

**Carrigeenduff Commonage**

**2021 Ecological Survey**



**Final Report**

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## **Carrigeenduff Commonage**

### **2021 Ecological Survey**

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## Carrigeenduff Commonage

### 2021 Ecological Survey

#### 1. Introduction

A baseline habitat condition and ecological survey and habitat management plan was prepared for the Carrigeenduff Commonage in 2019<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 2020.

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 severely damaged 7130 Blanket Bog, 4030 Dry Heath, 4010 Wet Heath and 4060 Alpine and Boreal Heath in the long term as well as protection of the existing acid grassland resource. The management prescriptions in the SUAS plan for the commonage also need to ensure that **Favourable status** is achieved for the Annex I bird species, which form the Special Conservation Interests for this SPA: Peregrine falcon (*Falco peregrinus*), Merlin (*Falco columbarius*).

The major negative impacts on these habitats arise from a legacy of decades of uncontrolled burning resulting in extensive areas of peat erosion along the summits and ridges (impacting on upland blanket bog and montane heath) with subsequent severe peat erosion, damage and losses to dry heath habitat with subsequent invasion by dense bracken, inappropriate grazing (from sheep and also from deer), which has not allowed burnt areas to recover, and has also favoured the development of species-poor acid grassland over heath. Overgrazing is also contributing to erosion on the ridges and summits coupled with natural exposure and erosion following burning activities. Self-seeding of Sitka spruce into 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 Carrigeenduff 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 Carrigeenduff commonage as set out in 2019 under SUAS were as follows:

##### Year 1 (2020)

1. No burning to be carried out on any of the site.
2. Open up the access route on the old laneway from the enclosed lower fields on to the commonage for machinery.

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 Unpublished report for SUAS EIP.

<sup>2</sup> Wilson, F. (2020). Report for Screening for Appropriate Assessment for a Commonage Management Plan at Carrigeenduff, Co. Wicklow in accordance with the requirements of Article 6(3) of the EU Habitats Directive. 16<sup>th</sup> January 2020. Unpublished report for SUAS EIP.

3. Some trial mechanical cutting of small areas of gorse and strong heather in area 4 (5, 6, 60, 72 & 73) – specialist machinery to be trialled.
4. Spray bracken in areas 4 (1 - Only in upper reaches of 1 as the lower slopes important for whinchat, 7, 76, 78 & 80) with Asulox. This may be done by quad with hand lance or with knapsack sprayers as it is inaccessible for tractors. Concentrate on the fringes where the bracken is spreading into surrounding areas and where there is still other vegetation growing underneath the bracken. Can spray up to 3ha in year 1.
5. Pull/cut self-seeded sitka spruce trees in area 2 (5) and area 4 (3 & 6).
6. Block some of the eroding gullies in blanket bog in area 1 (1 & 2) to restore the hydrology in this area.
7. Fence off at least 2 enclosure areas to see what recovery rates are like in Area 1 and discuss restoration options with NPWS for trial work. Enclosures will need to be stock and deer proof.
8. Repair boundary fence of the commonage along the north east of area 4.
9. Reinststate boundary fence between Areas 1, 2 and 14 in Area 1 to assist in management of sheep on the hill and keep them off upper damaged slopes – will need to have a defined access point for future management of sheep and walking access (signage to inform walkers at access point in Coillte plantation advising of function of fence and provision of gate)
10. Restoration of gully woodland along the Inchavore Stream and the establishment of similar small stands of native upland woodland along Crickgarr and Duff Brook. These species could also be used to diversify the small area of remnant planting at Mountain Lodge, Carrigshouk in Area 2 (2 and 4).
11. Look at trialling some peatland restoration measures in at least one area of bare peat.

#### **Year 2 (2021)**

1. No burning to be carried out on any of the site.
2. Spray bracken in areas 4 (1 - Only in upper reaches of 1 as the lower slopes important for whinchat, 7, 76, 78 & 80), (approx. 3ha in total) with Asulox to control Bracken. This may be done by quad with hand lance or with knapsack sprayer.
3. Some trial mechanical cutting of small areas of gorse and strong heather in area 4 (5, 6, 60, 72 & 73) – specialist machinery to be trialled.
4. Block some of the eroding gullies in blanket bog in Area 1 (1 & 2) to restore the hydrology in this area.
5. Cut/pull more of the self-seeded sitka spruce trees in Area 2 and 4.
6. Discuss repairs to walking track on Kanturk/Bracket Rocks ridge with NPWS to see what is possible or practical.
7. Plant additional native trees in existing stands in Area 2 (2 and 4) and protect new plantings from browsing.
8. Establishment of gully woodland along the tributaries of the Inchavore River in Area 1.

#### **Year 3 (2022)**

To be reviewed at the end of Year 2.

#### **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:**

- Move off sheep from neighbouring commonages, especially off the ridge in areas 1 & 2
- Sheep to be moved off area 1 and along ridges regularly to reduce grazing pressure there and allow vegetation to recover. Move sheep into the taller vegetation regularly to get them to graze these areas.
- Monitor sheep health for signs of ticks or other diseases.
- Count numbers of deer grazing the commonage and areas they are grazing.



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

Use feed buckets to encourage more sheep grazing on the northern slopes of area 4 of the commonage in the Jan/Feb and April/May period, particularly in the areas of stronger vegetation.

Use feed buckets in April/May for the hogget's on the lower slopes of Area 2 where dense heather is to encourage sheep off the ridge in Area 1 & 2.

Discuss repairs to walking tracks on Kanturk/Bracket Rocks with NPWS to see what is possible or practical.

Discuss the blocking of the drain along the military road with Wicklow County Council & NPWS and track damage along forestry with Coillte & NPWS.

Set up a number of enclosure sites for deer & sheep in the bare peat areas to see if natural regeneration will take place. May carry out some peat restoration work following discussion with NPWS.

**Details of sheep stocking rates proposed**

There are only 4 active shareholders using the commonage. In 2019, two of the graziers, had approx. 450 ewes on the hill for most of the year.

The plan is to have 600 to 700 sheep (ewes & hoggets) on the hill for 9-10 months of the year, which will happen over the next 2 to 3 years and will involve a change in breeding for some of the graziers. Numbers will be recorded accurately in 2020 and if amendments need to be made to this plan, it will be done at the end of 2020.

Sheep grazing on Areas 1 & 2 will be closely monitored and any necessary amendments to numbers will then be made.

