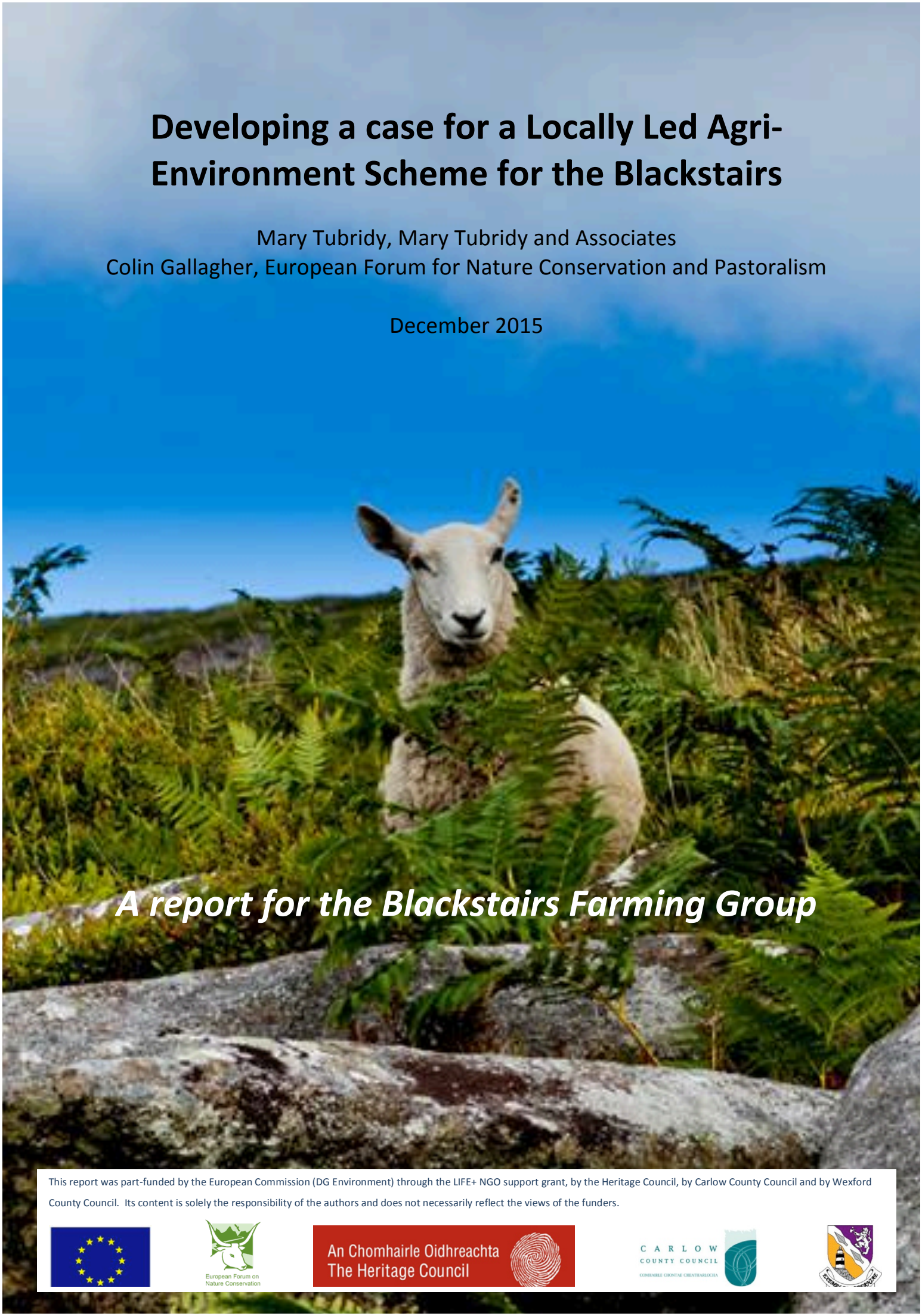
Developing a case for a Locally Led Agri-Environment Scheme for the Blackstairs

Mary Tubridy, Mary Tubridy and Associates
Colin Gallagher, European Forum for Nature Conservation and Pastoralism

December 2015



A report for the Blackstairs Farming Group

This report was part-funded by the European Commission (DG Environment) through the LIFE+ NGO support grant, by the Heritage Council, by Carlow County Council and by Wexford County Council. Its content is solely the responsibility of the authors and does not necessarily reflect the views of the funders.

European Forum on Nature Conservation

An Chomhairle Oidhreachta
The Heritage Council

CARLOW COUNTY COUNCIL
COMHAIRLE CHONTAE CHEATHARLOCHA

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Cover photo of a Blackstairs Cheviot Ewe by Patrick Monahan

'I would love to be farming full time or even to make it profitable enough to hand on to the next generation'

Comment on project questionnaire by a Blackstairs hill farmer, Summer 2015

CONTENTS

Glossary

Annexed Habitats and Species -Habitats and species listed in the Birds and Directives arranged in lists or annexes in relation to their importance and management requirements

AA – Appropriate Assessment. The assessment carried out to discover the significance of a development to a site or species listed in the EU Birds and Habitats Directives.

Biodiversity –This term describes all types of biological diversity, including varieties of a species, all species, the habitats with which they are associated and the environmental conditions or ecosystems which sustain them.

BFG – Blackstairs Farming Group

BoCCI – Birds of Conservation Concern in Ireland. An authoritative list of birds for which conservation action is required (Colhoun & Cummins 2013).

BSBI- Botanical Society of Ireland. Voluntary group involved in describing (mainly) native flora, represented in the Blackstairs region by voluntary recorders; for County Wexford (Paul Green) and County Carlow (Lisa Dowling).

Commonage – Land managed in common by farmers.

DAHG – Department of Arts, Heritage and Gaeltacht.

DAFM – Department of Agriculture, Food and the Marine.

DED – District Electoral Division.

EFNCP – European Forum for Nature Conservation and Pastoralism.

EU Birds Directive – Earliest biodiversity directive from the EU (Directive 2009/147/EC (Birds Directive) on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended) which lists birds which must be protected within the EU. These are principally migratory species and birds of prey.

EU Habitats Directive – Directive 92/43/EEC which lists (mainly) habitats of importance, certain bats and invertebrates and specifies their requirements for protection in all EU countries.

GIS-Geographic Information Systems. Software that produces maps, allows for revisions and examination of associated data.

GLAS – Green Low Carbon Agri-environment Scheme.

HNV Farming – High Nature Value Farming.

Listed Habitats and Species -Habitats and species listed in the Birds and Directives arranged in lists or annexes in relation to their importance and management

requirements

LLAES – Locally led agri-environment scheme.

NPWS – National Parks and Wildlife Service, the section of the Department of Art, Heritage and the Gaeltacht with principal responsibility for developing government policy and action on biodiversity, including the implementation of the EU Birds and Habitats Directives.

Natura 2000 – Network of sites designated under the Birds and Habitats Directive (SAC's and SPA's) containing good examples of the important habitats and populations of species listed in those directives.

NGO - Non-governmental organisation i.e. independent of government and involving volunteers.

Priority Habitat - A subset of the habitats listed in Annex I of the EU Habitats Directive which are priority for biodiversity conservation e.g. actively growing Blanket Bog.

RDP - Rural Development Programme managed by the Irish government to support implementation of policies concerned with rural development and agreed with the EU.

SAC - Special Area of Conservation is an area designated under the Habitats Directive which has good examples of one or more habitats or/and good populations of species listed in the Habitats Directive.

SPA - Special Protection Area is an area designated under the Birds Directive which has good examples of one or more populations of bird species listed in that Directive.

Acknowledgements

This study benefitted in numerous ways from the interest and participation of the Blackstairs farming community and their supporters. Particular thanks are due to the farmers (46) who completed the detailed questionnaire, to everyone who came to the farm walks and indoor meetings and participated in discussions and who answered our questions. These contributions were invaluable and incalculable. Carlow and Wexford County Councils and the National Parks and Wildlife Service provided practical help and support. Séamus Ó Murchú provided a map of townlands and information on archaeology and landscape history. A final important thank you to the Committee of the Blackstairs Farming Group, and particularly Co-coordinator Helena Fitzgerald and Chairman Martin Shannon for their assistance and support at all stages of the project.

Summary

In 2015 studies were carried out in the Blackstairs on local biodiversity and farming to inform an application by the Blackstairs Farming Group for a locally-led agri-environmental scheme. Research involved desk research, field work and consultations. An account of local biodiversity *The Blackstairs Habitat Mapping and Biodiversity Audit 2015* is in Tubridy et al, (2015). This report elaborates the rationale for a locally led agri-environmental scheme (LLAES).

A Blackstairs LLAES is needed because while the key habitats are in good condition, future prospects are poor due to the decline of hill farming and its indirect impact on burning practices, forage quality and scrub expansion. It is also needed to secure the future of hill farming on which biodiversity depends.

Survey work showed that there are worrying trends in the declining number of young hill farmers resulting in a continuing drop in sheep numbers and poor morale in the sector. Within the locality there is interest in improving management to enhance biodiversity. The approaches currently being used to integrate upland hill farming and biodiversity are failing, as they are not site specific and do not measure benefits to biodiversity. No actions have yet been taken to implement the Management Plans for local SAC's. While the GLAS may reach its target of attracting 50,000 farmers, 2015 has seen widespread opposition among commonage farmers with concerns over collective responsibility and penalties (Monaghan, 2015)

It is proposed that the LLAES for the Blackstairs would have the objective, using a results-based approach, of protecting the range of upland habitats present, taking account of the needs of species of conservation concern on the mountains, including the red grouse, and of the need to maintain high water quality in the local catchments, which provide drinking water and habitat for significant species including freshwater pearl mussel.

The results based approach to developing agri-environment schemes can offer cost effective, transparent solutions when compared with flat rate agri-environment payments. If implemented in the Blackstairs it will allow farmers the flexibility to manage their land in a manner that reflects local conditions and knowledge to ensure that the condition of annexed habitats is maintained, the populations of species of conservation concern is increased and water quality in maintained and enhanced.

1 Introduction

1.1 Background

The unenclosed open mountain associated with the Blackstairs is a site of international biodiversity interest or Natura site (Blackstairs Mountain SAC. Site Code No. 770) because of the presence of two listed habitats dry and wet heath (Fig.1.1).

Reviews of the national status of dry and wet heath by the National Parks and Wildlife Service (2013) concluded that future prospects for both dry and wet heath nationally were bad. Issues highlighted by the national habitat condition reports were inappropriate grazing regimes and burning. A more recent assessment of heath and scrub habitats listed under-management or abandonment resulting from under grazing, succession to scrub or heath, bracken encroachment as threats (DAHG, 2014). The Blackstairs SAC Management Plan (NPWS, 2006) refers to the low population of red grouse, and emphasizes the need for higher standards of management, including management by farmers.

The major watercourses in the region whose headwaters are in the Blackstairs are also designated. Species of international importance include the Freshwater Pearl Mussel, which occurs in the vicinity of the Blackstairs in the Ballymurphy, Aughavaud and Mountain/Aughnabrisky Rivers. Sub-basin management plans have been prepared for these rivers to implement statutory obligations under the Water Framework Directive[1].

The Blackstairs Farming Group was established in 2014 by a group of people in The Blackstairs concerned with the challenges faced by their area and community. Farmers found it difficult to make a living off their land, there were few young farmers, local shops and a post office had closed and rural schools were struggling for numbers. The Blackstairs area had been badly hit by the economic downturn due to a dependence on construction work to supplement farm incomes. The decline in the economic viability of farming had evolved over decades but could now be seen in the landscape. Granite dry stone walls were falling down and were not being repaired.

In early 2014 The Heritage Council awarded a Community Heritage Grant to SMART (St Mullins Amenity and Recreational Tourism Ltd) to carry out a study of the dry stone wall landscapes of The Blackstairs. This study, carried out by architects Mary Laheen and Helena Fitzgerald, indicated that with the decline of traditional farming practices, the future of the stone walls was precarious and that existing agri-environment schemes were not sufficient to ensure their future. The report (Laheen and Fitzgerald, 2014) suggested that a locally led agri-environment project similar to the Burren Farming for Conservation Project could be a more targeted vehicle for

1 http://www.wfdireland.ie/docs/5_FreshwaterPearlMusselPlans/Freshwater%20Pearl%20Mussel%20Plans%20March%202010/

sustainable landscape management.

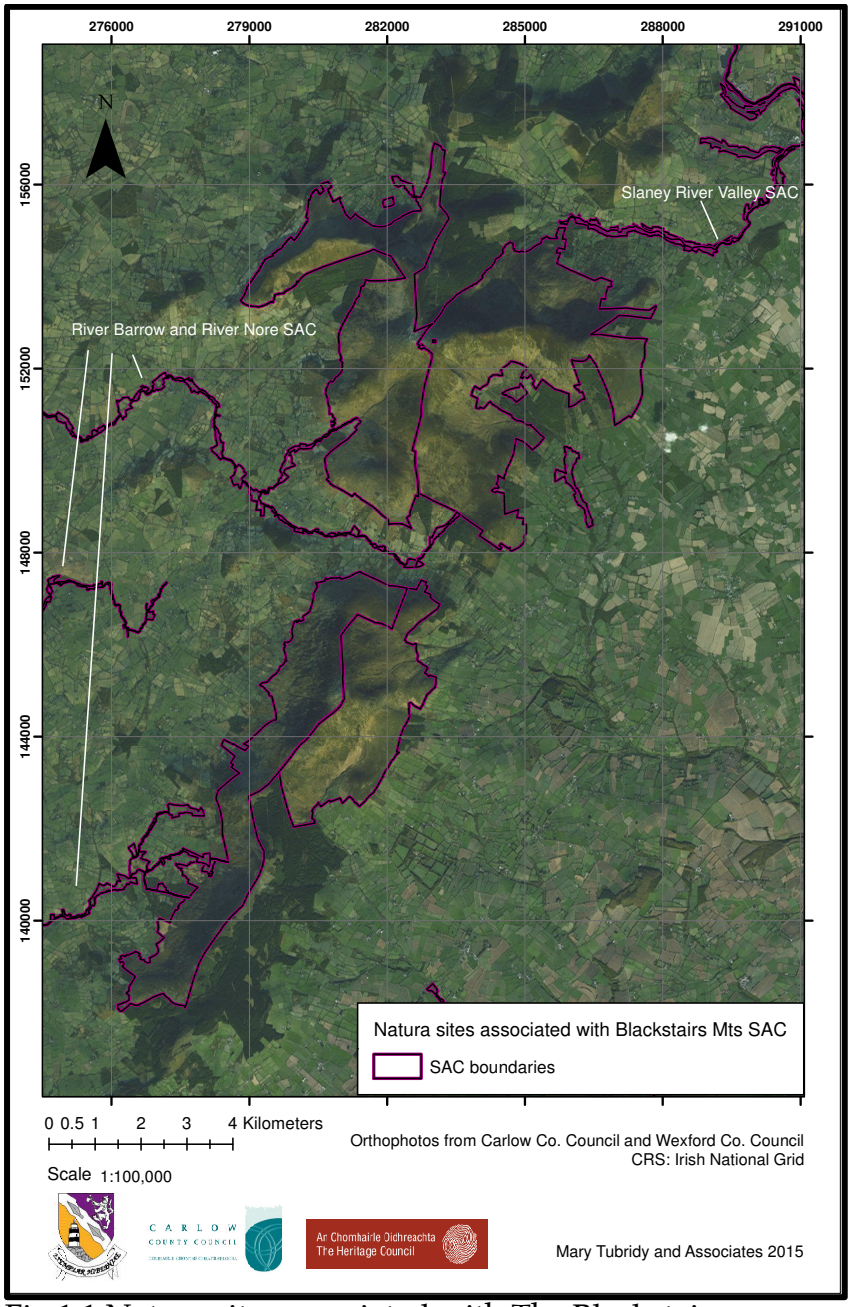

Fig.1.1 Natura sites associated with The Blackstairs

In April 2014 Teagasc published its Index of the Economic Strength of Rural Towns in Ireland (Teagasc, 2014). Bunclody was identified as the most economically depressed small town in Ireland and County Carlow scored second lowest in the county index. Also in April 2014 the Blackstairs group became aware of a proposal to fund Locally Led Agri-Environment Scheme Pilots under the Rural Development Programme 2014-2020. In June 2014 The Blackstairs Farming Group (BFG) was formed and started a programme of research to examine the potential of this initiative to benefit farming and local biodiversity particularly in the Blackstairs Mountain SAC. BFG members attended events like the Irish Uplands Forum (IUF) 2014 Conference and the Burren Winterage School in 2014. In October 2014, with funds secured through Agenda 21, the BFG commissioned a desk based baseline study of biodiversity which used historic records from digital data bases and historic

habitat mapping (Smith, 2015) and developed a http://blackstairsbiodiversity.com/ website.

A relationship was developed with an NGO, the European Forum for Nature Conservation and Pastoralism (EFNCP), and its active members in Ireland, including Dr James Moran Institute of Technology Sligo. The principal objective of the EFNCP (http://www.efncp.org/) is to promote the concept of High Nature Value Farming, a perspective which starts with the recognition that the rich natural heritage; the biodiversity and conservation of habitats in particular areas such as the Blackstairs are to a large extent a result of and dependent on the continuation of the type of pastoral farming practices that have taken place there for generations (Jones et al, 2013). In March 2015 the EFNCP offered technical support to the Blackstairs Farming Group to develop a locally led scheme via its HNV Ireland Officer, Colin Gallagher. Supported by funding from the IUF, fact-finding visits were made to the Burren and McGillycuddy Reeks in June 2015 to examine locally led initiatives concerned with biodiversity and farming. Dr. James Moran provided the Group with a ten point checklist (Appendix 1) of the steps and information needed to make an effective proposal for a locally led agri-environment scheme. The BFG applied for and were granted funding to produce a biodiversity baseline and habitat mapping of The Blackstairs from the Heritage Council, and Carlow & Wexford County Councils. The EFNCP also granted funding for the role of Co-ordinator with the BFG, which would provide practical and logistical support to the Group in their development of a LLAES. With the support of these organisations and local consultations the following brief for this study was developed by the BFG.

1.2 Study brief

The brief stated that research is needed to support the farming community to make a successful application for the agri-environmental scheme being developed by DAFM. Supporting studies should address the following:

1 The nature of biodiversity in the area(s), ecosystems/habitats & species in consultation with the local community.
2 The potential for a local agri-environment or other incentive based management schemes in consultation with the local community.
3 The nature of spatial and management targets with regard to habitats, species and management.
4 The development of indicators that can be used as a basis for payment of the delivery of the objectives of the programme.
5 The relationship between local cultural heritage (archaeology, field boundaries) and a local agri-environment scheme.

