

# **Glasnamullen Commonage**

## **2021 Ecological Survey**



### **Final Report**

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## Glasnamullen Commonage

### 2021 Ecological Survey

#### Table of Contents

1. Introduction .....	2
2. SUAS Vegetation Management Measures .....	2
3. 2021 Walkover Survey .....	4
3.1 Bracken Control .....	4
3.2 Flailed Areas/Firebreaks for Controlled Burning .....	5
3.3 Burnt Areas .....	11
3.4 Acid Grassland Habitats .....	21
3.5 Tree Planting .....	21
3.6 Rhododendron Control .....	21
3.7 Track Repairs .....	21
3.8 Management for 2021 .....	23
4. Appendix 1. Maps & Management Recommendations .....	24

## Glasnamullen Commonage

### 2021 Ecological Survey

#### 1. Introduction

A baseline habitat condition and ecological survey and habitat management plan was prepared for the Glasnamullen Commonage in 2018<sup>1</sup> and the measures within same underwent screening for Appropriate Assessment<sup>2</sup>.

A Commonage Management group was established for the commonage and the implementation of the management prescriptions in the plan began in 2019.

The management prescriptions in the plan set out to address the impacts highlighted in the report and to ensure that progress is made towards attaining **Favourable status** for the Annex I habitats present on the site – principally **4030 Dry Heath** and **4060 Alpine and Boreal Heath**.

The major negative impacts on these habitats arise from under grazing, lack of active shepherding, lack of vegetation management, and recreational access resulting in localised peat erosion. Self seeding of Sitka spruce and rhododendron in the southern part of the commonage and the encroachment of bracken into grassland areas are also being addressed.

The extent of habitats present within the commonage and their affinities to either Fossitt (Level 3) or Annex I habitats on the Glasnamullen Commonage were mapped as presented on **Figures 1 and 2 (See Appendix 1)** and their conservation status was assessed and mapped as shown on **Figure 3 (See Appendix 1)**. A series of management prescriptions were drawn up for the commonage as detailed in **Table 1** below and mapped on **Figure 4 (See Appendix 1)**.

#### 2. SUAS Vegetation Management Measures

The proposed management measures for the Glasnamullen commonage set out in 2019 under SUAS were as follows:

##### Year 1 (2019)

1. Cut/burn a number of small sections in areas 1 & 2. Cut up to a maximum of 18ha, in sections of approx. 2-3ha in size. These areas should be dispersed around areas 1 & 2 to encourage sheep to spread out more over these areas. Fire control lines, at least 3m wide shall be cut around each section, either by tractor mounted machine or by hand, to ensure these controlled burning areas are contained. This controlled burning will help build up experience among the farmers and in future years they may be able to work with much smaller control lines. Controlled burning may be carried out either in the spring or the autumn (or both) so long as it is within the legal burning season and has the approval of NPWS.
2. Cut/mulch a firebreak in area 2 west joining the forestry. Approx. 30m wide area to be cut (400m long X 30m wide = 1.2ha).
3. Cut/burn gorse in plot 2 west.
4. Spray Bracken in area 11. A number of small areas, totalling up to 2ha, to be trialled in 2019.

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<sup>1</sup> Wilson, F. (2019). Ecological Baseline Survey prepared for Glasnamullen Commonage as part of the Commonage Management Plan for SUAS. 27th January 2019. Unpublished report for SUAS EIP.

<sup>2</sup> Wilson, F. (2019). Report for Screening for Appropriate Assessment for a Commonage Management Plan at Glasnamullen, Roundwood, Co. Wicklow in accordance with the requirements of Article 6(3) of the EU Habitats Directive. 11th February 2019. Unpublished report for SUAS EIP.

**Year 2 (2020)**

1. Cut or burn a further number of sections in areas 1 & 2 (up to a max of 20ha). Follow the guidelines for year 1 in relation to the size and distribution of controlled burning/cutting areas.
2. Control gorse in area 2 by either cutting or burning
3. Spray a section in area 11, up to 10ha for bracken during 2020.
4. Control the rhododendron and cut out the self-seeded Sitka spruce plants in area 1.

**Year 3 (2021)**

1. Cut or burn a further number of sections in areas 1 & 2 (up to a max of 20ha). Follow the guidelines for year 1 in relation to the size and distribution of controlled burning/cutting areas.
2. Spray a section in area 11, up to 10ha for bracken during 2021.

**Year 4 (2022)**

1. Cut or burn a further number of sections in areas 1 & 2 (up to a max of 20ha). Follow the guidelines for year 1 in relation to the size and distribution of controlled burning/cutting areas.
2. Spray a section in area 11, up to 10ha for bracken during 2022.

