

Opportunities and challenges in implementing a results-based payments package – a scoping study on three Powys commons

Gwyn Jones & Simon Spencer



Y Begwns. Image: Christine Matthews, Creative Commons Licence



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Nature Conservation
and Pastoralism

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Opinions expressed herein do not necessarily reflect those of the funders

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Bracken bales on the Begwns. Image: Mike Prince, Creative Commons Licence

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Executive summary

This report was carried out for the Radnorshire Wildlife Trust-led Green Connections Powys Enabling Natural Resources and Wellbeing (ENRaW) project and assesses the relevance to three mid Wales commons – the Begwns in S Radnorshire and the Golfa and the Frochas in E Montgomeryshire – of the EFNCP-developed results-based payment scoring methodology, to suggest potential adjustments for field testing where the current cards were felt to be lacking, to ascertain the interest of the current graziers in participating in any pilot programme for such an approach, and to scan the horizon for any potential issues which might arise in that regard.

The three commons studied were all of high environment significance, notably for ponds and grassland fungi (the Begwns), for pearl-bordered fritillary *Boloria euphrosyne* (y Golfa and y Frochas) and hazel dormouse (y Frochas). In all three cases, the apparent value of the sites rose in the last 30 years, with the first recording of pearl-bordered fritillary by one of the authors in the case of the Montgomeryshire commons and with the increased awareness of grassland fungi in the case of the Begwns.

In all three cases, the results-based payment scorecard methodology as developed so far in Wales did not adequately reflect these values. A generally-applicable amendment, based on adapting the Plantlife area scoring methodology to a grid-based sampling scheme, is proposed in this report for the grassland fungi. In the case of the pearl-bordered fritillary, a new species-specific approach for use in polygons delimited by butterfly experts has been designed. Both require field testing.

The commons differ markedly in terms of the exercise of rights of common and in terms of their current state and resilience as regards their major biodiversity assets. On the Begwns, a high proportion of the commoners use their rights of pasture or estovers (in the form of cutting bracken for bedding) or both. The current state of the commons seems to be positive and sustainable in terms of management practices.

On both the Golfa and the Frochas, there is only one active grazier at present, and on the latter there are no obvious additional/alternative graziers waiting in the wings. While the Golfa was considered to be in favourable condition from the perspective of the pearl-bordered at the time of the last survey, our impression is of a sub-optimal and not very resilient situation. Meanwhile the Frochas is already considered in unfavourable condition and appears to be moving in a more unfavourable direction.

Discussions were had with commoners actively or recently-actively managing the commons, with the owners of the soil and, in the case of the Golfa, the tenants of the Estate. On all three commons there was an interest in potentially being involved in a trial of a results-based payments package. It is clear that there would be challenges in each case – dividing funds between mowers and graziers; rewarding activity without increasing the number of grazing sheep; recognising and contributing to the costs of non-graziers, and so forth. In each case, the graziers are left waiting for contact to be made if and when a relevant funding call is issued by the Welsh Government, at which point many of these issues will need to be worked through. In the case of the Golfa, additional concerns regarding

the risk of a serious wildfire and as regards the positioning of pheasant feeders in the core area for butterflies should be addressed whether or not there is a results-based pilot.

In the interim, we make the following recommendations

- If possible, test both the new and existing scorecards in the coming field season
- If possible, score the whole of the commons and in particular the Golfa and Frochas where the uncertainty is highest; the opportunity could be taken to demonstrate the methodology to the commoners and other interested stakeholders
- Resurvey both the Golfa and Frochas from a pearl-bordered fritillary point of view to ascertain
 - o Whether there are pearl-bordered fritillary habitats outwith the current polygon
 - o Whether there are areas within the current polygon which would not profit from being scored using the pearl-bordered fritillary card
- Contact the MWWFRS regarding fire risk reduction on the Golfa

Crynodeb gweithredol

Ysgrifennwyd yr adroddiad hon ar gyfer prosiect Cynllun Galluogi Adnoddau Naturiol a Llesiant Green Connections Powys, sydd dan arweinyddiaeth Ymddiriedolaeth Natur Maesyfed. Y mae'n asesu perthnasolrwydd y dull talu-am-ganlyniadau a ddatblygwyd gan EFNCP i dri darn o dir comin yng nghanolbarth Cymru (y Begwns yn ne Sir Faesyfed a'r Golfa a'r Frochas yn nwyrain Maldwyn), i awgrymu gwelliantau posib a ellid eu profi yn y maes pan fo'r cardiau presenol yn ymddangos yn wan, i ddirnad diddordeb y porwyr mewn cymryd rhan mewn unrhyw raglan o beilotu'r dull ac i feddwl ymlaen am unrhyw sialensau a allai godi.

Yr oedd y tri comins o gryn bwysigrwydd amgylcheddol, yn enwedig felly o ran pyllau dŵr a ffyngau glaswelltir (y Begwns), y fritheg berlog *Boloria euphrosyne* (y Golfa a'r Frochas) a'r pathew (y Frochas). Cynyddodd eu gwerth ymddangosol bob yr un yn y 30 mlynedd diwetha, wedi i un o'r awduron ddarganfod y fritheg ar y ddau gomins ym Maldwyn ac wrth i ymwybyddiaeth o ffyngau glaswelltir gynyddu yn achos y Begwns.

Nid yw'r dull talu-am-ganlyniadau trwy gardiau sgorio fel y'i datblygwyd hyd yma yng Nghymru yn llawn adlewyrchu'r gwerth hynny. Mae'r adroddiad hon yn awgrymu gwelliant cyffredinol, a luniwyd drwy addasu dull Plantlife o sgorio ardal i'r fethodoleg samplo mewn grid, i fynd i afael â'r ffyngau. Ac yn achos y fritheg, awgrymir dull newydd sy'n arbennig ar gyfer y rywogaeth neilltuol ac a ddylid ei ddefnyddio mewn polygonau a ddyluniodd arbenigwyr yn y maes. Mae angen rhoi'r ddau newyddbeth ar eu prawf yn y maes.