1.3 Study Approach

The approach to the study was based on the brief, the experience of the consultants, statutory requirements in relation to biodiversity, awareness of the potential for a locally led agri-environmental scheme in the Blackstairs and current guidelines for the development of such a scheme.

Consultants are experienced terrestrial ecologists and agri-environmental specialists. They include Dr. Betsy Hickey who was involved in a habitat mapping exercise in Blackstairs in 2002; Brendan O' Hanrahan who was one of the authors of the guidelines for upland habitat mapping (Perrin et al 2014) and Dr. Mary Tubridy who had recently produced a report on vegetation management and farming in the Wicklow uplands to support the proposal for an LLAES for that area (Wicklow Uplands Council, 2013).

Colin Gallagher, the High Nature Value Farming Officer with the EFNCP has been involved in projects concerned with developing schemes that link biodiversity and farming in various parts of Ireland. Helena Fitzgerald of the Blackstairs Farming Group acted as Project Co-ordinator. Her role included supporting the capacity of the farming community to contribute to research and development of the LLAES.

Statutory requirements in relation to biodiversity are particularly relevant to this study. They include the Birds and Habitats Directives which list particular habitat and species requiring protection (so called annexed habitats and species), particularly within the Blackstairs Mountain SAC and the Water Framework Directive which requires that all water bodies are of good quality.

The LLAES offers the possibility of implementing actions recommended by the authorities to implement the directives by supporting management works by farmers which will maintain and enhance local biodiversity and water quality.

1.4 Methodology

1.4.1 Biodiversity

The key objectives of the biodiversity study were to identify key features and assess management requirements in the context of the LLAES. Details of the methodology are in Tubridy et al (2015). Information was obtained through desk research, fieldwork (between July and September 2015) by the three ecologists and consultations (principally involving Mary Tubridy) among local naturalists and farmers.

While some modifications were required, fieldwork in the SAC followed the approach and methodology used in the National Survey of Upland Habitats (Perrin et al, 2014) and the habitat classification in Fossitt (2000). Therefore freshwater habitats were not mapped and condition assessments were only carried out on listed habitats. Outside the SAC habitat mapping took place in Carlow and Wexford down to c. 200m contour. Some of these townlands had been mapped (but at a different scale) in 2002 (Hickey, 2002) Using GIS a comparison was made between the results of habitat mapping in 2002 and 2015. The biodiversity audit lists priorities for the LLAES (Tubridy et al, (2015). It is complemented by 1) two shapefiles, for habitats and polygons (habitat mosaics) inside and outside the SAC and 2) excel files, which contain information on the condition of habitats or/and species in all mapped areas (polygons) and the condition assessment.

1.4.2 Farming

The project featured considerable structured farmer engagement to obtain information on upland farming (systems, prospects and farming issues) and allow for discussions on actions which directly and indirectly affect biodiversity and could

be supported by a LLAES.

Information on farming systems in lands around the Blackstairs was sourced from the CSO for the DED's shown on Fig. 1.2.

Fig. 1.2 DED's selected for examination using CSO and Ag. Stats data

By comparing results over three census periods 1991-2001 and 2010 trends in farm management in the vicinity of the Blackstairs were examined. In contrast to data from DED's which partly cover lowland areas, information of particular relevance to Blackstairs farming was gathered through a farmer focused survey in 2015 using a questionnaire with both closed and open ended questions (Appendix 2). The HNV Ireland Officer carried out twelve face to face interviews using the questionnaire while a further 34 were self-completed.

1.4.3 Public meetings

Consultations took place at three outdoor meetings which were held at weekly intervals towards the end of the fieldwork phase to discuss particular farming practices and their relationship to biodiversity. These meetings (similar to farm walks) took place in different types of upland environments in order to raise and discuss particular management issues. All farm walks were arranged through local farming contacts. Facilitated discussions took place at these meetings which were organised by the BFG Project Coordinator. The first farm walk took place on Tuesday 18th August at Ballyglisheen, Co Carlow, from 6 to 8.30pm. It was attended by fourteen hill farmers, the project team and members of the BFG Committee. The second farm walk took place on Tuesday 25th August at Ballycrystal, Co Wexford. It was attended by fourteen hill farmers, an agricultural advisor, representatives from Teagasc, NPWS, the project team and members of the BFG Committee. The final farm walk took place on Tuesday 1st September at Coolasnaghta/Raheenleigh (starting point - Nine Stones carpark), from 6 to 8.30pm. It was attended by twenty five hill farmers, a representative from the NPWS, the local Botanical Society of Ireland recorder, Séamus Ó Murchú, a local archaeologist, the project team and members of the BFG Committee.

Fig. 1.3 Nine Stones Farm Walk

A public information meeting was held in Rathanna, Co Carlow on the 9th October 2015 to present the research findings of the project to Blackstairs farmers. The meeting was attended by seventy hill farmers, the BFG Committee, local politicians and a representative from a local gun club. The principal speaker was Dr James Moran (IT Sligo) and the project team made presentations on biodiversity, the farmer survey and the plan for project development. A question and answer session allowed for audience input. Farmers at the meeting were asked to nominate representative farmers to attend two follow up workshops and participate in the development of the LLAES proposal.

This was followed up by indoor workshops on the 3rd and the 5th November 2015 to discuss possible measures/actions that should be included in a locally led scheme and how it should be administered at local level. The workshops were attended by twenty hill farmers nominated at the Rathanna Meeting. Accounts of these meetings are in Appendix 3.

The BFG Project Coordinator made contact with Local Authority Fire and Environment Services, Coillte, Teagasc (local and regional), NPWS, EPA, local gun clubs and Inland Fisheries and informed them about the project on behalf of the group.

1.4.4 Developing the LLAES

The proposal was informed by the results of the biodiversity study (Tubridy et al, 2015), awareness of farming issues and knowledge of scope of the LLAES. This allowed for the identification of local environmental targets for the LLAES and farming practices which would provide environmental improvements. The most relevant GLAS measures, taken up by farmers in the Blackstairs were examined so that an LLAES proposal would provide additionality to this programme.

The approach to this LLAES is informed by studies currently being carried out by an EU funded project RBAPS in the Shannon Callows, Leitrim and Navarra in Spain; the experience of the Burren Farming for Conservation Programme as outlined by Allen et al (2014); Keenlyside et al (2014) and the proposal developed in Wicklow for a LLAES (Wicklow Uplands Council, 2013).

Details were informed by national discussions on the direction and design of the national proposal for a LLAES which took place in 2015, at the workshop organised by the Irish Uplands Forum in Glencree (July 2015), in Portlaoise, organised by DAFM on 16th October which produced a SWOT analysis and a presentation made by DAFM at the Burren Winterage School (October 2015).

2 A locally led agri-environmental scheme for the Blackstairs: Rationale

2.1 Introduction

This section of the report describes the rationale behind the LLAES proposal for the Blackstairs. It describes the most important features of biodiversity. It contains recommendations related to farming from the biodiversity audit, an account of farming based on CSO data and the farmer survey and the issues which are of particular concern to Blackstairs farmers. A preliminary review of agri-schemes is included.

2.2 Biodiversity

2.2.1 History

Research on landscape history reveals the close relationship between farming and biodiversity. Palynological research elsewhere in the south-east of Ireland and relevant to the Blackstairs, suggests that after the end of the last Ice Age c. 12,000 years ago and before human settlement, an open woodland on a mineral soil with various combinations of Birch, Willow, Oak, Alder, Elm and Juniper covered most of the Blackstairs (Stefanini, 2015). Some areas may have remained treeless and always had a peat based soil if they were too wet or too exposed.

The influence of farming started c. 6,000 years ago and over the following thousands of years it led to a reduction in tree cover and drainage of suitable land resulting in the appearance of the landscape now associated with the Blackstairs. Arising from tree removal, through felling and fires in the uplands soils underneath were more subject to leaching by rainfall. They changed from mineral types to those with an upper layer of peat on which grew acid loving and low nutrient demanding plants forming the habitat known as dry heath. Once the population of farmers increased features of settlement started to appear in and around the mountains in association with farming. Fig. 2.1 shows the location of the archaeological sites (pre 1700) currently in the official inventory.

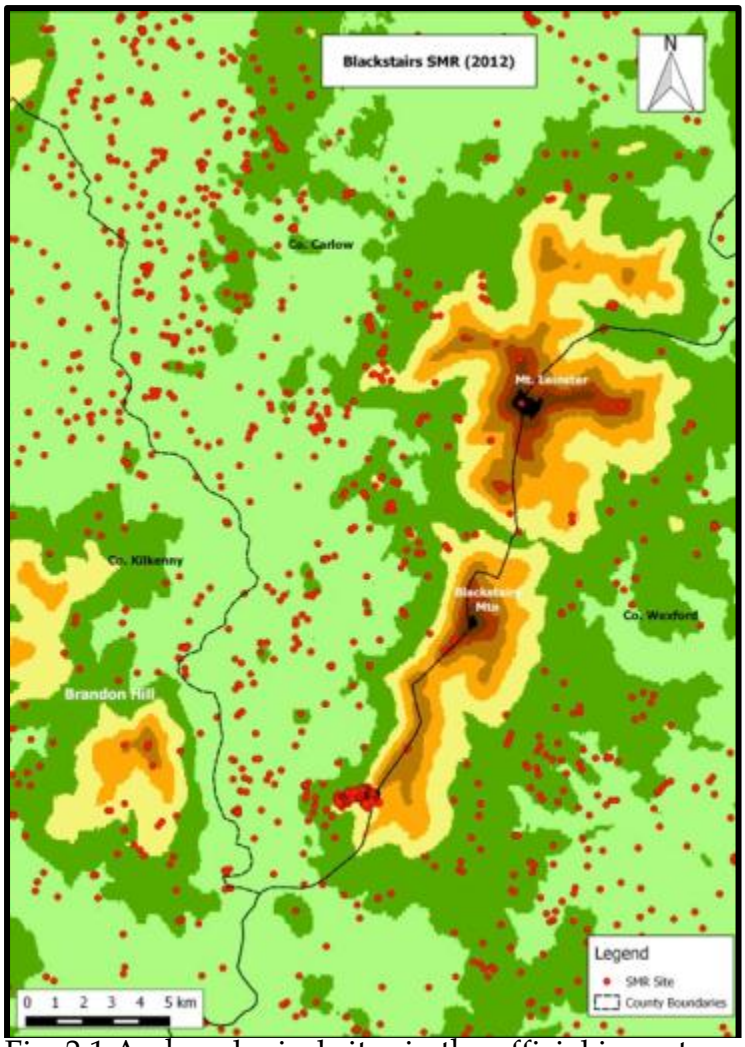

Fig. 2.1 Archaeological sites in the official inventory

Most of the prehistoric sites (cursus sites, summit cairns, rock art and a portal tomb) in the Blackstairs are Neolithic (5,000-2,500 BC) but the visible ones are mainly ceremonial or burial sites. Pre-bog hut sites and field walls on Dranagh Mountain may be Neolithic or Bronze Age. A flint core identified on Knockroe Mountain – on a trackway so completely out of context- and reported to the National Museum by Séamus Ó Murchú) indicates a human presence in the Neolithic period. The presence of a core rather than finished tools is indicative of seasonal settlement as cores were brought from lowlands into uplands to be worked (Rice 2006).

Field based research by a local archaeologist Séamus Ó Murchú associated with the preparation of his MA which focused on Dranagh Mountain and more recently the entire Blackstairs for his Ph. D (https://archaeouplands.wordpress.com/) has revealed a significantly higher number of archaeological features in the Blackstairs. A dense network of new sites was recorded as National Monuments in the townlands of Dranagh and Ballycrinnigan (86 sites in a 2km2) possibly due to the effects of a major fire which burnt peat and exposed the bedrock. PhD research has identified a further 200 new sites, which have not yet been included in the official archaeological record. Most of these are 18th/19th Century in date. The density of sites on Dranagh Mountain was not found elsewhere on the mountain.

With the advent of the Bronze Age (2,500-500BC), so called because metal tools became available, farming impacted more on the uplands. The discovery of a Deer Trap c. 2,000 years old buried in peat near Mount Leinster further indicates the links between upland and lowland activity as the deer trap was brought to this location (https://archaeouplands.wordpress.com/)

Evidence of farming in the medieval period is represented by the presence of ringforts scattered around the upland fringes. Many more may have existed which have since been levelled.

The Down Survey (1656-8) indicates that farming involved arable and pasture and that some areas were still wooded, such as around Crannagh.

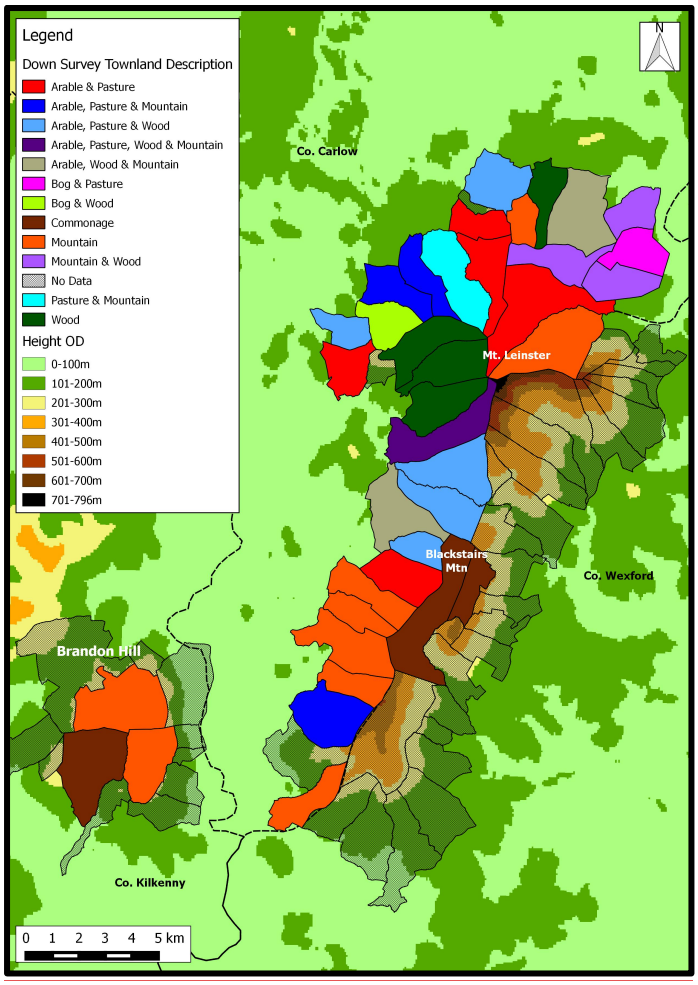

Fig. 2.2 Landcover in the 17th century

The surge in population in pre-famine times (from mid 1700's) is also evident, but principally in the land around the base of the mountain. It led to the reclamation of land with poor soils, those with a shallow peat covering over a mineral base, on the lower slopes, in accessible areas or where there was some potential for drainage. More fields were enclosed. Cultivation involved lazy beds, traces of which have recently been mapped by Séamus Ó Murchú (https://archaeouplands.wordpress.com/). Where land was successfully reclaimed the vegetation changed from that typically found in the uplands to a type of grassland such as now found in unimproved wet and dry fields.

Figs. 2.3 and 2.4

The faint remains of cultivation ridges can be seen on the open mountain in the townland of Slievegar, following burning (to left) and on Tomduff Hill (right) (Photos: Ó Murchú, 2014)

Historically, farms adjacent to the Blackstairs Mountains consisted of fields of enclosed green land around the dwelling house, which were often used for crop rotation; for the production of cereals, potatoes and other vegetables for both market and the household and the production of hay for winter fodder. Unenclosed land was used for grazing cattle, sheep or horses.

Peat was extracted from deeper deposits both on the mountain and adjacent lowland probably until the late 20th century with a peak during the Second World War. Until the 1940's heather was harvested and sold to a local factory for odour control.

Farming practices in the last fifty years have been associated with more land reclamation, drainage works, lime and fertiliser application. Many fields have become more improved and productive, enabling farmers to increase production and the farming enterprise has become focussed on sheep and cattle. Changes have been recorded to the area occupied by certain semi-natural habitats (not GA1) between 2002 and 2015. Fig. 2.5 and Figs 2.1- 2.4 in Appendix 4 show the result of the comparison between land cover in 2002 and 2015 in Carlow townlands to the south of the mountains.

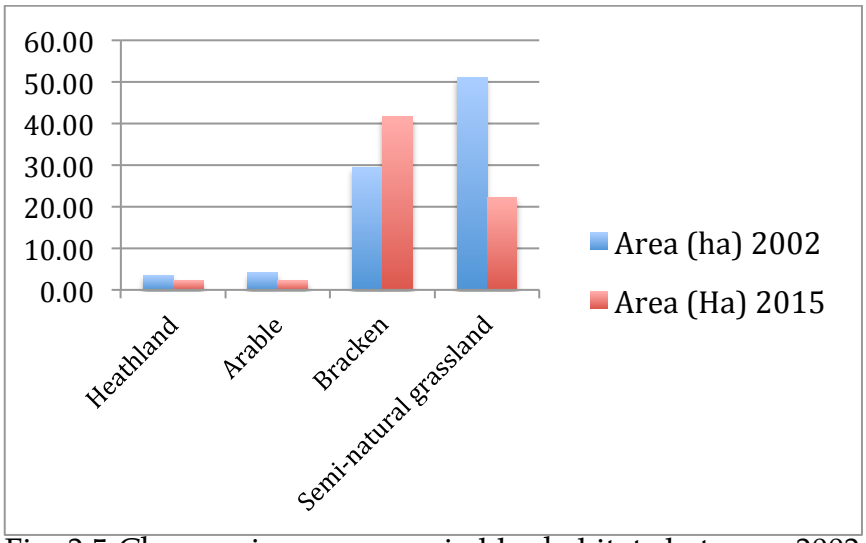

Fig. 2.5 Changes in area occupied by habitats between 2002 and 2015 in land outside the SAC in south Carlow

Significant changes occurred to bracken and semi-natural grasslands. Bracken cover increased by 10 %. It was noted by Betsy Hickey that increased cover of bracken in Gowlin is associated with the loss of scrub, wet grassland and improved agricultural grassland in fields mainly used for sheep and occasionally horses. The decline in the cover semi-natural grassland between 2002 and 2015 may have resulted in an overall loss of semi-natural habitat, its conversion to improved agricultural grassland or another type i.e. scrub. Some changes have had mixed impacts. In Ballycrinnigan an area of mostly wet grassland and scrub in 2002 is now a mosaic of wet willow-alder-ash woodland and scrub. A small area of conifer woodland has been planted on what was wet grassland and an adjacent area of wet grassland is now improved agricultural grassland. Species diversity has increased in the woodland/scrub. In addition to willow species there were hollies, sycamore, rowan and seedlings of oak, rowan and holly. The herb layer included several fern species including hard fern, broad buckler fern and soft shield fern.