**Shepherding**

**Average time per shepherding:** 6 Hours

**No of times sheep are to be shepherded:** 2-3 Times per week from 1<sup>st</sup> May to 30<sup>th</sup> November.

**Identified objective of the shepherding;**

- Sheep are to be kept from straying off the commonage onto surrounding areas.
- Move off sheep from other commonages.
- Monitor sheep health for signs of tick diseases.
- Count numbers of deer grazing the commonage and areas they are grazing.

**Other works to be carried out for entire commonage**

Repair the sheep gathering pen in area 2 in year 1. New wire fence to replace the old one, some new gates, a race and a sorting gate shall be required.

Use feed buckets to encourage more sheep grazing the commonage in the Jan/Feb and the April/May period.

**Use the feed buckets to move grazing pressure to overgrown areas in Jan/Feb time.**

**Ecological Assessment**

The commonage was surveyed in September 2021 by Faith Wilson and Declan Byrne to examine and review the implementation of the proposed measures and make any recommendations regarding same. The observations and recommendations from this visit are set out below.



### 3. 2021 Walkover Survey

The following observations, comments on same and recommendations on the works completed in 2021 are presented.

#### 3.1 Bracken Control

Bracken control was first implemented in 2019 in Area 11. This was done on 22<sup>nd</sup> August 2019 by spraying from a tractor. A rate of 11 litres of Asulox per ha was applied and an area of 2 ha was treated. In 2020 an additional 2ha bracken control (approx.) was carried out on the 27<sup>th</sup> August 2020 using a tractor sprayer and a hand lance. In 2021 spraying with Asulox, using a tractor sprayer was carried out on 31/08/2021. Coverage here seems to have been quite patchy as can be seen on **Plates 1 and 2** below.



**Plate 1. Bracken control in Area 11 – looking north of the Glasnamullen Stream.**



**Plate 2. Bracken control in Area 11 – looking north of the Glasnamullen Stream.**

### **3.2 Flailed Areas/Firebreaks for Controlled Burning**

Fire breaks were first cut around proposed burning areas on the 14<sup>th</sup> and 16<sup>th</sup> February 2019. A flail mulcher on the back of a tractor was used, and two widths of the machine were cut. On the inside of the cut area, it was cut a second time in the opposite direction to the first cut to see what difference that made to the creation of fire breaks and also to the recovery rates. These firebreaks can be seen in the Bing Maps imagery of the commonage from early 2020 as presented on **Figure 1** below.

The areas prepared for control burning in 2019 were located up towards the top of the commonage to encourage the sheep up away from the hill ditch (on the advice of the farmers who are aware of how their sheep use the hill). The cut areas prepared in 2019 generally avoided those areas which were previously burnt, which is very welcome, and were constrained as to where the machine could safely travel and work. It was recommended following the site survey in 2019 that in general the areas prepared for burning may possibly be too large and subsequent areas should be prepared towards the Ballinastoe end of the commonage which is where we ultimately want sheep to move to.

These areas (approx. 2.24ha) were subsequently cut on 27<sup>th</sup> February 2020 and were much smaller in size as advised. Within these flailed areas there was already some good regeneration of ling heather and bilberry. Other areas which were cut as firebreaks in 2019 in preparation for burning in 2020 were also examined. There is a variation in results here – some areas show marginal recovery and regrowth, others show good regrowth of both ling and bilberry, whereas some areas have begun to recover but browsing pressure is knocking back the regrowth of the heath habitat and hence these areas are becoming dominated by acid grassland. Similar results were observed in the 2021 resurvey.

**Table 1. Detail of cutting & controlled burning carried out and proposed**

<b>Year</b>	<b>Cutting</b>	<b>Controlled Burning</b>
2019		1.20
2020	2.25	2.52
2021	5.0 - 6.0	1.2





Figure 1. Firebreaks cut on Glasnamullen Commonage in 2019 (Bing Maps).



Plate 3. Looking north over Glasnamullen towards Powerscourt Paddock showing the areas cut in 2020, while those cut in 2021 were smaller in size and extended east and downslope.



- Heather cutting in Feb 2021
- Heather cutting in Feb 2020
- Heather cutting in Feb 2020 on neighbouring plot

Figure 2. Heather cutting areas on Glasnamullen 2020 and 2021.





**Plate 4.** Looking south over Glasnamullen towards Ballinastoe showing the areas cut in 2020, while those cut in 2021 were smaller in size and extended south towards Ballinastoe.



**Plate 4.** Regeneration of ling heather and bilberry in area burnt in 2019.

**Plate 4** and **5** are one of the areas that got burnt in 2019, which was very intensively burnt. There has been good recovery of heather to date and there is also quite a lot of grass coming in which has been brought in by the sheep, common bent grass and occasional heath rush. Sheep are in here quite a lot,



there is quite a lot of dunging. There is some good recovery of mosses, it is quite slow but it is coming. Quite a lot of *Polytrichum commune* moss and other areas are getting quite grassy. There is also tormentil but overall quite good recovery. There is still quite a lot of brash. Some areas have recovered better than others but it is not bad.



