitat
PO1	<i>Menyanthes trifoliata</i> – <i>Carex limosa</i> pool community			
PO1a	Infilling pool sub-community	0.3	0.01	100.0
SW1	<i>Potamogeton polygonifolius</i> soakway	0.2	0.004	100.0
SPG1	<i>Philonotis fontana</i> - <i>Saxifraga stellaris</i> spring			
SPG1a	typical sub-community	1.7	0.04	40.2
SPG1b	species-poor <i>Sphagnum denticulatum</i> sub-community	2.6	0.07	59.8
PFLU1	<i>Carex nigra/echinata</i> – <i>Sphagnum denticulatum</i> flush	9.3	0.24	15.7
PFLU2	<i>Juncus effusus</i> - <i>Sphagnum cuspidatum/palustre</i> flush	22.6	0.58	38.2
PFLU3	<i>Juncus acutiflorus/effusus</i> - <i>Calliergonella cuspidata</i> flush	3.7	0.10	6.3
PFLU4	<i>Molinia caerulea</i> - <i>Sphagnum palustre</i> flush			
PFLU4a	typical sub-community	18.0	0.46	30.5
PFLU4b	<i>Erica erigena</i> sub-community	5.5	0.14	9.3
RFLU1	<i>Carex viridula oedocarpa</i> - <i>Pinguicula vulgaris</i> - <i>Juncus bulbosus</i> flush			
RFLU1a	brown moss sub-community	2.3	0.06	11.6
RFLU1b	species-poor sub-community	0.8	0.02	4.1
RFLU2	<i>Eleocharis quinqueflora</i> – <i>Carex viridula</i> flush	0.02	0.001	0.1
RFLU3	<i>Carex panicea</i> – <i>Carex viridula</i> subsp. <i>oedocarpa</i> flush	16.5	0.4	84.3
UG1	<i>Agrostis capillaris</i> - <i>Festuca ovina</i> upland grassland			
UG1a	typical sub-community	50.9	1.31	76.1
UG1b	<i>Sphagnum</i> spp. sub-community	4.9	0.13	7.4
UG1d	<i>Juncus squarrosus</i> sub-community	0.7	0.02	1.1
UG2	<i>Nardus stricta</i> - <i>Galium saxatile</i> upland grassland			
UG2a	typical sub-community	1.5	0.04	2.2
UG2b	<i>Sphagnum</i> spp. sub-community	0.8	0.02	1.1
UG2d	<i>Juncus squarrosus</i> sub-community	8.1	0.21	12.1
BK1	<i>Pteridium aquilinum</i> community	26.7	0.69	100.0
DH2	<i>Calluna vulgaris</i> – <i>Erica erigena</i> – <i>Molinia caerulea</i> dry heath	3.8	0.10	1.9
DH3	<i>Calluna vulgaris</i> - <i>Erica cinerea</i> dry heath	113.7	2.93	55.3
DH4	<i>Calluna vulgaris</i> - <i>Sphagnum capillifolium</i> dry/damp heath	88.1	2.27	42.8
WH1	<i>Schoenus nigricans</i> – <i>Erica tetralix</i> wet heath			
WH1a	continuous cover sub-community	361.6	9.30	17.4
WH1b	open sub-community	702.0	18.06	33.8
WH2	<i>Trichophorum germanicum</i> – <i>Cladonia</i> spp. – <i>Racomitrium lanuginosum</i> wet heath	563.2	14.49	27.1
WH3	<i>Calluna vulgaris</i> - <i>Molinia caerulea</i> - <i>Sphagnum capillifolium</i> wet/damp heath	247.2	6.36	11.9
WH4	<i>Trichophorum germanicum</i> - <i>Eriophorum angustifolium</i> wet heath			
WH4a	typical sub-community	100.8	2.59	4.9
WH4c	<i>Juncus squarrosus</i> sub-community	27.3	0.70	1.3
WH5	<i>Trichophorum germanicum</i> - <i>Nardus stricta</i> - <i>Racomitrium lanuginosum</i> montane wet heath	77.8	2.00	3.7
MH1	<i>Calluna vulgaris</i> - <i>Racomitrium lanuginosum</i> montane heath			
MH1a	typical sub-community	125.0	3.22	37.6
MH1b	<i>Juncus squarrosus</i> sub-community	0.5	0.01	0.1

Table 4: continued.

Code	Provisional communities and sub-communities	Area (ha)	% of site	% of habitat
MH2	<i>Vaccinium myrtillus</i> – <i>Racomitrium lanuginosum</i> – <i>Herbertus aduncus</i> montane heath	6.1	0.16	1.9
MH4	<i>Calluna vulgaris</i> – <i>Juniperus communis</i> subsp. <i>nana</i> montane heath	139.8	3.60	42.0
MH5	<i>Nardus stricta</i> - <i>Carex binervis</i> - <i>Racomitrium lanuginosum</i> montane grass-heath	31.3	0.81	9.4
MH6	<i>Carex bigelowii</i> – <i>Racomitrium lanuginosum</i> montane vegetation			
MH6a	typical sub-community	29.8	0.77	8.9
MH7	<i>Nardus stricta</i> – <i>Carex bigelowii</i> montane vegetation			
MH7a	typical sub-community	0.4	0.01	0.1
BB1	<i>Schoenus nigricans</i> – <i>Eriophorum angustifolium</i> bog			
BB1a	continuous cover sub-community	135.9	3.50	30.0
BB1b	open sub-community	81.3	2.09	17.9
BB2	<i>Schoenus nigricans</i> – <i>Sphagnum</i> spp. bog	43.2	1.11	9.5
BB3	<i>Eriophorum vaginatum</i> – <i>Sphagnum papillosum</i> bog	41.4	1.06	9.13
BB4	<i>Trichophorum germanicum</i> – <i>Eriophorum angustifolium</i> bog	2.0	0.05	0.4
BB5	<i>Calluna vulgaris</i> - <i>Eriophorum</i> spp. bog			
BB5a	typical sub-community	116.6	3.00	25.7
BB5b	<i>Juncus squarrosus</i> sub-community	10.9	0.28	2.4
BB6	<i>Eriophorum angustifolium</i> – <i>Juncus squarrosus</i> bog			
BB6a	typical sub-community	22.0	0.57	4.8
HW1	<i>Sphagnum denticulatum/cuspidatum</i> hollow			
HW1i	upland variant	1.0	0.03	3.3
HW1ii	lowland variant	7.0	0.18	22.6
HW1iii	flush variant	0.5	0.01	1.6
HW2	<i>Eriophorum angustifolium</i> - <i>Sphagnum fallax</i> hollow			
HW2i	upland variant	2.0	0.05	6.4
HW2ii	lowland variant	4.1	0.11	13.2
HW3	<i>Rhynchospora alba</i> hollow	4.6	0.12	15.0
HW4	<i>Eleocharis multicaulis</i> hollow			
HW4i	bog variant	1.6	0.04	5.2
HW4ii	flush variant	10.1	0.26	32.7
DP1	<i>Campylopus introflexus</i> - <i>Polytrichum</i> spp. degraded peat community	1.2	0.03	100.0
TH1	<i>Luzula sylvatica</i> - <i>Vaccinium myrtillus</i> tall herb vegetation			
TH1i	rock face variant	0.2	0.004	100.0
SC1	Siliceous scree community	0.4	0.01	100.0
RS1	<i>Saxifraga spathularis</i> - <i>Asplenium adiantum-nigrum</i> rock cleft community	0.9	0.02	99.7
RS2	<i>Saxifraga aizoides</i> – <i>Asplenium</i> spp. – <i>Orthothecium rufescens</i> rock cleft community	0.003	0.0001	0.3
HM1	<i>Calluna vulgaris</i> – <i>Scapania gracilis</i> hepatic mat			
HM1iii	dry heath variant	0.03	0.001	0.2
HM1iv	wet heath variant	1.1	0.03	8.5
HM2	<i>Calluna vulgaris</i> – <i>Herbertus aduncus</i> hepatic mat			
HM2iii	dry heath variant	2.3	0.06	17.6
HM2iv	wet heath variant	1.3	0.03	10.2
HM2v	montane heath variant	7.0	0.18	52.9
HM2viii	siliceous scree variant	1.4	0.04	10.6

Table 4: continued

Code	Provisional communities and sub-communities	Area (ha)	% of site	% of habitat
	Total area of vegetation communities	3295.0	84.77	
	Not covered	96.1	2.47	
	Non-vegetation cover types	495.9	12.76	
	Total site area	3887.0		

Rare and notable flora

2.12 Rare and notable plant records for the site are listed in Table 5 and their locations, where accurately known, are presented in Fig. 5. The list is compiled from records made during the present survey and from existing records within the NPWS rare species database. For each species it is indicated whether it is listed on the Flora Protection Order, 1999 and/or the relevant Red Data List. For vascular plants this is Curtis & McGough (1988) and for bryophytes it is Lockhart *et al.* (2012). For lichens a preparatory list provided by D. McFerran, National Museums Northern Ireland, was used; this is very much provisional and IUCN status has not been assigned to these species. Notable records comprise plants which are not rare but are of particular interest in an upland context.

Table 5: Records of rare and notable plant species from Corraun Plateau cSAC.

Species	Red Data List	FPO	Annex II	Year of record (s)	NSUH	Previous records
Vascular plants						
<i>Arctostaphylos uva-ursi</i>	-	-	-	2009	•	3, 4
<i>Carex bigelowii</i>	-	-	-	2009	•	-
<i>Salix herbacea</i>	-	-	-	2009	•	-
<i>Saxifraga oppositifolia</i>	RA	-	-	2003	-	1
<i>Saussurea alpina</i>	RA	-	-	1982	-	1, 2, 3, 4
Bryophytes						
<i>Adelanthus lindenbergianus</i>	VU	-	-	2008, 2009	•	1, 3, 4
<i>Dicranodontium uncinatum</i>	VU	-	-	1982-2003	-	1, 3, 4, 5
<i>Molendoa warburgii</i>	VU	-	-	1982-2003	-	1, 5
Lichens						
<i>Cetraria islandica</i>	-	-	-	2009	•	-
<i>Cladonia rangiferina</i>	•	-	-	1989, 2009	•	1, 3, 4
<i>Cladonia zopfii</i>	•	-	-	2009	•	-

Previous records: 1, NPWS Recorder database and associated data
2, Natura 2000 Standard Data Form
3, cSAC site synopsis
4, NPWS Conservation Statement
5, Lockhart *et al.* (2012)

Red Data List: VU, Vulnerable
RA, Rare

2.13 A number of rare arctic-alpine vascular plant species were recorded during the NSUH. *Arctostaphylos uva-ursi* was recorded from several locations on the southern slopes of the site.

Both *Carex bigelowii* and *Salix herbacea* were recorded on the plateau. In addition to this *Carex bigelowii* was also recorded from Corraun Hill and the saddle below.

- 2.14 Previous rare plant records for the site included *Saussurea alpina* and *Saxifraga oppositifolia*. *Saussurea alpina* occurs on cliffs within the site, while *Saxifraga oppositifolia* occurs south of Knockacorraun Lough on the eastern side of Corraun Hill.
- 2.15 Other rare species recorded by the NSUH include the oceanic liverwort *Adelanthus lindenbergianus*, which was recorded from hepatic mats on the eastern side of Corraun Plateau.
- 2.16 Previous rare bryophyte records include *Dicranodontium uncinatum* and *Molendoa warburgii*, both of which were recorded south of Knockacorraun Lough on the eastern side of Corraun Hill.
- 2.17 Rare lichens recorded during the NSUH include *Cladonia zopfii*, which was recorded close to the saddle below Corraun Hill and *Cladonia rangiferina*, which was recorded from several locations on the southern slopes of the site. The notable montane lichen, *Cetraria islandica*, was recorded from the summit of Corraun Hill.
- 2.18 The NSUH survey did not actively seek to relocate previous rare plant records; therefore no inference should be made from the absence of a record in the current survey.
- 2.19 A list of the scientific and common names of all vascular plants, bryophytes and lichens recorded during the survey of this site are presented in Appendix 3.

Fauna

- 2.20 Golden Plover (*Pluvialis apricaria*), Red Grouse (*Lagopus lagopus*), Common Frog (*Rana temporaria*), Common Lizard (*Zootoca vivipara*), Raven (*Corvus corax*), Irish Hare (*Lepus timidus hibernicus*) and Fox (*Vulpes vulpes*) were all observed during the NSUH survey.
- 2.21 Previous faunal records from the cSAC include Otter (*Lutra lutra*), Badger (*Meles meles*), Irish Stoat (*Mustela erminea hibernica*), Hedgehog (*Erinaceus europaeus*), Curlew (*Numenius arquata*), Snipe (*Gallinago gallinago*), Raven (*Corvus corax*) and Woodcock (*Scolopax rusticola*).

3. CONSERVATION ASSESSMENT

- 3.1 The conservation status of Annex I habitats that form the primary focus of the NSUH was assessed using the methodology detailed in Perrin *et al.* (2014). The assessments comprise three parameters: area, structure and functions, and future prospects. The area parameter examines gains or losses in an Annex I habitat. The structure and functions parameter examines the vegetation composition and structure of the habitats and the physical structure of the substrate. A total of 48 monitoring stops were recorded within Corraun Plateau cSAC for this purpose (Fig. 6 and Table 6); an additional 17 relevés were also recorded. The future prospects parameter examines the current impacts to the site that are affecting area and structure and functions, and predicts the future status of the habitat based on future trends where there is sufficient data. The future prospects parameter can also be informed by available data from the Commonage Framework Plan project (CFP).
- 3.2 The habitats **8210 Calcareous rocky slopes** (0.1 ha) and **8220 Siliceous rocky slopes** (0.9 ha) comprised 0.002% and 0.02% of the site respectively. Monitoring stops were not recorded within these habitats during the field survey as assessment criteria had not been developed for these habitats at the time of survey. Consequently, the conservation status of these habitats has not been assessed.

Table 6: The number of monitoring stops recorded in primary focus Annex I habitats.

Annex I code	Habitat	Number of stops
4010	Wet heath	14
4030	Dry heath	2
4060	Alpine and Boreal heath	15
*7130/7130	Blanket bog	12
7140	Transition mires	1
7230	Alkaline fens	1
7150	<i>Rhynchosporion</i> depressions	2
8110	Siliceous scree	1

Commonage Framework Plan

- 3.3 Surveys were initiated in 1998 to assess livestock impacts on commonages in Ireland and to devise Commonage Framework Plans (CFP) to improve commonage condition. Assessments were made on an area basis by dividing the commonage into subunits based on areas of a consistent level of damage. Point sample assessments were made at a series of stations, of 10 x 10 m, within the subunits. Habitats identified by the CFP relevant to the NSUH sites were blanket bog, wet heath, dry heath and upland grassland. The damage assessment scale used was undamaged (U), moderately damaged to undamaged (MU), moderately damaged (MM), moderately to severely damaged (MS), severely damaged (S) or very severely damaged (S*). Further details of the CFP methodology can be found in Anon. (1998) and use of this data by the NSUH has been reviewed by Perrin (2012).
- 3.4 Corraun Plateau cSAC is predominantly commonage with these areas comprising 37.2 km² or 95.6% of the site. A baseline CFP survey of these areas occurred in 2000. An interim destocking

level of 30% was applied prior to the CFP commencing. This was then adjusted using the CFP results in c. 2002. Results from this survey are shown in Fig. 7.

- 3.5 The CFP baseline survey recorded 48 subunits within or partially within Corraun Plateau cSAC (Table 7). These indicate commonage within the site was badly damaged at this time with only 9.9% of the area of subunits being undamaged (U) and 31.9% of subunits being moderately to severely damaged (MS) or worse.

Table 7: Frequency of CFP subunit damage levels in Corraun Plateau cSAC baseline surveys.

Damage level	Frequency (n = 48)	Area %
U	15 (31.3%)	9.9
MU	11 (22.9%)	42.8
MM	6 (12.5%)	15.4
MS	6 (12.5%)	20.7
S/S*	10 (20.8%)	11.2

- 3.6 The CFP baseline survey recorded only 12 stations within Corraun Plateau cSAC (Table 8). These also indicate commonage within the site was badly damaged at this time with only 25.0% of stations being undamaged (U) and 50.0% of stations being moderately to severely damaged (MS) or worse.

Table 8: Frequency of CFP station damage level in Corraun Plateau cSAC, baseline surveys. Percentages indicate proportion of stations within each column.

Damage level	Wet heath/Dry heath/		
	Blanket bog (n = 11)	Upland grassland (n = 1)	All habitats (n = 12)
U	2 (18.2%)	1 (100.0%)	3 (25.0%)
MU	2 (18.2%)	0 (0.0%)	2 (16.7%)
MM	1 (9.1%)	0 (0.0%)	1 (8.3%)
MS	2 (18.2%)	0 (0.0%)	2 (16.7%)
S/S*	4 (36.4%)	0 (0.0%)	4 (33.3%)

- 3.7 Summary data for some of the key indicators recorded at CFP stations are compared with NSUH data in Table 9. There appears to have been no significant change in bare peat cover, sward height or *Calluna* height since the baseline survey. There has apparently been a substantial decline in *Calluna* cover however.
- 3.8 With no substantial CFP resurvey since the baseline survey it is difficult to draw many conclusions on trends. There are indications from the key indicator analysis that *Calluna* cover is decreasing. However, the fact that CFP stock reductions occurred in 90.1% of the commonage may in itself be seen as a positive trend for **4010 Wet heaths**, **4030 Dry heaths** and ***7130/7130 Blanket bogs** and other habitats where grazing has been recorded as an impact.

Table 9: Mean values for key indicators from CFP stations in Corraun Plateau cSAC, baseline survey with related data from NSUH survey.

	Wet heath/Dry heath/ Blanket bog		Upland grassland
	CFP	NSUH	CFP
	(n = 9-12)	(n = 52)	(n = 1)
Bare peat cover (%)	6.9	5.5	0.0
Sward height (cm)	17.5	19.3	-
<i>Calluna</i> height (cm)	14.4	13.8 [†]	-
<i>Calluna</i> cover			
D (>50%)	4 (36.4%)	5 (9.6%)	-
A (26-50%)	5 (45.5%)	10 (19.2%)	-
F (5-25%)	2 (18.2%)	26(50.0%)	-
O (<5%)	0 (0.0%)	7 (13.5%)	-
Absent	0 (0.0%)	4 (7.7%)	-

† Dwarf shrub height is used here as an estimate of *Calluna* height

4010 Wet heath

Area

3.9 Changes in the area of **4010 Wet heath** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. Only losses in habitat were found, there were no gains in habitat area (Table 10). These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. The main losses in area of **4010 Wet heath** were due to quarrying, turf cutting by hand, dispersed habitation, paths and tracks, the development of roads and commercial and agricultural buildings, drainage and landslides. These impacts and trends are discussed later under future prospects. The overall change in habitat area was a loss of less than 1% per year resulting in a status of Unfavourable – Inadequate.

Structure and functions

3.10 A total of 14 monitoring stops were recorded from **4010 Wet heath** within the Corraun Plateau cSAC (Table 11). In the assessment of structure and functions, 12 monitoring stops failed one criterion or more. Following a review of the ecological condition of the stops that failed one criterion or more, expert judgement determined one should pass because the failure was marginal, resulting in an overall failure rate of 78.6%. The structure and functions of **4010 Wet heath** were therefore assessed as Unfavourable – Bad.

3.11 The vegetation composition of **4010 Wet heath** was poor in several cases, with failures being recorded under three criteria. The cover of bryophytes and lichens was inadequate at 42.9% of monitoring stops, the cover of positive indicator species was inadequate at 28.6% and the cover of ericoids was inadequate at 21.4%.

Table 10: Impacts causing obvious losses in areas of 4010 Wet heath, 1995-2010.

Impact code	Impact	Area loss (ha)	Area loss (ha)	Area loss (ha)	Area loss (ha)
		1995-2000	2000-2005	2005-2010	1995-2010
C01	Mining and quarrying	1.59	1.29	0.72	3.60
C01.03.01	Hand cutting of peat	0.67	0.25	0.36	1.28
D01.01	Paths, tracks, cycling tracks	0.47	0.65	0.00	1.12
D01.02	Roads, motorways	0.00	0.43	0.01	0.44
E01.03	Dispersed habitation	1.08	0.12	0.00	1.20
E02.01	Factory	0.29	0.00	0.00	0.29
E04.01	Agricultural structures, buildings in the landscape	0.00	0.003	0.00	0.003
J02.07	Water abstractions from groundwater	0.09	0.00	0.00	0.09
L05	Collapse of terrain, landslide	0.00	0.01	0.04	0.05
All impacts (ha)		4.19	2.75	1.13	8.07
% of habitat		0.20	0.13	0.05	0.39
% loss per year		0.04	0.03	0.01	0.03

3.12 The vegetation structure of **4010 Wet heath** was poor, with 30.8% of monitoring stops failing due to excessive levels of grazing. The physical structure of **4010 Wet heath** was poor, with 42.9% of monitoring stops failing due to excessive cover of disturbed bare ground in the local vicinity and 14.3% also failing due to excessive cover of disturbed bare ground within the monitoring stop.

Future prospects

3.13 The impacts codes (Ssymank, 2009) and associated data recorded for **4010 Wet heath** are presented in Table 12. Thirteen significant impacts were recorded within **4010 Wet heath**.

Non-intensive cattle grazing (A04.02.01)

3.14 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that some cattle grazing occurred on the open mountain. However, this impact was not recorded during the present survey and is therefore omitted from Table 12.

Non-intensive sheep grazing (A04.02.02)

3.15 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) listed the maintenance of **4010 Wet heath** at favourable conservation status as one of the main conservation objectives for the site. Sheep grazing was noted as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage (NPWS, 2009).