2.2.2 Current biodiversity

Table 2.1 and Fig. 2.6 show the extent of listed habitats (those listed in the Habitats Directive) mapped by the biodiversity audit.

Table 2.1 Listed habitats inside and outside the SAC

Habitat (Fossitt) code	Common Name	Area in SAC (ha)	Area outside SAC (ha)
HH1	Acid Dry Heath	2745.28	113.34
HH3	Wet Heath	355.66	1.88
PB2	Upland Blanket Bog	172.73	0.90
WN7	Bog woodland	0.00	13.27
Area Surveyed		5019.96	639.44

Dry Heath (comprising 17% of the cover of this habitat in Ireland) dominates the SAC. Small areas with rarer upland habitats, Montane Heath and Pool are also present. The blanket bog was considered "active", thus a priority type habitat according to the Habitats Directive.

The condition assessment which was carried out in the SAC, following the methodology used in the National Survey of Upland Habitats (Perrin et al, 2014)

showed that the three upland habitats, Blanket Bog, Wet Heath and Dry Heath were in good condition. Appendix 5 lists characteristics measured to assess the condition of dry heath. Note that burning outside sensitive areas is not considered a negative characteristic. Uncontrolled burning is not suitable on any habitat as a management technique. From an ecological management perspective it is a useful tool only when undertaken in a prescribed fashion to meet specific goals.

Associated with the Blackstairs are other types of habitats not listed in the Habitats Directive which are also important for native flora and fauna, some of which are peat forming. Table 2.2.

Table 2.2 Semi-natural habitats mapped in the Blackstairs 2015

Habitat Type	**Specific (Fossitt) Habitats**	**Area in SAC (ha)**	**Area outside SAC (ha)**
Semi-improved grasslands	GS(1)3 GS(1)4 GS3 GS4	669.06	138.61
Bracken	HD1	830.74	199.77
Cutover Bog Fens and Heath	HH2 PB4 PF2	78.84	69.90
Broad-leaved woodland and scrub	WD1 WD2 WN WN5 WN6 WN7 WS1	110.60	186.80

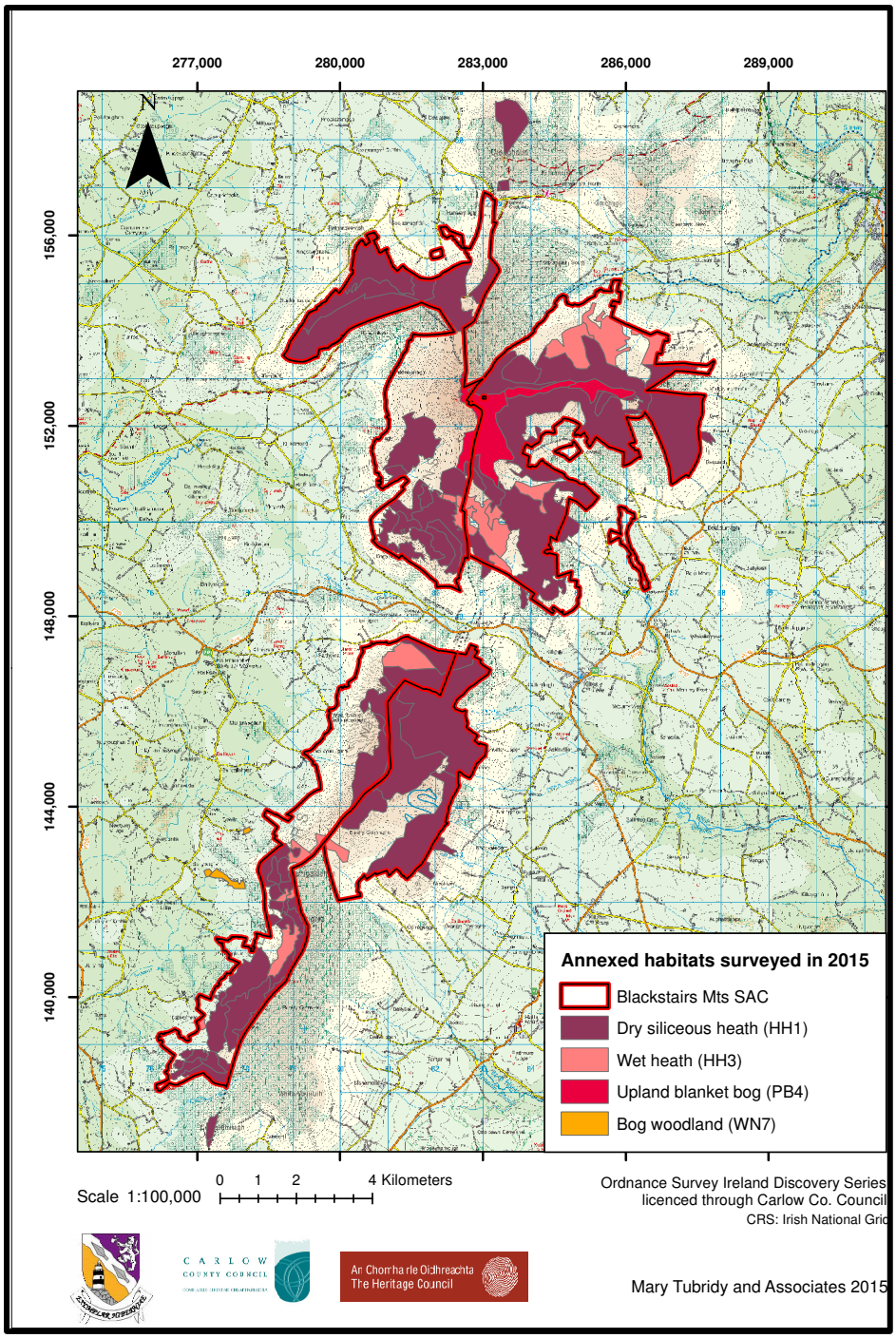

Fig. 2.6 Habitats listed in the EU Habitats Directive in the vicinity of the Blackstairs

Of particular interest is the presence of the listed habitat Dry Heath, semi-improved dry acid grasslands, cutover bog and scrub habitats in enclosed fields.

Red Grouse is the only species of international importance listed in EU Directives known to breed in the Blackstairs. While its population has declined c 10-12 pairs are still present. While all local birdwatchers have sighted Hen Harrier there are no reports of nesting birds. There are records of other raptors, hunting over the Blackstairs and possibly nesting, Peregrine Falcon, Kestrel, Buzzard, Sparrow hawk. Merlin are considered occasional breeders (Lorcan Scott, pers.comm. 2015) but this species was not mentioned by local birdwatchers. Red listed birds i.e. species of high

conservation concern in Ireland (Colhoun & Cummins 2013)) which were reported by local birdwatchers or observed during fieldwork are Whinchat, Meadow Pipit, Ring Ouzel, Yellowhammer and Golden Plover (also listed in Annexes I, II and III of the Birds Directive). According to Lorcan Scott, NPWS and Ciaran Byrne (pers. comm. 2015) the populations of Skylark (listed in Annex II(II) of the Birds Directive and Whinchat are in decline locally. Jack Snipe commonly seen in wet grassland and cut over bogs around the base of the mountain is protected under Annexes II and III of the Birds Directive. Burning regulations under the Wildlife (Amendment) Act offer protection to all nesting birds, not just those which are rare or listed in EU Directives.

Bat species reported by Ciaran Byrne (Byrne 2015) from Deerpark, Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Leisler's Bat (*Nyctalus leisleri*) Natterer's Bat (*Myotis nattereri*) and which are probably present at low density on the open mountain are protected under the Habitats Directive (Annex IV) and Wildlife Act. All native mammals recorded by various observers such as Badger, Pine Marten (mainly in plantations), Irish Hare, Rabbit, Irish Stoat, Red Fox, abundant Red Squirrel and pygmy shrew are protected under the Wildlife Act. All deer species are also given protection.

The common lizard present on the mountains is on the list of species protected under the Wildlife Act, 1976 by regulations made in SI 282/1980. The common frog is listed for protection under the Habitats Directive (Annex V) and is also listed for protection under the Wildlife Act.

Freshwater Pearl Mussels, listed for protection in the Habitats Directive are found in the Ballymurphy, Aughavaud and Mountain/Aughnabrisky Rivers. Principally as a result of their presence these rivers adjacent to the Blackstairs are also SAC's

The plant Devil's bit Scabious, (*Succisa pratensis*), the foodplant of the rare and protected Marsh Fritillary butterfly, listed in the EU Habitats Directive, is abundant in suitable habitats. The presence of the butterfly has been reported in land adjacent to the mountain. Plant species listed in Annex V are *Lycopodium clavatum* found occasionally on the summit of the mountains, all types of bog moss or Sphagnum and particularly *Sphagnum capillifolium ssp capillifolium* which is associated with a rare type of dry heath,

The red listed and nationally protected plant *Asplenium obovatum* (under Flora Protection Order 2015) is growing in a field boundary (granite) wall in a laneway leading to the mountain.

2.2.3 Management for biodiversity

A Management Plan for the Blackstairs SAC was prepared by the National Parks and Wildlife Service (NPWS, 2006) with the objectives of 1) maintaining the Annex I habitats which were then known to occur at the site ; dry heaths (all sub-types) (in mosaics with Dry Grassland and Exposed Rock) and North Atlantic Wet Heaths 2) maintaining the extent, biodiversity and species richness of the site and 3) establishing effective liaison and co-operation with landowners, legal users and relevant authorities.

Issues affecting biodiversity were:

- All terrain vehicles (ATVs)
- Burning

- Decline of the Red Grouse population
- Grazing
- Erosion
- Group water schemes

Measures to achieve the objectives of the plan were:

- The maintenance of sustainable levels of grazing
- The control of burning
- Controls over the use of all terrain vehicles
- Monitor status of Red Grouse population
- Maintain notable species within the site
- Liaison with stakeholders

Due to lack of resources no direct initiatives were taken by the NPWS to implement this Plan. Neither have practical initiatives been taken to implement the draft sub basin Management Plans for the Freshwater Pearl Mussel catchments.

The LLAES proposal supports the implementation of the SAC plan as it has the particular objective of integrating management of the SAC by farmers and maintaining and enhancing the particular features of biodiversity within the SAC. It can also offer support for the management of listed habitats outside the SAC.

The recent biodiversity audit has recommended support for the following types of actions which can be carried out by farmers to maintain and enhance biodiversity:

- Burning practices which maximise the value of dry heath to biodiversity and thus ensures that the rare type of dry heath (with *S. capillifolium*) is identified and avoided and there is little chance that wet heath, blanket bog and bracken infested areas are ever burnt.
- The maintenance of grazing associated with stocking rates, location and duration to ensure that it continues to enhance biodiversity.
- The enhancement of the population of Red Grouse and other important upland birds through supporting specific actions by farmers to improve habitat conditions at all stages of their life cycles.
- The development of farm plans which are informed by survey work at appropriate times of the year to identify relevant habitats, agree and discuss actions with the farmer and carry out baseline condition assessments.

The following actions are recommended to advance the proposal for a Blackstairs LLAES:

- The production of an illustrated guide to Blackstairs biodiversity for promoters, advisors and participants, explaining the principal features of biodiversity and the rationale for the measures associated with the scheme.
- Survey work to characterize biodiversity in the townlands not included in this survey, the River Urrin woodland (part of Blackstairs SAC), habitats such as rivers, streams, stone walls, hedgerows and ditches. The condition of annexed habitats outside the SAC could be assessed. The current status of the Freshwater Pearl Mussel should be determined to clarify the sensitivity of different sub-catchments in the mountains. Survey work should include a baseline Red Grouse survey. This could be carried out with local gun clubs, as members are familiar with the species and methodology.

- The proposal for an LLAES should incorporate use of GIS as this will ensure access to habitat mapping and links to descriptions and photos of units and condition assessments of annexed types. Other baseline data sets of relevance to management (commonages etc.) should be added and arrangements made to allow convenient local access to this data. GIS should be used to record and manage management measures.

Priority areas for the scheme should be land with annexed habitats inside and outside the SAC, particularly those within the catchments of streams associated with rivers supporting Freshwater Pearl Mussels, and associated species of conservation concern. The LLAES could include land outside the SAC which has habitats of semi-natural value such as old grasslands, bog and scrub as well as the listed habitat dry heath.

The results of actions funded by the LLAES should be measured at the farm/commonage level using habitat quality characteristics identified during the habitat mapping and biodiversity audit and the payments linked to those results. For other habitats quality indicators will be based on approaches used by O' Neill et al (2013) and Perrin et al (2008) to develop indicators for certain listed habitats.

An overall Blackstairs quality indicator should be elaborated within the community. This could incorporate objectives relating to the maintenance of the semi-natural habitats, especially those found in Annex 1 of the Habitats Directive, by maintaining appropriate levels of grazing, implementing good burning management, increasing red grouse population, and encouraging nesting hen harrier and other priority species.

2.3 Blackstairs ecosystem services

2.3.1 Introduction

"Ecosystem services" summarises all the services provided by biodiversity in the Blackstairs to farmers, all local residents, visitors and wider community. These are categorised under the headings: Provisioning, Regulating and Cultural.

2.3.2 Provisioning services

- *Food and fibre provision:* The Blackstairs provides food to consumers when cattle and sheep are sold by farmers. Hay, silage, cereals and wool are also produced.
- *Freshwater Supply:* Carlow and Wexford County Council data (pers. comm.) indicate that 14,200 and 7,600 people respectively, or 21,800 people in total across both counties are connected to a public water supply originating in The Blackstairs. A number of Group Water Schemes source their water from the Blackstairs while the Burrin River provides fresh water for around 9000 users in Carlow Town. The water quality in the Blackstairs is generally good though there are some issues with point source and diffuse pollution (EPA, 2013).
- *Habitat and genetic diversity:* The Blackstairs provides environmental conditions to support a wide diversity of plants and animals, some of which are unique to upland areas and rare in County's Carlow and Wexford. Particular features of habitat and genetic diversity are recognised as being of international and national importance. Habitats are shown on Fig. 2.7. Tributaries of the Rivers Barrow and Nore are sources of water for important plant and animal species including salmon and freshwater pearl mussel. The Aughnabrisky, Aughavaud, Ballymurphy and Mountain Rivers are important for the

freshwater pearl mussel, while the latter is an important river for brook/river lamprey, all of which are species of international importance.

- *Timber:* The mountains are a location for coniferous plantations (4,468ha Coillte, 1,175ha private) which provide various timber products (Coillte, 2001). Tree species are principally (90%) Sitka Spruce, Firs and Lodgepole Pine. There are also small pockets of semi-natural woodland located around rivers on the lower slopes.
- *Stone:* Quarrying of the exposed rocks, particularly granite has provided supplies of stone for private use.
- *Renewable energy:* Turbines generating energy on a small scale are present on Kilbrannish.

2.3.3 Regulating services

- *Water quality and flow* Almost all rainfall which falls in the Blackstairs is captured by the mountains thus lessening the amount which reaches the lowlands and reducing the risk of flooding in populated areas. Too frequent burning, upland drainage, overgrazing and soil erosion can all lead to increased run-off and increase the risk of flooding.
- *Climate Regulation.* Peaty soils mitigate for climate change, as they consist almost entirely of carbon. As well as holding the greatest amount of carbon (due to its depth) actively growing blanket bog is accumulating carbon. Even acid grassland which is associated with more mineral soil stores twice as much carbon per hectare as arable land (Table 2.3). Bad burning practices can not only lead to a long term reduction in the amount of the carbon stored in soil and vegetation but can also result in increased water coloration and/or dissolved organic carbon thus reducing water quality (Glaves et al, 2013).

Table 2.3 Carbon in the top 0-15cm of soil in Welsh habitats, 2007 (Stats Wales, 2015)

Habitat Type	**Carbon stock (tonnes per hectare)**
Dwarf shrub heath	88
Acid grassland	75
Neutral grassland	63
Improved grassland	62
Coniferous woodland	61
Arable	33

- *Pollination:* The wet and dry heath, semi-natural grasslands and blanket bog habitats support a large number of insects, which not only help pollinate the many species in situ but also serve to pollinate important agricultural crops in the enclosed field systems.

2.3.4 Cultural Services

- *Tourism, Recreation, Physical health:* The Blackstairs is appreciated for its unique landscape and the area is used by locals and tourists for active outdoor activities such as walking, cycling, horse riding, orienteering, wildlife watching, hang-gliding and heritage tourism. As Coillte operates an Open Forestry Policy the public has access to their forests.
- *Cultural Heritage:* As well as the many sites of historical and archaeological value (see Fig. 2.1) the Blackstairs has a unique tradition of dry stone walling

(Laheen and Fitzgerald, 2014). Two wall types are particular to the Blackstairs; Consumption Walls (known locally as ditches) and Coping Walls, both as named by Conry (2000). Consumption Wall are typically located in the townlands containing commonage land and can be up to 4m wide and 2.5m high. The consumption walls contain stone artefacts linked to traditional farming practice such as geataí or sheep passes. Laheen and Fitzgerald (op cit) have concluded that the future of these walls is precarious as repair of these sizable walls is now considered too laborious and time consuming by landowners. The biodiversity audit showed that the walls can be important for biodiversity. The only protected plant located during the 2015 survey was found in the Blackstairs on a granite dry stone wall.

- *Religious/Spiritual:* The Blackstairs Mountains is the principal focus of the wealth of lore and customs which principally relate to land management and farming and which have also been recorded by Seamus O' Murchú. This traditional lore and knowledge also underpins much of the community's sense of place.

2.4 Farming

2.4.1 Profile from CSO

While the south-east has the most profitable and largest farms in Ireland (Teagasc, 2014) few farms of this type characterise farming in the uplands.