Mae'r tri comins yn dra gwahanol o ran defnydd o'r hawliau comin, o ran eu cyflwr ar hyn o bryd ac o ran eu gwytnwch o safbwynt eu prif hasedau bioamrywiaeth. Mae cyfran uchel o'r hawlddalwyr yn arfer eu hawliau pori neu gasglu cynnud (trwy gywain rhedyn) neu'r ddau. Ymddengys bod cyflwr presenol y comins yn bositif ac yn gynladwy o ran arferion rheolaeth.

Ar y Golfa a'r Frochas, nid oes ond un porwr ar hyn o bryd, ac ar y Frochas nid oes unrhyw borwyr eraill posib yn amlwg ar gael. Tra bod y Golfa mewn cyflwr positif o safbwynt y fritheg ar adeg yr arolwg ddiwetha, ymddengys i ni bod y sefyllfa yn llai na delfrydol ac yn fregus braidd. Mae cyflwr y Frochas yn anffafriol ac ymddengys bod y cyflwr yn gwaethygu.

Cynhaliwyd trafodaethau â'r hawlddalwyr sydd neu a fu yn ddiweddar yn rheoli'r comins, gyda pherchnogion y pridd ac, yn achos y Golfa, gyda thenantiaid y Stâd. Roedd yna ddiddordeb ar y tri comins i gymryd rhan mewn treial o'r pecyn talu-am-ganlyniadau. Mae hi'n glir y byddai sialensau'n codi ym mhob achos – dyrannu arian rhwng y cywainwyr rhedyn a'r porwyr; gwobrwyo gweithredu heb achosi cynnydd yn y nifer o ddefaid yn pori; cydnabod a chyfrannu at gostau rheolwyr nad ydynt yn pori, ac yn y blaen. Ym mhob un o'r tri comins, mae'r porwyr yn disgwyl am neges os a phan fydd Llywodraeth Cymru yn cyhoeddi galwad am gynigion; bydd rhaid mynd trwy rai o'r cwestiynau bryd hynny. Yn achos y Golfa, gellir mynd i afael â'r pryderon am risg uchel tân ac o glych lleoli manau bwydo ffeasantod yng nghanol ardal greiddiol y fritheg p'un a fydd peiol neu beidio.

Yn y cyfamser, mae'r adroddiad yn cynnig yr awgrymiadau canlynol:

- Os yn bosib, rhoi'r cardiau sgorio – y gwreiddiol a'r newydd – ar eu prawf yn y maes eleni

- Os yn bosib, sgorio'r tri comins cyfan, yn enwedig y Golfa a'r Frochas lle mae fwy o ansicrwydd; dylid fanteisio ar y cyfle i arddangos y dull i'r porwyr a chyfranddalwyr eraill yr un pryd
- Ail-arolygu'r Golfa a'r Frochs o safbwynt y fritheg berlog i ddirnad
 - o A oes ardaloedd o gynefin tu allan i'r polygon presennol
 - o A oes ardaloedd o'r polygon presennol lle byddai hi'n well peidio anelu'r sgorio at anghenion y fritheg berlog
- Cysylltu â'r Gwasanaeth Tân ynghylch lleihau risg tân ar y Golfa

1 Introduction

This report has been carried out under a contract with the Radnorshire Wildlife Trust and is funded by the Green Connections Powys Enabling Natural Resources and Wellbeing (ENRaW) project. The context of the report is the opportunity afforded by the move away from the Common Agricultural Policy of the European Union towards a purely Welsh Sustainable Farming Scheme (SFS) to bring to bear new approaches which have the potential to deliver better results for both policy and farmers.

It focusses in particular on commons, a sector which is of considerable significance for the delivery of public goods, but which is the forgotten relation of policy, usually neglected when measures are being designed (Brackenbury and Jones 2016). And on three areas of common of particular nature conservation interest which are not even participating in the current Glastir agri-environment and climate measure (AECM).

Given that recently-developed ‘results-based’ approaches, so successful and popular abroad, might offer a viable alternative – at least one which should be tested to gauge its potential – the contract examines the appropriateness of the current scorecards (Jones et al. 2021) (Jones and Barnes 2022) and the interest of graziers in particular in being part of a possible trial of this way of encouraging and rewarding good management.

Its aims are to

- Set out a clear picture of the current and recent management systems and practices, of the numbers of rightsholders who are active and of any management by the owners of the soil and/or third parties
- Set out a clear picture of the state of the commons from the point of view of environmental public goods, particularly, but not only, biodiversity, and including describing those elements which are considered sub-optimal from one of those perspectives
- Evaluate the current results-based scorecards developed by EFNCP or others in the light of the particular interests on each of the commons, and suggest modifications to those cards where appropriate
- Set out any ‘capital works’ suggested by experts
- Meet with graziers to discuss all of the findings to that point and ascertain
 - o How working to deliver some of the wider policy goals would fit in with their aspirations or interests
 - o What impediments they see to working towards those ends
 - o Getting their response to the wider results-based approach; what safeguards they feel would need to be in place
 - o Their views on financial aspects of the payments/approach
 - o Their views on the organisational/governance/sociological aspects of the approach and how best to ensure success
 - o Ascertaining their willingness to be involved in future projects, and what the constraints on that would be

2 What is the results-based payments package?

The results-based package, as developed in Ireland in particular in the last decade, consists of three elements which ideally work seamlessly together:

- Adequate encouragement/reward for appropriate management i.e. results-based payments linked to scorecards
- Additional adequate encouragement for appropriate 'capital works'
- Ongoing support from qualified/trained project staff

Creating meaningful scorecards, reliable scoring methodologies, realistic payment rationales and rates and an equitable sharing of risk between the State and scheme participants are all essential and require considerable design effort and subsequent testing. Large-scale roll-out brings additional challenges, not least in terms of data manipulation and compatibility of IT systems and of capacity to deliver what is a wholly new way of working; this again implies the need for trialling at scale large enough to stress-test the proposed approach.