3.16 The present survey indicated that sheep grazing is the dominant land use within the Corraun Plateau cSAC and occurs throughout **4010 Wet heath**. During the assessment of structure and functions, excessive levels of grazing were recorded at 30.8% of monitoring stops, with the proportion of dwarf shrub shoots showing signs of grazing reaching as high as 75%. The

intensity of this impact was assessed as high and its influence as negative. The trend was assessed as improving due to the CFP reduction in stock numbers.

Table 11: Monitoring criteria and failure rates for 4010 Wet heath (n = 14).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)
Vegetation composition				
1 <i>Erica tetralix</i> present	20m radius	14	0	0
2 Cover of positive indicator species \geq 50%	Relevé	14	4	28.6
3 Total cover of <i>Cladonia</i> species, <i>Sphagnum</i> species, <i>Racomitrium lanuginosum</i> and pleurocarpous mosses \geq 10%	Relevé	14	6	42.9
4 Cover of ericoid species and <i>Empetrum nigrum</i> \geq 15%	Relevé	14	3	21.4
5 Cover of dwarf shrub species < 75%	Relevé	14	0	0
6 Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Ranunculus repens</i> collectively < 1%	Relevé	14	0	0
7 Cover of non-native species < 1%	Relevé	14	0	0
8 Cover of non-native species < 1%	Local vicinity	14	0	0
9 Cover of scattered native trees and scrub < 20%	Local vicinity	14	0	0
10 Cover of <i>Pteridium aquilinum</i> < 10%	Local vicinity	14	0	0
11 Cover of <i>Juncus effusus</i> < 10%	Local vicinity	14	0	0
Vegetation structure				
12 Crushed, broken and/or pulled up <i>Sphagnum</i> species < 10% of <i>Sphagnum</i> cover	Relevé	9	0	0
13 Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> showing signs of <u>browsing</u> collectively < 33%	Relevé	13	4	30.8
14 No signs of <u>burning</u> into the moss, liverwort or lichen layer, or exposure of peat surface due to burning	Local vicinity	14	0	0
15 No signs of <u>burning</u> inside boundaries of sensitive areas*	Local vicinity	14	0	0
Physical structure				
16 Cover of <u>disturbed</u> bare ground < 10%	Relevé	14	2	14.3
17 Cover of <u>disturbed</u> bare ground < 10%	Local vicinity	14	6	42.9
18 Area showing signs of <u>drainage</u> resulting from heavy trampling or tracking or ditches < 10%	Local vicinity	14	0	0

*Sensitive areas

- (a) Vegetation severely wind-clipped, mostly forming a mat less than 10 cm thick.
- (b) Areas where soils are thin and less than 5 cm deep.
- (c) Slopes greater than 1 in 3 (18°) and all the sides of gullies.
- (d) Ground with abundant, and/or an almost continuous carpet of *Sphagnum*, liverworts and/or lichens.
- (e) Pools, wet hollows, hags and erosion gullies, and within 5 – 10 m of the edge of watercourses.
- (f) Areas above 400 m in altitude.
- (g) Areas within 50 m of functioning drains.

Mining and quarrying (C01)

3.17 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that quarrying has occurred within the site, mainly along the southern side. The quarrying of small gravel pits for the purposes of track construction had resulted in small losses of habitat but, by 2009, many of these pits were no longer in use. One larger, actively-worked, unlicensed quarry, which was supplying sandstone for walls to Mayo County Council and local builders, was noted within the cSAC (NPWS, 2009). It was suggested that Mayo County Council could address this activity under the planning regulations. This quarry was observed to be in operation during the present survey. The assessment of area estimated that 3.6 ha of **4010 Wet heath** has been lost between 1995 and 2010 as a result of this impact. The intensity of this impact has been assessed as high and its influence as negative (Table 12).

Table 12: Assessment of future prospects for 4010 Wet heath. Under trend, Imp = Improving, Ins = Insufficient data.

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	High	Negative	100%	Inside	-4.5	Imp
C01	Mining and quarrying	High	Negative	0.17%	Inside	-0.75	Ins
C01.03.01	Hand cutting of peat	High	Negative	0.06%	Inside	-0.75	Ins
D01.01	Paths, tracks and cycling tracks	High	Negative	0.05%	Inside	-0.75	Ins
D01.02	Roads, motorways	High	Negative	0.02%	Inside	-0.75	Ins
E01.03	Dispersed habitation	High	Negative	0.06%	Inside	-0.75	Ins
E02.01	Factory	High	Negative	0.01%	Inside	-0.75	Ins
E04.01	Agricultural structures, buildings in the landscape	High	Negative	0.0001%	Inside	-0.75	Ins
G01.02	Walking, horseriding and non-motorized vehicles	Low	Neutral	<1%	Inside	0	Ins
I01	Invasive non-native species	Medium	Negative	<1%	Inside	-0.5	Ins
J02.07	Water abstractions from groundwater	High	Negative	0.004%	Inside	-0.75	Ins
K01.01	Erosion	Medium	Negative	11.6%	Inside	-1.0	Ins
L05	Collapse of terrain, landslide	High	Negative	0.002%	Inside	-0.75	Ins
Overall score						12.75	

Hand cutting of peat (C01.03.01)

3.18 The assessment of area estimated that 1.28 ha of **4010 Wet heath** had been lost due to turf cutting by hand between 1995 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Paths, tracks and cycling tracks (D01.01)

3.19 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) identified the construction of tracks associated with turf cutting as a management issue for the cSAC. It was not clear when they were constructed but many were thought to be “relatively new”. Tracks were most numerous in the southern part of the cSAC, where **4010 Wet heath** are dominant, and were probably constructed using material quarried from small gravel pits within the site. They serve to open areas up to peat extraction and quarrying. To protect **4010 Wet heath**, it was

recommended that new tracks should not be developed within the site. The assessment of area estimated that 1.1 ha of **4010 Wet heath** had been lost due to the development of tracks between 1995 and 2005. The intensity of this impact has been assessed as high and its influence as negative.

Roads, motorways (D01.02)

3.20 The assessment of area estimated that 0.44 ha of **4010 Wet heath** had been lost due to the development of roads between 2000 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Dispersed habitation (E01.03)

3.21 The assessment of area estimated that 1.2 ha of **4010 Wet heath** had been lost due to the development of one-off housing between 1995 and 2005. The intensity of this impact was assessed as high and its impact as negative.

Factory (E02.01)

3.22 The assessment of area estimated that 0.29 ha of **4010 Wet heath** had been lost due to the development of a commercial building between 1995 and 2000. The intensity of this impact was assessed as high and its impact as negative.

Agricultural structures, buildings in the landscape (E04.01)

3.23 The assessment of area determined that there had been minor losses of **4010 Wet heath** due to the development of agricultural buildings between 2000 and 2005. The intensity of this impact was assessed as high and its impact as negative.

Walking, horseriding and non-motorized vehicles (G01.02)

3.24 There are no official, waymarked walking routes within the Corraun Plateau cSAC but recreational hillwalking occurs within **4010 Wet heath** at relatively low levels. The intensity of this impact has been assessed as low and its influence as neutral. The area of **4010 Wet heath** affected has been estimated to be less than 1%.

Invasive non-native species (I01)

3.25 *Campylopus introflexus* is a non-native pioneer moss species of bare peat which can become abundant after disturbance such as peat cutting, burning or drainage (Atherton *et al.*, 2010). Carpets of the moss have been found to have a significant depressive effect on germination of *Calluna vulgaris* seeds and therefore this species can impact on re-establishment of heather (Equiha & Usher, 1993; Bernth, 1998). Klinck (2010) defined it as a mild or temporary invasive species as it does not have long-term effects on biodiversity.

3.26 *Campylopus introflexus* was recorded within two monitoring stops (14.3%) but, with a cover score of 0.7% in each it was not sufficiently abundant to cause those monitoring stops to fail. The mean cover score of *C. introflexus* in **4010 Wet heath** monitoring stops was 0.1%. The degraded peat vegetation community DP1 *Campylopus introflexus* – *Polytrichum* spp. was recorded within two polygons dominated by **4010 Wet heath** during vegetation mapping and formed extensive carpets, reaching a cover score of 7% in one polygon.

- 3.27 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that the non-native shrub *Rhododendron ponticum* had invaded heath habitats in some places and listed *Rhododendron* invasion as a management issue within the site. The level of the species present was not considered to pose much cause for concern but it was recommended that it should be monitored and, if it became more prevalent, that plants should be removed by cutting and herbicide treatment.
- 3.28 During the present survey, *Rhododendron ponticum* was observed on degraded **4010 Wet heath** in the south-eastern portion of the site. While the population is currently quite small, the species is highly invasive, very difficult to eradicate completely and transforms the habitats in which it becomes established, making it highly detrimental to their conservation status. The area of the habitat affected has been estimated to be less than 1%. The intensity of this impact was assessed as medium overall and its influence as negative. The overall area of **4010 Wet heath** affected by invasive non-native species has been estimated to be less than 1%.

Water abstractions from groundwater (J02.07)

- 3.29 Drainage has been recorded under this impact category. Water is being drained from **4010 Wet heath** and diverted away by means of ditches. The intended purpose is not water abstraction but desiccation of the peat. Although the impact category does not accurately describe the impact in question it is the most appropriate option available on the list recommended by the EU for Habitats Directive Article 17 assessments (Ssymank, 2009).
- 3.30 The assessment of area determined that there had been minor losses of **4010 Wet heath** due to the drainage between 1995 and 2000. The intensity of this impact was assessed as high and its impact as negative.

Erosion (K01.01)

- 3.31 Erosion of **4010 Wet heath** was observed within the Corraun Plateau cSAC (Plate 1). During the assessment of structure and functions, excessive levels of disturbed bare ground were recorded within and in the local vicinity of 14.3% and 42.9% of monitoring stops respectively. This was mainly due to trampling by sheep. Approximately 11.6% of the area of **4010 Wet heath** is estimated to be under threat from erosion; this is the proportion of the habitat occurring in polygons with at least 5% bare peat. The intensity of this impact was assessed as medium and its influence as negative.

Collapse of terrain, landslides (L05)

- 3.32 The assessment of area determined that there had been minor losses of **4010 Wet heath** due to landslides between 2000 and 2010. The intensity of this impact was assessed as high and its impact as negative.

-
- 3.33 The overall impacts score for **4010 Wet heath** has been calculated as -12.75. This is well below the nominal Favourable Reference Value of zero. Whilst destocking has resulted in reduced grazing levels within this habitat, it is not thought this will result in a significant change in the conservation status of the habitat overall within the next twelve years, due to continued erosion

and other ongoing impacts. The combined future trend for area and structure and functions was therefore assessed as no change. The future prospects for this habitat were therefore assessed as Unfavourable – Bad.

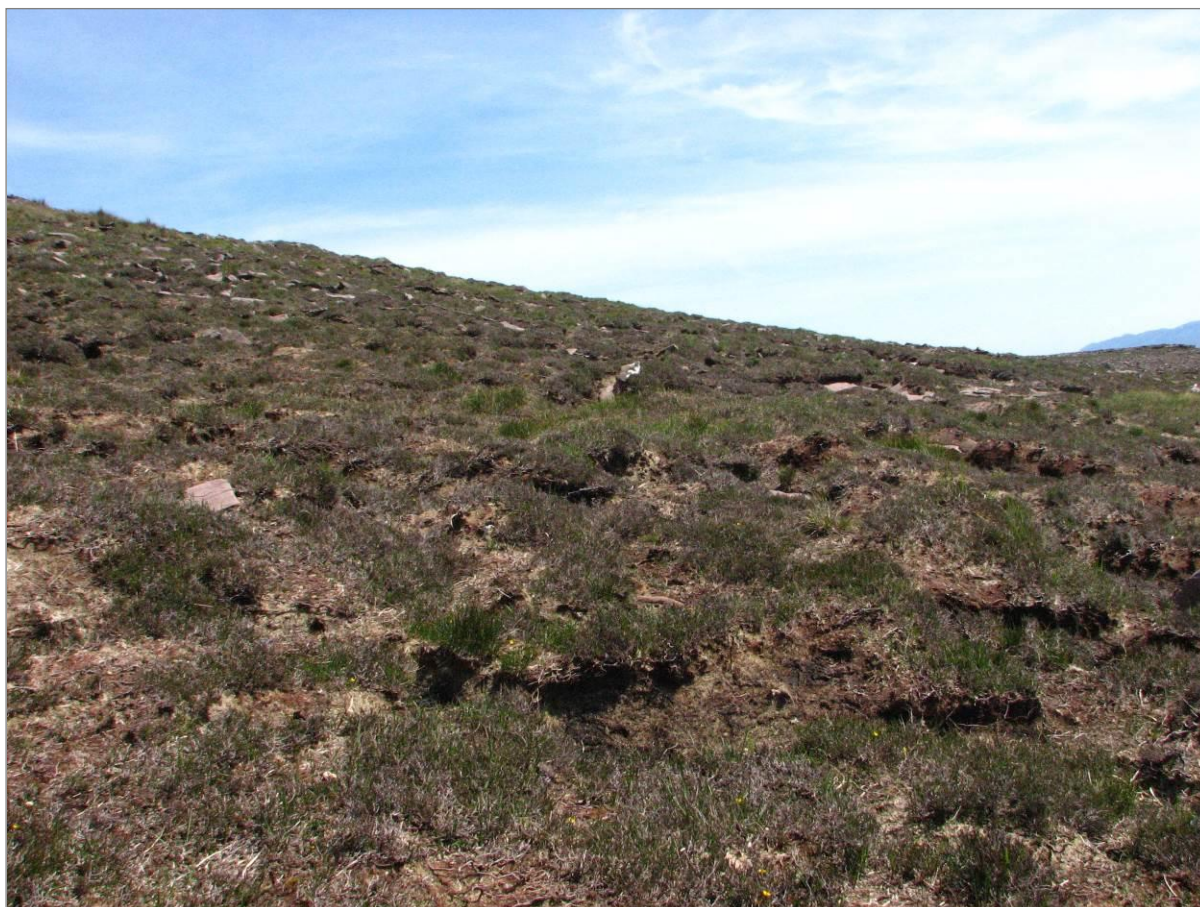


Plate 1: Eroded 4010 Wet heath with peat hagsgs (Photo: BEC Consultants).

4030 Dry heath

Area

3.34 Changes in the area of **4030 Dry heath** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. Only losses in habitat were found, there were no gains in habitat area (Table 13). These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. The main losses in area of **4030 Dry heath** were due to dispersed habitation, quarrying, landslides, paths and tracks, turf cutting by hand and the development of roads. These impacts and trends are discussed later under future prospects. The overall change in habitat area was a loss of less than 1% per year resulting in a status of Unfavourable – Inadequate.

Structure and functions

3.35 Two monitoring stops were recorded from **4030 Dry heath** within the Corraun Plateau cSAC (Table 14). In the assessment of structure and functions, one monitoring stop failed one

criterion relating to vegetation composition. Criterion 5 stipulates that the cover of non-native species should be less than 1%; a cover of 1% *Campylopus introflexus* was recorded in the local vicinity of that monitoring stop. Following a review of the ecological condition of that stop, expert judgement determined that it should pass because the failure was marginal, resulting in an overall failure rate of 0%. The structure and functions of **4030 Dry heath** were therefore assessed as Favourable.

Table 13: Impacts causing obvious losses in areas of 4030 Dry heath, 1995-2010.

Impact code	Impact	Area loss (ha)			
		1995-2000	2000-2005	2005-2010	1995-2010
C01	Mining and quarrying	0.03	0.04	0.04	0.11
C01.03.01	Hand cutting of peat	0.01	0.00	0.0001	0.01
D01.01	Paths, tracks, cycling tracks	0.01	0.02	0.00	0.03
D01.02	Roads, motorways	0.00	0.0001	0.00	0.0001
E01.03	Dispersed habitation	0.21	0.004	0.00	0.22
L05	Collapse of terrain, landslide	0.00	0.02	0.06	0.08
All impacts (ha)		0.27	0.08	0.10	0.45
% of habitat		0.13	0.04	0.05	0.22
% loss per year		0.03	0.01	0.01	0.01

Future prospects

3.36 Eight significant impacts were recorded within **4030 Dry heath** (Table 15).

Non-intensive cattle grazing (A04.02.01)

3.37 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that some cattle grazing occurred on the open mountain. However, this impact was not recorded during the present survey and is therefore omitted from Table 15.

Non-intensive sheep grazing (A04.02.02)

3.38 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) listed the maintenance of **4030 Dry heath** at favourable conservation status as one of the main conservation objectives for the site. Sheep grazing was noted as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site, including grazing rights, is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage (NPWS, 2009).

3.39 During the assessment of structure and functions, grazing was recorded at one **4030 Dry heath** monitoring stop (50%), where 18% of dwarf shrub shoots showed signs of grazing. This is within acceptable limits. The intensity of this impact was assessed as low and its impact as positive. The trend was assessed as improving due to the CFP reductions in stock numbers. Although **4030 Dry heath** are in good condition where they occur, it should be noted that this habitat is largely restricted to rocky slopes and steep hillsides that are less accessible to sheep. It appears, therefore, that this habitat is strongly suppressed by sheep grazing.

Table 14: Monitoring criteria and failure rates for 4030 Dry heath ($n = 2$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)	
Vegetation composition					
1	Number of bryophyte or non-crustose lichen species present, excluding <i>Campylopus</i> spp. and <i>Polytrichum</i> spp. ≥ 3	Relevé	2	0	0
2	Number of positive indicator species present ≥ 2	Relevé	2	0	0
3a*	DH5 (Calcareous heath): cover of positive indicator species 50-75%	Relevé	0	n/a	n/a
3b*	Siliceous heath: cover of positive indicator species $\geq 50\%$		2	0	0
4	Proportion of dwarf shrub cover composed of <i>Myrica gale</i> , <i>Salix repens</i> , <i>Ulex gallii</i> collectively $< 50\%$	Relevé	2	0	0
5	Cover of the following weedy negative indicator species: <i>Cirsium arvense</i> , <i>C. vulgare</i> , <i>Ranunculus repens</i> , large <i>Rumex</i> species (except <i>R. acetosa</i>), <i>Senecio jacobea</i> , <i>Urtica dioica</i> collectively $< 1\%$	Relevé	2	0	0
6	Cover of non-native species $< 1\%$	Relevé	2	0	0
7	Cover of non-native species $< 1\%$	Local vicinity	2	1	50.0
8	Cover of scattered native trees and scrub $< 20\%$	Local vicinity	2	0	0
9	Cover of <i>Pteridium aquilinum</i> $< 10\%$	Local vicinity	2	0	0
10	Cover of <i>Juncus effusus</i> $< 10\%$	Local vicinity	2	0	0
Vegetation structure					
11	Senescent proportion of <i>Calluna vulgaris</i> cover $< 50\%$	Relevé	0	n/a	n/a
12	Last complete growing season's shoots of ericoids and <i>Empetrum nigrum</i> showing signs of <u>browsing</u> collectively $< 33\%$	Relevé	2	0	0
13	No signs of <u>burning</u> inside boundaries of sensitive areas*	Local vicinity	2	0	0
14	Outside boundaries of sensitive areas, all growth phases of <i>Calluna vulgaris</i> should occur throughout, with $\geq 10\%$ of cover in mature phase	Local vicinity	2	0	0
Physical structure					
15	Cover of <u>disturbed</u> bare ground $< 10\%$	Relevé	2	0	0
16	Cover of <u>disturbed</u> bare ground $< 10\%$	Local vicinity	2	0	0

*Sensitive areas

(a) Areas where soils are thin and less than 5 cm deep.

(b) Hill slopes greater than 1 in 2 (26°), and all the sides of gullies.(c) Ground with abundant, and/or an almost continuous carpet of *Sphagnum*, liverworts and/or lichens.(d) Areas of H21 and H22 heath as defined by the NVC (Rodwell 1991). These are heaths primarily composed of mixtures of *Calluna vulgaris* and *Vaccinium myrtillus* over a moist carpet of bryophytes that often has a high *Sphagnum* content. Within the provisional classification, these communities are comparable to DH4 and damper elements of DH6 respectively.(e) Areas with noticeably uneven structure, at a spatial scale of around 1 m² or less. The unevenness (e.g. more commonly found in very old heather stands) will relate to distinct, often large, spreading dwarf-shrub bushes. The dwarf-shrub canopy will not be completely continuous, and some of its upper surface may be twice as high as other parts. Layering is likely to be present and may be common.

(f) Pools, wet hollows, hagsgs and erosion gullies, and within 5 – 10 m of the edge of watercourses.