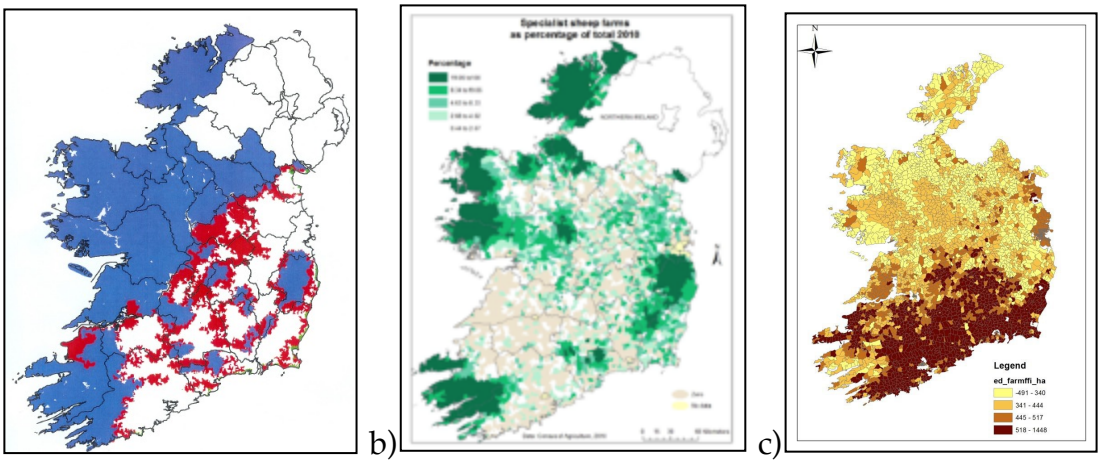

Fig 2.7 Maps indicating (a) the Blackstairs as an Area of Natural Constraint, (b) the location of specialist sheep farms throughout the Country and (c) the distribution of Family Farm Incomes in Ireland (Teagasc, 2015)

Principally as a result of factors such as high rainfall and poor agricultural soils the Blackstairs and their surrounding DEDs are designated as Areas of Natural Constraint under the Less Favoured Areas Regulation (950/97). In addition, income from sheep farming (the second most prevalent farming system on the Blackstairs Mountains) is among the lowest with an average family farm income of €15,065 compared with €67,598 for dairy (Teagasc, 2014). Sheep farming systems are also more reliant on direct payments; accounting for 123% of income in 2014. Therefore farmers in the Blackstairs are in a lower overall income bracket than surrounding areas in the South East (Teagasc, 2015).

As is other upland areas commonage is a feature of land management in the Blackstairs. Almost two thirds of Ireland's total commonage area (422, 415ha) is located in the BMW (Border Midlands and Western) region while just 5% of total agricultural area in the south-east is commonage (CSO, 2010).

There are 2,637ha of commonage in Carlow and 2,626ha in Wexford. According to the Department of Agriculture Commonage Container list there are forty four commonages on the Blackstairs covering a total area of 4,901ha with 235 active shareholders (i.e. farmers who declared commonage as part of their SPS application in 2014). Just 63% of the total area of commonage is claimed on in Ireland and this is largely as a result of dormant shareholders, which is also an issue for the Blackstairs, where some shareholders no longer use or claim on the commonage.

Headage payments for livestock were introduced in 1975 and this led to a rapid increase in sheep numbers; from 1.547 million ewes in 1980 to 4.756 million in 1992 (Connolly, 2000). In some upland areas this resulted in sheep numbers going well beyond the carrying capacity of the land, leading to overgrazing, land deterioration and damage to protected habitats. The mechanism of direct payments being made to individual farmers also had an impact on the traditional communal governance on commonages.

In response to the threats facing these habitats the Department of Agriculture Fisheries and Food introduced the Commonage Framework Plans (CFPs) in 1998. These plans attempted to prevent further deterioration and encourage recovery through a compulsory destocking of commonages, at a rate which depended on the degree of damage to habitats. The majority of commonage units on the Blackstairs were assessed in 2001 as 'Undamaged' or 'Moderately Undamaged'. Farmers were initially compensated for animals destocked but the long term impact of this policy is still being experienced. Destocking, combined with the decoupling of single farm payments in 2003, an ageing farmer population and changing market factors, has led to a reduction in the number of active farmers on many commonages.

Despite the various support mechanisms provided to farmers with commonage, many traditional hill farmers have not returned to grazing stock on the hillsides. This is also the case in the Blackstairs as can be seen from figure 2.13 below; total sheep numbers in the Blackstairs DED's have halved over the past twenty years. Monaghan (2015) has drawn attention to recent structural factors which are responsible for the reduction in farming activity in upland areas such as the criteria for the Basic Payment Scheme (which rewards inactivity), the imposition of set stocking rates based on the historic CFP) plans and resulting difficulties in setting stocking rates above those considered in 2000.

The total number of farms in the Blackstairs has decreased in almost all DED's between 1991 and 2010. In ten out of the fourteen ED's surveyed the total number of farms has decreased over a twenty year period.

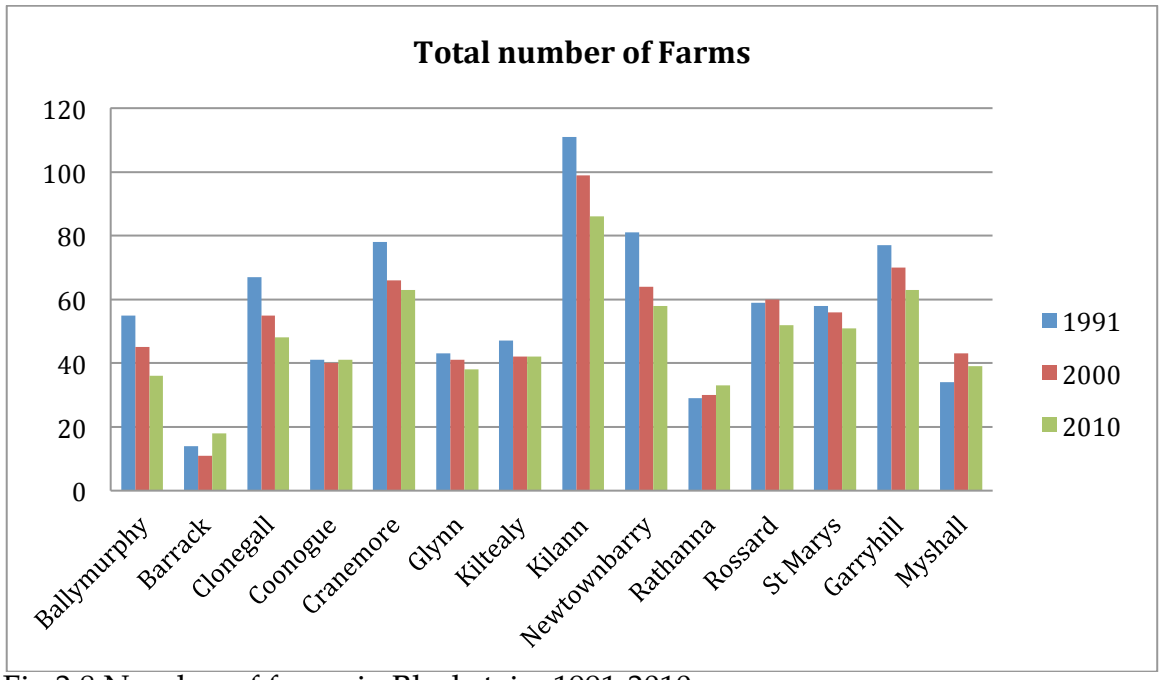

Fig.2.8 Number of farms in Blackstairs 1991-2010

There is a slight upward trend in the number of farms between 50 and 100 ha in these areas (Fig.2.9) and this may indicate a slow moving shift where smaller farms are being absorbed by larger farms.

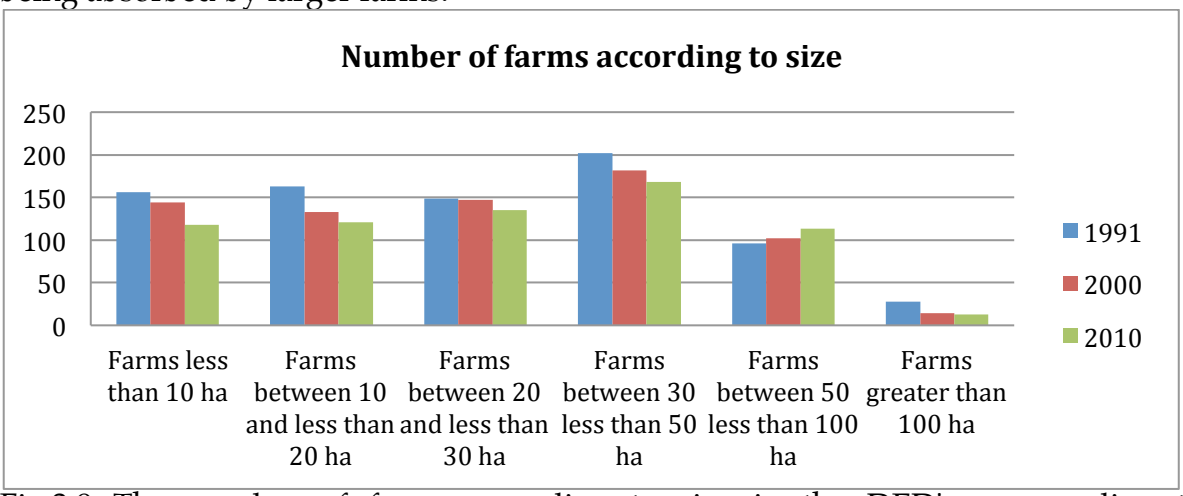

Fig.2.9 The number of farms according to size in the DED's surrounding the Blackstairs

Figure 2.10 illustrates the trend occurring among the number of young farmers who are the primary holder of the farm. This figure has declined almost 50% over a 20 year period.

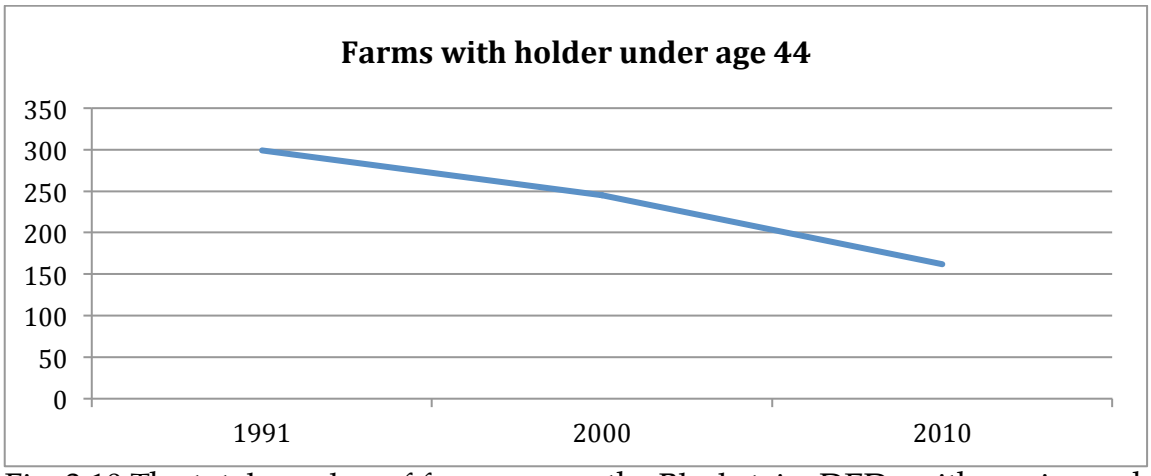

Fig. 2.10 The total number of farms across the Blackstairs DEDs with a primary holder under the age of 44

Breaking this down to individual DED level it is clear that this trend is occurring across almost all DEDs.

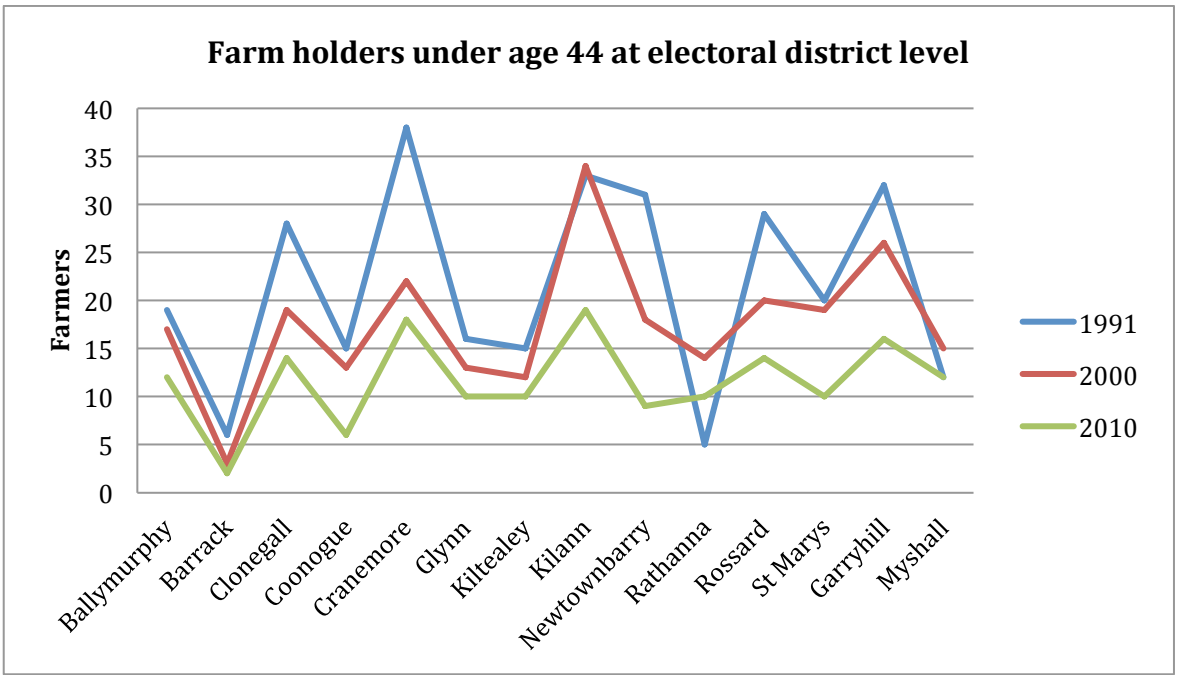

Fig.2.11 Farm holders under forty four in Blackstairs DED's

CSO data reveal that mixed grazing livestock is the predominant farm system in the DED's surrounding the Blackstairs mountain range (Fig 2.12) followed by specialist sheep. It is considered that mixed grazing systems represent the optimal use of forage resources for farming and biodiversity as they allow for the exploitation of various species at appropriate stages of growth (van Van Rensburg et al, (2008), Falco and Van Rensburg (2008) and Mulugeta (2013).

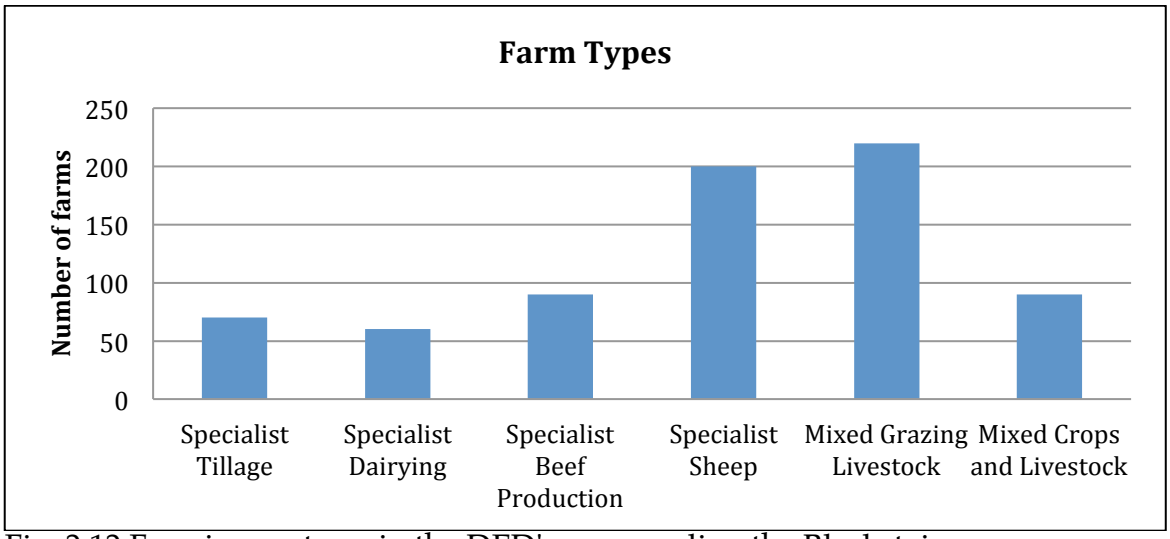

Fig. 2.12 Farming systems in the DED's surrounding the Blackstairs.

However an examination of CSO stats shows that total sheep numbers in the Blackstairs have halved over the last twenty years, from 178,719 to 84,670.

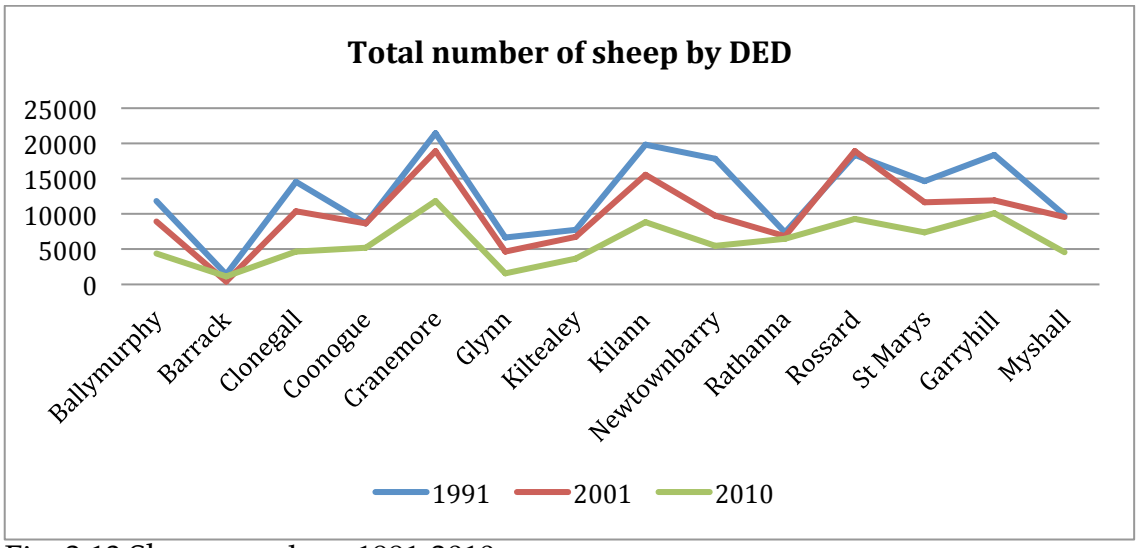

Fig. 2.13 Sheep numbers 1991-2010

In contrast cattle numbers have increased by 14% over the same period, which may indicate a move on some farms to specialise more in beef production and consequently a change in the grazing regime at farm level.