**Ecological Assessment**

The commonage was surveyed in September 2021 by Faith Wilson 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. To date the works have focused in Area 4.

#### 3.1 Mulched Areas

A specialist machine was used to mulch European gorse along either side of the track at the foot of the commonage in Area 4 to create a fire break. This was done sensitively with due regard for the native broadleaf trees which are found here. Regeneration of vegetation here was examined in 2021 and is quite grass dominated with frequent gorse seedlings and regeneration from the cut/flailed stumps. A series of bee hives were located here.



Plate 1. Areas cut by a specialist mulching machine along the track in 2020.





**Plate 2. Bee hives located above the track where the gorse was cut in 2020.**



**Plate 3. Clearance of gorse adjacent to the commonage.**

### **3.2 Previously Burnt Areas**

The ridge in Management Area 4 is slowly recovering following previous burns. The vegetation is mostly dominated by ling heather, but there is quite a lot of purple moor grass in amongst it. There's

also quite a lot of deer-grass, occasional heath rush and more rarely some cross-leaved heath, but very sparse bell heather. The vegetation is starting to come back very slowly. The ground is still very hard. There is still very little moss cover, so it is very important that this area does not get burnt again.



**Plate 4. Vegetation on the ridge recovering following previous uncontrolled burning - note uniformity of height.**

### **3.3 Acid Grassland Habitats**

Grazing impacts are continuing to favour acid grassland over heath in location 2, 3, 4 and 106 in Area 4.

### **3.4 Track Erosion**

Areas of acid grassland now mark the walking route up Kanturk on the ridge and are indicative of trampling pressure and in some areas the pressure is so great that the underlying peat is beginning to erode. Sheep are tending to favour these areas also. Grazing pressure in these areas needs to be managed through active shepherding and hunting out of sheep from these areas.

The trampling associated with hill walkers is localised on the ridge but nevertheless needs to be addressed. Once the old boundary ditch is crossed the trampling pressure here is more severe with eroding peat and damage to wet flushes and blanket bog habitat. Similarly on the ridge between Bracket Rocks and Kanturk.

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 5. Trampling pressure is resulting in localised erosion and the creation of acid grassland at the expense of blanket bog/heath. Sheep also tend to favour these areas and should be shepherded out. Track repair works will need to be conducted here.**

### **3.5 Vegetation Cutting**

There has been some manual cutting of leggy Ling Heather in location 100 and 107 in Area 4 near the adjoining forestry. A series of small patches (27) have been manually cut and cleared by a crew of contractors using brush cutters in the rough and stony areas.

Regeneration in these areas was viewed from the slopes above and in some areas large areas of brash seem to be preventing regeneration of heather as was witnessed on Powerscourt Paddock.

The square areas of cutting down below bracket rocks and between bracket rocks and the conifer plantation are regenerating well. There is a mixture of species coming, including fraughan, there is a only a small amount of heather. In some areas the brash is quite dense so it is slower but in other areas there is grass vegetation developing and the sheep seem to be using these areas and certainly the deer are.

There was a large number of deer in this area which would also be impacting on the regeneration of the vegetation here.





**Plate 8.** Small patches of heather were manually cut with brushcutters in the vicinity of the forestry on the slopes below Bracket Rocks, vegetation recovery in these areas is variable.

### **3.6 Access Lane Works**

A new fence was erected along the edge of the track at the foot of the commonage.



**Plate 9.** Fencing work along the access lane.



### 3.7 Upland Gully Woodland

The establishment of gully woodland along the watercourses in the commonage began in 2021. Planting was completed along the upper regions of Duff Brook. Some of the trees were planted on the open mountain side and on the actual ridge which are highly exposed locations and are unlikely to do well as a result.



**Plate 10. Planting on the ridge and open hillside – a very exposed and unlikely location for trees to establish.**

Other trees were planted in a better location in the sheltered slopes on either side of the watercourse further downslope.

The trees are in general planted well. The posts are all put in very strongly and well-staked. The majority of the tubes are on the right way with the fluted end at the top with just one or two the wrong way.

Several stands of remnant gully woodland are present and these should be expanded and connected with additional planting and tree establishment measures. The terrain along the Inchavore Stream will provide some shelter for trees from exposure and wind but they will need significant protection from browsing pressure and deer. Likewise on the other five watercourses within the commonage.





**Plate 11. Trees planted further downslope along the Duff Brook are more likely to succeed.**



**Plate 12. Remnants of Upland Gully Woodland on the slopes surrounding the Inchavore Stream. Planting in 2021 should concentrate on linking these areas and extending woodland down to the track.**



**Plate 13. Upland Gully Woodland should be established on the areas of bracken between the rocky outcrops at Carrigshouk.**

### **3.8 Deer control**

Twenty invasive Sitka deer hybrids were recorded during the site visit. Deer populations on the commonage need to be addressed and culled in a collaborative programme with NPWS, Coillte and adjoining commonage shareholders.

### **3.9 Management Measures for Areas 1, 2 and 3**

The biggest challenges on the commonage are faced in Management Area 1 where there is severe peat erosion which is impacting on the Annex I habitats present here. Proposed works to these areas under the SUAS project in collaboration with NPWS include:

- Block some of the eroding gullies in blanket bog in area 1 (1 & 2) to restore the hydrology in this area.
- Fence off at least 2 enclosure areas to see what recovery rates are like in Area 1 and discuss restoration options with NPWS for trial work. Enclosures will need to be stock and deer proof.
- Reinststate boundary fence between Areas 1, 2 and 14 in Area 1 to assist in management of sheep on the hill and keep them off upper damaged slopes – will need to have a defined access point for future management of sheep and walking access (signage to inform walkers at access point in Coillte plantation advising of function of fence and provision of gate).
- Restoration of gully woodland along the Inchavore Stream and the establishment of similar small stands of native upland woodland along Crickgarr and Duff Brook. These species could also be used to diversify the small area of remnant planting at Mountain Lodge, Carrigshouk in Area 2 (2 and 4).
- Look at trialling some peatland restoration measures in at least one area of bare peat.

### 3.10 Management for 2022

A review of the works which were proposed for 2020 and 2021 in the plan, coupled with the outcomes from the 2021 walkover was conducted. Items highlighted in red have not been completed. This has informed the proposed works for 2022.