**Plate 5.** Regeneration of ling and bilberry in an area burnt in 2019, which has recovered well in 2021.

**Plate 6** and **7** was taken in a small area that was cut in February this year and there is great regeneration of bilberry. Very little ling if any at this point, still quite a lot of brash but interesting seeing what was under the sward.





Plate 6. This area was cut in February this year and there is great regeneration of bilberry.



Plate 7. A small area flailed in 2021.



### 3.3 Burnt Areas

**Plates 8 and 9** show an area where the fire break was cut in February 2019 and the area was burnt in September 2020. There is very sparse regrowth of heather and bilberry and an awful lot of bare peat and a huge amount of dead brash of heather. There is actually very little difference in the amount of dead brash here after the burn compared to what a fail would have left.



**Plate 8.** This area was prepared for burning in February 2019 and was burnt in September 2020.



**Plate 9.** Sparse regrowth following the burn.





**Plate 10. Large areas of bare peat remain following the burn which was very intense.**

**Plates 12 and 13** are from the area that was burnt in February 2019. It was less intensively burnt than the one further up the slope as shown in the photograph from 2020 in **Plate 11**. There were a lot of areas left unburnt but in between there is a huge amount of erosion. There is very low regeneration of bilberry, heather, there is some regrowth but not much, it is not great. It has structure, but that is about the only advantage because we have tall bits and short bits, so an artificial structure has been created. There are a lot of sheep hanging around here and this may be curtailing the recovery. This was an area that never needed burning as the sheep always went through it anyway.





Plate 11. Photograph from 2020 showing the area on the northern side of the Glasnamullen Stream which was intensively burnt in 2020 (indicated by the red arrow). The patch below this was less intensively burnt in 2019 (indicated by the blue arrow).



Plate 12. Very low regeneration of bilberry and heather in the area less intensively burnt in 2019 – possibly impacted by grazing pressure of sheep.





**Plate 13. Very poor regeneration, dunging and erosion by sheep.**

The area on the southern side of the Glasnamullen Stream which was burnt in 2020 was also examined (see **Plates 14 to 18**). In contrast to the burn on the northern side, this was from the farmers' point of view much less successful, but in terms of ecological outcome much more favourable. There has been very little loss of moss cover. It burnt very quickly (from a farmers perspective - they felt it didn't burn well). There is very good regeneration of bilberry, there is areas of heather and bilberry that weren't burnt. A fair bit of sheep dung was noted here indicating that the sheep are coming in and they are getting something to eat. Even areas where you can see that the moss got a little bit damaged during the burn it is recovering. We have very little bare peat, there is very little erosion. In some of the more intensely burnt areas in this patch both hard fern and narrow buckler fern were regenerating. In terms of mosses, at least three species were recorded, which is positive. This area is recovering quite well. The main growth is actually of bilberry, there is less growth of heather, but it is coming, so it is going to be good grazing for the sheep and the mosaic of dry heath structure with unburnt areas providing a seed source, vegetation holding the ground, lack of erosion, etc. is much better.

An additional area further downslope was also examined. The burn there which was done in September 2020 was intense (see **Plates 19 to 22**). There is some regeneration of bilberry but there has been a lot of loss of mosses in the ground flora. Some mosses were still alive but looking slow to recover at this point. Very tall/tough stems of burnt heather remains. Animals are coming into this area. There is some sparse heather regeneration but the majority of it is bilberry, and there was an awful lot of thatch of dead moss. Some purple moor-grass is coming (very rarely) with some *Acrocarpus* mosses as well. In areas where the heather was less strong there is better regeneration. The really tall old leggy bits are very slow. The fire break on the lower slopes of this area was examined. There is an area where it had been failed and then the fire actually burnt through it. This is probably the best regeneration of ling heather in this area, everything else has been not so good. It got rid of a lot of the brash. But the sheep are favouring this area. There is a lot of bare peat, a lot of trampling, a lot of poaching. It is interesting the difference, just looking at the density of regeneration between areas. An area that was cleared of brash (it was raked back to improve the fire break) has probably the best regeneration of heather.





**Plate 14. Burnt area on the southern side of the Glasnamullen Stream.**



**Plate 15. Lightly burnt areas.**





**Plate 16. The moss layer remained relatively intact and undamaged.**



**Plate 17. Diversity of structure retained and ground cover of mosses intact.**





**Plate 18. Regeneration of ferns.**



**Plate 19. Intensely burnt area on the lower slopes.**





**Plate 20.** The edge of the firebreak where the brash had been raked back after cutting and the fire had extended into this area - this area had the best regeneration of heather.