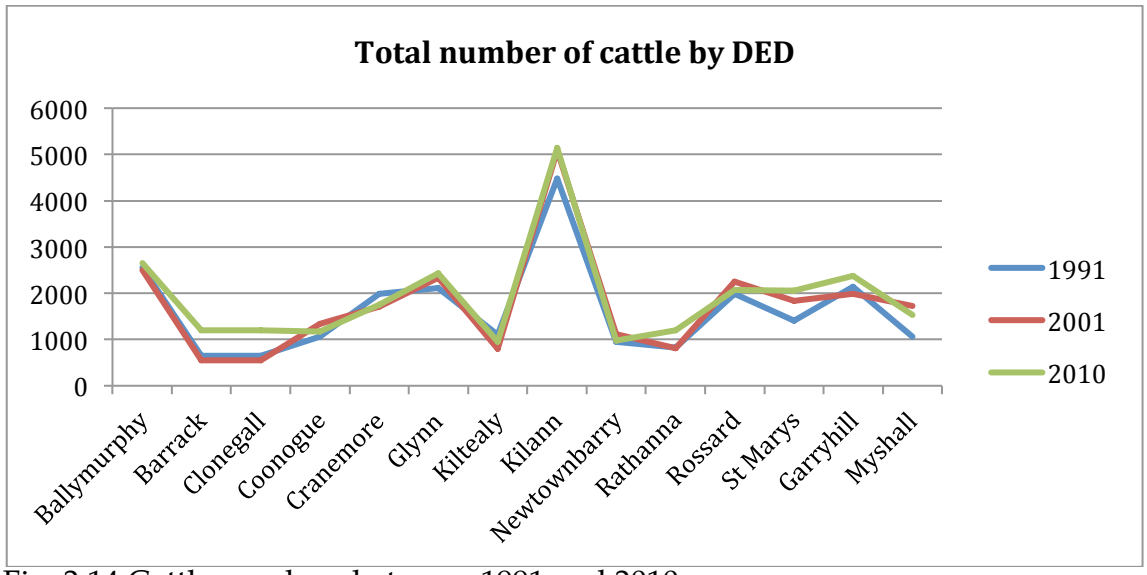

Fig. 2.14 Cattle numbers between 1991 and 2010

2.4.2 Results of farmer survey

The most complete questionnaires were those associated with face to face interview while those completed during the field walks were less comprehensive, with some questions left blank, particularly those that asked for opinions. Among 46 respondents; 44 male and 2 were female.

Age

While there was no individual dominant age group, the 25-34 age group was least represented in the survey.

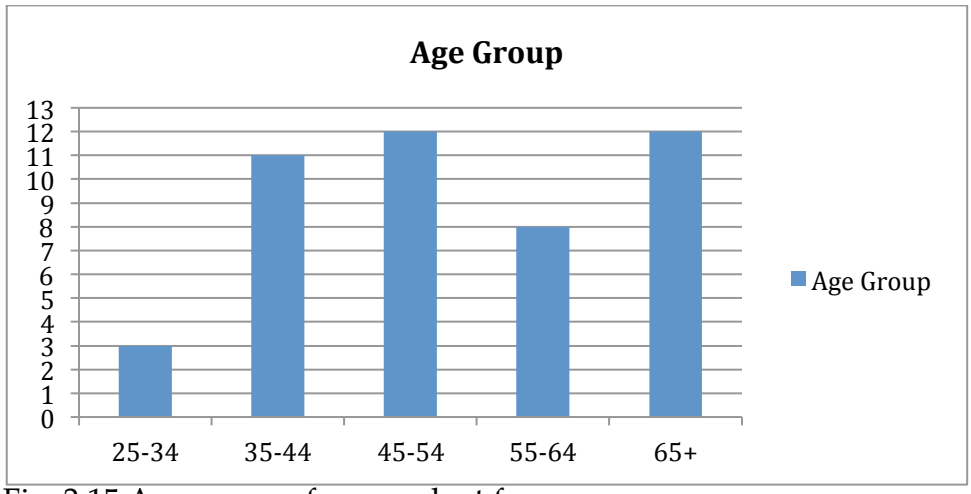

Fig. 2.15 Age group of respondent farmers

It should be considered that the age distribution captured in the survey probably reflects the sample of farmers interested in LLAES, and not a random sample of Blackstairs farmers. Only three farmers were under 34 while 12 were over retirement age with one farmer in his 90's.

While the numbers of farmers in the younger age group are small they have a significant impact on how some of the older, particularly those over retirement age, continue to farm. For example, on one particular commonage there were two farmers

that depended on one neighbouring young farmer (25-34) to monitor their stock on the commonage.

Full/Part-time Farming

A total of 81% of the farmers are full time and 19% part time. Of those farmers over fifty five 94% are dependant on full time farming compared with 69% of farmers under fifty five. While the high % of full time farmers is unusual in the national context it reflects the pattern shown in surveys elsewhere of upland farmers (see www.irishuplandsforum.org for presentation of results of IUF Challenges research project)

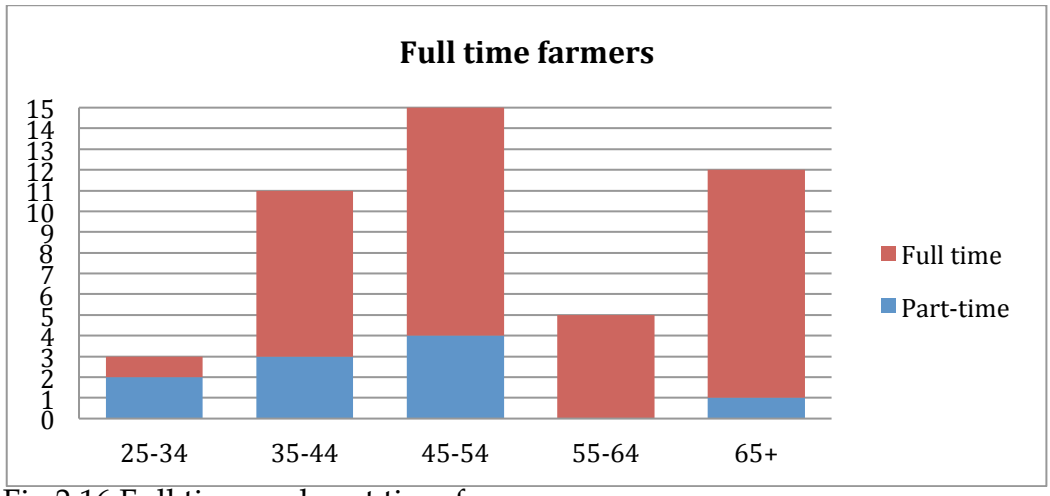

Fig.2.16 Full time and part time farmer

Identification of Farm Successor

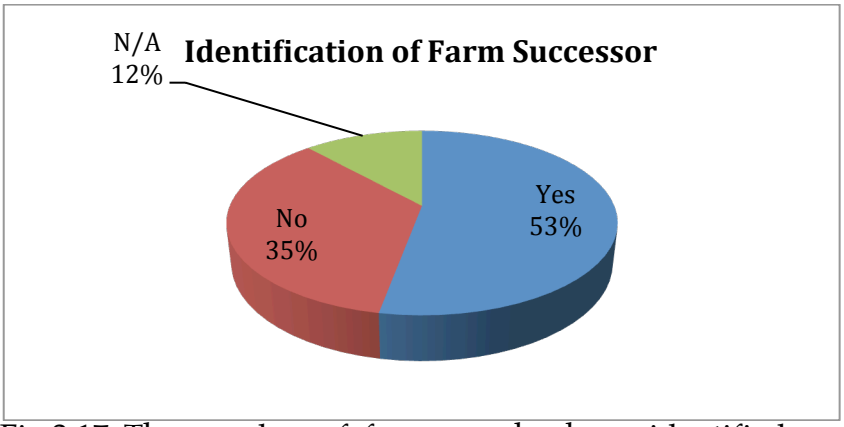

Fig.2.17 The number of farmers who have identified a successor to their farming enterprise.

A total of 53% of respondents had identified a successor to take over their farm. Older respondents were more likely to have a successor. Among those over 65 who answered the question (eight) seven had identified a successor.

Grazing and Livestock

A total of 77% of farmers with shares on the commonage are actively grazing the hill. The majority graze with sheep. Three respondents use the commonage to graze cattle/cows and calves and two graze with horses.

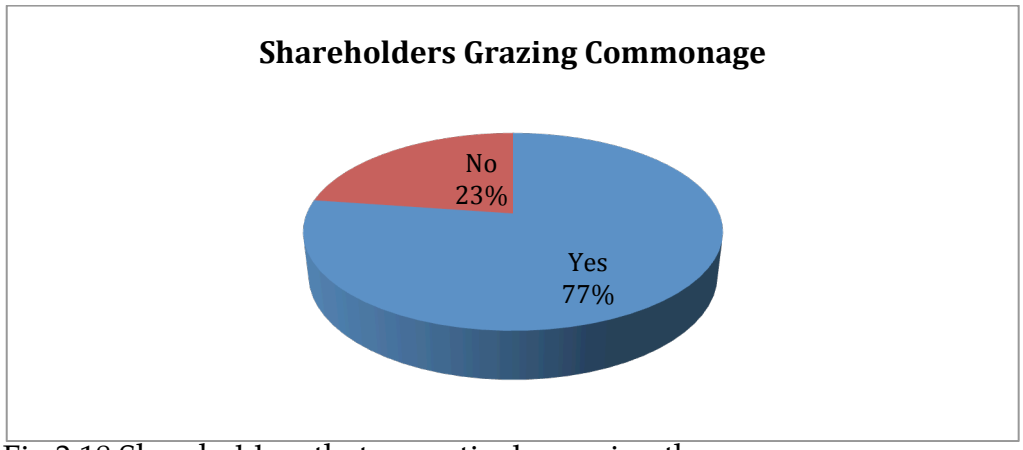

Fig.2.18 Shareholders that are actively grazing the commonage

Breed

Of those respondents with sheep 70% use the Cheviot or Cheviot cross breed. Other breeds used on the commonage to a much lesser extent were Suffolk, Blackface, Lanark, Hiltech and Mules.

The current sheep farming system on the Blackstairs Mountains largely revolves around the production of store lambs. The availability of enclosed grazing land will generally play a significant role in determining how long sheep will be on the mountain. Following lambing in spring, the sheep generally remain in low green land areas until the lambs are strong enough to take to the mountain, usually in July, where they follow the ewes to learn grazing ranges. This practice is essential if the lambs are to become replacements in the future and part of a viable flock for hill farming. Most sheep are collected and brought down from the mountain by October/November, at which point the store lambs are generally sold on for fattening or in some instances finished on the farm itself. Farmers inspect their stock regularly while on the mountain to check their health, roaming and location.

Average number of stock

While the sample number of farmers is small it is useful to get an indication of the average numbers of stock grazed by each shareholder. Twenty eight respondents gave figures for the number of stock they graze on the commonage each year. The average number of sheep put to the hill by each was 154, with the lowest figure being twenty and the highest being approximately 475.

Grazing period

The majority of active farmers (72%) graze the commonage during the period from June to November while the remaining 28% graze the commonage all year round. While it was not asked in the questionnaire it was gathered from anecdotal evidence that the availability of green lowland is the main factor determining grazing time on the commonage. Those with less green land tend to keep their stock longer on the hill throughout the year.

Stocking trends on commonage land

In answer to a question about changes in stocking levels on the commonage over the past ten years 64% of respondents had either decreased or stopped putting stock on the commonage over the past ten years while 36% had increased their stocking numbers.

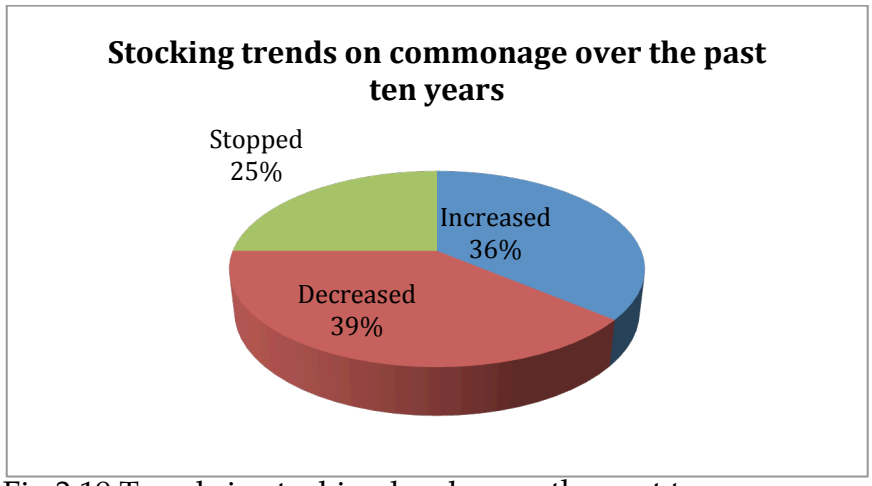

Fig.2.19 Trends in stocking levels over the past ten years

This trend is not just confined to the 65+ farmers but also among the under 44 age group; seven out of eight farmers in this age group had either decreased or completely stopped putting stock on the commonage in the past ten years (Fig.2.20).

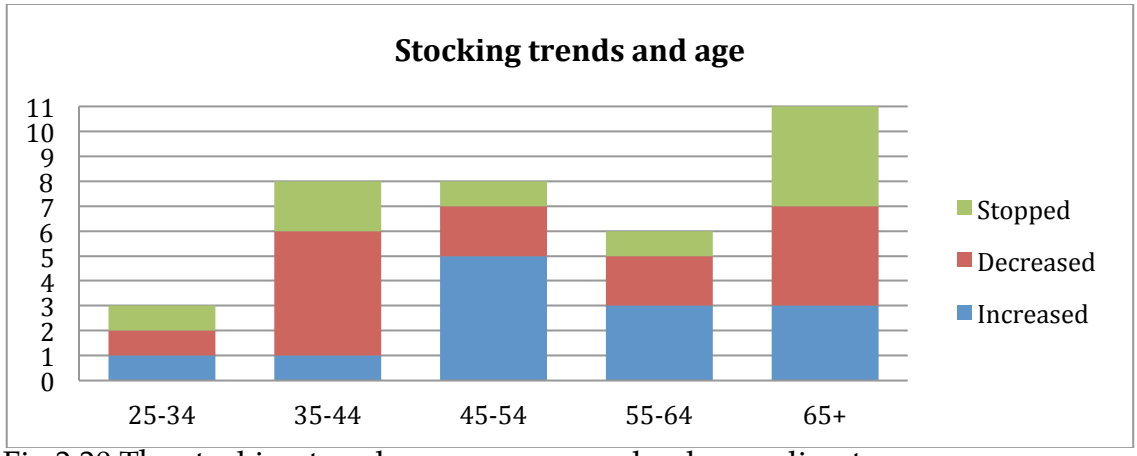

Fig.2.20 The stocking trends on commonage land according to age group

Farmers who answered the questionnaire were asked to state the reasons for their changes in stocking numbers on the commonage. Among the reasons were health and age related issues, poor fencing, lack of income from sheep farming and not having enough green land to support increasing stock.

Value of Forage

All but one of the total number of respondents considered the forage resource on the commonage as valuable (Fig.2.21).

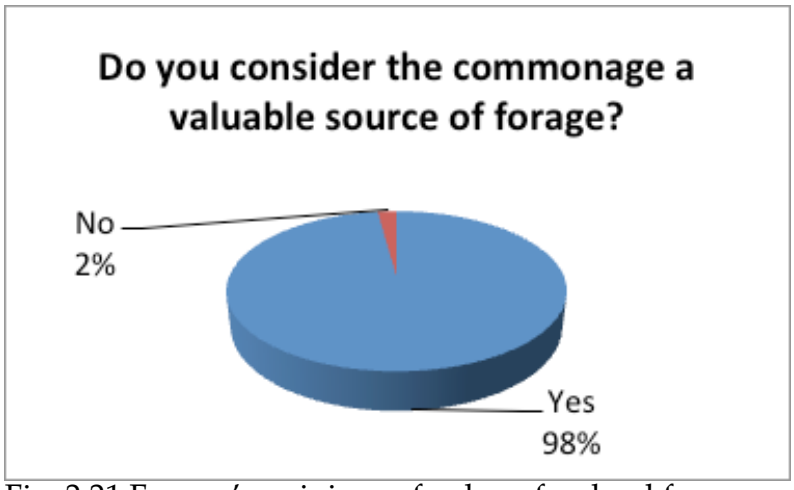

Fig. 2.21 Farmer's opinions of value of upland forage

Wildlife

Changes in wildlife mentioned by the respondents (21) were reduction in red grouse, increasing numbers of red deer and overgrowth/scrub. Four respondents had noticed no changes in wildlife and one had noticed a reduction in the number of bees in the area. A full list of the responses can be seen in Appendix 4.

Management issues

Fencing was identified as the most important management issue in a question which listed various concerns. This was followed by undergrazing, stock losses, ferns/bracken and burning.

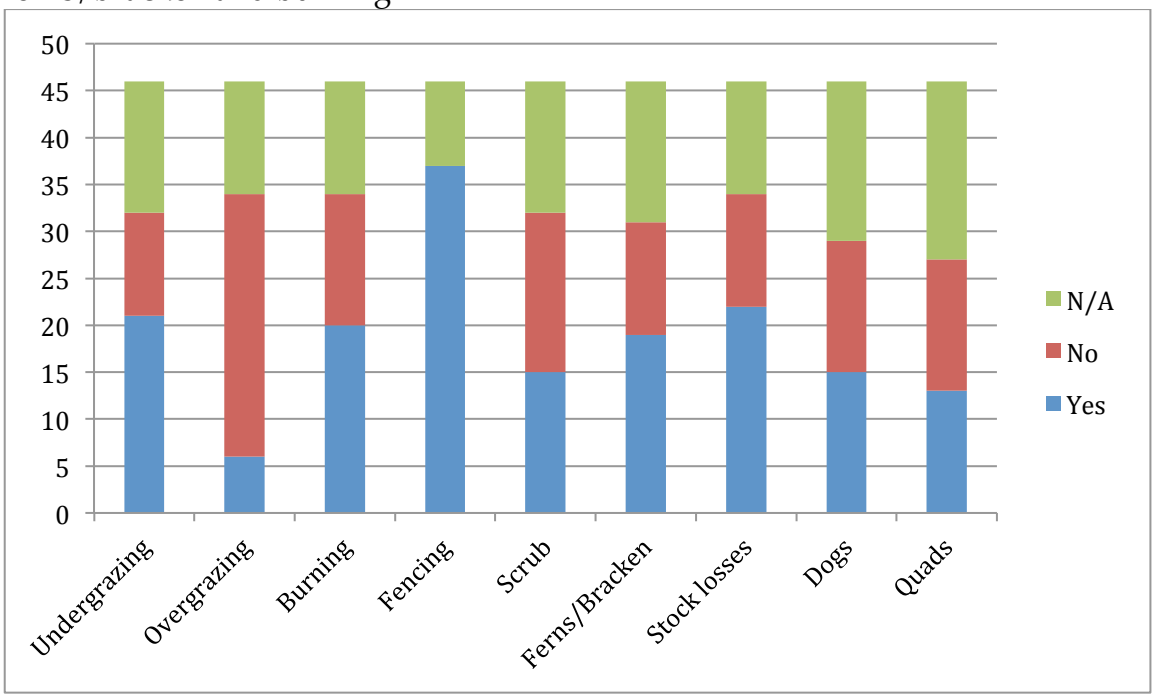

Fig. 2.22 This graph indicates the number of respondents who consider these issues a problem for farming on the Blackstairs

The issue of fencing related primarily to the fencing around commercial forest plantations. Most farmers mentioned that these fences were maintained while the forestry plantations were young as trees required protection from livestock but as the trees matured the fence was no longer effective. As these fences fall into disrepair

sheep can move into the forestry and get lost; making it very difficult for farmers to locate them when herding. When asked why they decreased or stopped putting stock on the mountain seven said it was related to the state of the forestry fence.