#### 2020

1. Open up the access route on to the commonage for machinery.
2. Some mechanical cutting of gorse and strong heather in area 4 (5, 6, 60, 72 & 73).
3. Spray bracken in areas 4 (1, 7, 56, 76, 78 & 80) with Asulox. This may be done by quad with hand lance or with knapsack sprayers as it is inaccessible for tractors. Concentrate on the fringes where the bracken is spreading into surrounding areas and where there is still other vegetation growing underneath the bracken. Can spray up to 3ha in year 1.
4. Pull/cut self-seeded sitka spruce trees in area 2 (5) and area 4 (3 & 6).
5. Block some of the drains in area 1 (1 & 2) to restore the hydrology in this area.
6. Fence off at least 2 enclosure areas to see what recovery rates are like in area 1 and discuss restoration options with NPWS for trial work.
7. Repair boundary fence along north east of area 4.

**Works in red were not carried out in 2020**

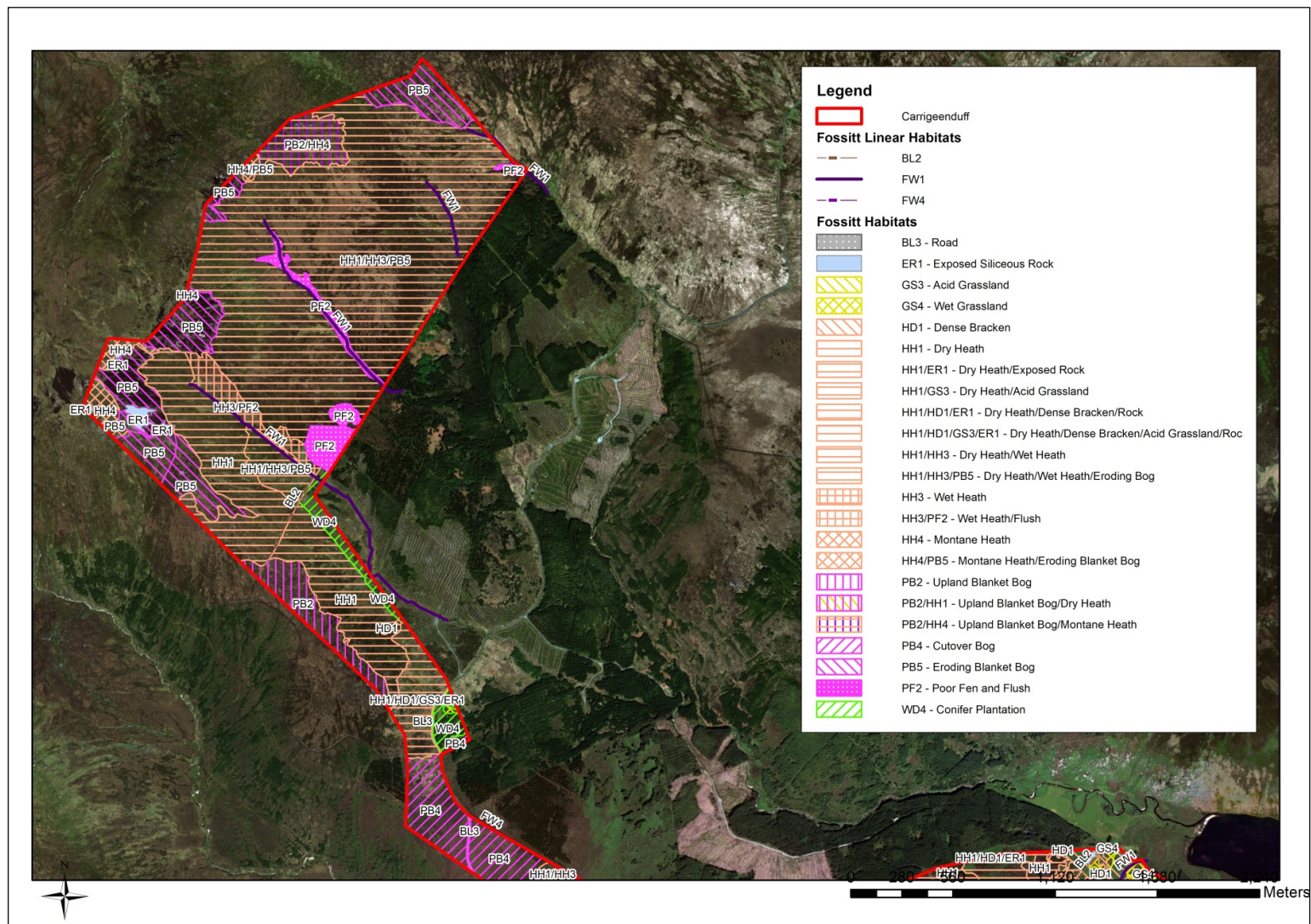
#### 2021

1. Spray bracken in areas 4 (1, 7, 56, 76, 78 & 80), (approx. 3ha in total) with Asulox to control Bracken. This may be done by quad with hand lance or with knapsack sprayer.
2. Some manual cutting of gorse and strong heather with brushcutters in area 4 (67 & 74 and 3, 5, 6, 72 & 73), up to 5 ha in total in small areas of approx. 10-15m by 10-15m.
3. Block some of the drains in area 1 (1 & 2) to restore the hydrology in this area. This work to be carried out under supervision from NPWS. At least one day with 3 CG members to be allocated.
4. Discuss repairs to walking track with NPWS to see what is possible or practical.
5. Plant 150 native trees along the river gullies in spring 2021.
6. Look at trialling some peatland restoration measures in at least one area of bare peat and fencing off enclosure sites under direction from NPWS.

Use feed buckets to encourage more sheep grazing in area 1 of the commonage in the Jan/Feb and April/May period, particularly up in the areas of stronger vegetation.