3 State of play of results-based payments in Wales

Wales has only had one trial of results-based payments to date, namely the Partneriaeth Llŷn and National Trust small three-farm pilot run with SMS and National Trust funds. The documentation for this pilot is unpublished and the methodology is quite labour-intensive and requires significant levels of botanical skill.

The Llŷn methodology, slightly amended, is also being used by the Environmental Impact Assessment team within Welsh Government in a small trial aimed at MG5 'meadow' grasslands on smallholdings. This trial, being carried out by ADAS and the Wildlife Trust of South and West Wales, is in its initial stages, but again covers just 20ha, albeit on 11 farms, with a considerable labour requirement per hectare. It is not clear what will underpin the payment rationale.

A separate string of projects, led by one of the authors, has focussed on producing a broadly-applicable methodology which can be used at scale and requires minimal botanical training to carry out. Nominally focussed on common land, the approach is based on Irish and then Scottish work where the intention was to create a method which is very broadly-applicable, not just to private mountain land but also to semi-natural inbye.

Interest on the part of the SFS scheme design team was initially zero, but following on from two study visits to Ireland in 2022, funded by NRW and Gower AONB Sustainable Development Fund respectively, this has changed to a feeling that there is definitely a role for the approach somewhere and at some scale within the new scheme, but with a high degree of uncertainty what those might be and a feeling that going down this road would involve some risks which need to be navigated by Welsh Government.

This is the context for an effort on the part of EFNCP to prepare for a possible large-scale pilot, potentially through the Integrated Natural Resources Management Scheme, the launch of which has been promised since July 2022. Because Glastir Commons uses a different payment rationale

(income forgone, arguably based on unrealistic scenarios) to the one in the EFNCP draft measure (additional costs of the management system), the focus has been on commons not currently participating in Glastir for whatever reason, making contact with a range of commons in different regions and with different habitat and management combinations.

4 Methodology

The work had four main elements:

- Getting a feel for the biodiversity priorities, their state and trends
- Getting a feel for the agricultural management and how it interacts with the biodiversity assessment
- Assessing the appropriateness or otherwise of the current EFNCP draft scoring protocol and pointing to possible improvements
- Getting a feel for the willingness of the graziers and others to participate in or support participation in a wider pilot project

The initial stage was to engage in a desk exercise of reading previous reports and getting a feel for existing data, but even at this point the role of speaking to stakeholders was vital to direct the work towards the key considerations. More generally, the stakeholders with whom we engaged can be divided into a number of broad classes, as follows:

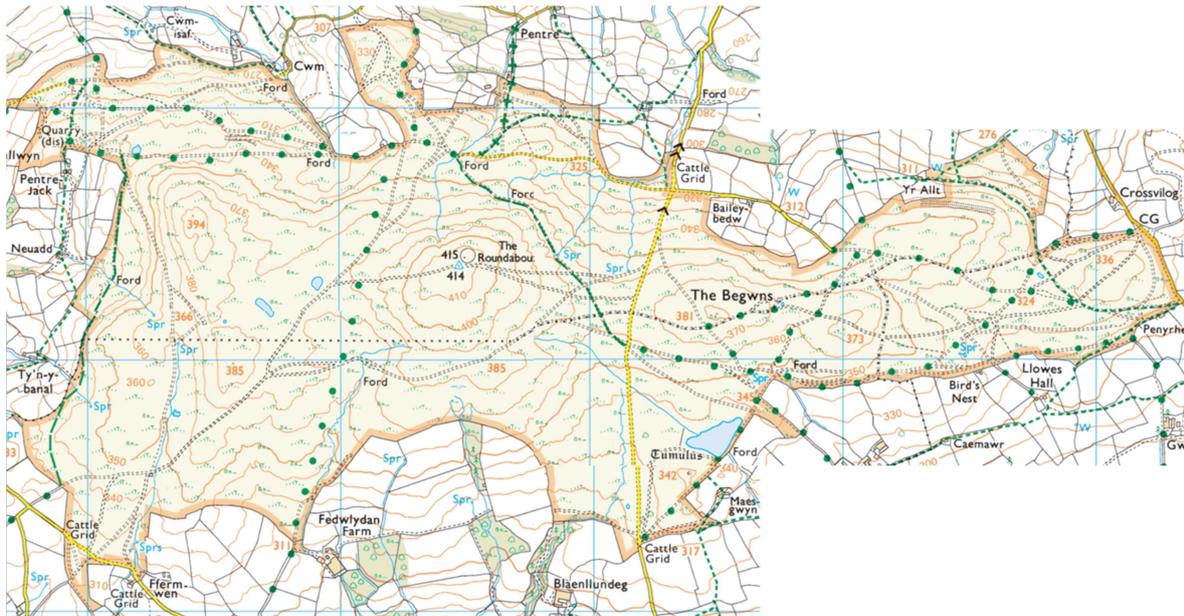
- Graziers, including recent or potential graziers. On the Begwns this consisted of a meeting with the secretary of the graziers' association who then convened a meeting, which was attended by 21 farmers. In Montgomeryshire, one of us held one-to-one meetings with the only recent grazer on Y Frochas, and with the current and three recent graziers on Y Golfa.
- Owners of the soil, i.e. staff of the National Trust (Begwns), NRW (Y Frochas) and Powis Estate (Y Golfa)
- Other managers. This was in the specific case of Y Golfa, where there are two leaseholders, namely Welshpool Golf Club and Montgomeryshire Wildlife Trust.
- A disparate group of biodiversity experts and data holders including current Wildlife Trust staff, Sarah Woodcock, Hannah Shaw, Gethin Davies, Nick Myhill. One of the authors is the main butterfly expert involved with the Montgomeryshire sites. Aspects of the proposed new approach to grassland fungi were also discussed with Lizzie Wilberforce.