Concern with stock losses is a concern among 65% of respondents associated with the condition of the forestry fence and theft (but only on some of the commonages).

The second biggest issue was undergrazing (66% of respondents) which is associated with reduction in the value of forage, difficulties with herding sheep and the threat of affected areas becoming ineligible for the Basic Payments Scheme.

Ferns/Bracken was considered a problem by 61% of respondents as it was considered that that in some areas it is spreading further up the mountain and causing the forage area to decline. If this trend continues there is a fear land will become ineligible for support payments. This result is supported by evidence from habitat mapping which showed 10% increase in bracken cover in certain Carlow townlands between 2002 and 2015 (Table 2.1).

Fig. 2.23 Bracken covered field on Kiltealy Mountain

A slight majority (59% of respondents) stated that burning was a problem on the Blackstairs range. While there was generally a 60/40 split between those who considered burning to be a problem and those who didn't, almost all agreed (anecdotally) that burning management should be improved.

Burning is a traditional feature of upland land management in the Blackstairs. In the Blackstairs local reports confirm that burning occurs outside of the period when officially allowed under the Wildlife (Amendment) Act and occasionally affects large areas. This type of burning practise is not optimum for dry heath.

Fig. 2.24 Fire in the Blackstairs April 2015

Dogs were considered a problem by 52% of respondents. This relates to the issue of dogs worrying sheep, causing distress, injury and death in extreme cases. The issue of dogs seems to be localised across the range, as farmers using the most publicly accessible commonages are most concerned with this issue.

Just less than half (47% of respondents) considered scrub to be a problem on their commonages. Scrub species of particular concern is gorse. Farmers from townlands such as Cloróg Mór, Knockymulgurry, Ballyglisheen and Deerpark Hill were particularly concerned.

As with the issue of ferns/bracken farmers recognise that scrub has always been a feature of the agricultural landscape around the Blackstairs. However, in some areas undergrazing can lead to the expansion of scrub; taking over grazing areas, reducing habitat diversity and thus overall biodiversity and causing land to be ineligible under the Basic Payments Scheme.

Fig. 2.25 Gorse scrub

Farmers were almost evenly divided on the impact of quad bikes. Almost 52% did not consider quad bikes to be an issue. Those respondents for whom quads are an issue are farming on the northern side of the mountain range.

Overgrazing is considered a problem by just 18% of the respondents probably all associated with commonages at the northern end of the mountain range.

Commonage meetings
In response to a question about the value of meetings to discuss the management of the commonage, 82% of respondents agreed that this would be useful.

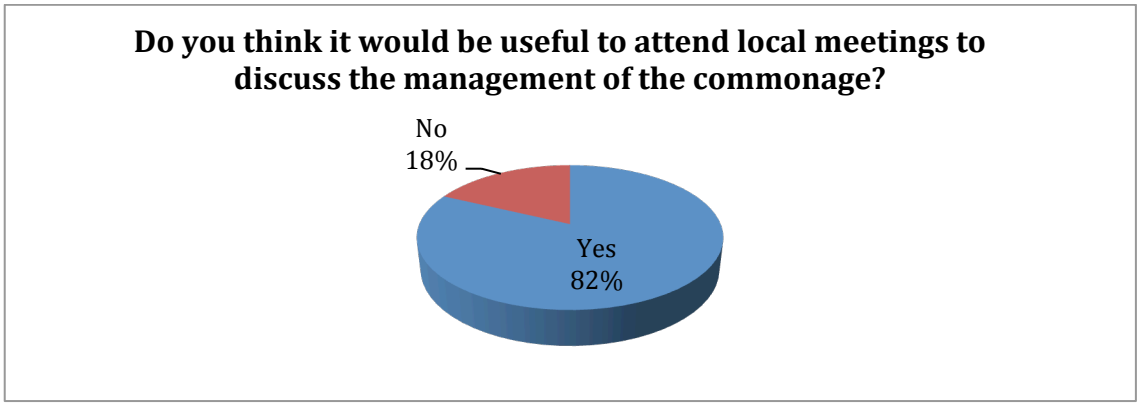

Fig.2.26 Interest in commonage meetings

Participation in GLAS
A question on GLAS revealed that the vast majority of farmers are in fact either in GLAS or intend to enter.

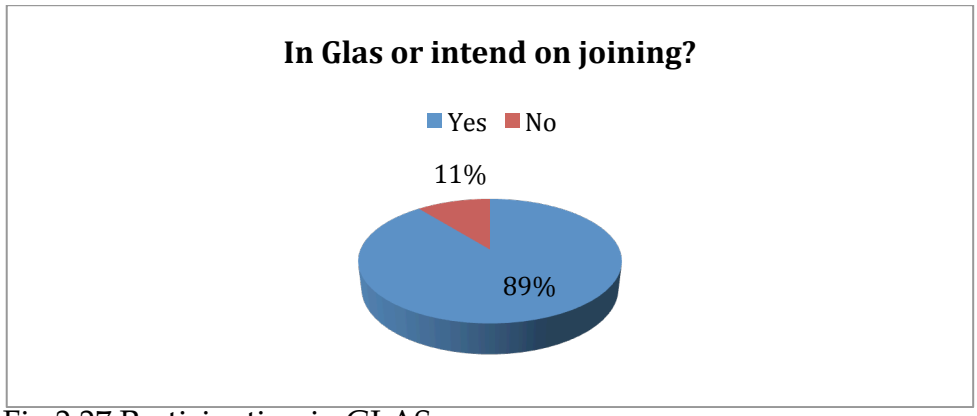

Fig.2.27 Participation in GLAS

Individual responses to farming
An open ended question which included prompts in relation to improving financial viability, making farming more attractive to young people and improving the uplands for wildlife alike elicited comments on grazing, burning and fencing, the creation of better market conditions for hill lamb, the need to improve governance and support investment in tourism.

A full list of comments can be seen in Appendix 6. They included a comment which indirectly relates to the proposal for an LLAES "any management has to reflect young people's way of life"

2.5 Agri-environmental schemes review

2.5.1 GLAS

As the farmer survey revealed that the majority of Blackstairs farmers surveyed intended to join GLAS, a review was carried out of the Commonage Measure, as farmers joining GLAS will be obliged to join under this Priority Environmental Asset.

Farmers on commonages >10ha and who wish to qualify under this measure must be part of a commonage management plan (CMP). This will be drawn up by a Commonage Planner and cover all of the farmers on the commonage who wish to join GLAS. The payment rate under this measure is €120/ha/year up to a maximum of €5k. In certain cases farmers with another Priority Environmental Asset (from among Private Natura, Farmland Birds (hen harrier, breeding waders, chough, twite), High Status Water and Rare Breeds) will qualify for GLAS+ and may be eligible for an additional maximum payment of €2,000. If applications for the commonage measure follow national trends payments are likely to be far less than the maximum. A recent report in Irish Farmers Journal (7th January 2016) states that commonage farmers typically had 17ha and claimed payments/year of c. €2k.

The objective of the GLAS Commonage Management Plan is to *"ensure that commonage lands are appropriately grazed and managed to ensure they remain in GAEC and are compliant with eligibility criteria".*

Applicants must also have a nutrient management plan. The principal obligation under the CMP concerns grazing. Their stock must graze the commonage at a prescribed stocking rate within a prescribed minimum and maximum. While co-operation with other shareholders is recommended there is no obligation to ensure the CMP covers a particular percentage of the commonage or shareholders. Guidance provided by the DAFM to planners for the completion of a CMP suggests that provisions for burning or predator control could also be included in the plan.

A recommendation on minimum and maximum stocking rates for the commonage will be provided by DAFM, based on the assessment of Blackstairs commonages in 2001. Planners will also be expected to carry out a commonage assessment in order to validate these recommendations or inform a revised stocking rate.

The condition assessment will be done by aggregating the results of assessments made at a series of waymarks within the commonage. Characteristics which must be considered are:

- Heather (growth stage, %cover and signs of grazing)
- Molinia (assessed on leaf litter evident between Nov – April; young growth between May-June; and grazing levels between Jul-Oct)
- Scrub (% cover of all woody tree/shrub species except Bog Myrtle and dwarf heaths)
- Sward (overall quality based on % cover of rank vegetation, diversity, cover of Nardus and grazing resistant species)
- Observed evidence of livestock/grazing/dung/hoof prints.

Following assessment a decision is made on the condition of the commonage; whether it is poor, average or good. This assessment also corresponds to the commonage framework plan damage category.

The GLAS scheme does not include monitoring of habitat condition. Farmers will be paid based on the evidence that that they hold the correct numbers of stock. It is not clear how evidence of grazing on the commonage will be obtained.

Farmers may be eligible for other general actions under Tier 3 of GLAS, but only on their private land. On private land payments are available for the maintenance of traditional stonewalls, planting new hedgerow, small woodland establishment (up to 0.09ha) and the protection of monuments in tillage and grassland.

While the CFPs have undoubtedly improved the habitat conditions in some areas, it is clear that current agri-environment supports do not go far enough to address some of the local threats and pressures on the habitats and at farm level. The commonage measure in GLAS has seen strong opposition from commonage farmers who have concerns about the top down approach, particularly the collective responsibility and penalties associated with the scheme (Monaghan, 2015). More effective management measures that target specific environmental objectives and meet the individual farming challenges associated with the local farming systems are required.

2.5.2 LLAES scheme proposal

The proposal for an LLAES scheme under the Rural Development Plan (RDP) is still being developed. Information provided by DAFM suggests that local farming groups can become involved in the design, development and implementation of an agri-environment programme. This should be in an output-related, results-based scheme that delivers improved environmental quality and shows value for public money. Specific funding (as yet unspecified) will be provided for an uplands LLAES under the title Uplands/peatlands.

An uplands LLAES supports the proposal from the Oireachtas Joint Committee on Agriculture, Food and the Marine. In its "Report on Review of Commonage Lands and Framework Management Plans" it specifically urged the DAFM to consider the outcome/results-driven approach developed in the Burren. It was also highlighted that this approach would encourage the management of commonages along co-operative lines, which would reduce problems caused by a lack of governance and dormancy and that it would promote the involvement of young farmers.

While details have not been published information provided from DAFM (Walsh, 2015) suggests the following features of the LLAES:

- Actions supported by the LLAES must be different to those required under GAEC or GLAS in order to avoid double funding.
- Biodiversity indicators must be provided and monitored to provide evidence of value for money.
- GLAS participation will not be required for qualification to join an LLAES.
- Depending on the contribution of the action to environmental/agricultural value it is expected that actions will be part funded by the participating farmer. In the Burren Farming Conservation Programme this is between 25% and 75%.

For example, there is a 25% allowance for repair to a new track but a 75% allowance for wall repair.

- The scheme will probably be advertised in 2016.
- The Project team which will co-ordinate/administer the scheme at local level will carry out the following tasks:
    - Design the appropriate land management activities for the conservation species/habitats.
    - Train, liaise and co-ordinate the farm advisors.
    - Cross-check farm plans.
    - Liaise with applicants/steering group/DAFM.
    - Develop and implement a monitoring programme.
    - Produce/disseminate information.
    - Provide scientific advice, appropriate guidelines.
    - Produce annual/final reports on scheme operation.
    - Review scheme design and implementation.

According to a Prior Information Notice (6/11/2015) DAFM intends to appoint consultants to assist in the implementation of the LLAES. The tender notice states the intention is to "procure services for the delivery of a number of individual Locally-Led Agri-Environment Schemes to be launched under the terms of the Rural Development Programme 2014-2020 and the principal objectives of any contract awarded as a result of any competition may include at least the following for each relevant scheme.

- To help with the design and development of the individual scheme for which the procurement request issues.
- To publicise the relevant scheme and recruit applicants.
- To liaise closely on the ground with local communities and stakeholders in the preparation and implementation of the scheme.
- To ensure the preparation and implementation of focused farm plans aimed at delivering the objectives of the scheme.
- To provide full project management, including administrative and technical support, for the successful implementation of the scheme.
- To provide training and technical support to farmers and agricultural advisors involved in the scheme.
- To oversee and validate all payment claims
- To contribute to an on-going review and assessment of the scheme in question during its implementation phase, and to provide a final review and assessment on completion"

The tender notice suggests that chosen groups will be given specific assistance to prepare a successful application, promote, manage and monitor their scheme. It is assumed that further details concerning the timescale for this service will be available when DAFM publicise the full notice in May 2016.

2.5.3 Results Based Schemes

Results based agri-environment schemes are based on the development of a scoring system which links the environmental output (e.g. quality of the habitat for wildlife) to payments. Farmers are paid according to how well they achieve the environmental targets and outcomes, which are set out in a simple plan at the start of the year. Scoring happens each year, so that farmers have an incentive to improve the overall score of their plot and thereby increase their final payment rate. An increase in score means an overall improvement in the environmental quality of the field, which delivers a more cost effective approach than a flat rate agri-environment payment and is an effective policy design. There is flexibility within the scheme so that it is largely up to the farmer how they achieve the outcomes, but continuing guidance and advice forms a significant element of the scheme. This characteristic of a local scheme gives greater ownership to the farmers as to how s/he farms; to achieve specific environmental objectives. A key element of the results based approach is the development of appropriate indicators that can measure the successful achievement of required outcomes. The Burren Scheme uses many indicators to measure the impact of management relating to grazing, impact of invasive species and ecological integrity.

McGurn and Moran (2013) have presented an outline of a results based agri-environment approach for commonage, which is comprised of two components and is relevant to the Blackstairs. Component 1 is a targeted outcome-based area payment which reflects the specific condition of the habitat type and component 2 is associated with a targeted programme of specific actions appropriate to habitat type/ environmental target.

In contrast to GLAS where payment rate is not linked to the condition of the habitat and generic quality indicators are used; an LLAES for the Blackstairs commonages can monitor and reward good management. Indicators can be developed based on the biodiversity audit for these uplands and the habitat requirements of target species.

The contrast in payment structure between GLAS and LLAES is shown in the following table (Table 2.4).

Commonage Framework Plan damage category	**Habitat condition for commonage management plan**	**Payment rate under GLAS**	**Results based Score for habitat**	**Results based LLAES payment structure**
U* (Rank and Undergrazed)	Poor	€120	0	€0
U (Undamaged)	Good	€120	5	€Maximum rate
MU (Moderately undamaged)	Average	€120	4	€ increases as score increases and environmental quality improves
MM (Moderately damaged)	Average	€120	2-3	€ top-up starts at a score of 3
MS (Moderately to Severe)	Poor	€120	1	€0 top up
S (Severely damaged)	Poor	€120	0	€0 top up
S* (Very Severe damaged)	Poor	€120	0	€0 top up

Table 2.4 Payment and evaluation systems used in GLAS and required by LLAES

2.6 Conclusions

The rich tradition of farming across the Blackstairs Mountains is principally responsible for its current biodiversity and the provision of many services which benefit the wider community, some of which are intangible (such as landscape, carbon sequestration and community identity), while others are tangible (food, access to hills for recreation and clean water). The diverse range of environmental services provided by the Blackstairs contrasts with those associated with lowland parts of the region. Over time farming practices were perfected, making optimal use of the upland areas in a way that added greatest value to the farming system. There was a solid rationale behind this system; employing methods that made good farming sense and also contributed to the economic, social and cultural fabric of the communities that surround the Blackstairs. As a result the Blackstairs now supports substantial areas with Dry Heath habitat in good condition and good prospects for all other peat forming systems. While annexed habitats are in good condition there is particular concern with undergrazing resulting in the spread of scrub, burning management and the population of red grouse. Local reports suggest that the frequency and intensity of fires has increased. While dry heath habitat is best maintained through appropriate burning and grazing, inappropriate burning will lead to the removal of this habitat and its replacement by acid grassland.

Trends in management suggest that biodiversity and associated goods and services are now under threat associated with a decline in stock grazing and a decreasing number of upland hill sheep farmers. While external factors (economics, regulatory, environment, etc.) are significant, local land management is also responsible. The current impact of this decline in stock grazing and farming may be an increased cover of scrub, more intensive burning practises, which are partly responsible for the expansion of ferns/bracken and will in the long term threaten valuable habitats and species. If current management trends are maintained there will be more "scrub", more bracken and less dry heath. All habitats will deteriorate but particularly dry heath (converted to acid grassland), wet heath (through a reduction in species diversity) and acid grassland (as it will be converted to scrub). There will be a reduction in the ecosystem services particularly those associated with biodiversity, amenity and carbon sequestration.

The biodiversity audit and review of farming in the Blackstairs suggests that an LLAES for the Blackstairs is necessary. This type of support is compatible with the concept of HNVF, the implementation of the SAC Management Plan and the maintenance and enhancement of ecosystem services through supporting the farming systems on which they depend.

The requirement for "relevant output indicators" implies that there should be a results based component to the LLAES designed to deliver measureable improvements in environment quality. Some of the indicators used to assess habitat condition and information on local farming practices can be used to elaborate such indicators. The indicators for the Blackstairs should relate to local environmental objectives to maintain and enhance habitat quality, particularly dry heath (17% of dry heath in Ireland is in the Blackstairs) and the population of red grouse. Habitat management for this species will benefit the full range of upland habitats and improve conditions for all ground nesting birds such as meadow pipit, skylark and

wheatear. It is also beneficial to livestock (e.g. provision of more suitable forage and the reduction of ticks).

The GLAS commonage measure is focussed solely on the overall stocking numbers, with no regard to any more specific outcomes and without much regard to further more detailed management which might be necessary to achieve them. The Blackstairs LLAES will focus on local environmental targets and through monitoring of relevant indicators will show evidence of management impact.

The population of red grouse will be used as one of the indicators of habitat quality. Red grouse has not been included in the suite of measures under the GLAS programme.