**Plate 21. Poor recovery following the burn.**



**Plate 22. Very tall heather in this area following burn in mid-2000s.**

On the lower slopes we examined at the legacy of the old burn from the mid 2000s adjoining a recently flailed area (see **Plates 23** and **24**). Even though it is not particularly obvious in terms of height, when you start to look at it with more of an eye for structure, the area that was unburnt has a



greater diversity of species in it. It still has big, tall leggy heather, but there is young heather coming through, there is bilberry, there is a bit of purple-moor grass, there are some mosses, there is the odd bit of tormentil and you can actually walk through it.

In contrast the area that was burnt previously (the burn is visible on the 2005 aerial photographs) is now dominated by heather close on 1 m high and the sheep aren't even going into it. It was a struggle to physically walk through it. In contrast the heather in the unburnt area is now going through it's natural cycle (without having been burnt) and at this point in time is more beneficial for forage than what was burnt a number of years ago, ungrazed and it is now completely inaccessible.



**Plate 23. Three ages of interventions - area flailed in 2020 on lhs, unburnt area beginning to naturally become senescent with increased accessibility and forage for sheep in the background and dense area dominated by heather which is mostly impenetrable in places in the foreground.**



**Plate 24. Looking south – mid 2000s burn showing in greener tones while naturally senescing areas which were previously unburnt are brownish in colour.**

### **3.4 Acid Grassland Habitats**

The areas of acid grassland within the commonage are overgrazed (Areas 2, 9, 16 and 17) and in some areas are at risk of erosion. Grazing pressure in these areas needs to be managed through active shepherding and hunting out of sheep from these areas. These habitats are also under pressure from trampling associated with hill walkers but this is very localised compared to the grazing pressure (and more easily rectified). These areas were not examined in any great detail in 2021.

Sheep numbers on Glasnamullen are still too high even though some of them graze on surrounding hills. Feed buckets on Glasnamullen were used in the period Dec-Feb to encourage sheep into the taller heather areas away from the overgrazed areas.

### **3.5 Tree Planting**

Planting of native trees has taken place in 2021 along the Glasnamullen Stream.

### **3.6 Rhododendron Control**

Rhododendron removal from within the commonage has not yet been tackled.

### **3.7 Track Repairs**

Ground on either side of the railway sleeper boardwalk on the ridge between White Hill and Djouce Mountain is showing signs of trampling pressure and will need upgrading. The section of Wicklow Way walking track in Area 17 that skirts below the summit of Djouce and extending into Powerscourt Paddock also needs repairs. The track within the Glasnamullen Stream valley in Area 16 and 11 is also eroding. The results of the study recently completed during the track erosion surveys conducted by Chris York in 2021 should be reviewed and the recommendations implemented.





**Plate 25. Tree planting along the Glasnamullen Stream.**



**Plate 26. Track erosion between Area 1 and 11.**

### 3.8 Management for 2021

A review of the works which were proposed for 2021 in the plan, coupled with the outcomes from the 2021 walkover was conducted. This has informed the proposed works for 2022 which are presented below.

#### 2020

1. Cut/burn gorse in plot 2 west, marked "B" on the map.
2. Carry out Controlled Burning in the areas on map 3 below inside the firebreaks.
3. Cut the vegetation on a number of areas, up to 0.2ha in size, on Area 1, marked A on the map. Use a suitable machine and cut areas to be spread out and not joined up to create variation in the structure of the vegetation.
4. Control the rhododendron in Area 3.
5. Cut or pull the self-seeded Sitka spruce plants in Area 1

Actions coloured red were not completed.

#### 2021

1. Carry out Controlled Burning in the remaining areas with firebreaks prepared.
2. Cut the vegetation on a number of areas, up to 0.2ha in size, distributed throughout the areas outlined in red on the map below. Use a suitable machine and cut areas to be spread out and approx. 15-20m by 15-20m in size, to create variation in the structure of the vegetation.
3. Control the rhododendron in Area 3.
4. Cut or pull the self-seeded Sitka spruce trees in Area 1.
5. Sheep numbers need to be reduced to sustainable levels in the late summer period.
6. Consultation with NPWS and other stakeholders regarding track condition and develop plan for same.
7. Plant 150 native trees along the river gullies in spring 2021.

#### 2022

1. Cut or burn a further number of sections in areas 1 & 2 (up to a max of 20ha). Follow the guidelines for year 1 in relation to the size and distribution of controlled burning/cutting areas.
2. Spray a section in area 11, up to 10ha for bracken during 2022.