5 Introduction to the three commons

5.1 Y Begwns

5.1.1 The common and its land use

The Begwns (Radnorshire Common Land Unit (CL) 12) is a 523ha common situated in the south of the county between Painscastle and Clyro (Penford et al. 1990). It is mostly between 300 and 400m in altitude and is separated from the nearest area of open rough grazings by the Bachawy valley to the north.



Ordnance Survey map of the common. Crown Copyright

The owner of the soil is the National Trust. There were 46 sets of common rights of pasture registered, with cattle and pony rights listed as well as rights for sheep. 38 rights of estovers and one of turbarry were also registered.

Nowadays around 37 people hold the registered rights (all the data in this paragraph: Richard Price, pers. comm.; data may not be perfect but is the best estimate available), 17 of which exercise their rights to graze, all of them with sheep and 2-3 also with ponies. 15 exercise their right of estovers by means of cutting and baling bracken for bedding. 6 rights holders are active farmers but not active in exercising their rights; unusually this seems to accord with BPS claims, with 31 claims being made in relatively recent times (approx. 10 years ago, Welsh Government unpublished data). A total of 19 rightsholders have cattle on their holding but none currently exercise their grazing rights for cattle.

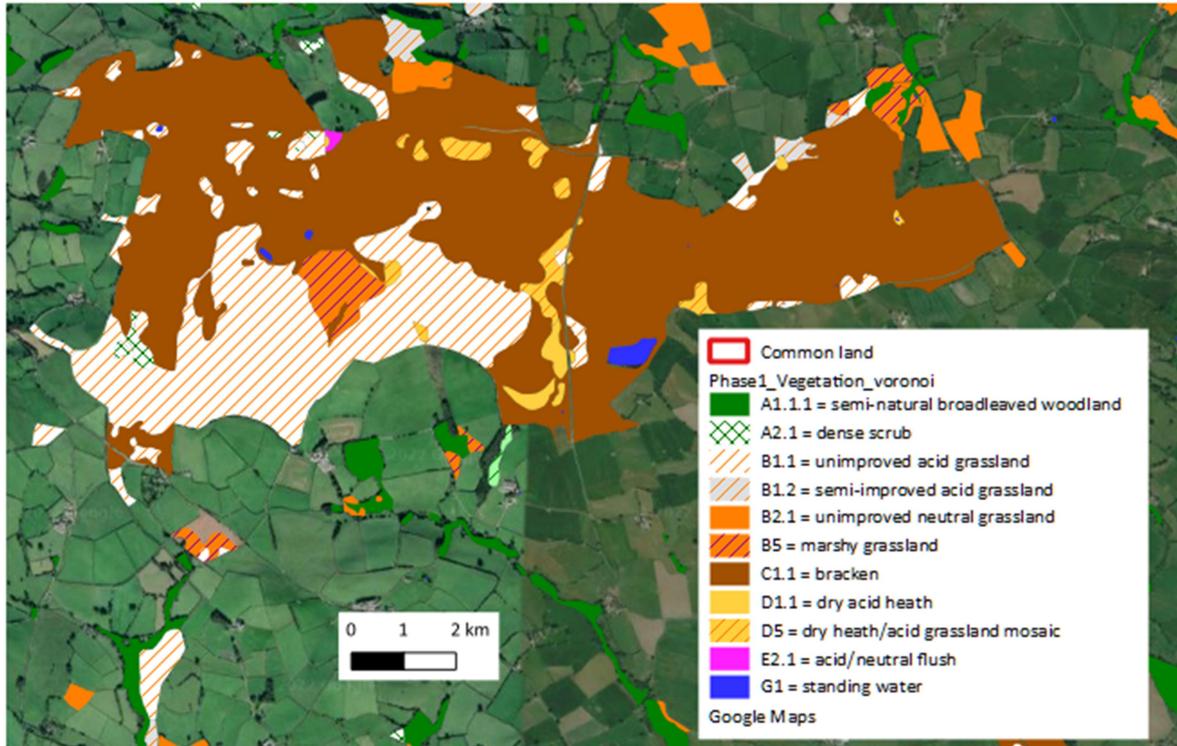
As implied above, the commons is currently predominantly grazed by sheep, complemented by a few dozen horses. On a large proportion of the area – around half of the common – bracken is mown for bedding in late summer.

The common is accessible from three minor roads, one of which bisects it. There is heavy use by ramblers, dog walkers and recreational horse riders. Anecdotally, the pressure from recreational use is said to be on the increase, with considerable spillover from nearby Hay-on-Wye as well as walkers apparently travelling especially from further afield to walk this National Trust site.

5.1.2 The nature conservation interest

The Begwns are an interesting example of shifting perceptions: back in 1990, when the Biological Survey of Common Land (Penford et al. 1990) was written, the focus was on the wetland features – the ponds in particular, but also some wet flushes. In a report of a survey carried out by the National Trust (Lister and Foster 1994), the surveyors, again having noted the significance of the ponds and flushes, write, ‘the biological interest of the rest of the property is rather limited: it is

mostly bracken-covered with some areas of intensively-grazed acidic grassland... [The bracken is] of very little biological interest'. With the increased awareness of grassland fungi (Ray Woods, Sarah Woodcock, pers. comm.), the present-day assessment of the significance of the bracken and acid grassland areas which dominate the common is very different.