Mining and quarrying (C01)

3.40 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that quarrying has occurred within the site, mainly along the southern side. The quarrying of small gravel pits for the purposes of track construction had resulted in small losses of habitat but, by 2009, many of these pits were no longer in use. One larger, actively-worked, unlicensed quarry, which was supplying sandstone for walls to Mayo County Council and local builders, was noted within the cSAC (NPWS, 2009). It was suggested that Mayo County Council could address this activity under the planning regulations. This quarry was observed to be in operation during the present survey. The assessment of area estimated that 0.11 ha of **4030 Dry heath** had been lost due to quarrying between 1995 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Table 15: Assessment of future prospects for 4030 Dry heath. Under trend, Imp = Improving, Ins = Insufficient data

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Low	Positive	50%	Inside	0.75	Imp
C01	Mining and quarrying	High	Negative	0.05%	Inside	-0.75	Ins
C01.03.01	Hand cutting of peat	High	Negative	0.01%	Inside	-0.75	Ins
D01.01	Paths, tracks, cycling tracks	High	Negative	0.01%	Inside	-0.75	Ins
D01.02	Roads, motorways	High	Negative	0.0001%	Inside	-0.75	Ins
E01.03	Dispersed habitation	High	Negative	0.1%	Inside	-0.75	Ins
I01	Invasive non-native species	Low	Neutral	0.25%	Inside	0	Ins
L05	Collapse of terrain, landslide	High	Negative	0.04%	Inside	-0.75	Ins
Overall score						-3.75	

Hand cutting of peat (C01.03.01)

3.41 The assessment of area estimated that 0.01 ha of **4030 Dry heath** had been lost due to turf cutting by hand between 1995 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Paths, tracks, cycling tracks (D01.01)

3.42 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) identified the construction of tracks associated with turf cutting as a management issue for the cSAC. It was not clear when they were constructed but many were thought to be “relatively new”. Tracks were most numerous in the southern part of the cSAC and were probably constructed using material quarried from small gravel pits within the site. They serve to open areas up to peat extraction and quarrying. It was recommended that new tracks should not be developed within the site. The assessment of area estimated that 0.03 ha of **4030 Dry heath** had been lost due to the development of tracks between 1995 and 2005. The intensity of this impact has been assessed as high and its influence as negative.

Roads, motorways (D01.02)

3.43 The assessment of area determined that there had been minor losses of **4030 Dry heath** due to the development of roads between 2000 and 2005. The intensity of this impact was assessed as high and its impact as negative.

Dispersed habitation (E01.03)

3.44 The assessment of area estimated that 0.22 ha of **4030 Dry heath** had been lost due to the development of one-off housing between 1995 and 2005. The intensity of this impact was assessed as high and its impact as negative.

Invasive non-native species (I01)

3.45 *Campylopus introflexus* is a non-native pioneer moss species of bare peat which can become abundant after disturbance such as peat cutting, burning or drainage (Atherton *et al.*, 2010). Carpets of the moss have been found to have a significant depressive effect on germination of *Calluna vulgaris* seeds and therefore this species can impact on re-establishment of heather (Equiha & Usher, 1993; Bernth, 1998). Klinck (2010) defined it as a mild or temporary invasive species as it does not have long-term effects on biodiversity.

3.46 *Campylopus introflexus* was recorded within one monitoring stop (50%) with a cover score of 0.5%. The mean cover score of *C. introflexus* in **4030 Dry heath** monitoring stops was 0.25%. The degraded peat vegetation community DP1 *Campylopus introflexus* – *Polytrichum* spp. was not recorded within polygons dominated by **4030 Dry heath** during vegetation mapping. As the species was not recorded as forming extensive carpets, the influence of this impact was assessed as neutral.

Collapse of terrain, landslide (L05)

3.47 The assessment of area estimated that 0.08 ha of **4030 Dry heath** had been lost due to landslides between 2000 and 2010. The intensity of this impact was assessed as high and its impact as negative.

3.48 The overall impacts score for **4030 Dry heath** has been calculated as -3.75. This is below the nominal Favourable Reference Value of zero. The combined future trend for area and structure and functions is deemed to be improving due to the CFP reductions in stock numbers but several minor impacts appear to be continuing. The future prospects for this habitat were therefore assessed as Unfavourable - Inadequate.

4060 Alpine and Boreal heath

Area

3.49 Changes in the area of **4060 Alpine and Boreal heath** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. These data are restricted to obvious changes in habitat; subtle changes from one habitat type to another cannot be reliably identified by this process. No changes in area of habitat were noted; therefore the area status was assessed as Favourable.

Structure and functions

- 3.50 A total of 15 monitoring stops were recorded from **4060 Alpine and Boreal heath** within the Corraun Plateau cSAC (Table 16). In the assessment of structure and functions, six monitoring stops failed one criterion each or more. Following a review of the ecological condition of the stops that failed one criterion or more, expert judgement determined that no changes should be made, resulting in an overall failure rate of 40.0%. The structure and functions of **4060 Alpine and Boreal heath** were therefore assessed as Unfavourable – Bad.
- 3.51 The vegetation composition of **4060 Alpine and Boreal heath** was poor, with failures being recorded under three criteria. The cover of positive indicator species was inadequate at 33.3% of monitoring stops. The cover of negative indicator species was excessive at 20.0% of monitoring stops. The number of bryophyte or lichen species present was inadequate at 6.7% of monitoring stops.
- 3.52 The vegetation structure of **4060 Alpine and Boreal heath** was good with no failures being recorded under the relevant criteria. However, the physical structure of **4060 Alpine and Boreal heath** was poor in some cases, with excessive cover of disturbed bare ground being recorded within, or in the local vicinity of, 13.3% and 20.0% of monitoring stops respectively.
- 3.53 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) described **4060 Alpine and Boreal heath** as the most important and least disturbed habitat present and listed the maintenance of this habitat at favourable conservation status as one of the main conservation objectives for the site. In contrast with the findings of the present survey, the habitat was considered to be of good ecological quality although it was acknowledged that the available information was outdated and botanical survey work was needed to determine the current status of the habitat.

Future prospects

- 3.54 Four impacts were recorded within **4060 Alpine and Boreal heath** (Table 17).

Non-intensive sheep grazing (A04.02.02)

- 3.55 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that sheep grazing was the main land use within the site. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site, including grazing rights, is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage (NPWS, 2009). Sheep grazing was identified as a cause of damage to **4060 Alpine and Boreal heath** and the extent of this habitat was said to have been greatly diminished. Inaccessible areas of cliff were thought to hold the best examples of **4060 Alpine and Boreal heath**, as other areas were generally overgrazed. The *Calluna vulgaris* - *Juniperus communis* subsp. *nana* community of **4060 Alpine and Boreal heath**, in particular, was said to be severely over-grazed in places, with only small patches of vegetation evident. Following the CFP baseline survey in 2000, the relevant Commonage Plans (MA17 and MA20) recommended destocking levels between 50% and 60%.
- 3.56 The present survey indicated that sheep grazing was the dominant land use within the Corraun Plateau cSAC. During the assessment of structure and functions, no **4060 Alpine and Boreal**

heath monitoring stops failed due to excessive levels of grazing but evidence of low to medium levels of sheep grazing was recorded at the majority of monitoring stops. The intensity of this impact was assessed as medium and its influence as negative. The trend was assessed as improving due to the CFP reductions in stock numbers.

Table 16: Monitoring criteria and failure rates for 4060 Alpine and Boreal heath ($n = 15$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)	
Vegetation composition					
1	Number of bryophyte or non-crustose lichen species present ≥ 3	Relevé	15	1	6.7
2	Cover of positive indicator species $\geq 66\%$	Relevé	15	5	33.3
3	Cover of dwarf shrubs $\geq 10\%$	Relevé	15	0	0
4	Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>A. vinealis</i> , <i>Anthoxanthum odoratum</i> , <i>Deschampsia flexuosa</i> , <i>Festuca ovina</i> , <i>F. vivipara</i> , <i>Galium saxatile</i> , <i>Potentilla erecta</i> and <i>Poa</i> spp. (except <i>Poa alpina</i>) collectively $< 10\%$	Relevé	15	3	20.0
5	Cover of non-native species $< 1\%$	Relevé	15	0	0
Vegetation structure					
6	Live leaves of <i>Carex bigelowii</i> , <i>Deschampsia flexuosa</i> , <i>Festuca ovina</i> , <i>F. vivipara</i> showing signs of <u>grazing</u> collectively $< 10\%$	Relevé	13	0	0
7	Last complete growing season's shoots of ericoids and <i>Empetrum nigrum</i> showing signs of <u>browsing</u> collectively $< 33\%$	Relevé	14	0	0
8	No signs of <u>burning</u> inside feature	Local vicinity	15	0	0
Physical structure					
9	Cover of <u>disturbed</u> bare ground $< 10\%$	Relevé	15	2	13.3
10	Cover of <u>disturbed</u> bare ground $< 10\%$	Local vicinity	15	3	20.0

Table 17: Assessment of future prospects for 4060 Alpine and Boreal heath. Under trend, Imp = Improving, Ins = Insufficient data

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Medium	Negative	86.7%	Inside	-2.5	Imp
G01.02	Walking, horseriding and non-motorized vehicles	Low	Neutral	<1%	Inside	0	Ins
I01	Invasive non-native species	Low	Neutral	0.05%	Inside	0	Ins
K01.01	Erosion	Medium	Negative	1.7%	Inside	-1.0	Ins
Overall score						-3.5	

Walking, horseriding and non-motorized vehicles (G01.02)

3.57 There are no official, waymarked walking routes within the Corraun Plateau cSAC but recreational hillwalking occurs within **4060 Alpine and Boreal heath** at relatively low levels. The intensity of this impact has been assessed as low and its influence as neutral.

Invasive non-native species (I01)

- 3.58 *Campylopus introflexus* is a non-native pioneer moss species of bare peat which can become abundant after disturbance such as peat cutting, burning or drainage (Atherton *et al.*, 2010). Carpets of the moss have been found to have a significant depressive effect on germination of *Calluna vulgaris* seeds and therefore this species can impact on re-establishment of heather (Equiha & Usher, 1993; Bernth, 1998). Klinck (2010) defined it as a mild or temporary invasive species as it does not have long-term effects on biodiversity.
- 3.59 *Campylopus introflexus* was recorded within two monitoring stops (13.3%) but, with cover scores of 0.3% and 0.5%, it was not sufficiently abundant to cause those monitoring stops to fail. The mean cover score of *C. introflexus* in **4060 Alpine and Boreal heath** monitoring stops was 0.05%. The degraded peat vegetation community DP1 *Campylopus introflexus* – *Polytrichum* spp. was not recorded within polygons dominated by **4060 Alpine and Boreal heath** during vegetation mapping. As the species was not recorded as forming extensive carpets, the influence of this impact was assessed as neutral.

Erosion (K01.01)

- 3.60 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) noted that erosion occurred within **4060 Alpine and Boreal heath** as a result of overgrazing. The *Calluna vulgaris* - *Juniperus communis* subsp. *nana* community of **4060 Alpine and Boreal heath** was particularly affected in places, with bare ground and erosion evident.
- 3.61 During the assessment of structure and functions, disturbed bare ground was recorded within 86.7% of **4060 Alpine and Boreal heath** monitoring stops (Plate 2). Excessive coverage of disturbed bare ground was recorded within and in the local vicinity of 13.3% and 20.0% of monitoring stops respectively. This disturbance was largely due to trampling by sheep. While sheep numbers have been reduced on the site and the current level of grazing lies within acceptable limits, it appears that sheep trampling impacts remain excessive. Approximately 1.7% of the area of **4060 Alpine and Boreal heath** is estimated to be under threat from erosion; this is the proportion of the habitat occurring in polygons with at least 5% bare peat. The intensity of this impact was assessed as medium and its influence as negative.

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- 3.62 The overall impacts score for **4060 Alpine and Boreal heath** has been calculated as -3.5. This is below the nominal Favourable Reference Value of zero. The future trend for structure and functions is however deemed to be improving due to the CFP reductions in stock numbers, although significant impacts remain due to continuing erosion. The future prospects for this habitat were therefore assessed as Unfavourable – Inadequate.



Plate 2: 4060 Alpine and Boreal heath with patches of disturbed bare ground, near the summit of Corraun Hill. Peat erosion is visible in the background on the north-western slope of the Corraun Plateau. (Photo: BEC Consultants).

***7130/7130 Blanket bog**

Area

3.63 Changes in the area of ***7130/7130 Blanket bog** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. Only losses in habitat were found, there were no gains in habitat area (Table 18). These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. The main losses in area of ***7130/7130 Blanket bog** were due to dispersed habitation, quarrying, landslides, paths and tracks, turf cutting by hand and the development of roads. Erosion has unquestionably resulted in loss of habitat, but due to the gradual and diffuse nature of this impact it was impractical to measure the area lost. Even when including the loss due to erosion it is estimated that the overall change in habitat area was a loss of less than 1% per year resulting in a status of Unfavourable – Inadequate. These impacts and trends are discussed later under future prospects.

Table 18: Impacts causing obvious losses in areas of *7130/7130 Blanket bog, 1995-2010.

Impact code	Impact	Area loss (ha)	Area loss (ha)	Area loss (ha)	Area loss (ha)
		1995-2000	2000-2005	2005-2010	1995-2010
C01	Mining and quarrying	0.22	0.04	0.02	0.29
C01.03.01	Hand cutting of peat	0.23	0.08	0.17	0.48
D01.01	Paths, tracks, cycling tracks	0.02	0.13	0.00	0.15
D01.02	Roads, motorways	0.00	0.24	0.001	0.24
E02.01	Factory	0.16	0.00	0.00	0.16
E04.01	Agricultural structures, buildings in the landscape	0.00	0.002	0.00	0.002
J02.07	Water abstractions from groundwater	0.004	0.00	0.00	0.004
K01.01	Erosion	n.m.	n.m.	n.m.	n.m.
All impacts (ha)		0.64	0.50	0.19	1.33
% of habitat		0.14	0.11	0.04	0.28
% loss per year		0.03	0.02	0.01	0.02

Structure and functions

- 3.64 A total of 12 monitoring stops were recorded from ***7130/7130 Blanket bog** within the Corraun Plateau cSAC (Table 19). In the assessment of structure and functions, six monitoring stops failed one criterion each or more. Following a review of the ecological condition of the stops that failed one criterion or more, expert judgement determined that no changes should be made, resulting in an overall failure rate of 50.0%. The structure and functions of ***7130/7130 Blanket bog** were therefore assessed as Unfavourable – Bad. Vegetation mapping indicated that the proportion of inactive and eroding bog within the total area of bog was 16.0% (Tables 2 and 3). These findings provide further support for the Unfavourable – Bad assessment result.
- 3.65 The vegetation composition of ***7130/7130 Blanket bog** was good, with no failures being recorded under the relevant criteria. However, the vegetation structure of ***7130/7130 Blanket bog** was poor in some cases, with 18.2% of monitoring stops failing due to excessive grazing. The physical structure of ***7130/7130 Blanket bog** was also poor in some cases, with excessive cover of disturbed bare ground being recorded in the local vicinity of 27.3% of monitoring stops. Excessive levels of erosion and drainage were recorded at 25.0% and 16.7% of monitoring stops respectively.

Future prospects

- 3.66 Eleven significant impacts were recorded within ***7130/7130 Blanket bog** (Table 20).

Non-intensive cattle grazing (A04.02.01)

- 3.67 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that some cattle grazing occurred on the open mountain. However, this impact was not recorded during the present survey and is therefore omitted from Table 20.

Non-intensive sheep grazing (A04.02.02)

- 3.68 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) described sheep grazing as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site is owned by the Dickens Estate, local farmers

have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage (NPWS, 2009). High levels of grazing were said to have reduced the extent of ***7130/7130 Blanket bog** at lower altitudes. The **PB2 Upland blanket bog** on Corraun Plateau was described as being heavily grazed, causing the vegetation to shift towards that of a heath community. A small area of intact blanket bog with pools and hummocks was noted at approximately 270 m a.s.l. between the heads of the Glennanean and Cuillaloughaun Rivers (Plate 3).

Table 19: Monitoring criteria and failure rates for *7130/7130 Blanket bog ($n = 12$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)	
Vegetation composition					
1	Number of positive indicator species present ≥ 7	Relevé	12	0	0
2	Cover of bryophyte or lichen species, excluding <i>Sphagnum fallax</i> $\geq 10\%$	Relevé	12	0	0
3	Cover of <u>each</u> of the following species: <i>Calluna vulgaris</i> , <i>Eleocharis multicaulis</i> , <i>Eriophorum vaginatum</i> , <i>Molinia caerulea</i> , <i>Schoenus nigricans</i> , <i>Trichophorum germanicum</i> individually $< 75\%$	Relevé	12	0	0
4	Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium aquilinum</i> , <i>Ranunculus repens</i> collectively $< 1\%$	Relevé	12	0	0
5	Cover of non-native species $< 1\%$	Relevé	12	0	0
6	Cover of non-native species $< 1\%$	Local vicinity	12	0	0
7	Cover of scattered native trees and scrub $< 10\%$	Local vicinity	12	0	0
Vegetation structure					
8	Crushed, broken and/or pulled up <i>Sphagnum</i> species $< 10\%$ of <i>Sphagnum</i> cover	Relevé	11	0	0
9	Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> showing signs of <u>browsing</u> collectively $< 33\%$	Relevé	11	2	18.2
10	No signs of <u>burning</u> into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Local vicinity	12	0	0
9	No signs of <u>burning</u> inside boundaries of sensitive areas*	Local vicinity	12	0	0
Physical structure					
12	Cover of <u>disturbed</u> bare ground $< 10\%$	Relevé	12	0	0
13	Cover of <u>disturbed</u> bare ground $< 10\%$	Local vicinity	11	3	27.3
14	Area showing signs of <u>drainage</u> resulting from heavy trampling or tracking or ditches or peat cutting $< 10\%$	Local vicinity	12	2	16.7
15	Cover of <u>erosion</u> gullies and eroded areas within the greater bog mosaic $< 5\%$	Local vicinity	12	3	25.0

*Sensitive areas

- (a) Slopes greater than 1 in 3 (18°), and all the sides of gullies.
- (b) Ground with abundant and/or an almost continuous carpet of *Sphagnum*, other mosses, liverworts and/or lichens.
- (c) Patterned areas i.e. with pools, wet hollows, hags and erosion gullies.
- (d) Areas within 5-10 m of watercourses.
- (e) Areas above 400 m in altitude.
- (f) Areas within 50 m of functioning drains.



Plate 3: Intact PB2 Upland blanket bog with pool system located between the heads of the Glennanean and Cuillaloughaun Rivers (Photo: Jenni Roche).

3.69 The present survey indicated that sheep grazing is the dominant land use within the Corraun Plateau cSAC and occurs throughout ***7130/7130 Blanket bog**. During the assessment of structure and functions, 18.2% of monitoring stops failed due to excessive levels of grazing. Disturbed bare ground, due largely to trampling by sheep, was recorded at the majority of ***7130/7130 Blanket bog** monitoring stops, with 27.3% of monitoring stop failing due to excessively high levels of disturbance. The area of ***7130/7130 Blanket bog** surrounding the lakes on the northern side of the site was particularly badly damaged by ongoing sheep trampling, with extensive areas of bare peat. The intensity of this impact was assessed as high and its influence as negative. The trend was assessed as improving due to the CFP reductions in stock numbers.

Mining and quarrying (C01)

3.70 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that quarrying has occurred within the site, mainly along the southern side. The quarrying of small gravel pits for the purposes of track construction had resulted in small losses of habitat but, by 2009, many of these pits were no longer in use. One larger, actively-worked, unlicensed quarry, which was supplying sandstone for walls to Mayo County Council and local builders, was noted within the cSAC (NPWS, 2009). It was suggested that Mayo County Council could address this activity under the planning regulations. This quarry was observed to be in operation during the present

survey. The assessment of area estimated that 0.29 ha of ***7130/7130 Blanket bog** had been lost due to quarrying between 1995 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Peat extraction (C01.03)

3.71 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that localised turf cutting detrimentally impacted ***7130/7130 Blanket bog** and reduced the extent of this habitat at lower altitudes. Turf cutting was most extensive at Lough Ard. This activity was ongoing west of Lough Ard, east of Loughaun, sporadically at a number of locations along the turbary tracks on the southern side of the site and on a small-scale at scattered locations on the eastern side of the site. Bare peat and peat banks were recorded. Turf cutting was identified as one of the main management issues within the cSAC and recommended that remaining areas of intact ***7130/7130 Blanket bog** should not be subject to large-scale peat extraction. It was also noted that further destruction of ***7130/7130 Blanket bog** would affect the populations of wintering Golden Plover (*Pluvialis apricaria*), which is listed under Annex I of the Birds Directive. Hand cutting and mechanical removal of peat are discussed separately below.

Hand cutting of peat (C01.03.01)

3.72 During the present survey, **PB4 Cutover bog** was recorded west of Lough Ard, west of Loughaun, at Srahmore and on the southern side of the site, east of the Buncladdy River. Active turf cutting was observed west of Lough Ard and may have occurred at other locations, although it was not recorded. The assessment of area estimated that 0.48 ha of ***7130/7130 Blanket bog** had been lost due to turf cutting by hand between 1995 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Mechanical removal of peat (C01.03.02)

3.73 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) stated that a large tract of ***7130/7130 Blanket bog** in the vicinity of Lough Ard was being machine cut, with most of the turf cutting in that area being carried out by facebank cutting using a digger and hopper. During the present survey, active turf cutting was observed west of Lough Ard. Mechanised methods of turf extraction are particularly damaging to ***7130/7130 Blanket bog**, resulting in loss of habitat and associated drainage impacts. The intensity of this impact was assessed as high and its influence as negative. The area of ***7130/7130 Blanket bog** affected was estimated to be less than 1% due to the localised nature of the impact.

Paths, tracks and cycling tracks (D01.01)

3.74 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) identified the construction of tracks associated with turf cutting as a management issue for the cSAC. It was not clear when they were constructed but many were thought to be “relatively new”. Tracks were most numerous in the southern part of the cSAC and were probably constructed using material quarried from small gravel pits within the site. The tracks serve to open up areas to peat extraction and quarrying. To protect ***7130/7130 Blanket bog**, it was recommended that new tracks should not be developed within the site. The assessment of area estimated that 0.15 ha of

***7130/7130 Blanket bog** had been lost due to the development of tracks between 1995 and 2005. The intensity of this impact has been assessed as high and its influence as negative.