Local consultations have confirmed that a results based approach based on habitat quality and particularly the production of suitable red grouse habitat will have widespread local support. The majority of farmers interviewed favored co-operation on commonage management and improved burning management. They are particularly interested in a local scheme which will produce local benefits for biodiversity and enhance farm incomes. The farm survey shows that there is a strong level of interest in farmers joining GLAS.

Farmers in the Blackstairs are concerned directly and indirectly with many of the issues which affect biodiversity. Undergrazing, which is associated with reduction in value of forage, difficulties with herding sheep, the threat of some areas becoming ineligible for the Basic Payments Scheme and increased risk of uncontrolled burning is of concern to most farmers. This issue also affects grouse. Measures which reduce the risk of this occurring and also protect biodiversity will have local support. They are similarly interested in good burning management. The public meeting showed there was widespread support for improved management of burning. Measures can be designed to encourage good farming practices which maintain and enhance biodiversity.

The analysis of the development of the LLAES scheme suggests that while indicators and a programme of works can be presented for the Blackstairs LLAES costings cannot be provided to ensure that the LLAES costings provide additionality, as these should be developed in the next stage of an application, with the assistance of consultants provided by DAFM post May 2016.

3 Conclusions and recommendations

The proposed LLAES will maintain and enhance important features of biodiversity and farming systems which are important to maintain biodiversity. While the condition assessments for annexed habitats showed that they were in good condition, future prospects are poor due to the decline of farming, associated with more intensive burning practice and expansion of scrub. An LLAES should reverse this trend and support the continued delivery of ecosystem services through a mechanism that has local meaning and is based on an evaluation of the current status of biodiversity and local potential for management. It will support the implementation of the SAC Management Plan.

While GLAS should have a positive impact on biodiversity it is unlikely that this scheme will be able to address local threats and pressures. The Blackstairs LLAES is based on local research which has identified the location of important areas of habitat, and their relationship to farming. Its impact can be measured in terms of benefits to Blackstairs biodiversity and Blackstairs farming systems.

While focussing primarily on the maintenance and improvement of habitat condition, the Blackstairs LLAES will incorporate support for actions in commonages which are not covered by GLAS. These include the enhancement of red grouse habitat, the protection of archaeology and stone walls, encouragement for the establishment of new small native woodlands and fencing around Coillte plantations. By including land outside the commonage which is managed by commonage farmers, in contrast to GLAS it will offer support for the management of a wider range of associated semi-natural habitats.

Developing this type of agri-environment scheme on commonage will require a scheme that promotes positive communication among shareholders and between farmers and specialists. This possibility was realised during the research for this study as the research process was based on a transdisciplinary approach.

Farmers in the Blackstairs have developed a positive attitude about the possibility of developing their own LLAES. Farmers want to improve commonage governance; they want to come together to overcome the pressures affecting their farming systems and the biodiversity of the area. An appropriately planned and implemented locally led scheme, could deliver the kind of outcomes and results that could improve conservation status in a more self-sustaining way, while also adding value to hill farming systems. It provides an opportunity to have a wider landscape/catchment approach (both for biodiversity and water) where equal focus is placed on non-commonage areas – something which GLAS in its current form signally fails to deliver.

It is recommended that:

- The development of the Blackstairs LLAES, will continue to support the partnership approach, to fully realise the potential of collaboration between farmers, NGO's, local gun clubs, state agencies, community groups and other stakeholders which are concerned with and benefit from Blackstairs biodiversity and ecosystem services.

- A census/count of red grouse across the Blackstairs should be carried out so that baseline figures and locations of breeding birds can be established. This presents an opportunity to further develop relationships between farmers and other stakeholders such as local gun clubs and other voluntary organisations.

- Similarly a trial of stone wall rebuilding should be carried out to provide estimates of local costs for this measure.

- If resources allow score cards for the Blackstairs LLAES should be designed and tested to inform the evaluation system for farm plans based on either a five and ten point scoring system.

- Careful attention should be paid to any announcements on the LLAES proposal and any information on the costing calculations for the measures included in GLAS. This will be essential for the drafting of local costs and payment calculations for the LLAES so that additionality is provided and double funding is avoided.

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Appendix 1 James Moran's Ten Point Plan

1. Deciding on the **environmental/biodiversity goals** for the area(s), ecosystems/habitats & species.
2. Assessment of the **environmental baseline**, reference level and need for agri-environment or other incentive based management schemes
3. Assessment of what is **already paid for and covered under GLAS scheme**?
4. Habitat/species/water body location. **Defining specific target and location**
5. **The practicalities** – assessment of development costs, funding availability, available expertise: Cost-effectiveness
6. Understanding of relevant **dynamics in both environment target (habitats/ species) and target farms**.
7. Can **indicators of success (proof that a farm /field delivered required output)** be developed that can be used as a basis for payment for delivery of objectives of programme (output-based).
8. Requirements for **landscape-scale measures?** What is the most appropriate management unit?
9. Identification of **institutional capacity to deliver.**
10. Draft **proposal** developed and ready for call.

Appendix 2 Questionnaire

Name:_____ Date: _____
Address:_____
Phone: _____

Q.1 Are you a full-time or part-time farmer? Full-time Part-time

Q.2 Age group:

18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+ ☐

Q. 3 Have you identified a successor for the farm? Yes ☐ No ☐

Q. 4 To help us understand your use of the commonage, please fill in the table below.

Commonage Name	Do you graze it? Yes/No	Breed of stock e.g. Cheviot, Blackface	Number of stock on commonage

Q.5 Which months of the year do you have stock on the commonage?

_____

Q.6 Which of the following best describes your use of commonage over the past ten years? Please tick one.

Over the past ten years I have increased my stock numbers on the commonage. ☐

Over the past ten years I have decreased my stock numbers on the commonage. ☐

Over the past ten years I have stopped putting stock on the commonage. ☐

I never stocked the commonage.

Q.7 What is the main reason for the changes in how you stock the commonage?

_____

_____

Q.8 Please outline the changes, if any, that you've noticed in wildlife (plants and animals) in the Blackstairs area and explain what you think the reasons for these changes are?

_____

_____

Q.9 Do you consider the commonage to be a valuable source of forage for stock?

Yes ☐ No ☐

Q.10 Please state if you consider the following issues to be a problem for farmers on the Blackstairs?

Issue	Do you consider this issue a problem on the Blackstairs? Yes/No	Comment
Overgrazing		
Undergrazing		
Fencing		
Burning		
Scrub (Furze, bushes)		
Ferns/ bracken		
Stock losses (please state reason for loss – theft, fencing etc.)		
Dogs worrying sheep		
Quad biking		
Other…		

Q. 10a From the list above which do you consider a priority for farmers in general in the Blackstairs area? Please add your own priority if it is not on the list.

_____

Q.11 Have you ever attended local meetings with other shareholders to discuss management of the commonage? Do you think such meetings would be useful?

_____

Q.12 Please indicate if you are in any of the following agri-environment schemes.

Scheme	**Yes/No**
REPS	
AEOS	
GLAS	
I intend on joining GLAS	

Q. 13 If the farm is not in an agri-environment scheme and you do not intend on joining GLAS what are the reasons for this?

_____

Q.14 Please outline any thoughts you may have on how to make farming more financially successful, attractive to young people and how the Blackstairs can be managed in a way that benefits farming and wildlife alike. (Please use the back of the sheet if necessary)

_____

_____

_____

Appendix 3 Report on Project Development Meetings November 2015: A Locally Led Agri-environmental Project in the Blackstairs

(Compiled by Helena Fitzgerald, BFG Coordinator, Blackstairs Farming Group)

DATE: Thursday 5th November

TIME: 8.00pm - 9.30pm

VENUE: Rathanna Hall

Better to light a candle than curse the darkness

Attendance: Martin Shannon (BFG Chair, Knockroe), Noel Bolger (Knockroe), Paddy Drennan (Crannagh), Alan Doyle (Crannagh), Eddie Donohue (Seskinamadra), Tom Jordan (Raheenleigh), Jim Kavanagh (Raheenleigh), Norman Livingston (Kilbrannish), John Kehoe (Craan), John Taylor (Mandoran), Paddy Dwyer (Ballycrystal), Martin O'Leary (Cloróg Beg), Larry Farrell (Cullentragh), Patrick Byrne (Dranagh), Paddy Dooley (Corrageen), Terence O'Neill (Rathgeran), Luke Doran (Ballyglisheen), Tom Murphy (Ballyglisheen), Maura Redmond (Walshestown), Paddy Doyle (Ballymartin Gun Club), David Ashmore (Agricultural Advisor and BFG Committee Member), Brigid O'Regan (BFG Secretary), Colin Gallagher (EFNCP), Dr. Mary Tubridy (Ecology Team), Helena Fitzgerald (BFG Coordinator)

Apologies: Tomás McCarthy (Vice-chair) and Kevin Byrne (Raheenleigh)

WELCOME

Martin Shannon welcomed all to the meeting.

BRIEF REVIEW OF ITEMS DISCUSSED AT TUESDAYS MEETING

A note of Tuesday's meeting was distributed the main points summarised (HF).

IMPLEMENTATION OF A LOCALLY LED SCHEME

Colin Gallagher gave an outline of the likely process for implementing a locally led scheme in The Blackstairs should we be successful. A summary is attached.

GROUP DISCUSSIONS

Three groups were formed to discuss Controlled Burning and Scrub (MT); Fencing to Forestry and Ferns (CG); Agreement at Commonage Level and Commons Ditch/Stone Walls (HF).
After the groups reconvened and reported on their results there was a general discussion among all present at the meeting on the issues raised.

WHAT NEXT

- **What Information Is Needed**? Farmers present indicated that there would be interest in more information on Controlled Burning (possible demonstration) and Red Grouse Management. BFG to progress further, possibly with the NARGC.
- **Who Do We Need To Talk To/Who Do We Need To Support The Project**? HF advised that to date contact had been made with NPWS; Gun Clubs; Inland Fisheries Local Authority Fire Services; Irish Water/EPA and Coillte. No other groups were identified.
- HF outlined that CG and MT were in the process of completing a report on the potential for a locally led project for consideration by Blackstairs Farmers. The report will be complete in early 2016.

END

Martin Shannon thanked all for attending.

Workshop Accounts (provided by group facilitators)

WORKSHOP ONE – FENCING, FORESTRY AND FERNS (CG)

Fencing

• Members of the group spoke about having worked with Coillte in the past; where they supplied materials to farmers for fencing the forestry line. Farmers in the Dranagh area had fenced a lot of the forestry line with new fencing but soon afterwards it was destroyed by contractors who not only broke the fence but also created a kind of embankment making it difficult for future fencing.

• All agreed that the state of the forestry fence was making herding very difficult on the commonage to the extent that some have stopped grazing completely.

• I put forward a proposed payment of between 8-10 euro/m for timber fencing and this was generally seen as a fair payment.

• General agreement that it is now important to inform Coillte of the Group's intentions with the LLAES and of the need to include a measure to repair the forestry fence. Those farmers that had worked with Coillte previously said they had found them approachable and open to discourse.

• It was suggested, to general agreement, that the Group should consider a fence that will have a once off cost. This would probably mean galvanised steel fencing (rather than with wooden posts) which lasts much longer and possibly be less costly in the long run (though a higher initial construction cost).

• Payment for the erection of fence works should be paid directly and only to those involved in its construction. Farmers could share the work but this would mean less payment per farmer. The option should also be available to get contractors to carry out the work. Either way the payments should be made on results produced and not on receipts. Payment should be made to the farmer who signs up to this action and who achieves his targets/work. He can pass on his payment to whoever actually carries out the work (contractor/other farmer, etc.).

• It was also suggested that Coillte need to work closely with farmers during discussions around burning to include a measure where farmers can create firebreaks and maintain them over summer months. There was general interest in farmers getting involved in actions that would see them clear areas of high vegetation by hand around forestry plantations (possibly with strimmers/ flails).

Ferns/Bracken

• The most significant point that came from this discussion was the clear need to have different options available to farmers who want to be part of this measure. This would mean everything from the option of clearing bracken by hand to clearing it with a bracken bruiser on the back of a quad to clearance with larger machinery or even Asulox in some cases, for areas not accessible with a quad. This would accommodate farmers with different kinds of terrain (from very rough to very accessible) to choose a method most suitable to them.

• As with the fencing there was general agreement that payment should be made to those who carry out the work and achieve the kinds of results required.

• The discussion went from cutting bracken to cutting heather and it was suggested by farmers that a measure be included for the cutting of heather, where it had gotten too mature for burning. There was a small industry of cutting heather on the Blackstairs up to twenty years ago. The material was supplied to local meat factories that used it for odour control.

Other issues

• There was a general discussion at the end about how all of these measures would be agreed upon between shareholders. It was generally agreed that each commonage should seek to gain maximum agreement (or as near to as possible) among its shareholders. All proposed measures/actions to be carried out on all commonages should be discussed openly between all shareholders. Once a planner/advisor decides what needs to be done on the commonage then a meeting should be held between all members of that commonage (having been informed by letter). They may need to decide with majority agreement but all shareholders (active and inactive) should be kept informed at each step of the process. An important part of this process would be education and awareness...showing all shareholders (whether in agreement of the measures or not) of the benefits of the measures/actions to the state of the commonage and to good farm management e.g. actions may prevent areas becoming ineligible for future payments – benefiting all shareholders.

• It was also generally agreed that it would be good to include some of the fields outside the boundary fence (privately owned) if they were suitable for inclusion in the scheme.

Colin Gallagher 10th Nov 2015

WORKSHOP TWO - CONTROLLED BURNING AND SCRUB (MT)

(7 participants)

Everyone introduced themselves and their interest in farming in the context of the Blackstairs. It was announced that there was ten minutes on two topics. Controlled burning and scrub/ furze control. Furze was discussed first.

Furze Control

Mary talked about the importance of scrub to biodiversity but need to limit it to ensure survival of other habitats. She reminded them of regulations regarding removal of semi-natural veg and penalties under Basic Payment Scheme if scrub is allowed to spread.

Through discussion it was clarified that in the past farmers subbed them out over the winter and that the problem is not the same throughout the Blackstairs. Particular issue in Walshestown area, where bushes are very tall and no control happens. Treatment depends on terrain, flat dry areas very different to rough rocky wet places.

Possible treatments proposed include hand cutting with chain saw, treating stumps with herbicide to prevent re-growing, spraying with herbicide (but this was not attractive to everyone). There was an awareness that timing was important for regrowth and a reminder that NPWS need to be consulted about these works.

Cost would be c €10/hour or €130-140 per day for man with chainsaw. Hymac is €40/hour. Thought that neighbours would co-operate to clear scrub following an agreed flexible timetable.

Mary mentioned that this could be monitored by examining amount cleared and condition of habitat encouraged by clearance.

Controlled Burning

Mary said that biodiversity survey confirmed that some areas should not be burnt, but that burnt areas are generally restored. She summarised regulations and said that an agri-scheme could be a way to do burning co-operatively, legally and in a way that benefits biodiversity i.e. right time, place, type and stage of vegetation development.

Everyone in the group then spoke about their experience. Two /three individuals were involved in burning (of heather and furze). One farmer displayed keen awareness of good burning practice i.e. with regard to height of vegetation and benefits to sheep. No one admitted to doing it according to regulations. There was criticism of burning dates but not by all (possibly as they were not aware of them?). There were particular concerns about the
activities of people who started fires maliciously or thoughtlessly. There was an interest in learning how to stop fires. One participant described how John Carslake, employed by NARGC operates in Boleybrack.

After animated discussion where it was suggested things could be left as is, it was agreed that an agri-scheme could incorporate a burning plan. First stage is a survey to find out where burning could happen, and with agreement of farmer incorporate a spec to be followed by each individual. It was suggested that training would be useful and that some one like John Carslake could be asked to do that. Everyone was also reminded that if the grazing is right there may be less need for burning. If a burning plan was drawn up and
implemented Fire Brigades would know when burning is taking place in a planned way and not illegally, thus not wasting their time in unnecessary call outs.
Mary Tubridy 6th Nov 2015

WORKSHOP THREE - AGREEMENT AT COMMONAGE LEVEL AND COMMONS DITCH/STONE WALLS (HF)

(7 participants)
10 minutes were to be given to each topic.

Each participant described their commonage as follows:-
- 1/7 share of 200 acres
- 2/18 share of 487 acres
- 2/8 share of 1190 acres
- 5/10 share of 689 + 100 acres
- Shareholding of 7.5 Ha with 13 other shareholders on commonage
- Shareholding of 42 Ha with 8 other shareholders on commonage
- Shareholding of 20 Ha with 5 other shareholders on commonage

There was a discussion on the variety in size of commonage holdings and the implications of this for the project and for agreement of a management plan at commonage level.

It was discussed that any per Ha payment for good habitat would need to take consideration of the smaller commonage holdings. Participants asked that the project be 'worthwhile' to encourage participation in large and small commonages. It was agreed that there would be support for controlled and organised burning.

The process for drawing up and agreeing a plan was discussed. It was felt that farmers would be interested in participating in the planning process. 'One participants asked 'What was the alternative?' A payment to recognize the input of farmers in the planning process was felt to be a good idea. It was also discussed that a bonus payment for a positive outcome following the successful implementation of the commonage plan would also be useful.

HF pointed out that under a locally led project payments could only be made for work done or output delivered.

An imaginary commonage map was drawn with some actions identified. The group discussed how work could be divided between commonage shareholders. It was discussed that a farmer who was no longer doing 'heavy' work would pay another farmer to do work on his behalf, with other farmers co-operating on the mountain to actually carry out the work. It was agreed that actions like fencing and scrub removal had a clear benefit and that it was in a farmer's interest to co-operate. It was clear from the clarity farmers had about how work could be divided that these types of arrangement are part of existing farming practice.

COMMONS DITCH/STONE WALLS

The group discussed stone wall repair, pointing out that the payment would need to reflect the work required for the large Blackstairs walls as it took time to rebuild walls. Most farmers in the group had stone wall building skills and felt that maintaining the commons ditch was very important to minimise stock losses.

Helena Fitzgerald 10th November 2015

Colin Gallagher's Note 'How I see the project rolled out'

1. Preparation – The Group looks at baseline data, identifies environmental targets, engages with stakeholders (particularly farmers) and identifies the challenges, threats to farming and biodiversity in the area. Looks at potential to add value to current farming systems (Well underway in the case of the Blackstairs). With the release of information from the Dept of Ag who has indicated that they may be engaging services to provide support to those groups preparing for the LLAES there may be external support available to the Blackstairs Group between now and the call.

2. Proposal – The call for Expressions of Interest will come from the DAFM with a list of criteria, terms and conditions that should be met. The Group will at this stage prepare and submit a complete proposal. This will outline the needs of the area, the actions/measures/results based/ etc. that will deliver the outputs required to restore/conserve/maintain the biodiversity and help improve the conservation status of the Blackstairs and hopefully address some of the serious local socio-economic issues surrounding the sustainability of hill farming in the area. The proposal will be fully costed using verifiable methods.