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











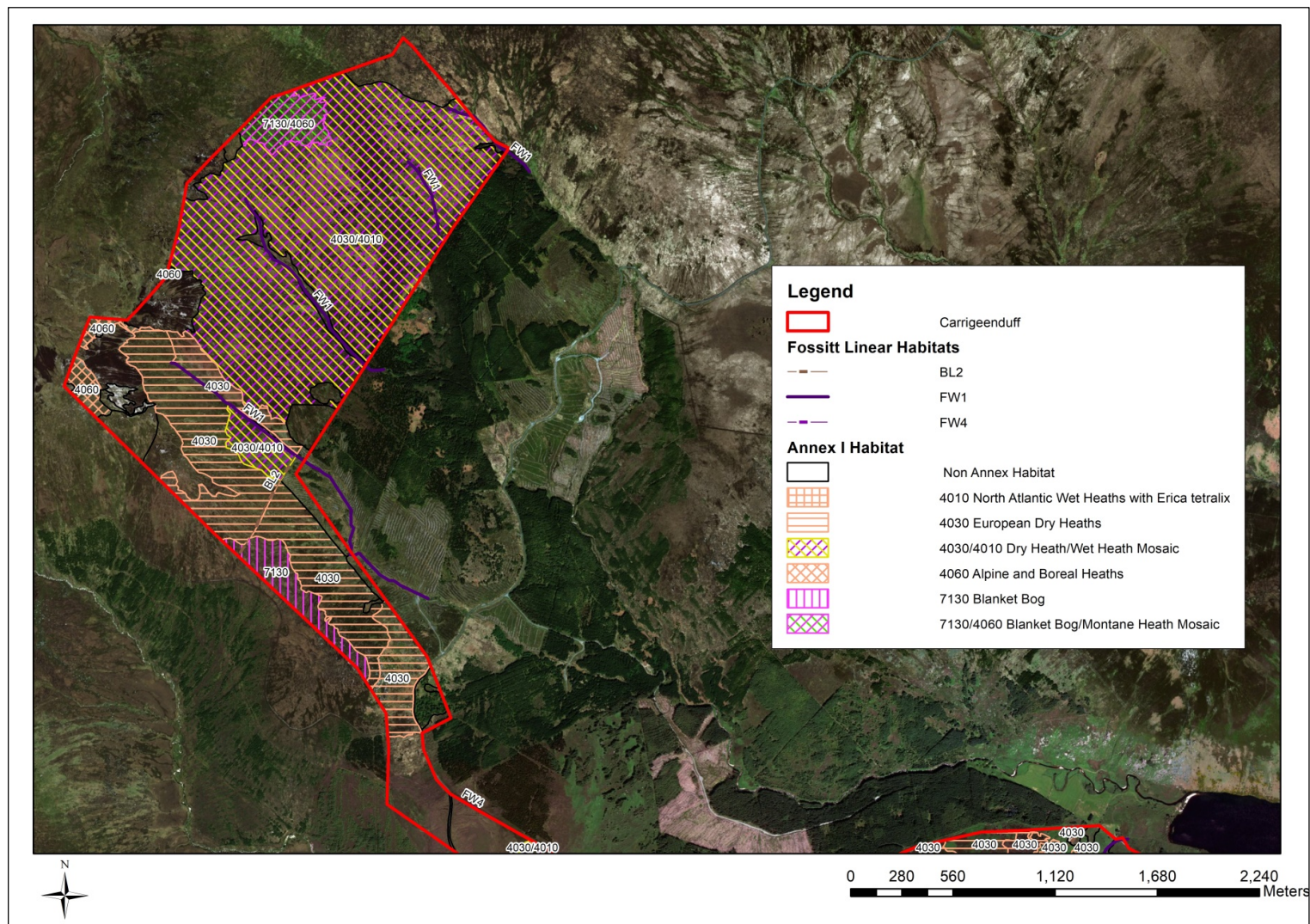


Figure 3. Habitats mapped according to their correspondence with Annex I habitats within the Carrigeenduff commonage.



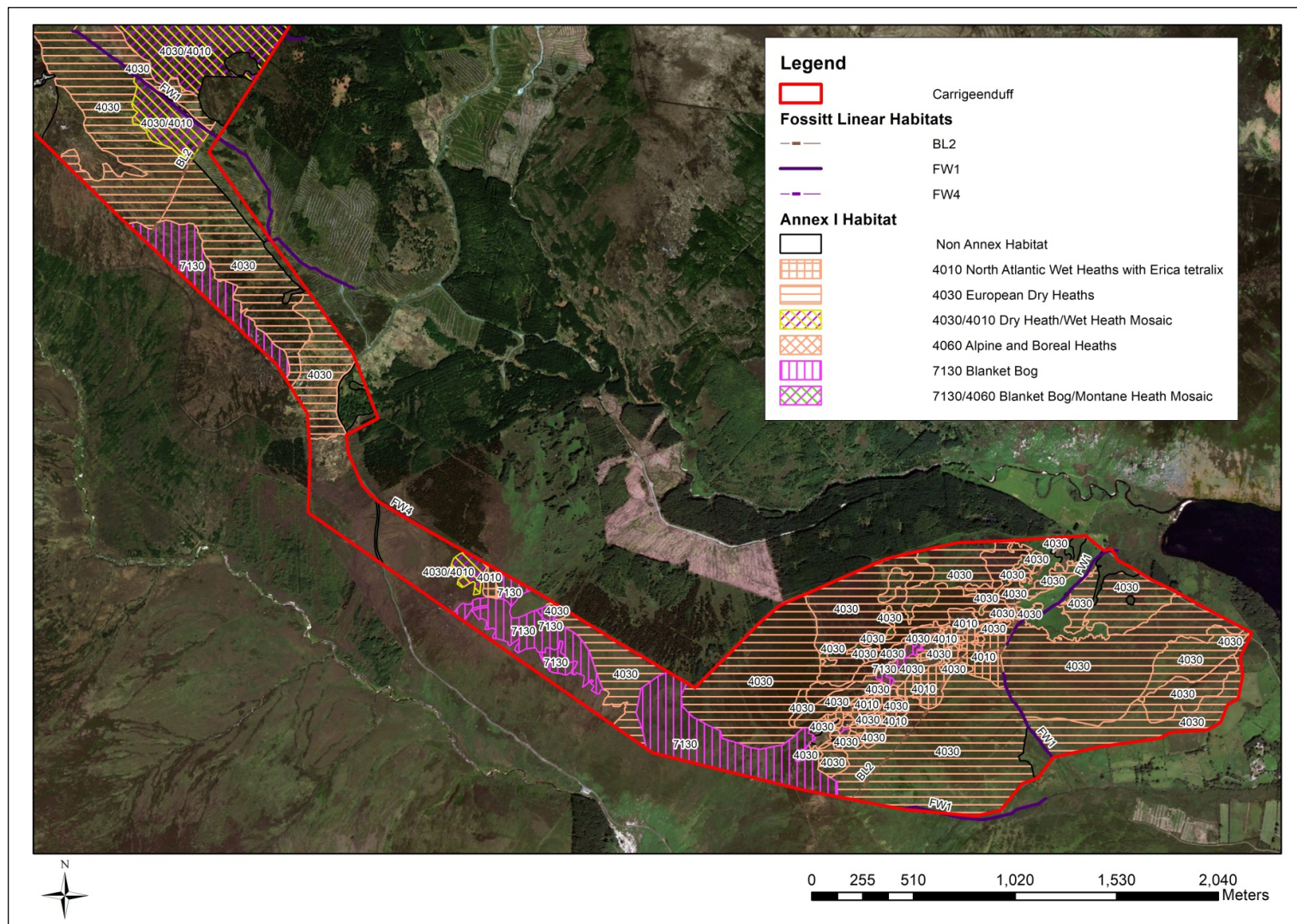


Figure 4. Habitats mapped according to their correspondence with Annex I habitats within the Carrigeenduff commonage.