Table 20: Assessment of future prospects for *7130/7130 Blanket bog. Under trend, Imp = Improving, Ins = Insufficient data

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Medium	Negative	100%	Inside	-3.0	Imp
C01	Mining and quarrying	High	Negative	0.06%	Inside	-0.75	Ins
C01.03.01	Hand-cutting of peat	High	Negative	0.1%	Inside	-0.75	Ins
C01.03.02	Mechanical removal of peat	High	Negative	<1%	Inside	-0.75	Ins
D01.01	Paths, tracks and cycling tracks	High	Negative	0.03%	Inside	-0.75	Ins
D01.02	Roads, motorways	High	Negative	0.05%	Inside	-0.75	Ins
E02.01	Factory	High	Negative	0.03%	Inside	-0.75	Ins
E04.01	Agricultural structures, buildings in the landscape	High	Negative	0.0004%	Inside	-0.75	Ins
G01.02	Walking, horseriding and non-motorized vehicles	Low	Neutral	<1%	Inside	0	Ins
J02.07	Water abstractions from groundwater	High	Negative	0.001%	Inside	-0.75	Ins
K01.01	Erosion	High	Negative	20.7%	Inside	-1.5	Ins
Overall score						-12.5	

Roads, motorways (D01.02)

3.75 The assessment of area estimated that 0.24 ha of ***7130/7130 Blanket bog** had been lost due to the development of roads between 2000 and 2010. The intensity of this impact was assessed as high and its impact as negative.

Factory (E02.01)

3.76 The assessment of area estimated that 0.16 ha of ***7130/7130 Blanket bog** had been lost due to the development of commercial buildings between 1995 and 2000. The intensity of this impact was assessed as high and its impact as negative.

Agricultural structures, buildings in the landscape (E04.01)

3.77 The assessment of area determined that there had been minor losses of ***7130/7130 Blanket bog** due to the development of agricultural buildings between 2000 and 2005. The intensity of this impact was assessed as high and its impact as negative.

Walking, horseriding and non-motorized vehicles (G01.02)

3.78 There are no official, waymarked walking routes within the Corraun Plateau cSAC but recreational hillwalking occurs within ***7130/7130 Blanket bog** at relatively low levels. The intensity of this impact has been assessed as low and its influence as neutral.

Water abstractions from groundwater (J02.07)

3.79 Drainage has been recorded under this impact category. Water is being drained from ***7130/7130 Blanket bog** and diverted away by means of ditches. The intended purpose is not water abstraction but desiccation of the peat. Although the impact category does not accurately describe the impact in question it is the most appropriate option available.

3.80 The assessment of area determined that there had been minor losses of ***7130/7130 Blanket bog** due to the drainage between 1995 and 2000. The intensity of this impact was assessed as high and its impact as negative.

Erosion (K01.01)

3.81 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) noted that ***7130/7130 Blanket bog** within the site includes some areas of bare and eroding peat. Furthermore, during the assessment of structure and functions, 25.0% of monitoring stops failed due to excessive levels of erosion in the local vicinity (Plate 4). Peat hagsgs were observed in places (Plate 5).



Plate 4: Peat erosion within PB2 Upland blanket bog, located on a terrace above the corrie of Lough Cullydoo. The Nephin Beg Range is visible in the background (Photo: BEC Consultants).

3.82 This impact may be linked to high levels of disturbance, due largely to trampling by sheep, which are discussed in paragraph 3.69 above. Due to the CFP reductions in stock numbers the number of sheep on this site has fallen in recent years. However, once exposed by removal of the vegetation, areas of bare peat may continue to erode due to climatic conditions regardless of manipulation of grazing levels; the mean annual rainfall for this area was within the range of 1600-2000 mm per year for 1981-2010, with the plateau receiving 2000-2400 (Met Éireann, 2012). Therefore unless restoration measures are undertaken in badly eroded areas, erosion is likely to continue. It was assessed that there is insufficient data to determine the trend for this impact.

Approximately 20.7% of the area of ***7130/7130 Blanket bog** is estimated to be under threat from erosion; this is the proportion of the habitat occurring in polygons with at least 5% bare blanket peat.



Plate 5: Eroding peat hags within ***7130/7130 Blanket bog** (Photo: BEC Consultants).

3.83 The overall impacts score for ***7130/7130 Blanket bog** has been calculated as -12.5. This is significantly below the nominal Favourable Reference Value of zero. Whilst the CFP reductions in stock numbers has resulted in reduced grazing levels within this habitat, it is not thought this will result in a significant change in the conservation status of the habitat overall within the next twelve years due to continued erosion in the absence of restoration measures and other ongoing impacts. The combined future trend for area and structure and functions was therefore assessed as no change. The future prospects for this habitat were therefore assessed as Unfavourable – Bad.

7140 Transition mires

Area

3.84 Changes in the area of **7140 Transition mires** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and

satellite imagery available through Google Earth. These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. No changes in area of habitat were noted; therefore the area status was assessed as Favourable.

Structure and functions

3.85 One monitoring stop was recorded in **7140 Transition mires** within Corraun Plateau cSAC (Table 21). The monitoring stop was recorded in the PO1a *Menyanthes trifoliata* - *Carex limosa* infilling pool sub-community. In the assessment of structure and functions, the monitoring stop did not fail any criteria. The structure and functions of **7140 Transition mires** were therefore assessed as Favourable.

Table 21: Monitoring criteria and failure rates for 7140 Transition mires ($n = 1$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)
Vegetation composition				
1a	PO1a: number of positive indicator species from Groups i or ii present ≥ 3	Relevé	1	0
1b	PFLU5: number of positive indicator species from Groups i or ii present ≥ 3		0	n/a
1c	RFEN1b: number of positive indicator species from Groups i or ii present ≥ 6		0	n/a
2	Number of species from Group i present ≥ 1	Relevé	1	0
3	Cover of the following species: small to medium sized <i>Carex</i> spp., <i>Equisetum fluviatile</i> , <i>Hydrocotyle vulgaris</i> , <i>Hypericum elodes</i> , <i>Mentha aquatica</i> , <i>Menyanthes trifoliata</i> , <i>Potentilla palustris</i> , <i>Sphagnum</i> spp. collectively $\geq 25\%$	Relevé	1	0
4	Cover of the following species: <i>Anthoxanthum odoratum</i> , <i>Epilobium hirsutum</i> , <i>Holcus lanatus</i> collectively $< 1\%$	Relevé	1	0
5	Cover of non-native species $< 1\%$	Relevé	1	0
Vegetation structure				
6	PFLU5/RFEN1b: $\geq 50\%$ of the tips of live leaves and/or flowering shoots of vascular plants should be more than 15 cm above the ground surface	Relevé	0	n/a
Physical structure				
7	Cover of <u>disturbed</u> bare ground $< 10\%$	Relevé	1	0
8	Cover of <u>disturbed</u> bare ground $< 10\%$	Local vicinity	1	0
9	Area showing signs of <u>drainage</u> resulting from heavy trampling or tracking or ditches $< 10\%$	Local vicinity	0	n/a

3.86 The small sample size of one monitoring stop reflects the relative rarity of this habitat within the Corraun Plateau cSAC, where only 0.3 ha of **7140 Transition mires** were recorded, comprising 0.01% of the site.

Future prospects

3.87 No impacts (Threats, Pressures and Activities code X) were recorded within **7140 Transition mires**.

3.88 The overall impacts score for **7140 Transition mires** has been calculated as zero, which equals the nominal Favourable Reference Value. The combined future trend for area and structure and functions is deemed to be no change. The future prospects for this habitat were therefore assessed as Favourable.

7150 *Rhynchosporion* depressions

Area

3.89 Changes in the area of **7150 *Rhynchosporion* depressions** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. No changes in area of habitat were noted; therefore the area status was assessed as Favourable.

Structure and functions

3.90 Two monitoring stops were recorded in **7150 *Rhynchosporion* depressions** within the Corraun Plateau cSAC (Table 22). In the assessment of structure and functions, these monitoring stops did not fail any criteria, resulting in an overall failure rate of 0%. The structure and functions of **7150 *Rhynchosporion* depressions** were therefore assessed as Favourable.

Future prospects

3.91 One impact was recorded within **7150 *Rhynchosporion* depressions** (Table 23). The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) did not refer specifically to this habitat.

Non-intensive sheep grazing (A04.02.02)

3.92 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) described sheep grazing as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage (NPWS 2009). Following the CFP baseline survey in 2000, the relevant Commonage Plans (MA17 and MA20) recommended destocking levels between 50% and 60%.

3.93 During the assessment of structure and functions, the level of grazing was not directly assessed due to the absence of the relevant dwarf shrub indicator species. However, one **7150 *Rhynchosporion* depressions** monitoring stop exhibited low levels of disturbance, most likely due to sheep trampling, with a cover score of 2% for disturbed bare ground in the local vicinity. The other **7150 *Rhynchosporion* depressions** monitoring stop was located within an old, abandoned, revegetated peat cutting with a quaking surface, where sheep grazing would be unlikely to occur. The intensity of this impact has therefore been assessed as low and its intensity as neutral. The area of **7150 *Rhynchosporion* depressions** affected was estimated as 50.0%. The trend was assessed as improving due to the CFP reductions in stock numbers.

Table 22: Monitoring criteria and failure rates for 7150 *Rhynchosporion* depressions ($n = 3$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)	
Vegetation composition					
1	Number of positive indicator species present ≥ 5	Relevé	3	0	0
2	Cover of <i>Rhynchospora</i> spp. $\geq 10\%$	Relevé	3	0	0
3	Cover of <u>each</u> of the following species: <i>Eleocharis multicaulis</i> , <i>Molinia caerulea</i> , <i>Schoenus nigricans</i> , <i>Trichophorum germanicum</i> individually $< 35\%$	Relevé	3	0	0
4	Cover of the following negative indicator species: <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium aquilinum</i> , <i>Ranunculus repens</i> collectively $< 1\%$	Relevé	3	0	0
5	Cover of non-native species $< 1\%$	Relevé	3	0	0
6	Cover of scattered native trees and scrub $< 10\%$	Local vicinity	3	0	0
Vegetation structure					
7	Crushed, broken and/or pulled up <i>Sphagnum</i> species $< 10\%$ of <i>Sphagnum</i> cover	Relevé	3	0	0
8	Last complete growing season's shoots of ericoids, <i>Empetrum nigrum</i> and <i>Myrica gale</i> shrubs showing signs of <u>browsing</u> collectively $< 33\%$	Relevé	3	0	0
9	No signs of <u>burning</u> into the moss, liverwort or lichen layer or exposure of peat surface due to burning	Local vicinity	3	0	0
10	No signs of <u>burning</u> inside boundaries of sensitive areas*	Local vicinity	3	0	0
Physical structure					
11	Cover of <u>disturbed</u> bare ground $< 10\%$	Relevé	3	0	0
12	Cover of <u>disturbed</u> bare ground $< 10\%$	Local vicinity	3	0	0
13	Area showing signs of <u>drainage</u> resulting from heavy trampling or tracking or ditches $< 10\%$	Local vicinity	3	0	0
14	Cover of <u>erosion</u> gullies and eroded areas within the greater bog mosaic $< 5\%$	Local vicinity	3	0	0

*Sensitive areas

(a) Ground with abundant and/or an almost continuous carpet of *Sphagnum*.

(b) Patterned areas (i.e. with pools and wet hollows).

(c) Areas within 50 m of functioning drains.

(d) Areas within 5-10 m of watercourses.

Table 23: Assessment of future prospects for 7150 *Rhynchosporion* depressions. Under trend, Imp = Improving

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Low	Neutral	50.0%	Inside	0	Imp
Overall score						0	

3.94 The overall impacts score for **7150 *Rhynchosporion* depressions** has been calculated as 0. This is equal to the nominal Favourable Reference Value. The future trend for structure and functions is deemed to be improving due to the CFP reductions in stock numbers. The future prospects for this habitat were therefore assessed as Favourable.

7230 Alkaline fens

Area

3.95 Changes in the area of **7230 Alkaline fens** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. No changes in area of habitat were noted; therefore the area status was assessed as Favourable.

Structure and functions

3.96 One monitoring stop was recorded in **7230 Alkaline fens** within the Corraun Plateau cSAC (Table 24). The monitoring stop was recorded in the RFLU2 *Eleocharis quinqueflora* – *Carex viridula* flush community. In the assessment of structure and functions, the monitoring stop failed three criteria. Following a review of the ecological condition of this stop, expert judgement determined that no changes should be made, resulting in an overall failure rate of 100.0%. The structure and functions of **7230 Alkaline fens** were therefore assessed as Unfavourable - Bad.

3.97 The vegetation composition of **7230 Alkaline fens** was poor, with the monitoring stop failing due to excessive cover of the non-native species *Epilobium brunnescens*. The vegetation structure of **7230 Alkaline fens** was good with no failures being recorded under the relevant criteria.

3.98 The physical structure of **7230 Alkaline fens** was poor. The monitoring stop failed due to excessive cover of disturbed bare ground, both within the monitoring stop and in the local vicinity. This is likely to be due to grazing by sheep.

3.99 The small sample size of one monitoring stop reflects the relative rarity of this habitat within the Corraun Plateau cSAC, where only 2.3 ha of **7230 Alkaline fens** were recorded, comprising 0.1% of the site.

Future prospects

3.100 Two impacts were recorded within **7230 Alkaline fens** (Table 25).

Non-intensive sheep grazing (A04.02.02)

3.101 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) described sheep grazing as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage. Following the CFP baseline survey in 2000, the relevant Commonage Plans (MA17 and MA20) recommended destocking levels between 50% and 60%.

3.102 During the assessment of structure and functions, excessive cover of disturbed bare ground was recorded at the **7230 Alkaline fens** monitoring stop. This is likely to be due to grazing by sheep. The intensity of this impact was assessed as medium and its influence as negative. The trend was assessed as improving due to the CFP reductions in stock numbers.

Table 24: Monitoring criteria and failure rates for 7230 Alkaline fens ($n = 1$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)	
Vegetation composition					
1	At least one brown moss species present	Relevé	1	0	0
2a	RFLU1a/RFLU2: number of positive vascular indicator species present ≥ 2	Relevé	1	0	0
2b	RFLU4/RFEN1a: number of positive vascular indicator species present ≥ 3		0	n/a	n/a
3a	RFLU1a/RFLU2: vegetation cover of brown mosses and vascular indicator species $\geq 20\%$	Relevé	1	0	0
3b	RFLU4/RFEN1a: vegetation cover of brown mosses and vascular indicator species $\geq 75\%$		0	n/a	n/a
4	Total cover of the following species: <i>Anthoxanthum odoratum</i> , <i>Epilobium hirsutum</i> , <i>Holcus lanatus</i> , <i>Ranunculus repens</i> $< 1\%$	Relevé	1	0	0
5	Cover of non-native species $< 1\%$	Relevé	1	1	100.0
6	Cover of scattered native trees and scrub $< 10\%$	Local vicinity		0	0
7	Total cover of <i>Juncus effusus</i> and <i>Phragmites australis</i> $< 10\%$	Local vicinity	1	0	0
Vegetation structure					
8	At least 50% of the live leaves/flowering shoots are more than 5 cm above ground surface	Relevé	1	0	0
Physical structure					
9	Cover of <u>disturbed</u> , bare ground $< 10\%$	Relevé	1	1	100.0
10	Cover of <u>disturbed</u> , bare ground $< 10\%$	Local vicinity	1	1	100.0
11	Area showing signs of <u>drainage</u> resulting from ditches or heavy trampling or tracking $< 10\%$	Local vicinity	1	0	0
12	Where tufa is present, <u>disturbed</u> proportion of vegetation cover $< 1\%$	Local vicinity	0	n/a	n/a

Table 25: Assessment of future prospects for 7230 Alkaline fens. Under trend, Imp = Improving, Ins = Insufficient data

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Medium	Negative	100%	Inside	-3.0	Imp
I01	Invasive non-native species	Low	Negative	5%	Inside	-0.5	Ins
Overall score						-3.5	

Invasive non-native species (I01)

3.103 *Epilobium brunnescens* is a species of damp, stony places, especially in the mountains, which is localised but spreading in Ireland (Parnell & Curtis, 2012). During the present survey, *E. brunnescens* was recorded within the **7230 Alkaline fens** monitoring stop with a cover score of 5%. The intensity of this impact is assessed as low, since this species does not tend to transform the nature of the habitats in which it becomes established but, nonetheless, its influence has been assessed as negative.

3.104 The overall impacts score for **7230 Alkaline fens** has been calculated as -3.5. This is below the nominal Favourable Reference Value of zero. The future trend for structure and functions is deemed to be improving due to the CFP reductions in stock numbers. The future prospects for this habitat were therefore assessed as Unfavourable - Inadequate.

8110 Siliceous scree

Area

3.105 Changes in the area of **8110 Siliceous scree** were recorded for the period 1995 to 2010 through a combination of observations in the field and analysis of aerial photographs and satellite imagery available through Google Earth. These data are restricted to obvious changes in habitat; less obvious changes from one habitat type to another cannot be reliably identified by this process. No changes in area of habitat were noted; therefore the area status was assessed as Favourable.

Structure and functions

3.106 One monitoring stop was recorded in **8110 Siliceous scree** within the Corraun Plateau cSAC (Table 26). In the assessment of structure and functions, this monitoring stop did not fail any criteria, resulting in an overall failure rate of 0%. The structure and functions of **8110 Siliceous scree** were therefore assessed as Favourable.

3.107 The small sample size of one monitoring stop reflects the relative rarity of this habitat within the Corraun Plateau cSAC, where 30.3 ha of **8110 Siliceous scree** were recorded, comprising only 0.8% of the site.

Future prospects

3.108 One impact was recorded within **8110 Siliceous scree** (Table 27).

Non-intensive sheep grazing (A04.02.02)

3.109 The Corraun Plateau cSAC Conservation Statement (NPWS, 2009) described sheep grazing as the main land use within the cSAC. The majority of the site was described as overgrazed due to high stocking levels. Although most of the site is owned by the Dickens Estate, local farmers have had access to grazing there for several decades and approximately 95.7% of the site is managed as commonage. Following the CFP baseline survey in 2000, the relevant Commonage Plans (MA17 and MA20) recommended destocking levels between 50% and 60%.

3.110 During the assessment of structure and functions, no grazing was recorded within the **8110 Siliceous scree** monitoring stop. The monitoring stop contained stable block scree with a relatively large clast size, making it difficult for sheep to access (Plate 6). However, during vegetation mapping, sheep were observed within more accessible areas of relatively mobile **8110 Siliceous scree** with smaller clast sizes. Sheep paths were common in these areas (Plate 7). The intensity of this impact was assessed as low and its influence as negative. The area of **8110 Siliceous scree** affected was estimated to be 10%.

Table 26: Monitoring criteria and failure rates for 8110 Siliceous scree ($n = 1$).

Criteria	Scale of assessment	Number of assessments	Number of failures	Failure rate (%)
Vegetation composition				
1 Cover of bryophyte and non-crustose lichen species $\geq 5\%$	Relevé	1	0	0
2 Proportion of vegetation composed of following negative indicator species: <i>Cirsium arvense</i> , <i>C. vulgare</i> , <i>Rubus fruticosus</i> agg., large <i>Rumex</i> species (except <i>R. acetosa</i>), <i>Senecio jacobaea</i> , <i>Urtica dioica</i> collectively $< 1\%$	Relevé	1	0	0
3 Proportion of vegetation composed of non-native species $< 1\%$	Relevé	1	0	0
4 Block scree: number of positive indicator species for 8220 present ≥ 1	Local vicinity	1	0	0
5 Cover of grass species and dwarf shrubs collectively $< 20\%$	Local vicinity	1	0	0
6 Cover of <i>Pteridium aquilinum</i> , native trees and scrub collectively $< 25\%$	Local vicinity	1	0	0
Vegetation structure				
7 Live leaves of forbs and shoots of dwarf shrubs showing signs of <u>grazing</u> or <u>browsing</u> collectively $< 50\%$	Relevé	1	0	0
Physical structure				
8 Ground <u>disturbed</u> by human & animal paths, scree running, vehicles $< 10\%$	Relevé	1	0	0
9 Ground <u>disturbed</u> by human & animal paths, scree running, vehicles $< 10\%$	Local vicinity	1	0	0

Table 27: Assessment of future prospects for 8110 Siliceous scree.

Impact code	Impact	Intensity	Influence	Habitat area	Source	Score	Trend
A04.02.02	Non-intensive sheep grazing	Low	Negative	10%	Inside	-0.5	Imp
Overall score						-0.5	

3.111 The overall impacts score for **8110 Siliceous scree** was calculated as -0.5, which is marginally below the nominal Favourable Reference Value. The future trend for structure and functions is deemed to be improving due to the CFP reductions in stock numbers. The future prospects for this habitat were therefore assessed as Favourable.



Plate 6: 8110 Siliceous scree monitoring stop, recorded in stable block scree above the corrie of Lough Cullydoo (Photo: Brendan O’Hanrahan).



Plate 7: Sheep paths within relatively mobile 8110 Siliceous scree on the northern side of Corraun Plateau (Photo: BEC Consultants).

Summary of conservation assessment

3.112 The results of the conservation assessment of Annex I habitats are summarised in Table 28. Of the eight habitats assessed, four were assessed as Unfavourable – Bad, one as Unfavourable – Inadequate and three as Favourable.

3.113 Habitats generally performed well in the assessment of area, with no major losses of habitat being readily apparent. With the exception of **7140 Transition mires** and **7150 *Rhynchosporion* depressions**, peatland habitats generally performed poorly in the assessment of structure and functions, future prospects and overall conservation status, while the rocky habitat **8110 Siliceous scree** performed better. **4030 Dry heath** performed better in the assessment of structure and functions than in the assessment of future prospects as, despite improvements due to the CFP reductions in stock numbers, several ongoing minor impacts present a threat to this habitat. **4060 Alpine and Boreal heath** and **7230 Alkaline fens** performed better in the assessment of future prospects than the assessment of structure and functions as it is anticipated that these habitats will gradually recover from previously high stocking levels.