3. Implementation – If the Blackstairs is successful in its bid for the LLAES then a new preparation stage will begin whereby farmers will be liaising with a team on the ground that are in place to help deliver the scheme in the area. This team will oversee and project manage the scheme. They will be involved in setting out the needs and requirements of each field/commonage and will carry out consultations with all concerned so that maximum agreement is reached on what is to be done and by whom.

a. Example: Plan for a commonage

- A planner/ecologist/member of project management team will assess the commonage and identify the issues that need to be addressed. They will use the list of measures/actions that the Group submitted as part of their proposal indicating what farmers are willing to sign up to. From this list a plan

will be made listing what needs to be done and where (indicating it simply and clearly on a map).

• This general plan with the map will be sent to all shareholders on the commonage informing them of the proposed plan and inviting them to a consultation where all members can sit down and agree on what will be done and by whom.

• These consultations will be informed and guided by a neutral person (possibly one of the management team). Once agreement is reached then individual farm plans can be drawn up and issued, indicating who has agreed to do what and a general timetable for the plan.

• Training may need to be given to farmers in how to record their actions/results over the year. They should also be informed about why it is these action/measures are necessary for their particular commonage (provide a solid rationale to farmers about why they are being asked to do the tasks outlined in their plan).

• The management team/local planners will monitor the progress of the plans and provide guidance, advice and possibly training when necessary.

• At relevant times of the year the commonage will be checked so that achievements/results can be recorded/ scored.

• The management team will submit results to DAFM and advise that payment be made to the Farmer in question.

• Farmers are paid at end of year/season dependent on delivery of results.

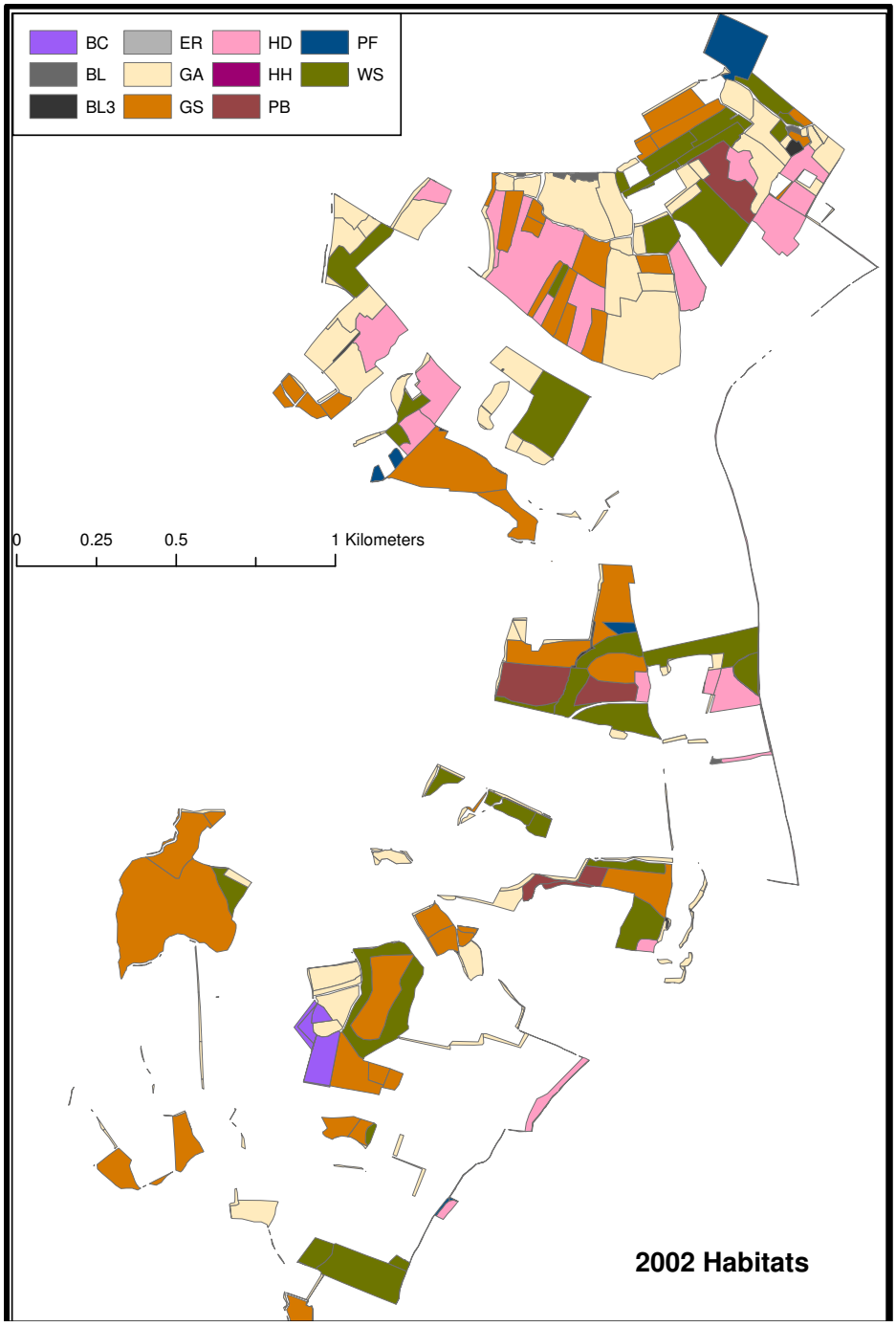
• Possibility of an inspection from DAFM given that funding for the LLAES comes under the Agri-Environment Measure.

• The following year the commonage is assessed again and a new plan is issued to participants, with agreement between shareholders as before.

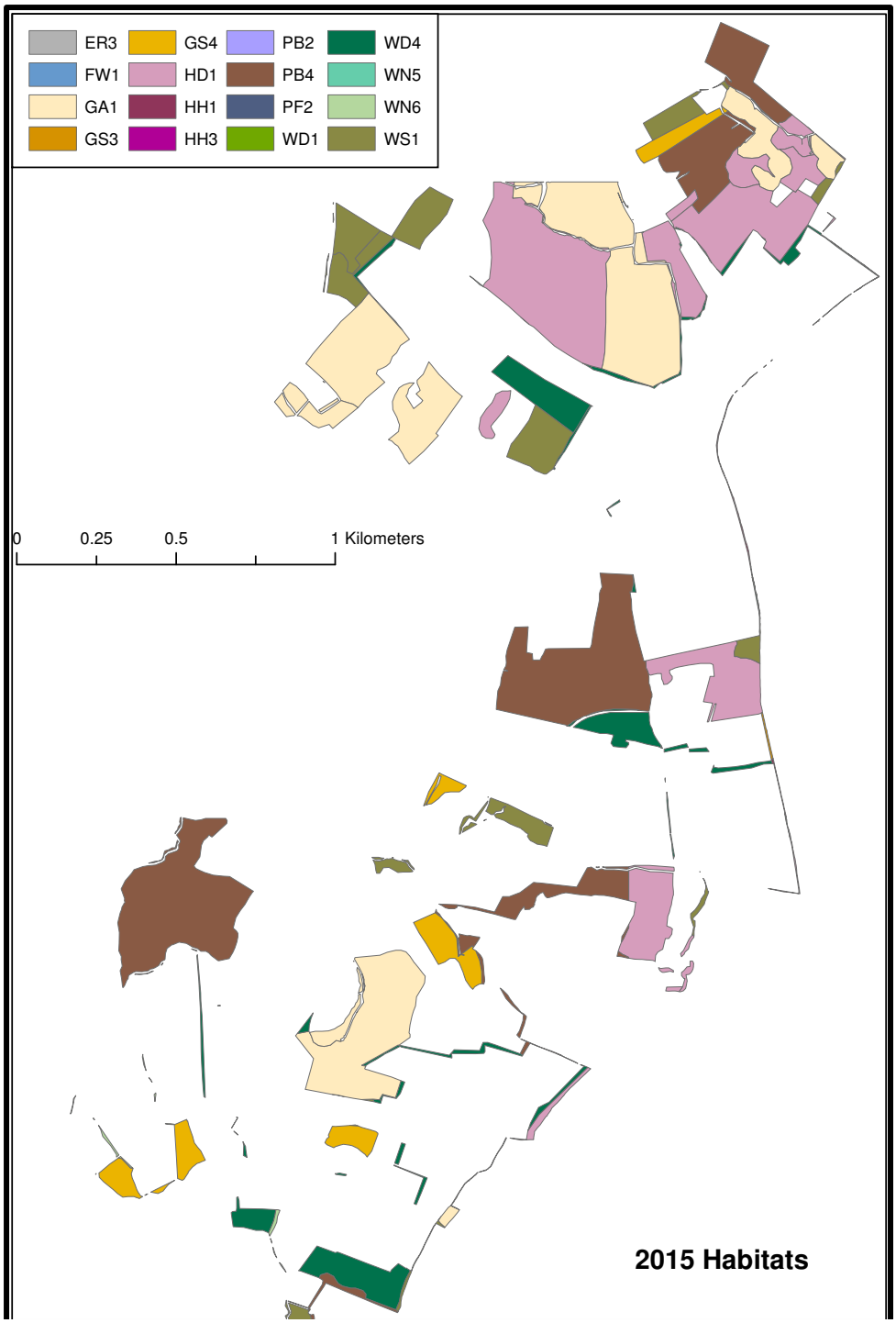
•Depending on application criteria the Group should consider the possibility of a performance related payment, one for which all shareholders would be hopefully eligible. Should the criteria allow it would be good to include a bonus payment based on a periodic assessment of the commonage over the five-year plan. This assessment would use the same guidelines that the Commonage Planners use (for consistency). Following assessment, if it can be shown that, as a result of the measures implemented as part of the Locally Led Scheme, that the overall conservation status of the commonage has improved then the shareholders would be eligible for a performance related payment.

Colin Gallagher 10th Nov 2015

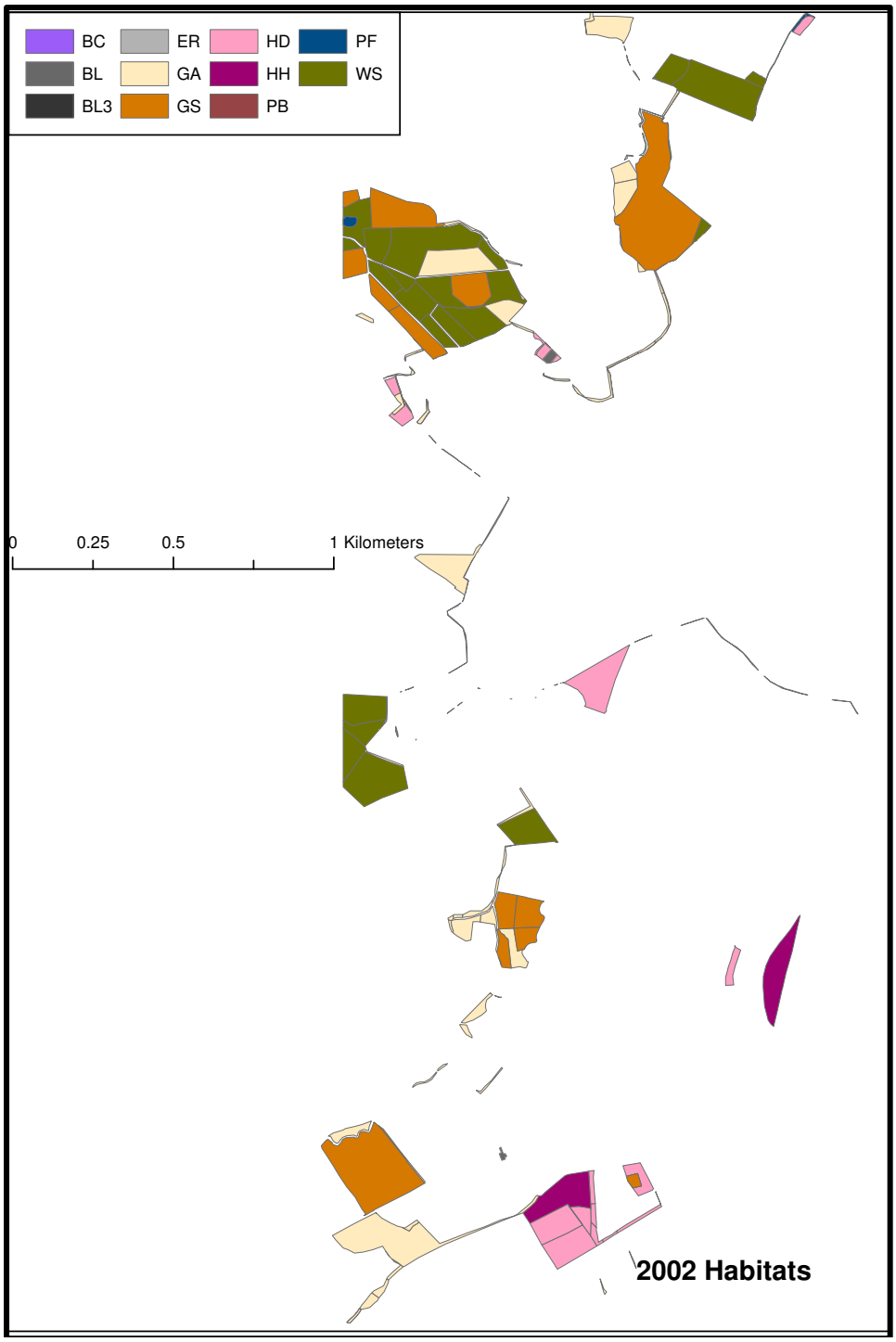
Appendix 4 Habitat cover in Carlow townlands in 2002 and 2015



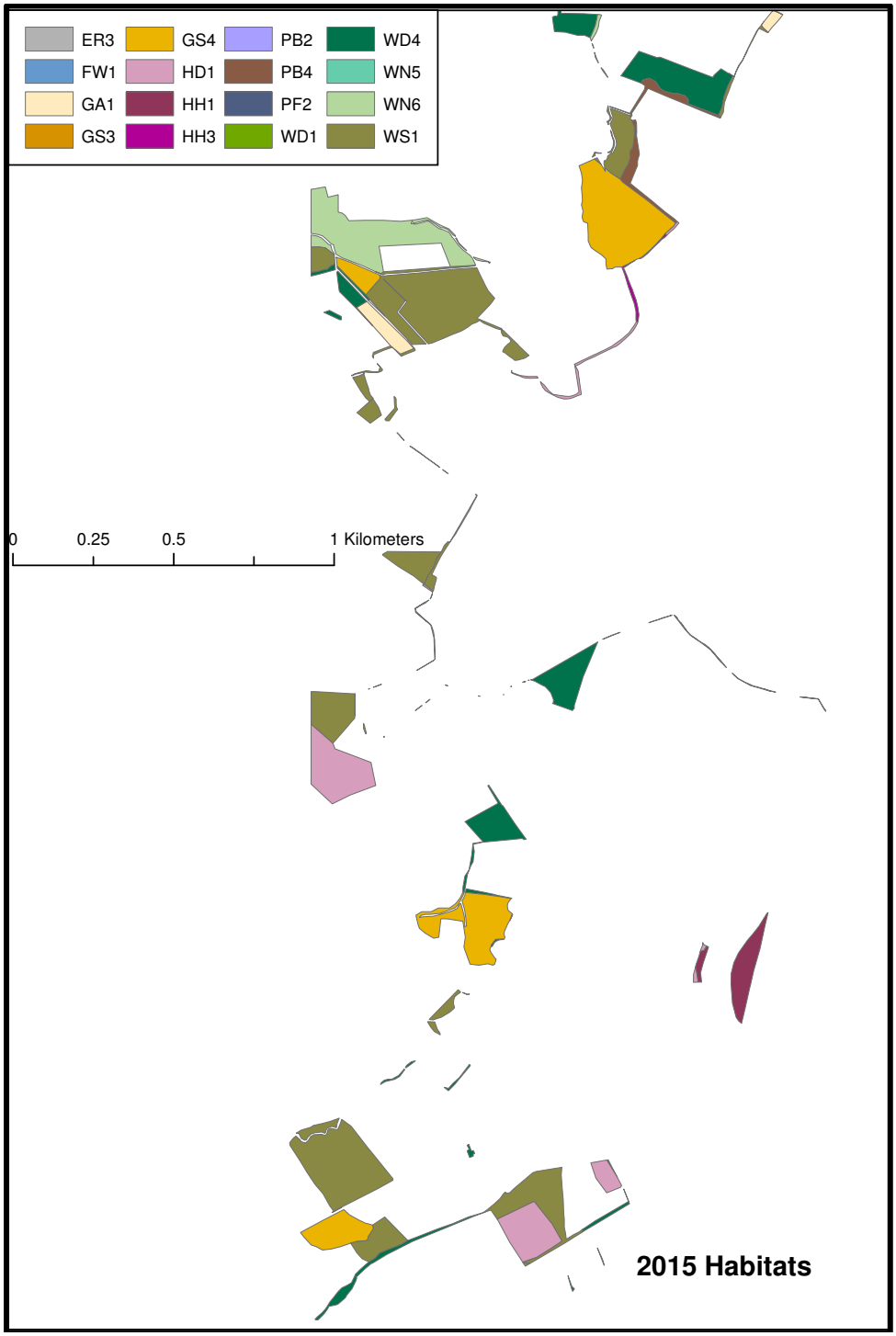
Habitats to north of survey area in 2002



Habitats to the north of survey area 2015



Habitats to south of survey area 2002



Habitats to south of survey area 2015

Appendix 5 Criteria used to assess Dry Heath Habitat (NSUH, 2015)

European dry heaths (4030)

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

†Assess only the sub-criterion relevant to the community being assessed.

‡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 1991a). 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, haggs and erosion gullies, and within 5 – 10 m of the edge of watercourses.

††*Calluna vulgaris* growth phases
1. Pioneer < 10 cm
2. Building 10 – 30 cm
3. Mature > 30 cm

Appendix 6 Comments about changes to wildlife from farmer questionnaire

- Reduction in Grouse.
- More deer, less snipe and Grouse are scarcer
- Too overgrown because of destocking leading to undergrazing
- Grouse numbers decreased probably because of burning
- Increase in birds – Yellowhammer, Bullfinch, Linnet, Cuckoo, Sparrow Hawk, Hooded Crow, Magpie, Pigeon, and Rook
- Encroaching bracken and furze
- Forestry pushed Grouse higher up the mountain
- Less wildlife
- More scrub because of undergrazing
- Less bees than there used to be
- More overgrowth
- More wildlife on it (mountain) than there was
- Overgrowth due to decline in grazing
- There is an increase in vegetation on mountain
- Less wildlife to be seen