Phase 1 land cover map from the 1990s(?); background image: Google Maps

Ponds

The plant interest in the ponds centres around a suite of species, many associated with seasonally-fluctuating water levels. The flagship species is the Amber List (vulnerable and near-threatened) aquatic fern, pillwort *Pilularia globulifera* but the suite includes species such as *Limosella aquatica*, *Oenanthe fistulosa*, *Potamogeton obtusifolius*, *Ranunculus aquatilis*, *Sagina nodosa*, *Alopecurus aequalis*, *Catabrosa aquatica*, *Eleocharis quinqueflora*, *Eleogiton fluitans*, *Ranunculus peltatus* and *Potamogeton berchtoldii* (all from the Radnorshire Rare Plant Register (ed. Brown 2020))



Two very different Begwns pools. Images: Jeremy Bolwell, Creative Commons Licence

The Freshwater Habitats Trust surveyed 18 ponds on the commons in 2016 (Hannah Shaw, pers. comm.). Of these, 11 contained pillwort – see map below. Dave Drewett also provided records to the Rare Plant Register in the 1990s, estimating populations going into the millions at some of the ponds.

The ponds are also of significance for *Apium inundatum*, two nationally-scarce water beetles, *Helochares punctatus* and *Paracymus scutellaris* and a nationally-scarce damselfly, the scarce blue-tailed damselfly *Ischnura pumilio* (Lister and Foster 1994). The moss *Leptodontium flexifolium* is also noteworthy, as are the flowering plants *Sparganium emersum* and *Veronica scuttelata*. There had been reports of the possible presence of fairy shrimp *Chirocephalus diaphanus* prior to 1994, but it is not known whether these were confirmed.

Flushes

(Penford et al. 1990) also note some flushes of interest, listing some typical flowering plants; (Lister and Foster 1994) note the presence of some more base-loving plants associated with the flushes, including some which have a more restricted distribution in the county such as *Scutellaria minor* and *Viola lutea*. They also found the noteworthy water beetle *Hydroporus nigrita* and the snail-killing fly *Limnia paludicola*.

Bracken, dry acid grassland and dry heath areas



Typical largely closely-cropped and/or mown areas of bracken/acid grassland/dry heathland mosaic on the Begwns. Images: Christine Matthews, Creative Commons licence

Most of the commons (c.99% at the time of (Penford et al. 1990)'s survey) is covered in bracken, much of which is mown more or less annually for bedding, and in dry acid grassland, with some dwarf shrubs, especially gorse, also present in many places.

This is the area which was previously described as being of little biological interest in the 1990s, but which has in the last decade come to be seen as being of considerable value due to its grassland fungi population. Ray Woods (pers. comm.) writes, 'A 2017-18 review of Welsh waxcap grassland sites by NRW following 15 visits ranks this common as the 47th most important waxcap grassland sites in Wales based on a CHEGD [a wider assemblage of grassland fungi, the abbreviation being the first letters of the names of the taxonomic groups in question] score of 42. Twenty seven species of

waxcaps were reported. Assessed purely on its waxcaps it would be the 14th most important site in Wales. Both its CHEGD and waxcap totals qualify it for consideration as a SSSI on account of its grassland fungi. [There will be other] surveys for which I don't have detailed records.

Recent eDNA sampling of a small area towards the south-western edge of the common has added additional species, increasing the CHEGD score to at least 48.

With such a high ranking it must be considered to be of European importance as well given how threatened grassland fungus sites are. My own recent sampling has identified 5 species of waxcap present considered threatened on a world scale to which one further species can be added following the EDNA sampling.

The interest appears to be widespread where ever *Agrostis-Fescue* grassland dominates. Areas of light bracken appear important too as may be the areas regularly cut for bracken with good grass and moss cover. Dense bracken has not been surveyed in detail by me and its importance for waxcaps awaits more detailed investigation.