Table 28: Summary of assessments for Annex I habitats at Corraun Plateau cSAC.

Annex I code	Habitat	Area	Structure and functions	Future prospects	Overall score
4010	Wet heaths	Unfavourable - Inadequate	Unfavourable - Bad	Unfavourable - Bad	Unfavourable - Bad
4030	Dry heaths	Unfavourable - Inadequate	Favourable	Unfavourable - Inadequate	Unfavourable - Inadequate
4060	Alpine and Boreal heath	Favourable	Unfavourable - Bad	Unfavourable - Inadequate	Unfavourable - Bad
*7130/7130	Blanket bogs	Unfavourable - Inadequate	Unfavourable - Bad	Unfavourable - Bad	Unfavourable - Bad
7140	Transition mires	Favourable	Favourable	Favourable	Favourable
7150	<i>Rhynchosporion</i> depressions	Favourable	Favourable	Favourable	Favourable
7230	Alkaline fens	Favourable	Unfavourable - Bad	Unfavourable - Inadequate	Unfavourable - Bad
8110	Siliceous scree	Favourable	Favourable	Favourable	Favourable

4. DISCUSSION

Natura 2000 Standard Data Form

- 4.1 Nine Annex I habitats were recorded in Corraun Plateau cSAC that are currently not listed for the site on the Natura 2000 Standard Data Form: habitats 3130, 3160, 6150, 7140, 7150, 7230, 8110, 8210 and 8220. Lough Ard and the corrie lakes to the north of the plateau were considered **3130 Upland oligotrophic lakes**. **3160 Dystrophic lakes** occur throughout the site, particularly in the north and are associated with the bog at Srahmore. **6150 Siliceous alpine and boreal grasslands** were recorded on the high ground of the plateau and Corraun Hill. Examples of **7140 Transition mires** were recorded in the east and **7150 *Rhynchosporion* depressions** were recorded through the north, east and south of the site. **7230 Alkaline fens** were recorded in the northeast and northwest of the site. **8110 Siliceous scree** and **8220 Siliceous rocky slopes** were associated with both the northern and southern slopes of the site while a small example of **8210 Calcareous rocky slopes** was recorded from the corrie wall above Knockacorraun Lough.
- 4.2 The Annex I habitat **5130 Juniper scrub** is listed as a qualifying interest for the Corraun Plateau cSAC (Table 1). This habitat was not recorded during the NSUH survey though it was recorded during a recent NPWS commissioned juniper survey (Cooper *et al.* 2012). *Juniper communis* ssp. *nana* was recorded particularly on the southern slopes of the sites during the NSUH but, as set out in Perrin *et al.* (2014), this subspecies is considered to be a component of **4060 Alpine and Boreal heath** rather than **5130 Juniper scrub**. Cooper *et al.* (2012) do not differentiate between habitats on the same basis and, though acknowledging that juniper is associated with **4060 Alpine and Boreal heath**, refer all formations of juniper to **5130 Juniper scrub**.
- 4.3 The current Natura 2000 assessment significantly overestimates the cover of **4030 Dry heath** in the cSAC (25% compared with 5.4%); cover of ***7130/7130 Blanket bog** is also overestimated (16% compared with 12.0%). Conversely the area of **4010 Wet heath** has been underestimated (25% compared with 53.4%). The area for **3110 Lowland oligotrophic lakes** (3%) has been slightly overestimated; the combined area for all lakes at the site is only 1.2%. The area for **4060 Alpine and Boreal heath** appears to have been accurately assessed.
- 4.4 The Natura 2000 Standard Data Form for this site should be reviewed and updated in light of the data presented in this report in terms of the habitats listed, areas and ratings. It is obligatory that all Annex I habitats within an SAC are listed on this form even if they are subsequently ranked as having a non-significant presence.

Additional recommendations

- 4.5 Whilst a Conservation Statement exists for Corraun Plateau cSAC, a Conservation Plan is required which should utilise the information provided by this report. Management objectives in the plan need to address the impacts highlighted in this report if progress is to be made towards attaining Favourable status for the Annex I habitats. The three major impacts are livestock grazing, peat erosion and peat extraction.
- 4.6 Levels of livestock grazing are being addressed through the CFP. Whilst the CFP reductions in stock numbers appear to have resulted in some improvement to Annex I habitats, these

- habitats are not currently attaining Favourable status. Continued monitoring is required to establish what would be sustainable levels of livestock for this site bearing in mind that there may be a considerable delay between changes in livestock levels and a response in the vegetation. The available data do not support an increase in stocking levels.
- 4.7 Erosion of blanket peat is a major impact in ***7130/7130 Blanket bog**. Whilst some areas of eroded peat may gradually revegetate as a result of the CFP reductions in stock numbers, in areas of more severe erosion active restoration measures may be needed for this habitat to achieve Favourable status. These may include the damming of erosion gullies, stabilisation of bare peat with geotextiles or heather brash, the planting of *Eriophorum angustifolium*, and seeding of bare peat with *Sphagnum* propagules. The conservation of ***7130 Active blanket bog** should be prioritised as befitting its status.
- 4.8 Active turf-cutting by mechanised methods is occurring at several locations within the site, particularly at Lough Ard and is having a major localised impact on ***7130/7130 Blanket bog**. Appropriate regulation of mechanised methods of turf-cutting is required within the site.
- 4.9 This site was surveyed during the Pilot Phase of the NUSH when assessment criteria for the rocky habitats were being developed. As such **8210 Calcareous rocky slopes** and **8220 Siliceous rocky slopes** were not assessed at this site. It would be desirable for these habitats to be assessed to complete the assessment of habitats at this site.
- 4.10 It would be desirable for future phases of monitoring to expand on the network of monitoring stops established by this survey. Placement of additional stops should take into account the spatial distribution of existing stops.
- 4.11 Monitoring criteria should be developed for habitat **6150 Siliceous alpine and boreal grasslands**. Relevé data collected by this survey will allow these habitats to be, in part, retrospectively assessed.

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APPENDIX 1: ANNEX I HABITATS

The following standard abbreviations are used throughout this report for Annex I habitats. With the exception of habitats 4060, 6150 and 7130, these follow the abbreviations used in NPWS (2008).

Annex I code	Full name of Annex I habitat	Standard abbreviation
3110	Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>)	3110 Lowland oligotrophic lakes
3130	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i>	3130 Upland oligotrophic lakes
3160	Natural dystrophic lakes and ponds	3160 Dystrophic lakes
4010	Northern Atlantic wet heaths with <i>Erica tetralix</i>	4010 Wet heath
4030	European dry heaths	4030 Dry heath
4060	Alpine and Boreal heaths	4060 Alpine and Boreal heath
5130	<i>Juniperus communis</i> formations on heaths or calcareous grasslands	5130 Juniper scrub
6150	Siliceous alpine and boreal grasslands	6150 Siliceous alpine and boreal grasslands
7130	Blanket bogs (* if active bog)	*7130 Active blanket bog or 7130 Inactive blanket bog or *7130/7130 Blanket bog
7140	Transition mires and quaking bogs	7140 Transition mires
7150	Depressions on peat substrates of the <i>Rhynchosporion</i>	7150 <i>Rhynchosporion</i> depressions
7230	Alkaline fens	7230 Alkaline fens
8110	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsetalia ladani</i>)	8110 Siliceous scree
8210	Calcareous rocky slopes with chasmophytic vegetation	8210 Calcareous rocky slopes
8220	Siliceous rocky slopes with chasmophytic vegetation	8220 Siliceous rocky slopes

APPENDIX 2: PHOTOGRAPHS



Plate A1: Large patch of *Cladonia*, dominated by *Cladonia floerkeana* (Photo: Jenni Roche).



Plate A2: The arctic-alpine lichen *Cetraria islandica* (Photo: Jenni Roche).



Plate A3: *Dactylorhiza maculata* growing with *Arctostaphylos uva-ursi* and *Erica cinerea* (Photo: Jenni Roche).



Plate A4: 4060 Alpine and Boreal heath containing *Juniperus communis* ssp. *nana* (Photo: Jenni Roche).



Plate A5: Exceptionally badly eroded area of *7130/7130 Blanket bog with remnant tussocks of *Schoenus nigricans*, near Lough Cullydoo (Photo: Brendan O'Hanrahan).



Plate A6: View over *7130/7130 Blanket Bog on Corraun Plateau, across Clew Bay to Croagh Patrick and the Sheeffry Hills (Photo: Jenni Roche).



Plate A7: View east from Corraun Hill along the northern edge of the plateau (Photo: Jenni Roche).



Plate A8: View west from the plateau towards Corraun Hill, with Achill Island in the distance (Photo: Jenni Roche).



Plate A9: View of Corraun Hill with rocky expanse of 4060 Alpine and Boreal heath in the foreground (Photo: Jenni Roche).

APPENDIX 3: PLANT SPECIES LIST

All species recorded from relevés, waypoints and polygons during the NSUH survey of Corraun Plateau cSAC are listed.

VASCULAR SPECIES	
Species name	Common name
<i>Agrostis canina</i>	Velvet Bent
<i>Agrostis capillaris</i>	Common Bent
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Agrostis vinealis</i>	Brown Bent
<i>Anagallis tenella</i>	Bog Pimpernel
<i>Antennaria dioica</i>	Mountain Everlasting
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Arctostaphylos uva-ursi</i>	Bearberry
<i>Armeria maritima</i>	Thrift
<i>Betula pubescens</i>	Downy Birch
<i>Blechnum spicant</i>	Hard-fern
<i>Calluna vulgaris</i>	Heather
<i>Cardamine pratensis</i>	Cuckooflower
<i>Carex bigelowii</i>	Stiff Sedge
<i>Carex binervis</i>	Green-ribbed Sedge
<i>Carex flacca</i>	Glaucous Sedge
<i>Carex echinata</i>	Star Sedge
<i>Carex limosa</i>	Bog-sedge
<i>Carex nigra</i>	Common Sedge
<i>Carex panicea</i>	Carnation Sedge
<i>Carex pilulifera</i>	Pill Sedge
<i>Carex pulicaris</i>	Flea Sedge
<i>Carex viridula</i>	Yellow-sedge
<i>Chrysosplenium oppositifolium</i>	Opposite-leaved Golden-saxifrage
<i>Cirsium dissectum</i>	Meadow Thistle
<i>Corylus avellana</i>	Hazel
<i>Dactylorhiza maculata</i>	Heath Spotted-orchid
<i>Deschampsia flexuosa</i>	Tufted Hair-grass
<i>Drosera anglica</i>	Great Sundew
<i>Drosera rotundifolia</i>	Round-leaved Sundew

VASCULAR SPECIES

Species name	Common name
<i>Dryopteris aemula</i>	Hay-scented Buckler-fern
<i>Dryopteris dilatata</i>	Broad Buckler-fern
<i>Eleocharis multicaulis</i>	Many-stalked Spike-rush
<i>Eleocharis quinqueflora</i>	Few-flowered Spike-rush
<i>Empetrum nigrum</i>	Crowberry
<i>Epilobium brunnescens</i>	New Zealand Willowherb
<i>Erica cinerea</i>	Bell Heather
<i>Erica erigena</i>	Irish Heath
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
<i>Festuca vivipara</i>	Viviparous Sheep's-fescue
<i>Galium saxatile</i>	Heath Bedstraw
<i>Huperzia selago</i>	Fir Clubmoss
<i>Hymenophyllum wilsonii</i>	Wilson's Filmy-Fern
<i>Hypericum pulchrum</i>	Slender St John's-wort
<i>Ilex aquifolium</i>	Holly
<i>Iris pseudacorus</i>	Yellow Iris
<i>Jasione montana</i>	Sheep's-bit
<i>Juncus acutiflorus</i>	Sharp-flowered Rush
<i>Juncus bulbosus</i>	Bulbous Rush
<i>Juncus effusus</i>	Soft-rush
<i>Juncus squarrosus</i>	Heath Rush
<i>Juniperus communis</i> subsp. <i>nana</i>	Juniperus communis subsp. Nana
<i>Listera cordata</i>	Lesser Twayblade
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil
<i>Luzula sylvatica</i>	Great Wood-rush
<i>Lychnis flos-cuculi</i>	Ragged-Robin
<i>Melampyrum pratense</i>	Common Cow-wheat
<i>Menyanthes trifoliata</i>	Bogbean
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Myrica gale</i>	Bog-myrtle
<i>Nardus stricta</i>	Mat-grass
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Osmunda regalis</i>	Royal Fern
<i>Oxalis acetosella</i>	Wood-sorrel

VASCULAR SPECIES

Species name	Common name
<i>Pedicularis sylvatica</i>	Lousewort
<i>Phragmites australis</i>	Common Reed
<i>Pinguicula lusitanica</i>	Pale Butterwort
<i>Plantago maritima</i>	Sea Plantain
<i>Polygala serpyllifolia</i>	Heath Milkwort
<i>Potamogeton polygonifolius</i>	Bog Pondweed
<i>Potentilla erecta</i>	Tormentil
<i>Pteridium aquilinum</i>	Bracken
<i>Quercus petraea</i>	Sessile Oak
<i>Ranunculus flammula</i>	Lesser Spearwort
<i>Rhododendron ponticum</i>	Rhododendron
<i>Rhynchospora alba</i>	White Beak-sedge
<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Salix aurita</i>	Eared Willow
<i>Salix cinerea</i>	Grey Willow
<i>Salix herbacea</i>	Dwarf Willow
<i>Saxifraga spathularis</i>	St Patrick's-cabbage
<i>Schoenus nigricans</i>	Black Bog-rush
<i>Solidago virgaurea</i>	Goldenrod
<i>Stellaria uliginosa</i>	Bog Stitchwort
<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Teucrium scorodonia</i>	Wood Sage
<i>Trichophorum germanicum</i>	Deegrass
<i>Utricularia species</i>	A Bladderwort
<i>Vaccinium myrtillus</i>	Bilberry
<i>Viola palustris</i>	Marsh Violet
<i>Viola riviniana</i>	Common Dog-violet

BRYOPHYTES

Species name	Common name
<i>Adelanthus lindenbergianus</i>	-
<i>Aneura pinguis</i>	Greasewort
<i>Anthelia julacea</i>	Alpine Silverwort
<i>Bazzania tricrenata</i>	Lesser Whipwort
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss
<i>Breutelia chrysocoma</i>	Golden-head Moss

BRYOPHYTES

Species name	Common name
<i>Calliergonella cuspidata</i>	Pointed Spear-moss
<i>Calypogeia fissa</i>	Common Pouchwort
<i>Calypogeia muelleriana</i>	Mueller's Pouchwort
<i>Campylium stellatum</i> var. <i>stellatum</i>	Yellow Starry Feather-moss
<i>Campylopus atrovirens</i>	Bristly Swan-neck Moss
<i>Campylopus brevopilus</i>	Compact Swan-neck Moss
<i>Campylopus flexuosus</i>	Rusty Swan-neck Moss
<i>Campylopus introflexus</i>	Heath Star-moss
<i>Cephalozia bicuspidata</i>	Two-horned Pincerwort
<i>Ctenidium molluscum</i>	Comb-moss
<i>Dicranella heteromalla</i>	Silky Forklet-moss
<i>Dicranum fuscescens</i>	Dusky Fork-moss
<i>Dicranum majus</i>	Greater Fork-moss
<i>Dicranum scoparium</i>	Broom Fork-moss
<i>Diplophyllum albicans</i>	White Earwort
<i>Frullania dilatata</i>	Dilated Scalewort
<i>Frullania tamarisci</i>	Tamarisk Scalewort
<i>Frullania teneriffae</i>	Sea Scalewort
<i>Herbertus aduncus</i>	Juniper Prongwort
<i>Hieracium species</i>	Hawkweeds
<i>Hylocomium splendens</i>	Glittering Wood-moss
<i>Hymenophyllum wilsonii</i>	Wilson's Filmy-Fern
<i>Hypnum jutlandicum</i>	Heath Plait-moss
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Kurzia</i> sp.	A Fingerwort
<i>Leucobryum glaucum</i>	Large White-moss
<i>Lophocolea bidentata</i>	Bifid Crestwort
<i>Mnium hornum</i>	Swan's-neck Thyme-moss
<i>Mylia taylorii</i>	Taylor's Flapwort
<i>Nardia compressa</i>	Compressed Flapwort
<i>Nowellia curvifolia</i>	Rustwort
<i>Odontoschisma sphagni</i>	Bog-moss Flapwort
<i>Pellia epiphylla</i>	Overleaf Pellia
<i>Plagiochila punctata</i>	Spotty Featherwort
<i>Plagiomnium undulatum</i>	Hart's-tongue Thyme-moss
<i>Plagiothecium undulatum</i>	Waved Silk-moss

BRYOPHYTES

Species name	Common name
<i>Pleurozia purpurea</i>	Purple Spoonwort
<i>Pleurozium schreberi</i>	Red-stemmed Feather-moss
<i>Polytrichum commune</i>	Common/Dense Haircap
<i>Polytrichum formosum</i>	Bank Haircap
<i>Polytrichum strictum</i>	Strict Haircap
<i>Racomitrium lanuginosum</i>	Wooly Fringe-moss
<i>Rhytidiadelphus loreus</i>	Little Shaggy-moss
<i>Rhytidiadelphus squarrosus</i>	Springy Turf-moss
<i>Riccardia multifida</i>	Delicate Germanderwort
<i>Saccogyna viticulosa</i>	Stragglng Pouchwort
<i>Scapania gracilis</i>	Western Earwort
<i>Scapania uliginosum</i>	Marsh Earwort
<i>Scleropodium purum</i>	Neat Feather-moss
<i>Scorpidium scorpioides</i>	Hooked Scorpion-moss
<i>Sphagnum capillifolium</i>	Acute-leaved/Red Bog-moss
<i>Sphagnum compactum</i>	Compact Bog-moss
<i>Sphagnum cuspidatum</i>	Feathery Bog-moss
<i>Sphagnum denticulatum</i>	Cow-horn Bog-moss
<i>Sphagnum fallax</i>	Flat-topped Bog-moss
<i>Sphagnum inundatum</i>	Lesser Cow-horn Bog-moss
<i>Sphagnum magellanicum</i>	Magellanic Bog-moss
<i>Sphagnum palustre</i>	Blunt-leaved Bog-moss
<i>Sphagnum papillosum</i>	Papillose Bog-moss
<i>Sphagnum quinquefarium</i>	Five-ranked Bog-moss
<i>Sphagnum subnitens</i>	Lustrous Bog-moss
<i>Sphagnum tenellum</i>	Soft Bog-moss
<i>Thuidium tamariscinum</i>	Common Tamarisk-moss

LICHENS

Species name	Species name
<i>Alectoria nigricans</i>	<i>Melanelixia fuliginosa</i> subsp. <i>fuliginosa</i>
<i>Acarospora fuscata</i>	<i>Micarea coppinsii</i>
<i>Bunodophoron melanocarpum</i>	<i>Micarea leprosula</i>
<i>Cetraria aculeata</i>	<i>Micarea lignaria</i> var. <i>endoleuca</i>
<i>Cetraria islandica</i> subsp. <i>islandica</i>	<i>Micarea xanthonica</i>
<i>Cladonia arbuscula</i> subsp. <i>squarrosa</i>	<i>Miriquidica pycnocarpa pycnocarpa</i>

LICHENS

Species name

Species name

<i>Cladonia asahinae</i>	<i>Mycoblastus caesius</i>
<i>Cladonia cervicornis</i>	<i>Ochrolechia androgyna</i>
<i>Cladonia chlorophaea s. lat</i>	<i>Opegrapha calcarea</i>
<i>Cladonia ciliata</i> var. <i>ciliata</i>	<i>Opegrapha gyrocarpa</i>
<i>Cladonia ciliata</i> var. <i>tenuis</i>	<i>Parmelia discordans</i>
<i>Cladonia crispata</i> var. <i>cetrariiformis</i>	<i>Parmelia omphalodes</i>
<i>Cladonia crispata</i>	<i>Parmelia saxatilis</i>
<i>Cladonia diversa</i>	<i>Parmelia sulcata</i>
<i>Cladonia floerkeana</i>	<i>Parmotrema perlatum</i>
<i>Cladonia furcata</i>	<i>Pertusaria amara</i> forma <i>amara</i>
<i>Cladonia gracilis</i>	<i>Pertusaria coralline</i>
<i>Cladonia portentosa</i>	<i>Pertusaria flavicans</i>
<i>Cladonia rangiferina</i>	<i>Pertusaria lacteal</i>
<i>Cladonia squamosa</i> var. <i>squamosa</i>	<i>Pertusaria pseudocorallina</i>
<i>Cladonia strepsilis</i>	<i>Porpidia flavocruenta</i>
<i>Cladonia subcervicornis</i>	<i>Porpidia tuberculosa</i>
<i>Cladonia uncialis</i> subsp. <i>biuncialis</i>	<i>Pycnothelia papillaria</i>
<i>Cladonia zopfii</i>	<i>Ramalina siliquosa</i>
<i>Clauzadeana macula</i>	<i>Ramalina subfarinacea</i>
<i>Ephebe lanata</i>	<i>Rhizocarpon distinctum</i>
<i>Fuscidea cyathoides</i> var. <i>cyathoides</i>	<i>Rhizocarpon geographicum</i>
<i>Fuscidea lygaea</i>	<i>Rhizocarpon reductum</i>
<i>Hypogymnia physodes</i>	<i>Sclerococcum sphaerale</i>
<i>Icmadophila ericetorum</i>	<i>Sphaerophorus globosus</i>
<i>Lecanora gangaleoides</i>	<i>Stereocaulon evolutum</i>
<i>Lecanora polytropa</i>	<i>Thamnolia vermicularis</i>
<i>Lecanora sulphurea</i>	<i>Umbilicaria cylindrica</i>
<i>Lecanora symmicta</i>	<i>Umbilicaria torrefacta</i>
<i>Lecidea lithophila</i>	<i>Usnea flammea</i>
<i>Lichenomphalia hudsoniana</i>	