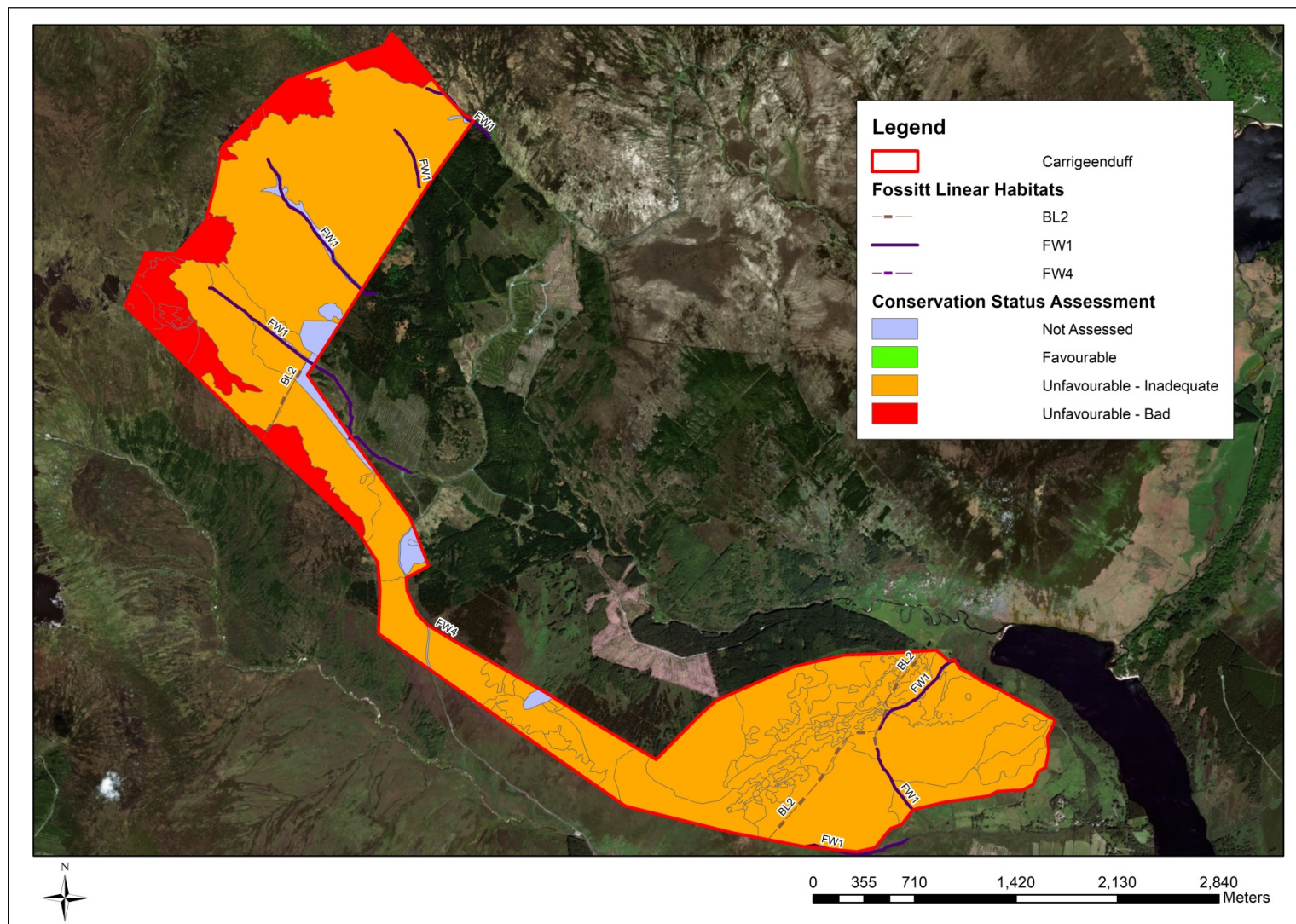


Figure 5. Habitat Condition Assessment for Carrigeenduff Commonage.