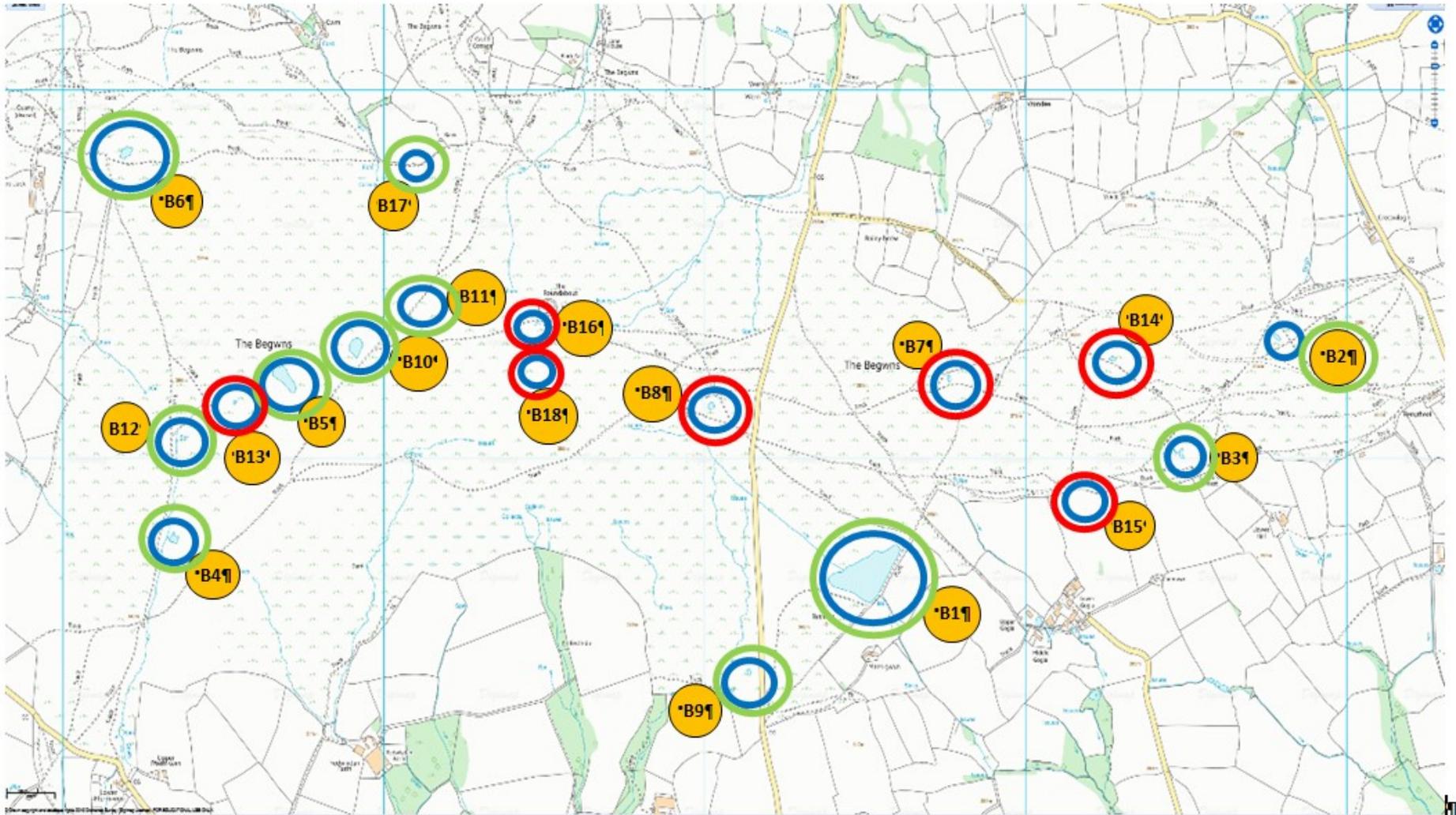
Alongside the mown and short-cropped areas, there are smaller zones where shrubs and trees are present. The expansion of gorse is a potential issue, but in general these ranker areas are at present a positive for the common, given the overall dominance of short vegetation (Sarah Woodcock, pers. comm.) and are significant for certain bird species (Gethin Davies, pers. comm.).

The common also has significance for birds as part of the wider landscape – curlew are not thought to breed on the common at present, not least due to disturbance from ramblers and dog walkers, but birds from nearby Ireland Moor use it regularly for foraging (Nick Myhill, pers. comm.). Wintering golden plover are commonly present and a flock of c. 30 birds was seen in the course of project meetings.

In summary, all of the experts interviewed considered the common of great interest and as being under a management regime which seems to be positive for biodiversity at present.

5.1.3 Current/previous initiatives of relevance

There have not been any 'project' management initiatives, but one positive if unsuccessful sign of the ability of stakeholders, not least the graziers, to pull together was an application for Sustainable Management Scheme funding for the wider 'Begwns and Bachawy' area. A copy of the application was seen (Catherine Hughes, pers. comm.); it did not contain any novel or unexpected commons-specific proposals. Interestingly, similar agreement was not reached when it came to Glastir Commons.

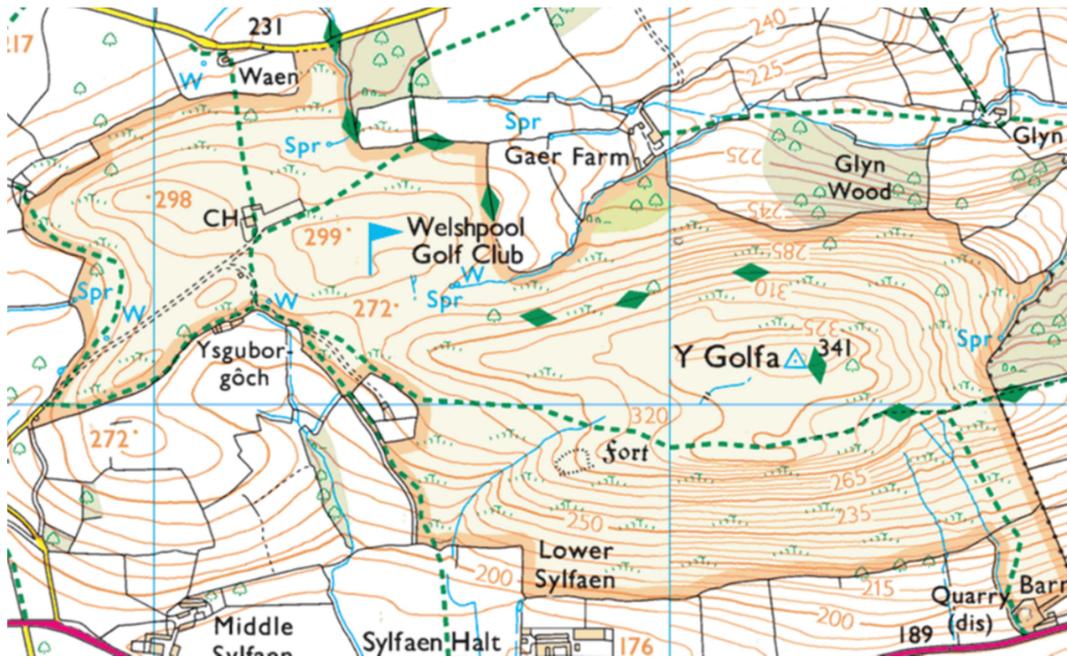


Freshwater Habitats Trust 2016 pillwort survey results – green circles: pillwort present; red circles: pillwort absent (yellow circles – numbering of ponds surveyed)

5.2 Y Golfa

5.2.1 The common and its land use

The Golfa (Montgomeryshire CL4 (Francis et al. 1989)) is a 120ha common to the west of Welshpool. It lies mostly between 200 and 300m in altitude, consisting of a flattish topped but steep-sided set of hills.