Figure 1. Survey area / boundary of Corraun Plateau cSAC (000485), Co. Mayo



Figure 2. Primary Fossitt habitats within Corraun Plateau cSAC (000485), Co. Mayo

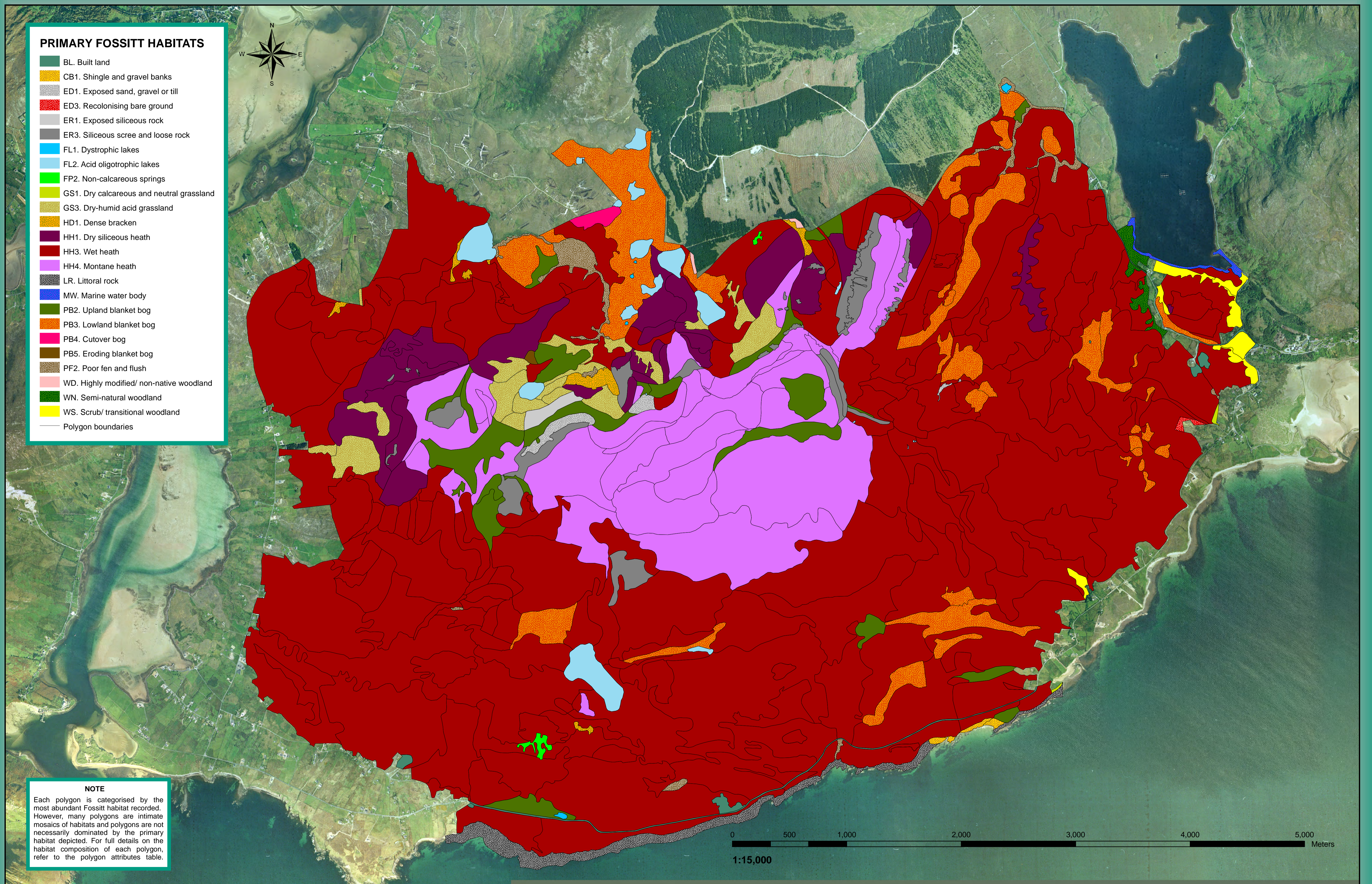
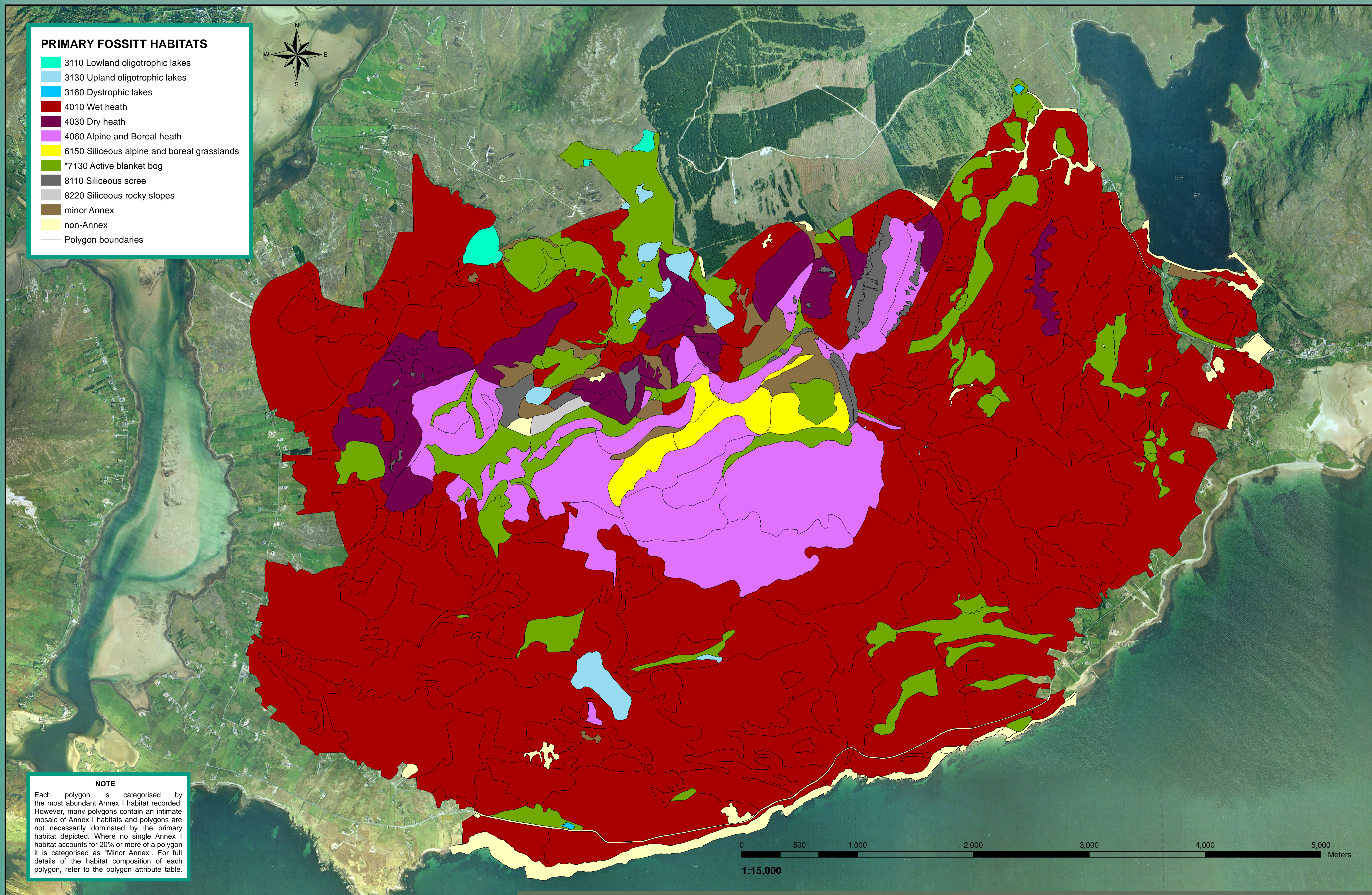


Figure 3. Primary Annex I habitats within Corraun Plateau cSAC (000485), Co. Mayo



PRIMARY FOSSITT HABITATS

- 3110 Lowland oligotrophic lakes
- 3130 Upland oligotrophic lakes
- 3160 Dystrophic lakes
- 4010 Wet heath
- 4030 Dry heath
- 4060 Alpine and Boreal heath
- 6150 Siliceous alpine and boreal grasslands
- *7130 Active blanket bog
- 8110 Siliceous scree
- 8220 Siliceous rocky slopes
- minor Annex
- non-Annex
- Polygon boundaries



NOTE
 Each polygon is categorised by the most abundant Annex I habitat recorded. However, many polygons contain an intimate mosaic of Annex I habitats and polygons are not necessarily dominated by the primary habitat depicted. Where no single Annex I habitat accounts for 20% or more of a polygon it is categorised as "Minor Annex". For full details of the habitat composition of each polygon, refer to the polygon attribute table.

0 500 1,000 2,000 3,000 4,000 5,000 Meters
 1:15,000

Figure 4a. Cover of 4010 WET HEATH within Corraun Plateau cSAC (000485), Co. Mayo

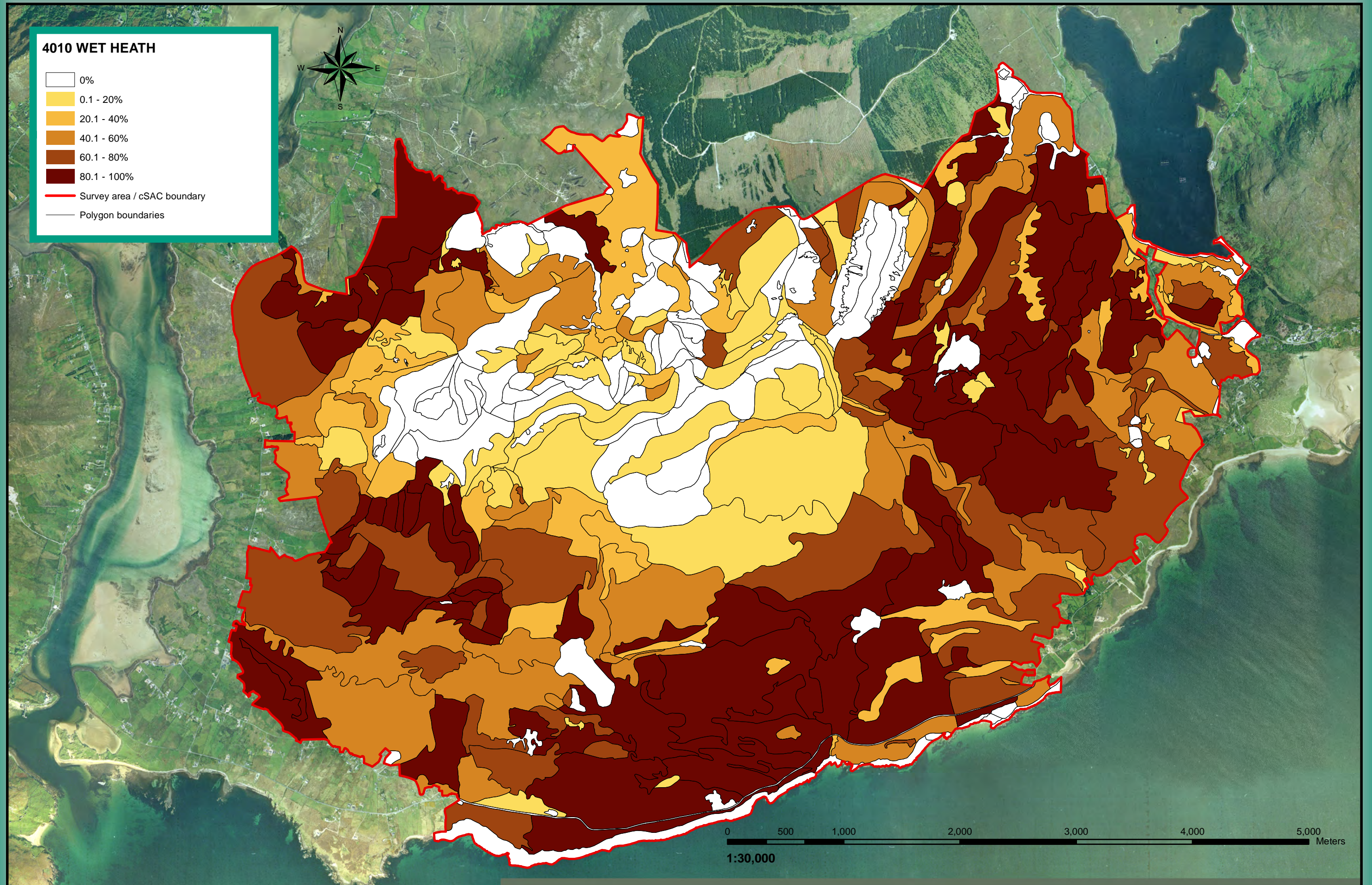


Figure 4b. Cover of 4030 DRY HEATH within Corraun Plateau cSAC (000485), Co. Mayo

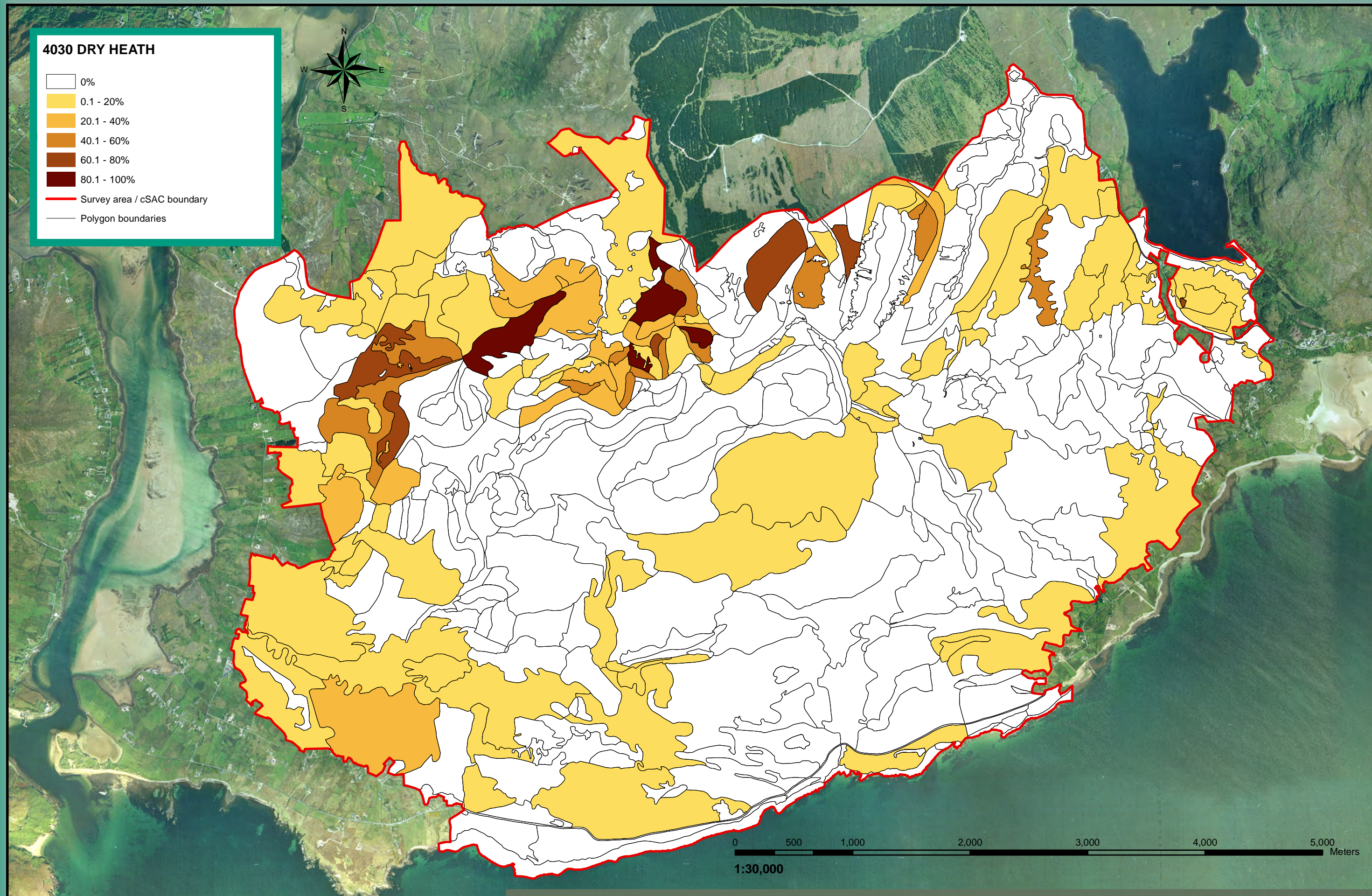


Figure 4c. Cover of 4060 ALPINE AND BOREAL HEATH within Corraun Plateau cSAC (000485), Co. Mayo

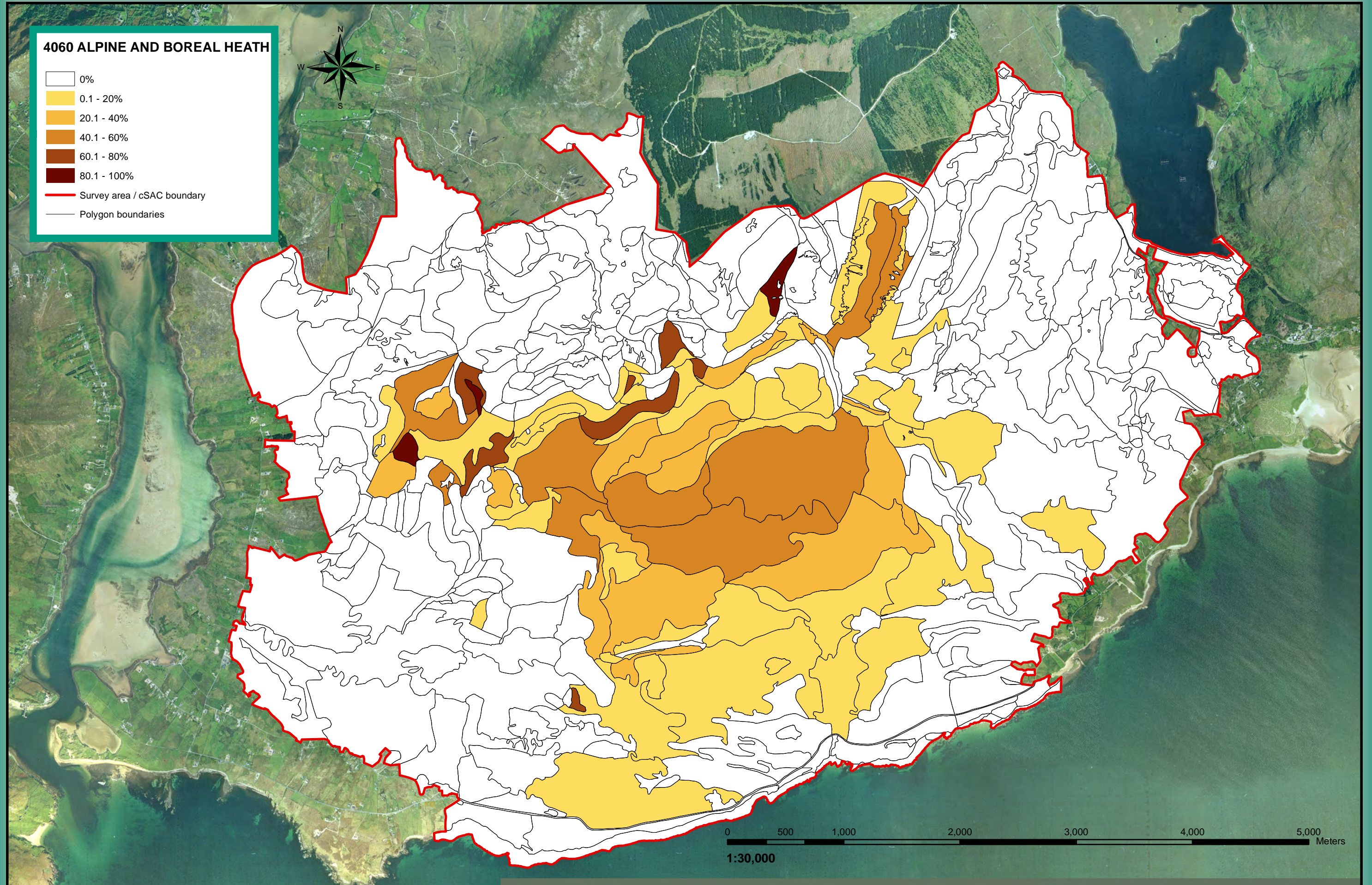


Figure 4d. Cover of 6150 SILICEOUS ALPINE AND BOREAL GRASSLANDS within Corraun Plateau cSAC (000485), Co. Mayo