#### **4. Appendix 1. Maps & Management Recommendations**



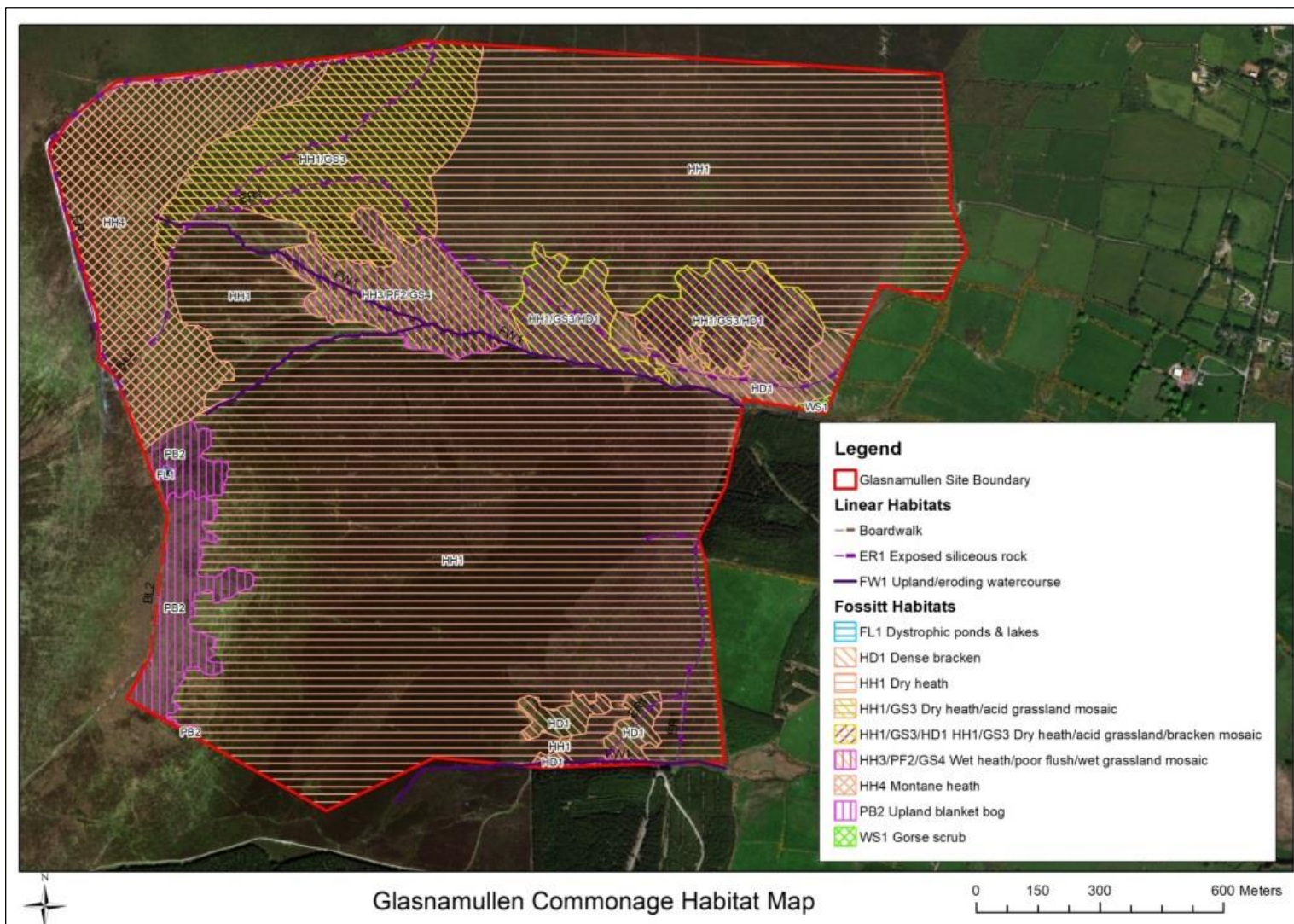


Figure 1. Habitats mapped to Level Three (Fossitt, 2000) within the Glasnamullen commonage.