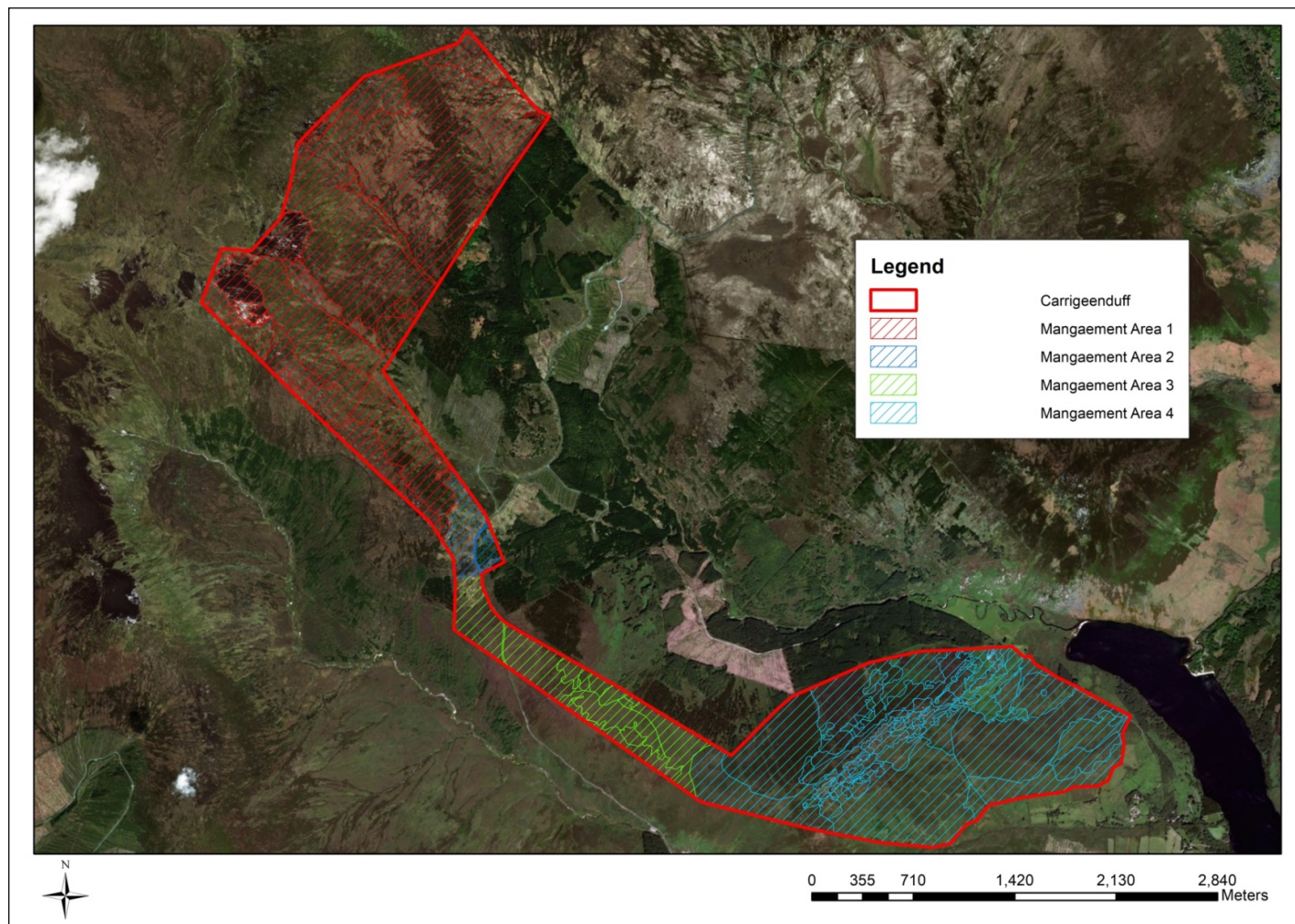


Figure 6. General Management Areas for Carrigeenduff.



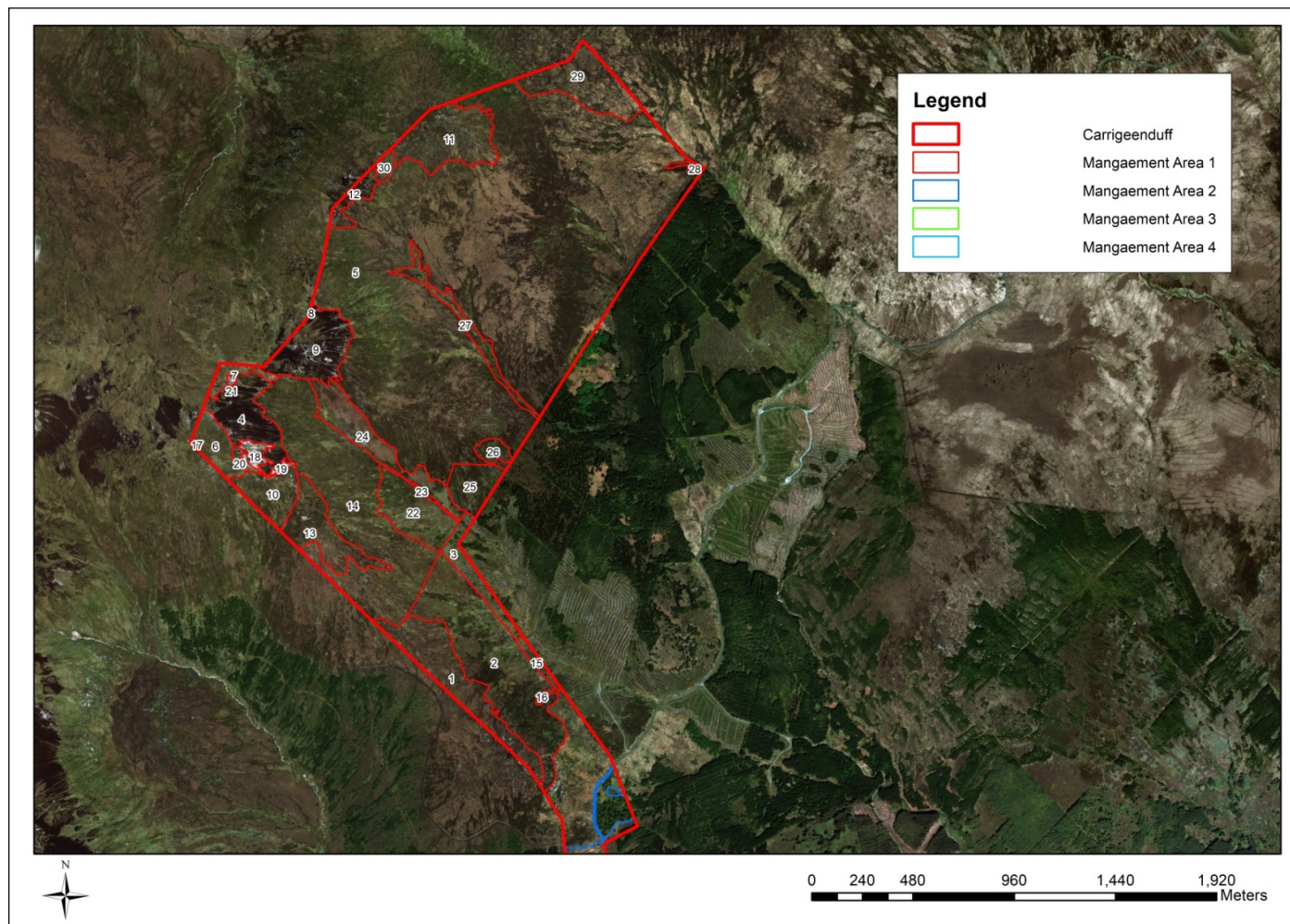


Figure 7. Carrigeenduff Management Area 1.