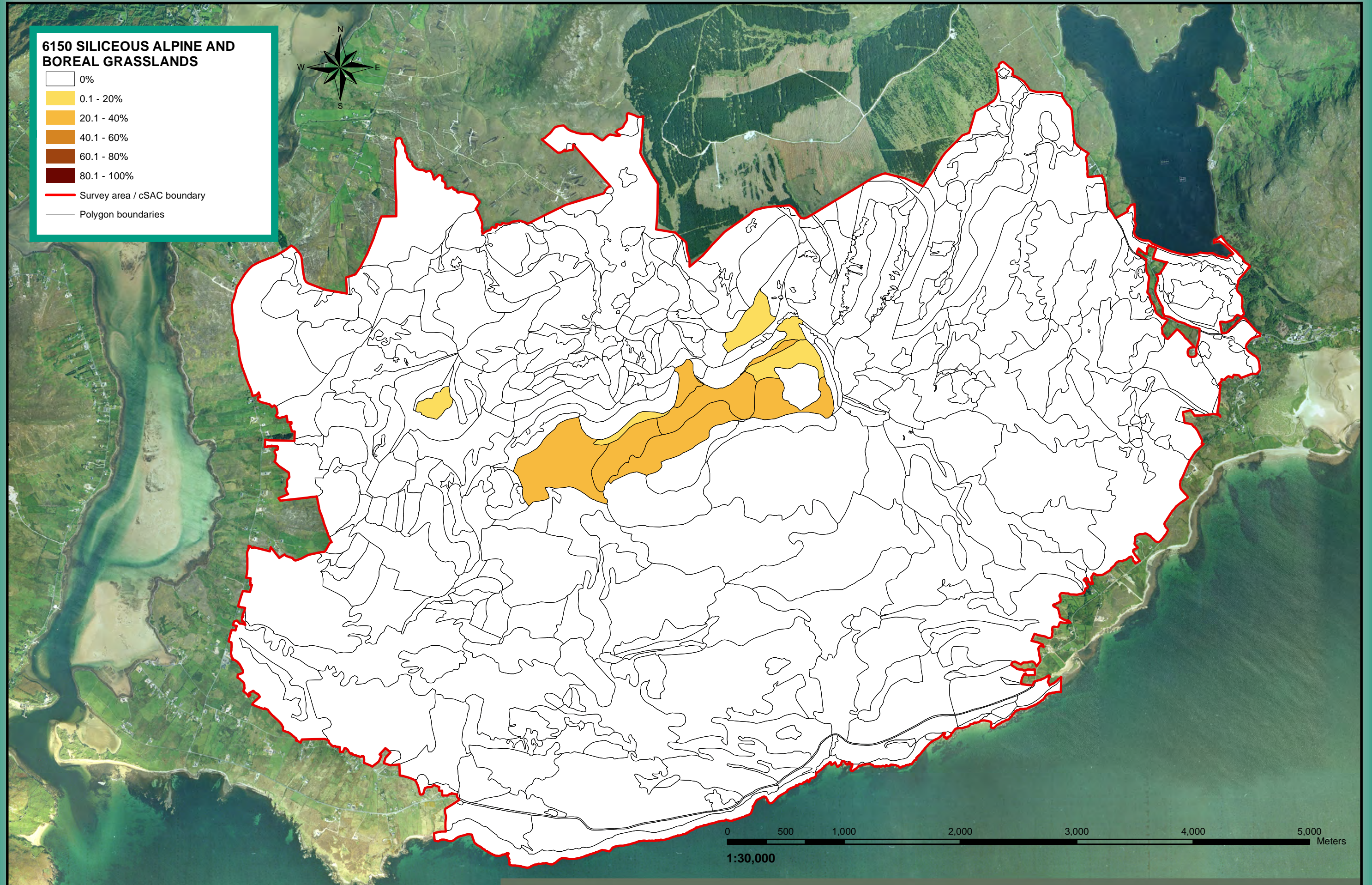


Figure 4e. Cover of *7130 ACTIVE BLANKET BOG within Corraun Plateau cSAC (000485), Co. Mayo

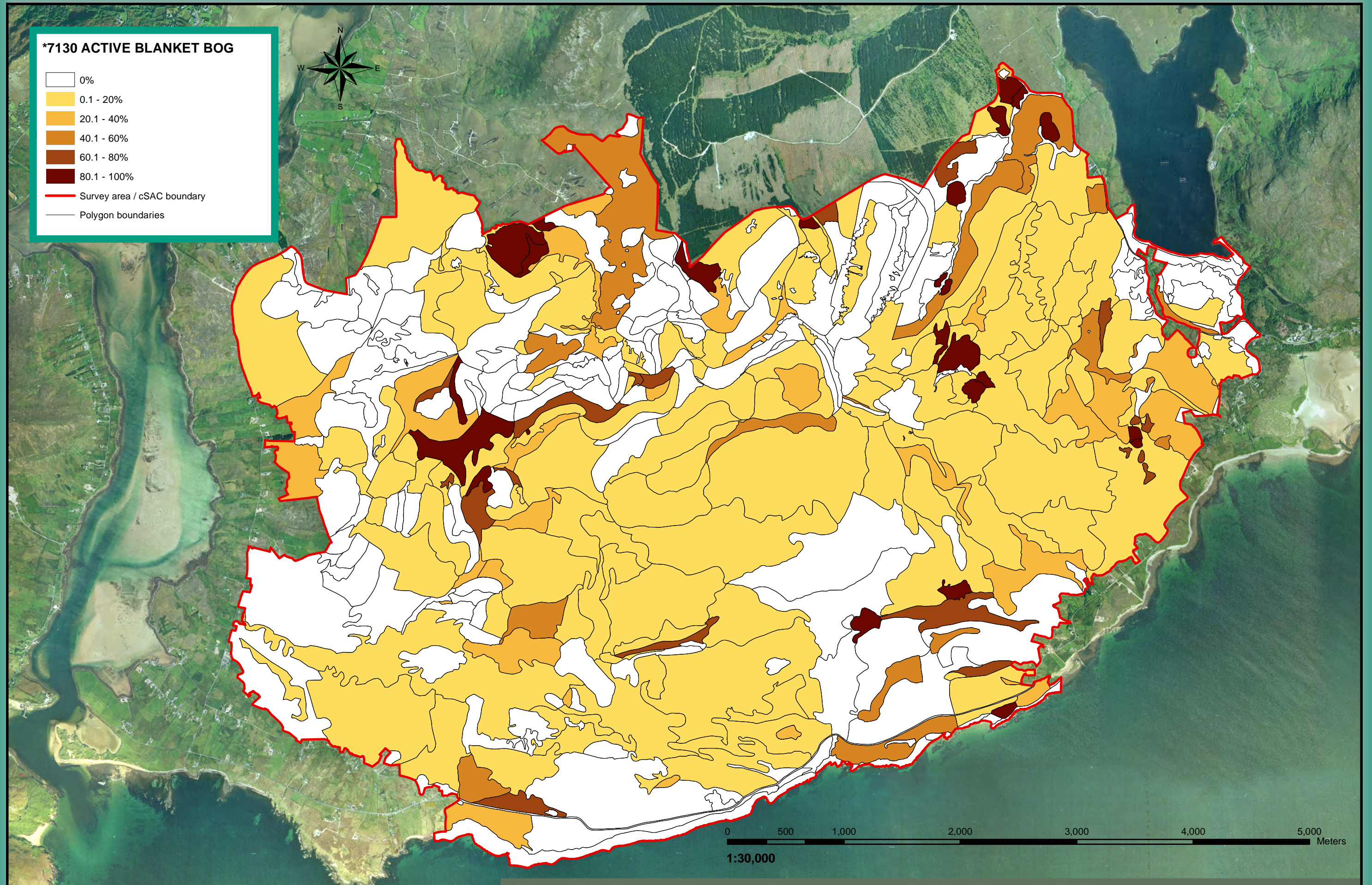


Figure 4f. Cover of 7130 INACTIVE BLANKET BOG within Corraun Plateau cSAC (000485), Co. Mayo

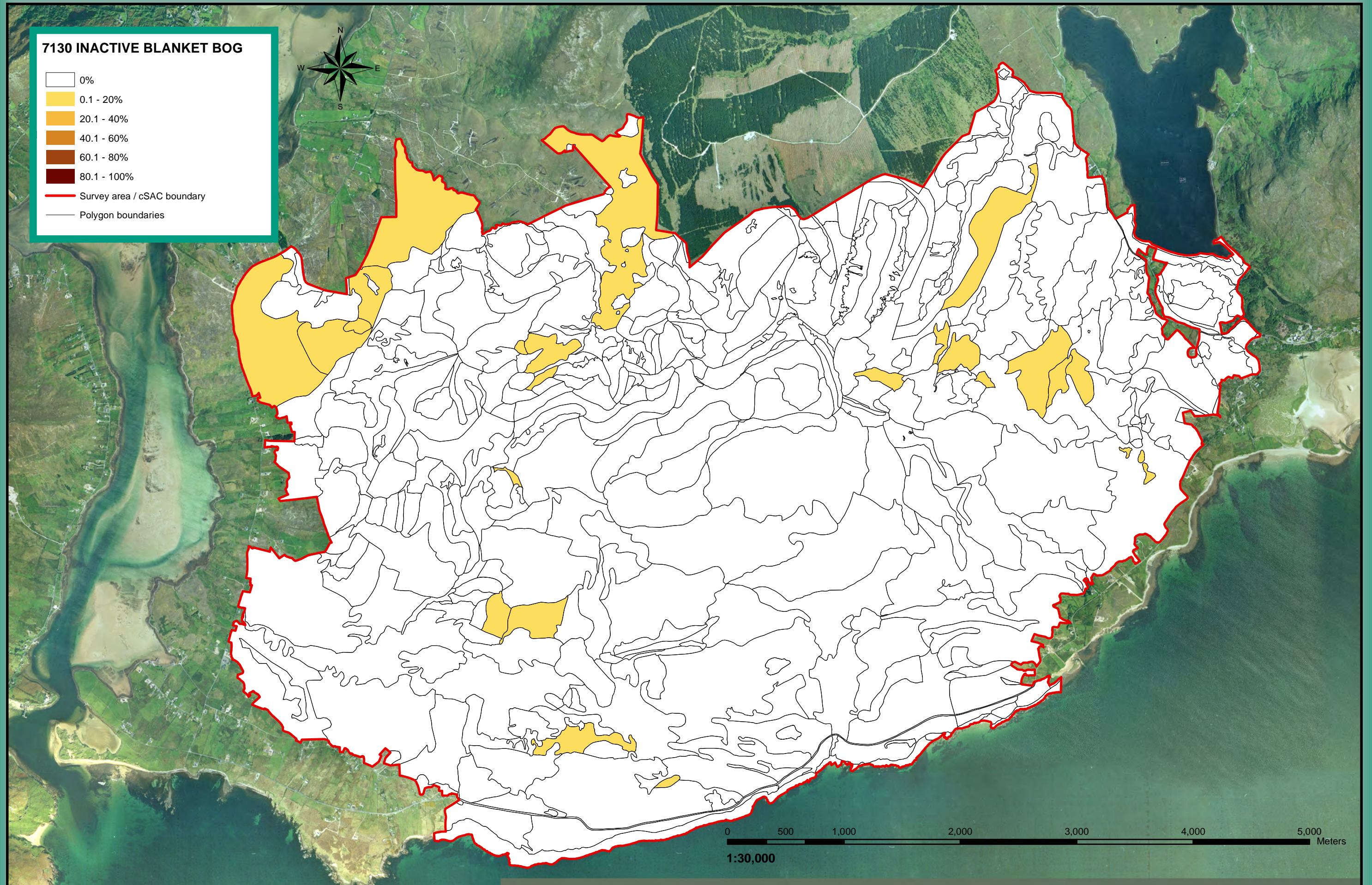


Figure 4g. Cover of 7140 TRANSITION MIRES within Corraun Plateau cSAC (000485), Co. Mayo

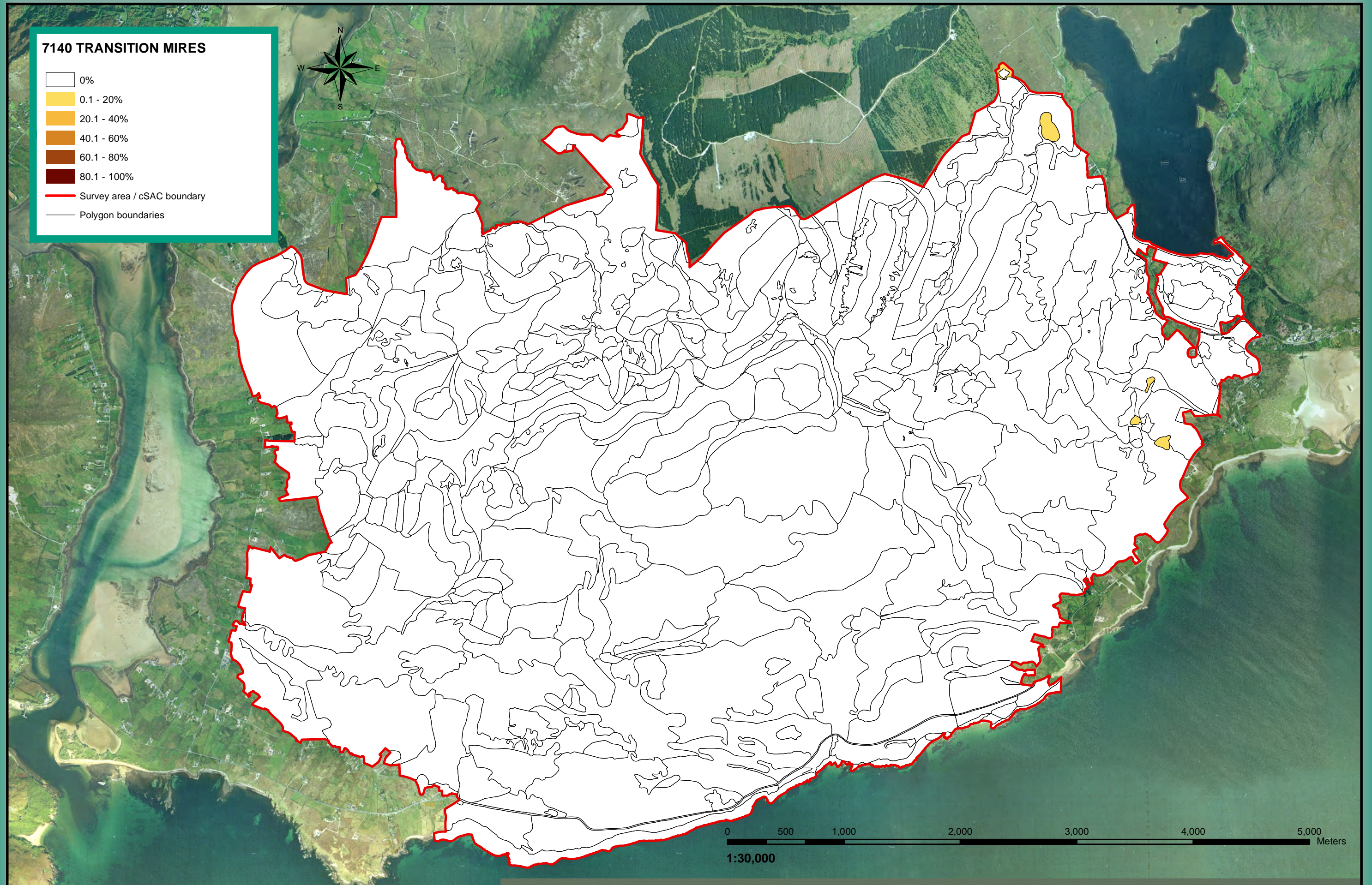


Figure 4h. Cover of 7150 *RHYNCHOSPORION* DEPRESSIONS within Corraun Plateau cSAC (000485), Co. Mayo

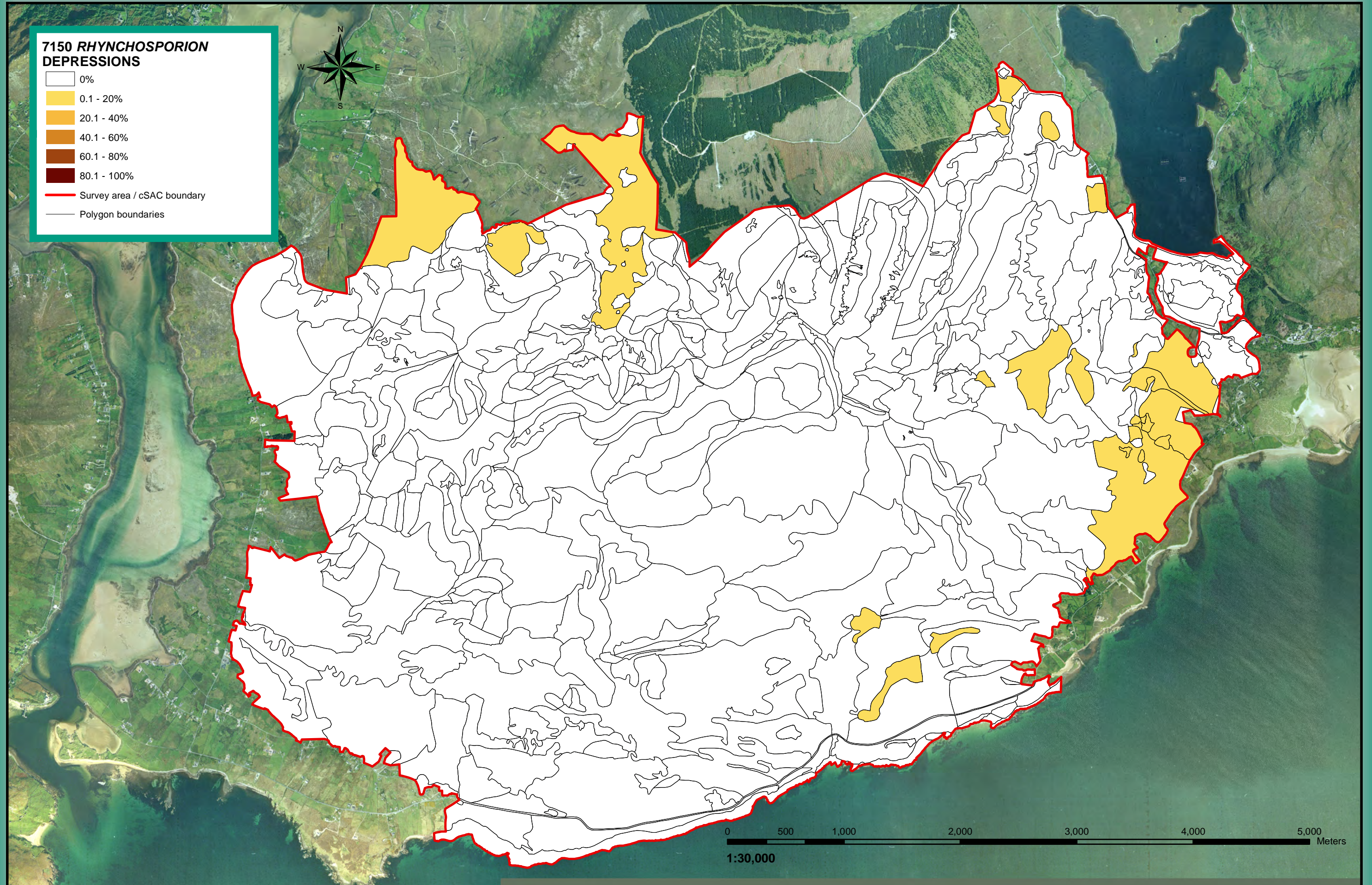


Figure 4i. Cover of 7230 ALKALINE FENS within Corraun Plateau cSAC (000485), Co. Mayo

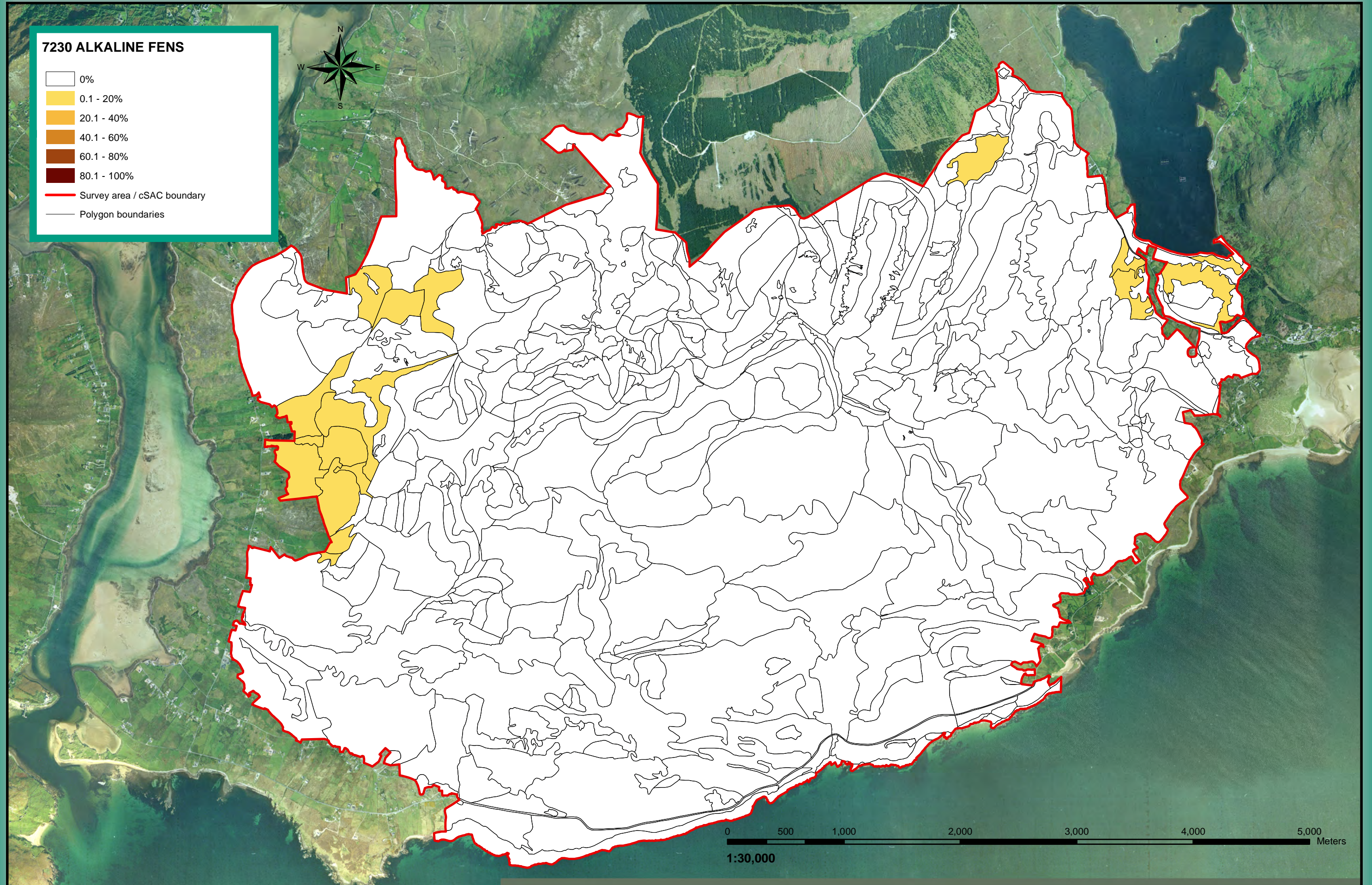


Figure 4j. Cover of 8110 SILICEOUS SCREE within Corraun Plateau cSAC (000485), Co. Mayo