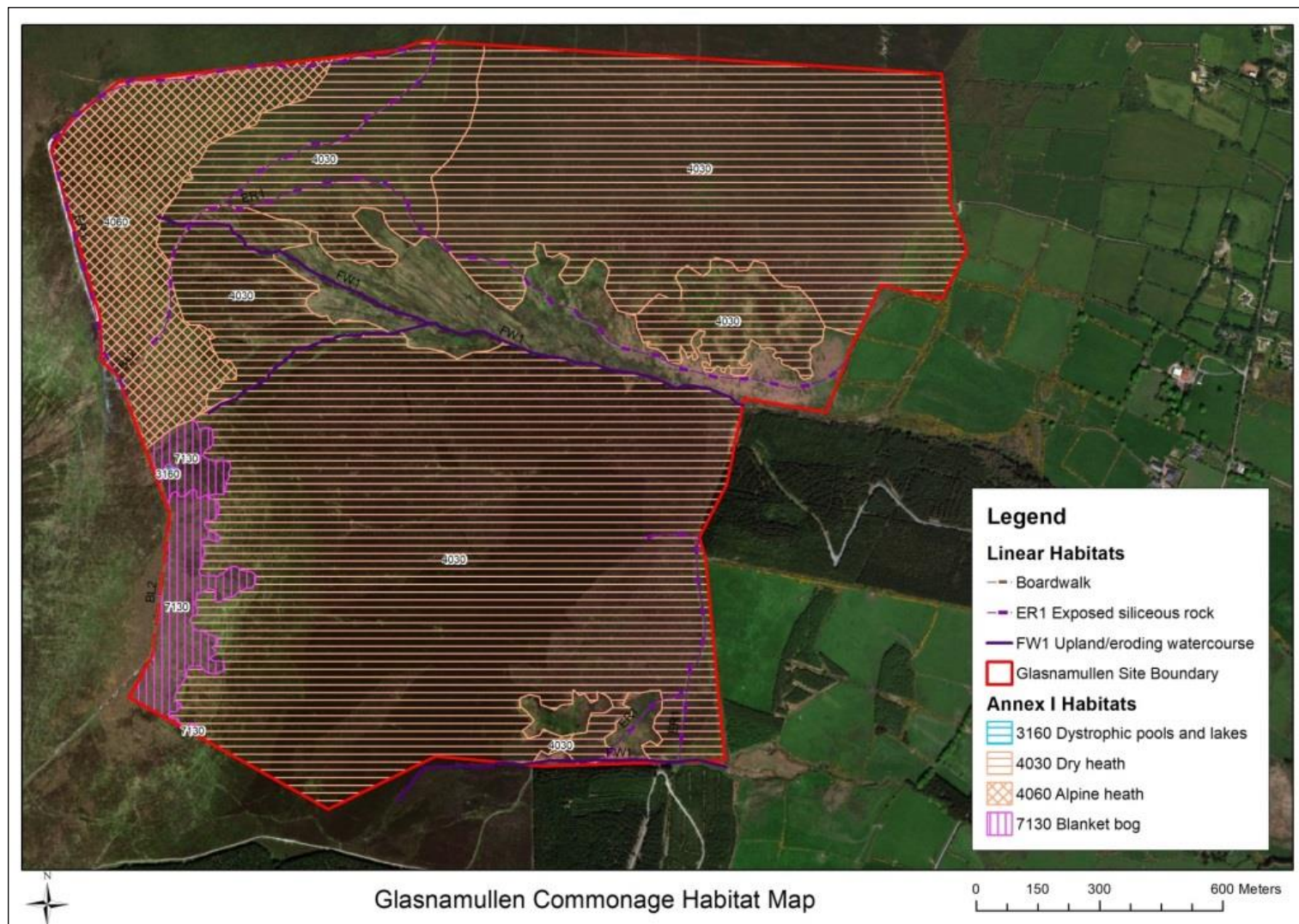


Figure 2. Habitats mapped according to their correspondence with Annex I habitats within the Glasnamullen commonage.