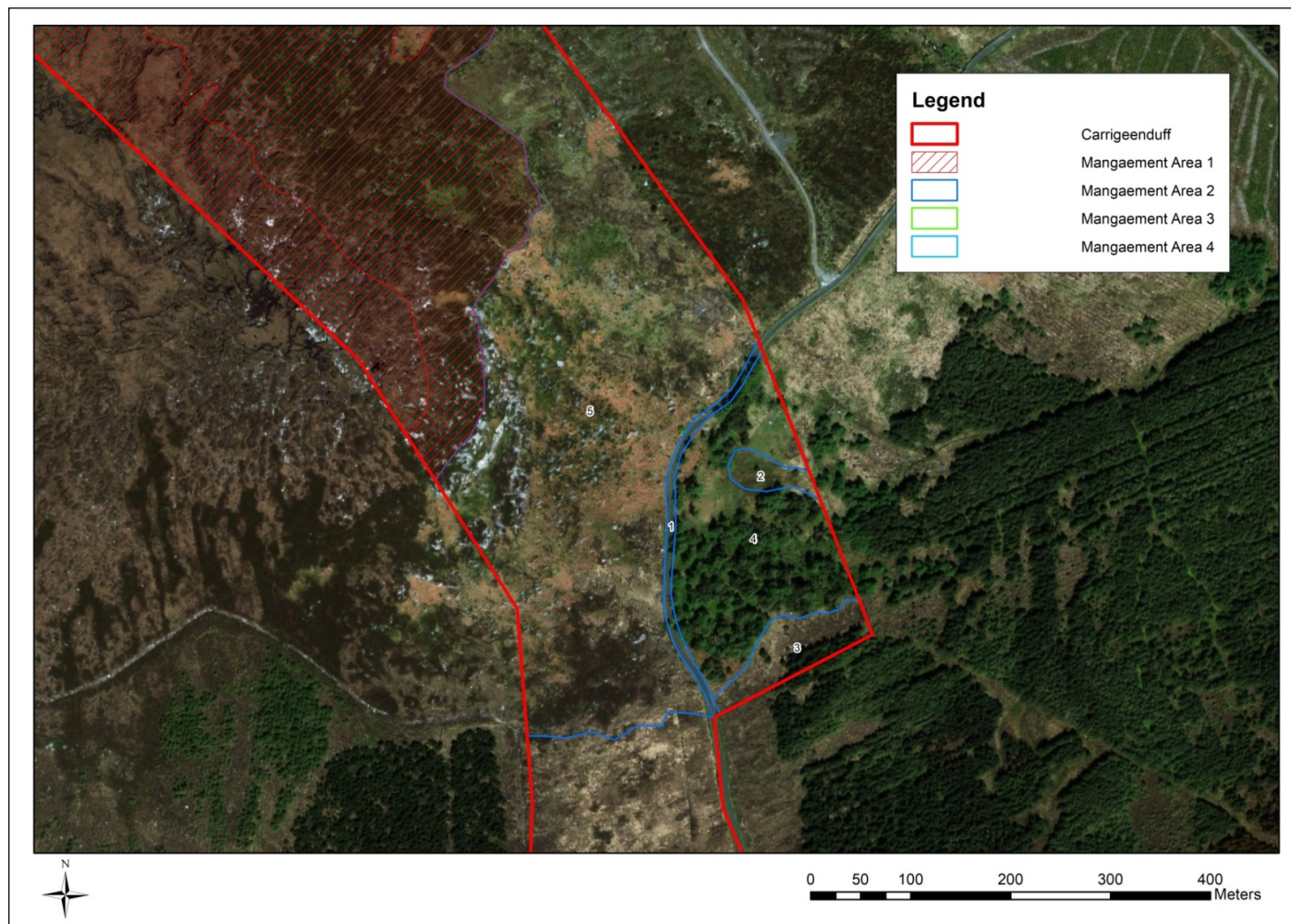


Figure 8. Carrigeenduff Management Area 2.