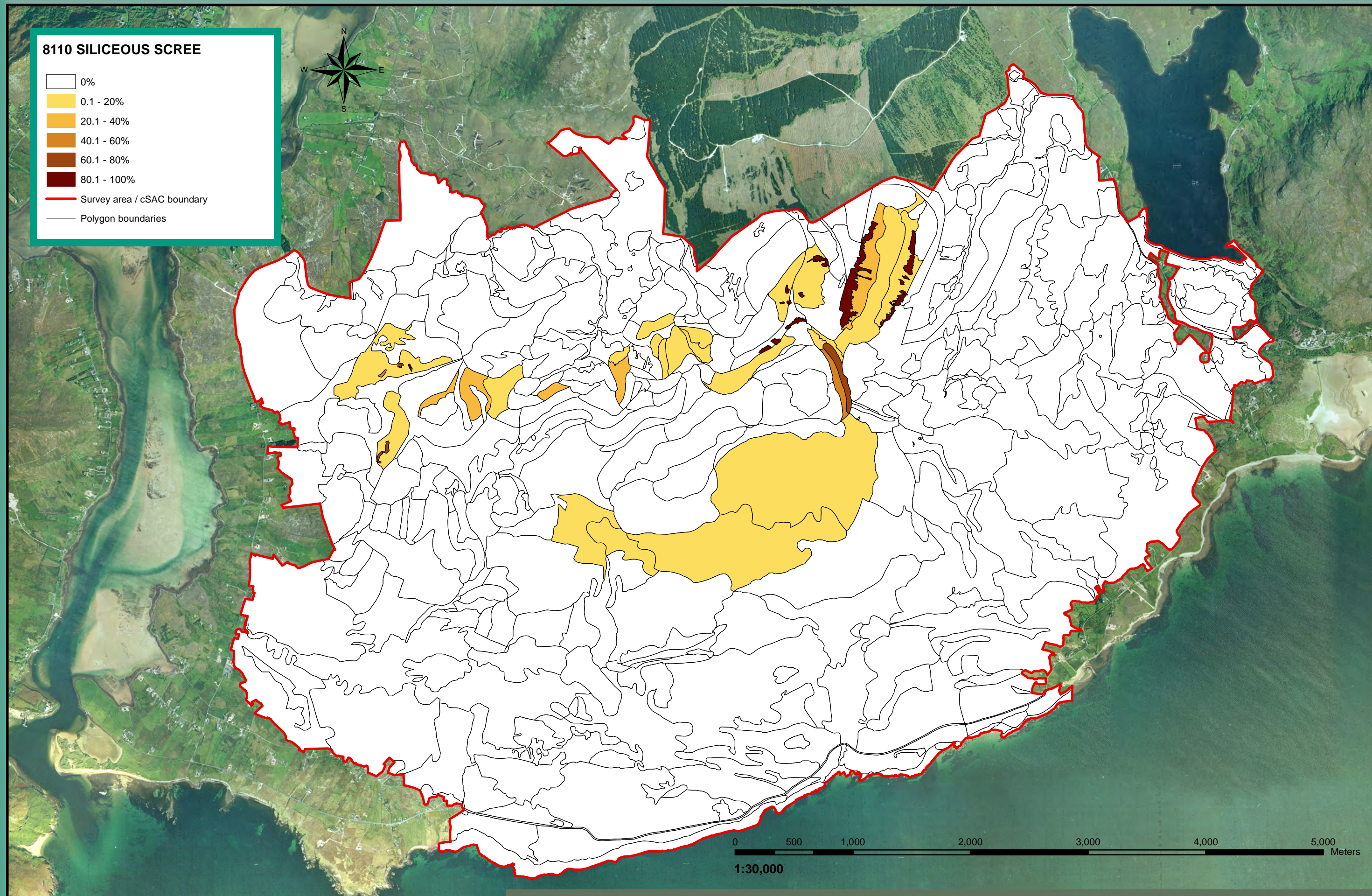


Figure 4k. Cover of 8210 CALCAREOUS ROCKY SLOPES within Corraun Plateau cSAC (000485), Co. Mayo

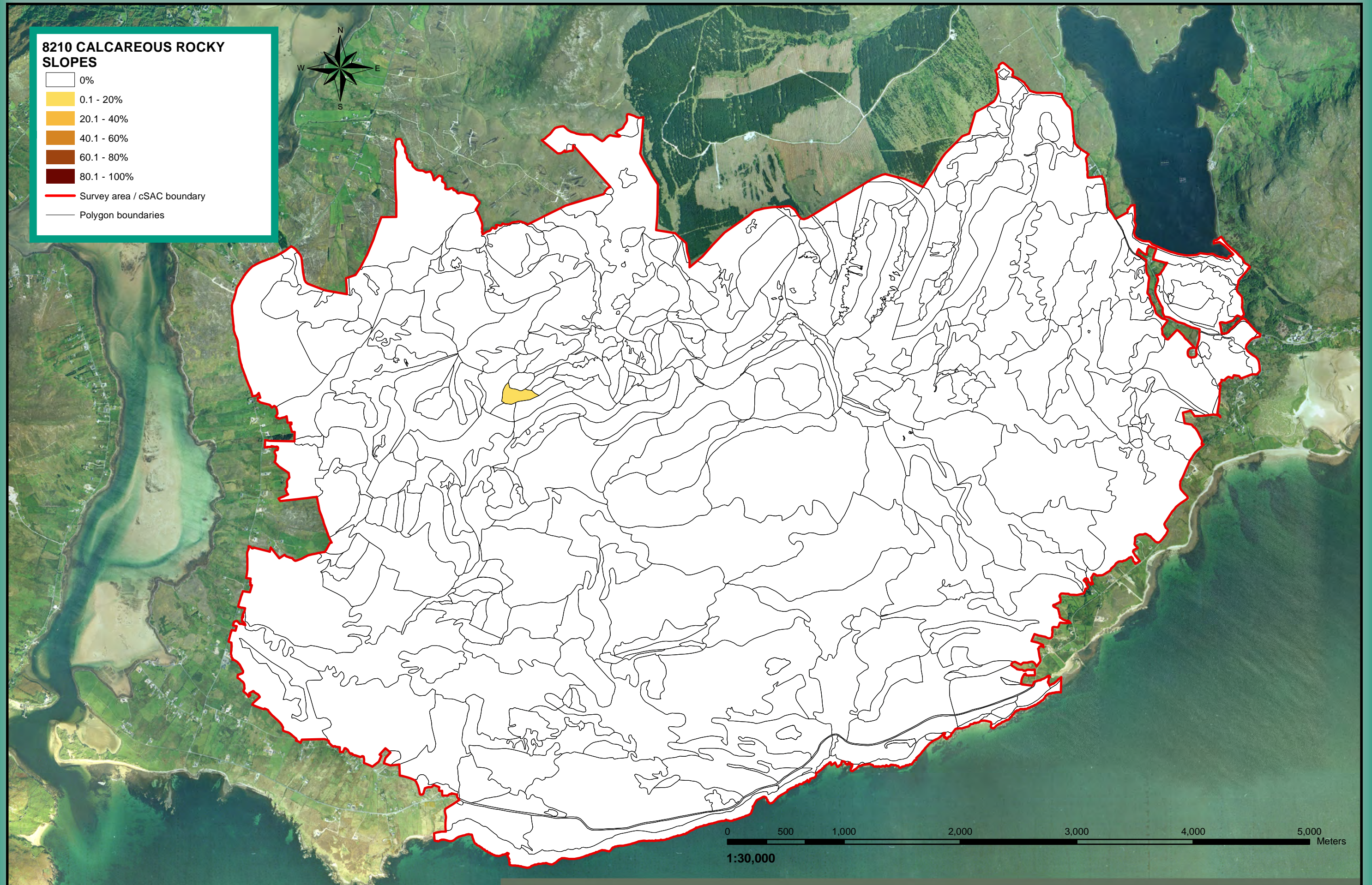


Figure 4I. Cover of 8220 SILICEOUS ROCKY SLOPES within Corraun Plateau cSAC (000485), Co. Mayo

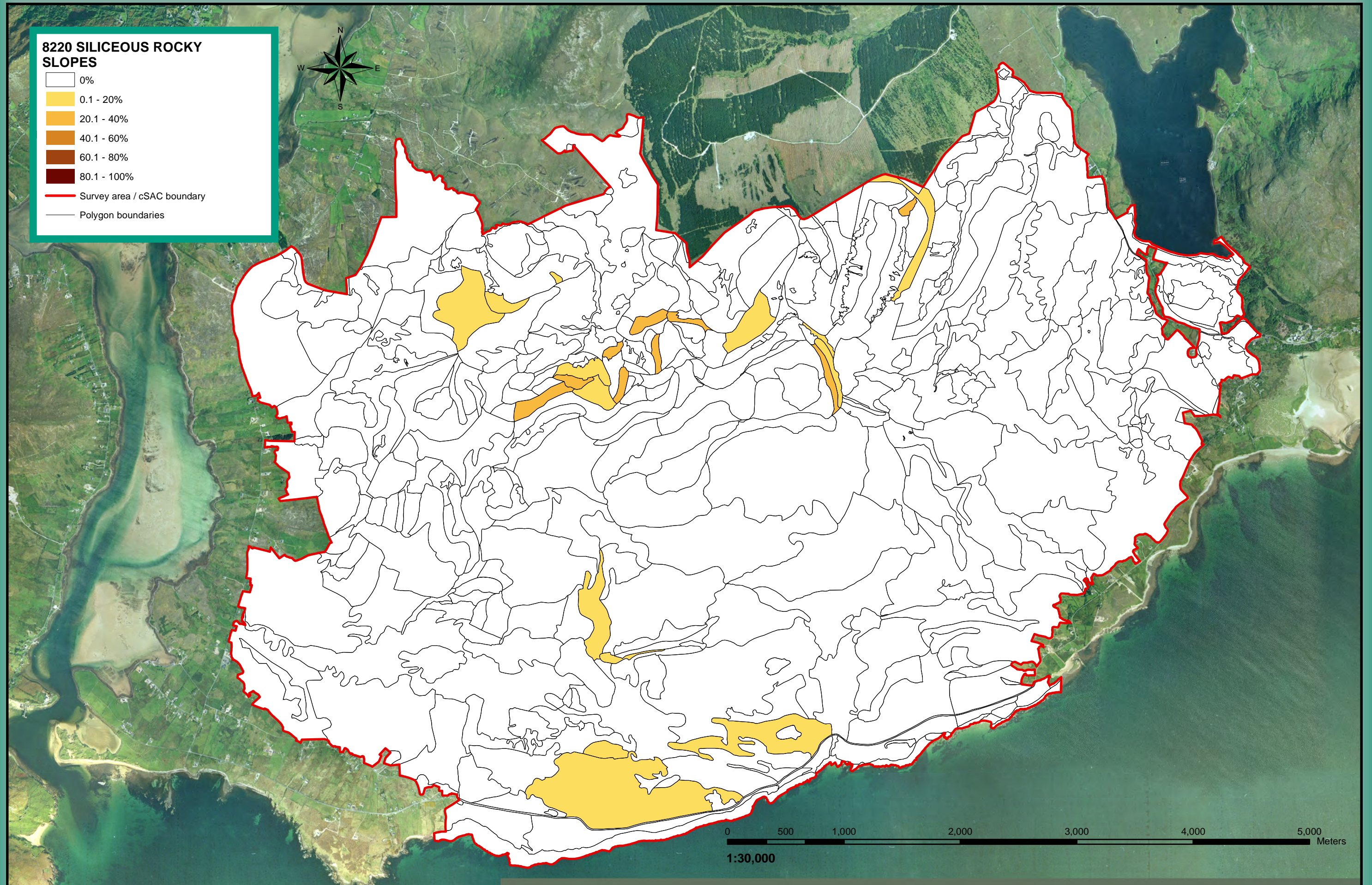


Figure 5. Location of rare and notable plant records within Corraun Plateau cSAC (000485), Co. Mayo

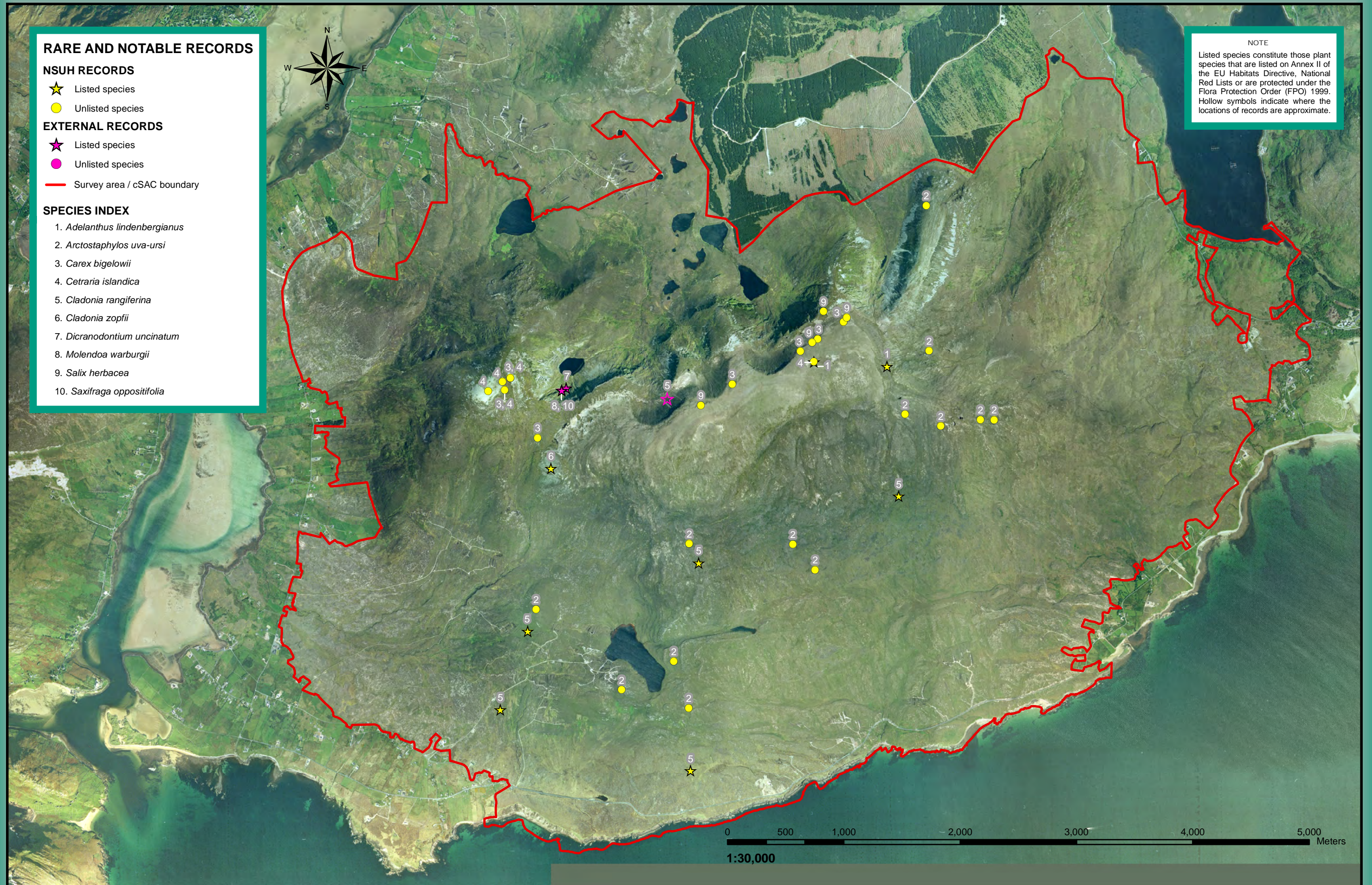


Figure 6. Location and results of conservation assessment monitoring stops and other relevés within Corraun Plateau cSAC (000485), Co. Mayo

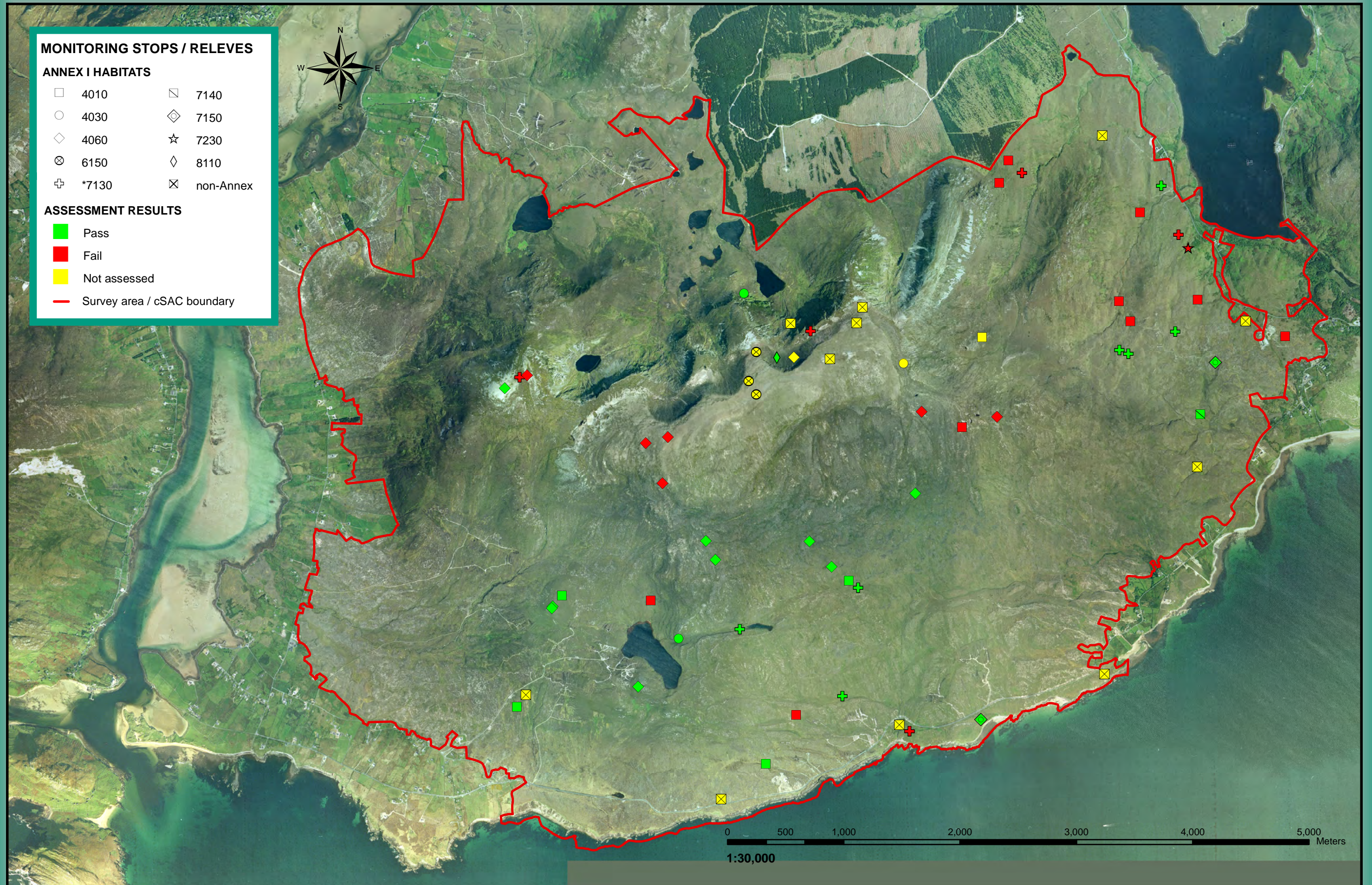


Figure 7. Commonage Framework Plan damage assessment (2000) within and surrounding Corraun Plateau cSAC (000485), Co. Mayo