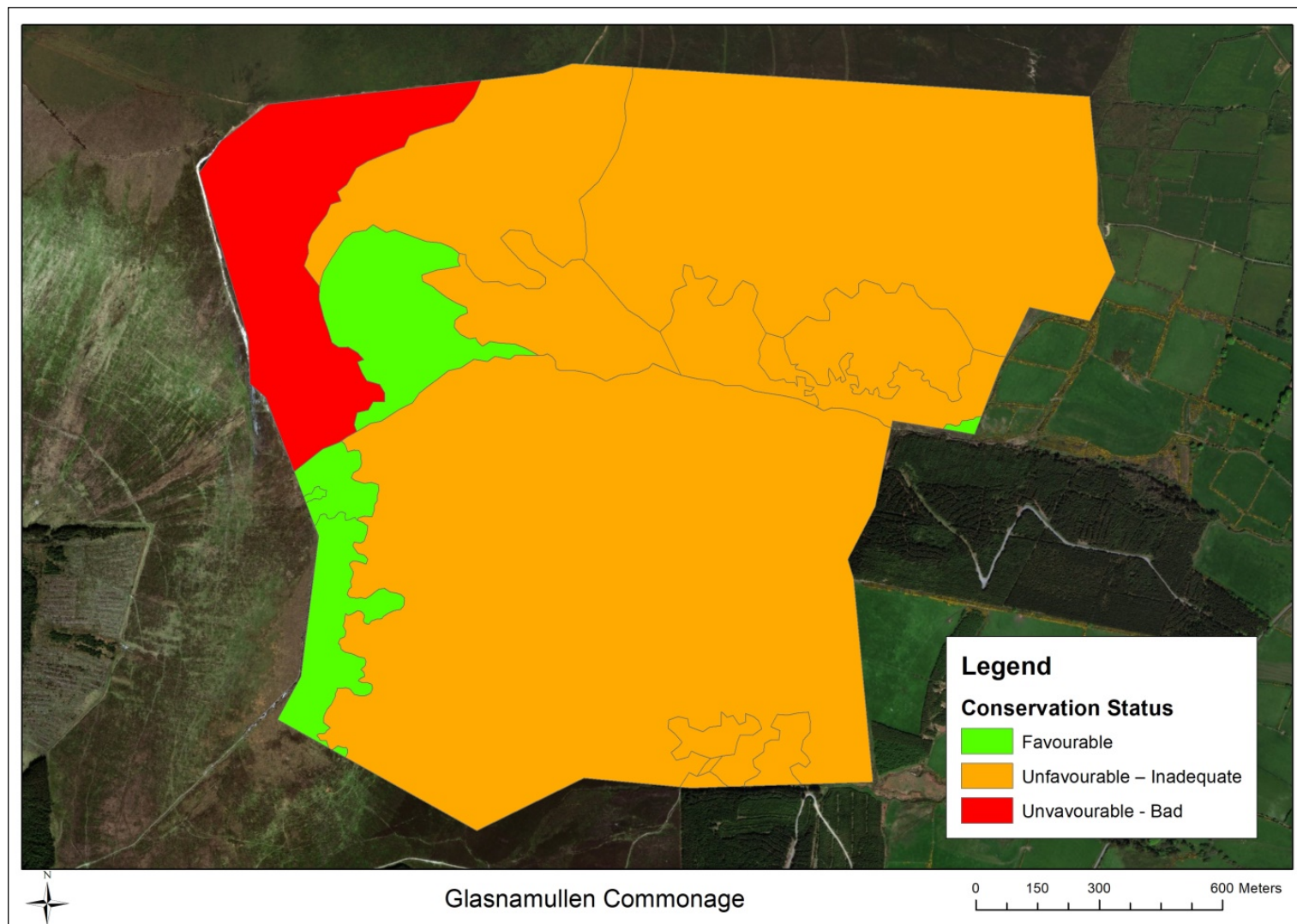


Figure 3. Habitat Condition Assessment for Glasnamullen Commonage.