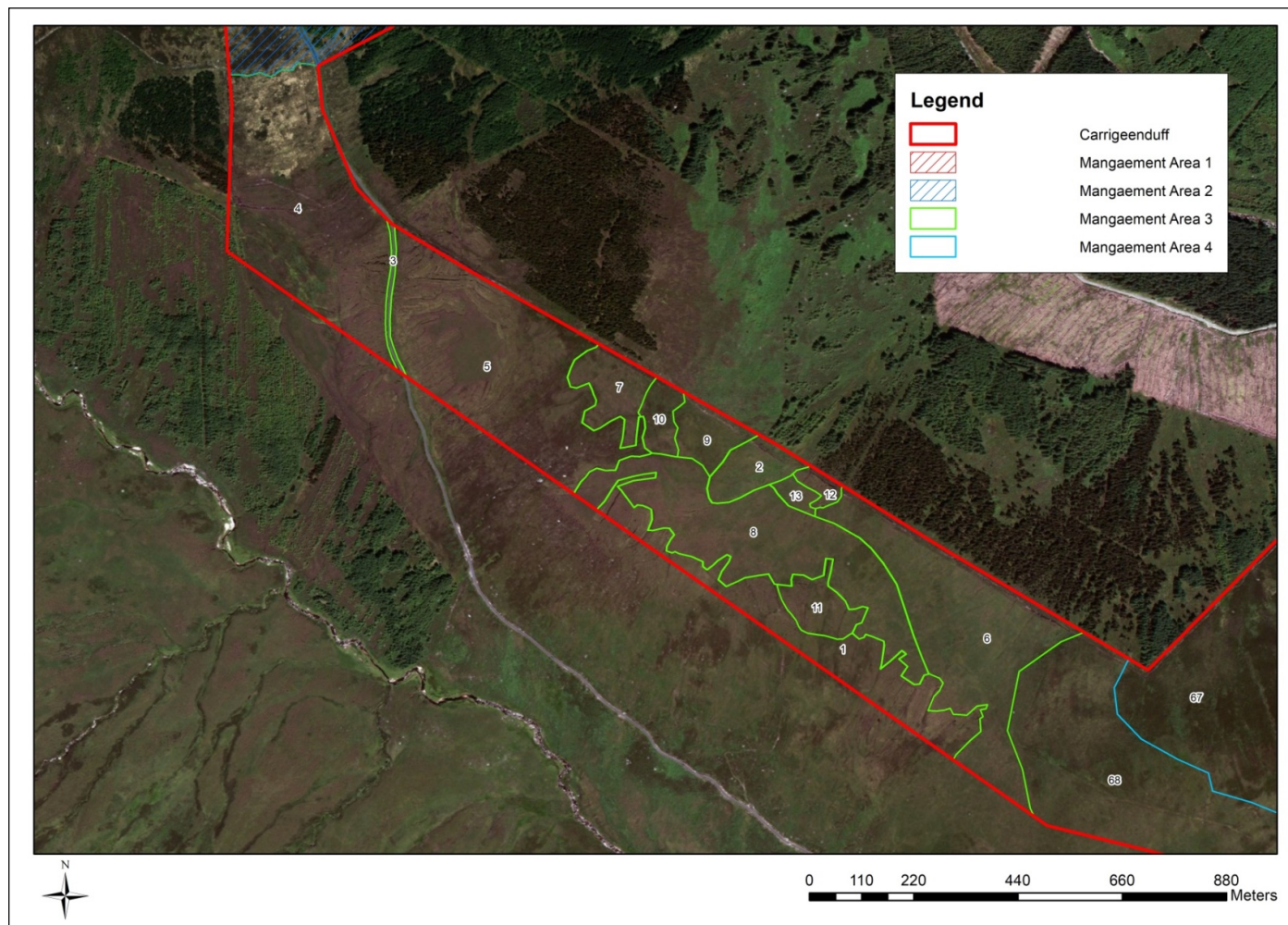


Figure 9. Carrigeenduff Management Area 3.

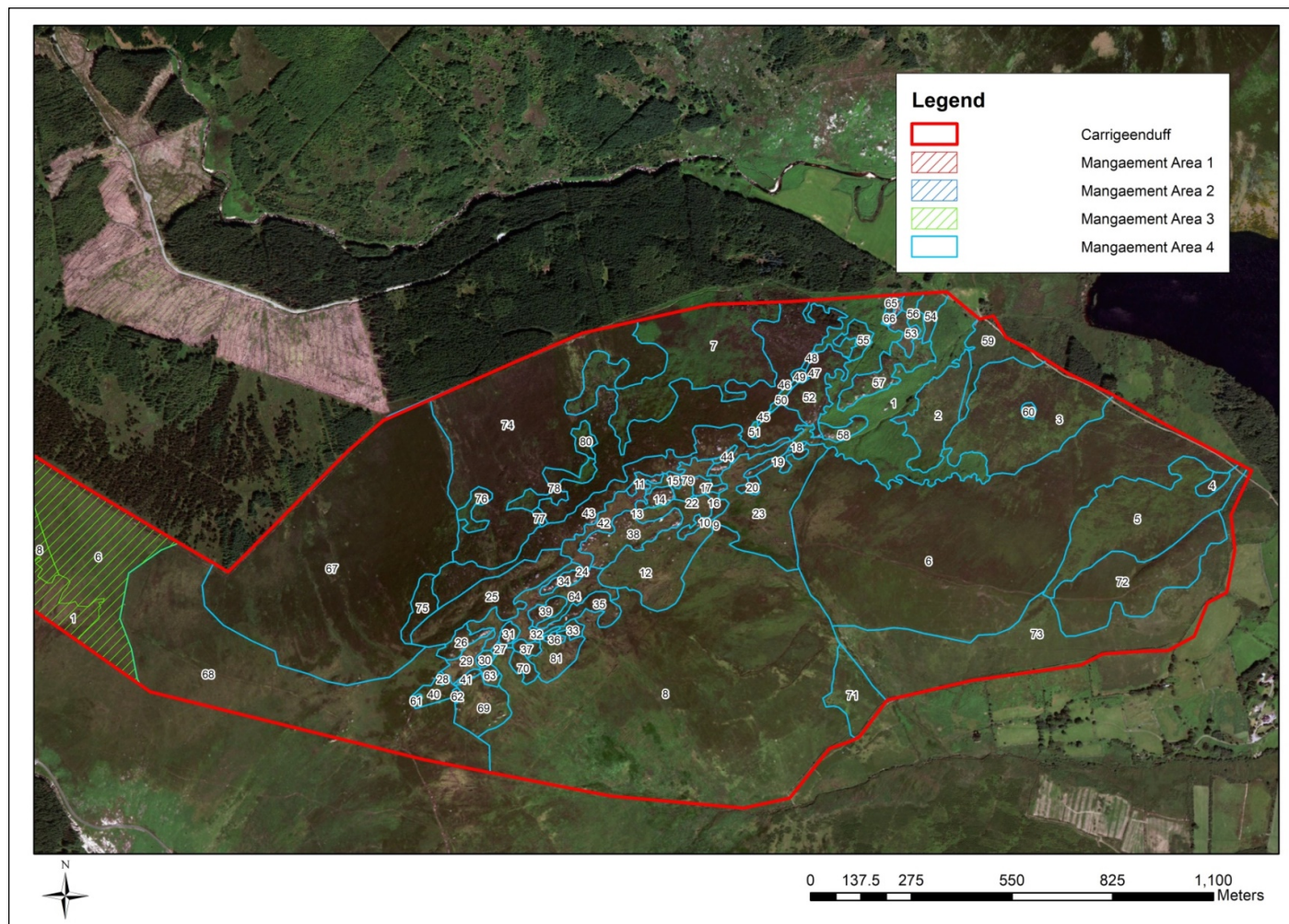


Figure 10. Carrigeenduff Management Area 4.



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

Area	Recommendation
1, 2, 3, 4	No further burning
1, 2, 3, 4	Control deer
1,2, 3, 4	Shepherd out trespassing sheep
1, 4	Protection and restoration of existing gully woodland remnants, additional planting and protection for same
1, 2	Destock the hill of grazing animals and allow the habitats to recover
1, 2	Restoration measures for eroding bog on the ridges
1, 2	Restoration measures for areas of bare peat on the ridges
1, 2	Restoration measures for areas of montane heath on the ridges
1, 2	Erect deer exclosures to determine effects of deer and trespassing sheep
2 - location 5	Consider the establishment of native woodland on this rocky outcrop where bracken is encroaching and protect from grazing Remove self-seeded Sitka spruce from this area
2 - location 4	Enrichment planting of native species into the existing stand to diversify same, protect new planting from browsing
3	Reduce grazing pressure in this area
3 - location 5	Block drain to restore hydrology along the road
3 - location 4 and 5	Liaise with Wicklow County Council re. recent drainage works at roadside margins - restore hydrology by blocking drains
3 - location 6	Resolve track damage caused - accessed from Coillte?
4 - location 1, 7, 76, 78, 80	Bracken control - being mindful of whinchat habitat on lower slopes of location 1
4 - location 73	Bracken control
4 - location 3/6	Remove Sitka spruce from this area
4 - summit ridge of Kanturk/Bracket Rocks	Track repairs