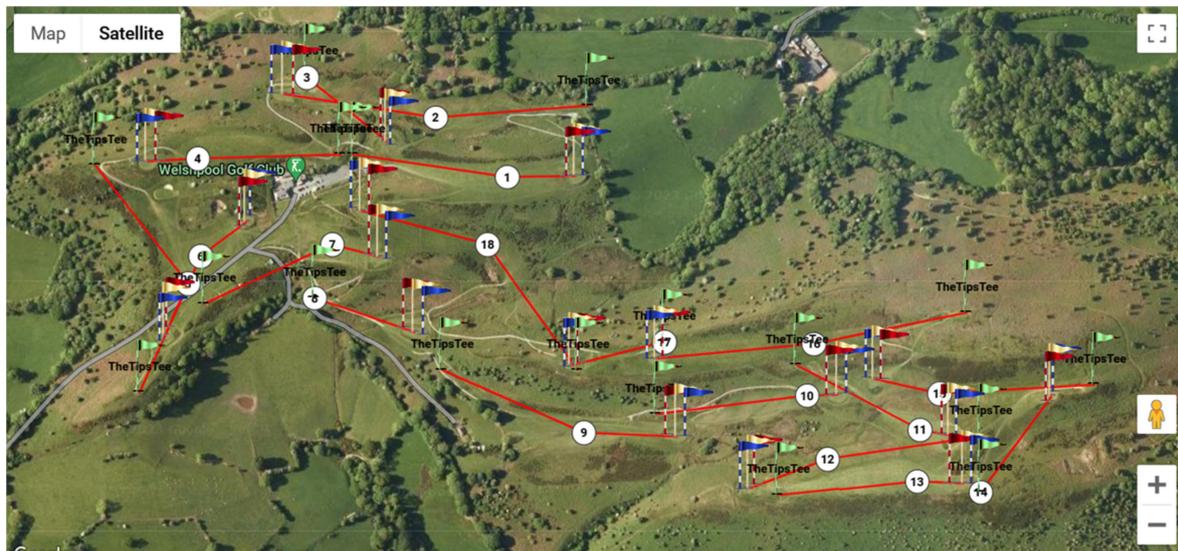


Ordnance Survey map of the common. Crown Copyright



Google Earth image looking approximately due east.

The owner of the soil is Powis Estate, but it lets out a small area (the core pearl-bordered fritillary area – see below) to the Montgomeryshire Wildlife Trust and the rest of the common to the Welshpool Golf Club, whose course covers most of the hilltop areas.



Layout of Welshpool Golf Course. Underlying image: Google Earth¹

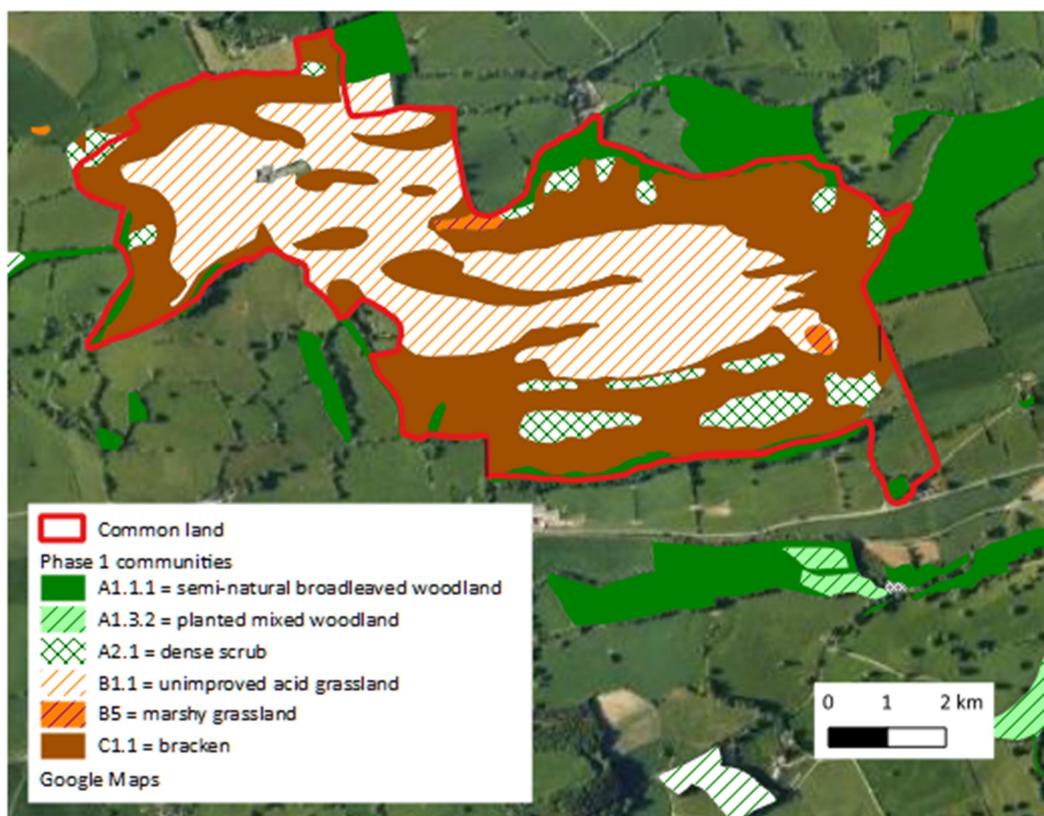
10 sets of rights of pasture are registered, all for sheep, 9 of which are also exercisable by cattle and 6 of which are also exercisable by ponies. 8 sets of rights of estovers in the form of bracken or litter were registered. In recent years, three rightsholders have exercised their right of pasture, all with sheep only, and latterly it is said that only one has been doing so; numbers reported in the grazier interview (c.150 ewes) seem to reflect the management recorded in 2003 (Spencer and Kelsall 2003b). The sheep currently grazed seem, based on our field visit, to confine their attention to the southern half of the common, with little or no signs of grazing visible elsewhere. In recent years (c. 10 years ago, Welsh Government unpublished data), 6 BPS claims included an area of this common.