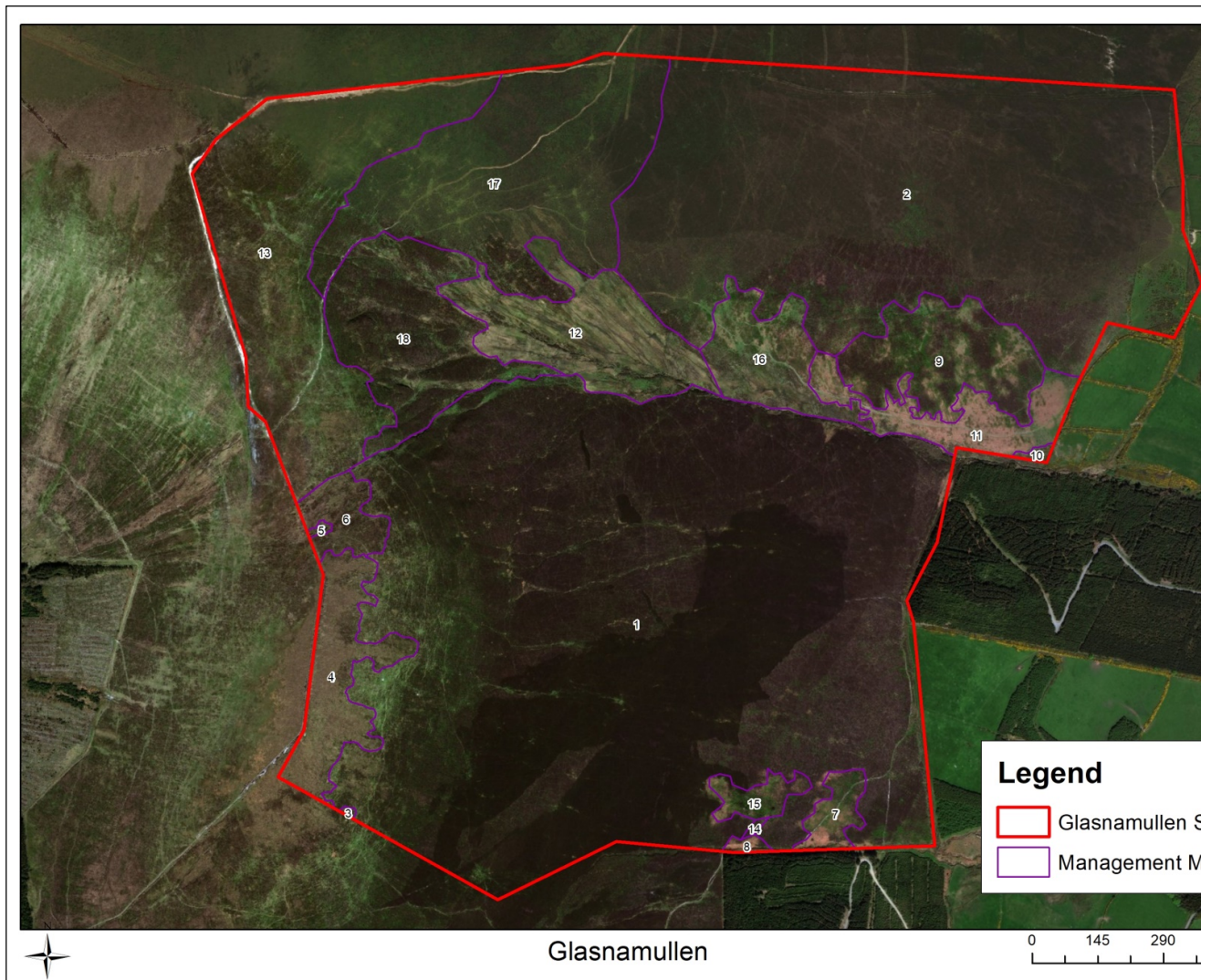


Figure 4. Management measures for Glasnamullen.

**Table 1. Habitats present on Glasnamullen Commonage and Management Recommendations.**

<b>Id</b>	<b>Annex I Code</b>	<b>Fossitt Code</b>	<b>Conservation Status</b>	<b>Habitat</b>	<b>Area (m Sq)</b>	<b>Area (hectares)</b>	<b>Management Measure</b>
1	4030	HH1	Unfavourable - Inadequate	Dry Heath	1201285	120.13	Controlled burning measures as detailed above. Removal of Sitka spruce and rhododendron regeneration.
2	4030	HH1	Unfavourable - Inadequate	Dry Heath	669959	67.00	Controlled burning measures as detailed above.
3	7130	PB2	Favourable	Upland Blanket Bog	598	0.06	Monitor grazing and sheep movements to keep in good condition.
4	7130	PB2	Favourable	Upland Blanket Bog	65059	6.51	Monitor grazing and sheep movements to keep in good condition.
5	3160	FL1	Favourable	Bog Pool	1117	0.11	Monitor grazing and sheep movements to keep in good condition.
6	7130	PB2	Favourable	Upland Blanket Bog	24676	2.47	Monitor grazing and sheep movements to keep in good condition.
7		HD1	Not assessed but needs management	Dense Bracken	16654	1.67	Control bracken.
8		HD1	Not assessed but needs management	Dense Bracken	2955	0.30	Control bracken.
9	4030	HH1/GS3/HD1	Unfavourable - Inadequate	Dry Heath/ Acid grassland/ Bracken	83534	8.35	Monitor grazing and sheep movements. Control bracken.
10		WS1	Retained for breeding birds	Gorse Scrub	1973	0.20	No measures required.
11		HD1	Not assessed but needs management	Dense Bracken	51663	5.17	Control bracken.
12		HH3/PF2/GS4	Unfavourable - Inadequate	Wet Heath/ Flush/ Wet Grassland	103105	10.31	Monitor grazing and sheep movements. Move sheep out of this area where they tend to congregate.
13	4060	HH4	Unfavourable - Bad	Montane Heath	251955	25.20	Restoration work to the walking path.
14	4030	HH1	Unfavourable - Inadequate	Dry Heath	982	0.10	Very small area – monitor.
15		HD1	Not assessed but needs management	Dense Bracken	14494	1.45	Control bracken.
16		HH1/GS3/HD1	Unfavourable - Inadequate	Dry Heath/ Acid grassland/ Bracken	55680	5.57	Monitor grazing and sheep movements. Move sheep out of this area where they tend to congregate. Control bracken.
17	4030	HH1/GS3	Unfavourable - Inadequate	Dry Heath/ Acid grassland	238734	23.87	Monitor grazing and sheep movements. Move sheep out of this area where they tend to congregate. Monitor erosion along the walking track.
18	4030	HH1	Favourable	Dry Heath	116876	11.69	Monitor grazing and sheep movements. Move sheep out of this area if it begins to get overgrazed.