5.2.2 The nature conservation interest

The common consists of an east-west trending ridge, falling steeply in places to both north and south. The focus in terms of biodiversity has thus far been exclusively on the most extensive of the south-facing slopes, which is home to one of Wales's largest populations of the pearl-bordered fritillary butterfly *Boloria euphrosyne*. The common is also the largest sub-population in a probable metapopulation locally which includes the Frochas, the third common in this study.

The butterflies are subject to regular surveys, originally by one of the authors and nowadays by Montgomeryshire Wildlife Trust (Montgomeryshire Wildlife Trust 2019). The Golfa is one of only two sites in Montgomeryshire where both the habitat and butterfly population are considered favourable.

¹ <https://golftraxx.com/full-layout?courasename=Welshpool+Golf+Club&zipcode=SY21%209AQ&static=true>



Phase 1 land cover map from the 1990s(?); background image: Google Maps

In contrast to this small area of low-lying south-facing slope, there is little information on the biodiversity interest of the rest of the common, whether other south-facing areas, the grasslands (including large areas of golf course fairway), the small areas of flush, the large north-facing bracken slopes or the areas of scrub and one area of mature woodland. However, what records there are on Aderyn suggests, as might be expected, a good range of woodland edge birds (e.g. tree pipit, redstart) and that the site could have a significant grassland fungi interest. Other notable species seen on site include the small pearl-bordered fritillary, small heath and wall butterflies, the brown hare and common lizard.

5.2.3 Previous/current initiatives of relevance

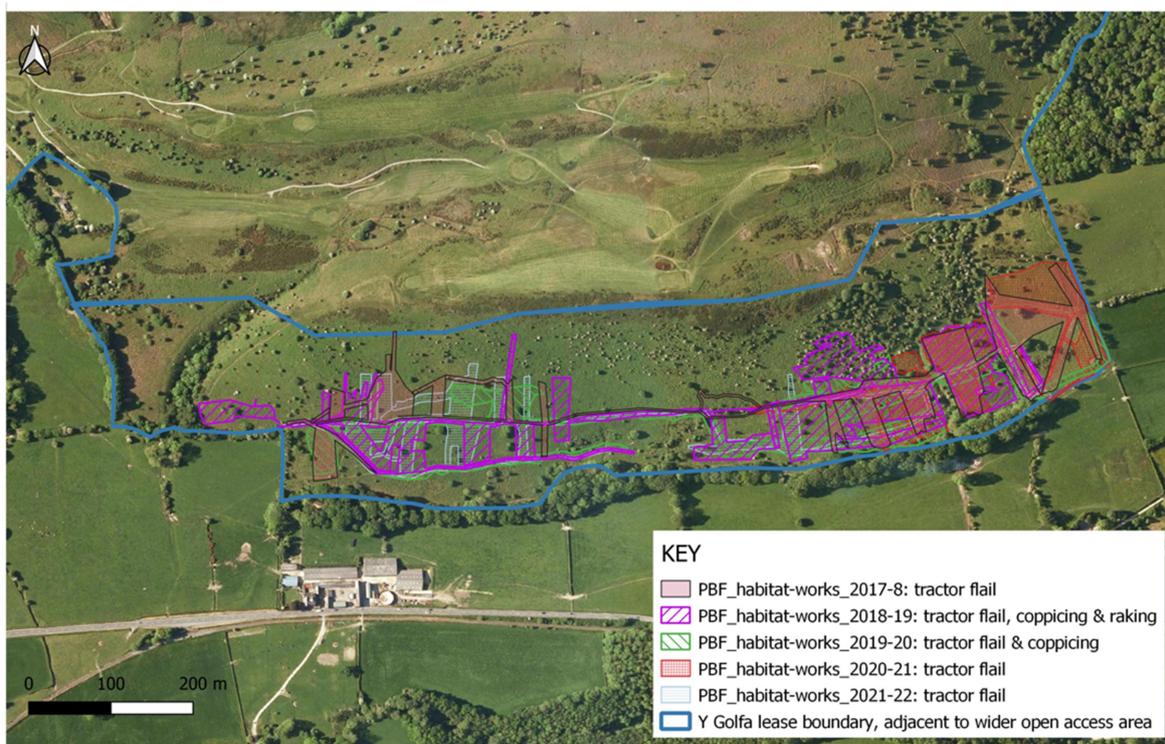
A study and management plan for the Golfa was produced in 2003 (Spencer and Kelsall 2003b), setting out the then current and recent past management and suggesting some actions which might improve conditions for the butterfly:

- An annual winter flail mowing program targeting the gorse and scrub on the south face.
- A few tracks to be made by flail mowing through the bracken in late June to facilitate grazing.
- Increasing sheep grazing by encouraging farmers to exercise their grazing rights particularly in summer and autumn.
- Annual monitoring of pearl-bordered fritillary adults and habitat using CCW's Common Standards Monitoring methodology.
- The creation of a commoner's association.



The main pearl-bordered fritillary area on Y Golfa viewed from the A458. Image: Penny Mayes, Creative Commons Licence

At present, the main pearl-bordered fritillary area is leased by Powis Estate to the Wildlife Trust so that it can undertake management work (map below). This has focused on two aspects: first the cutting back of scrub and second the periodic mowing of areas of bracken in winter, originally intended to control unwanted bramble and scrub.



Y Golfa habitat management work 2017-2022 (Tammy Stretton, pers. comm.)

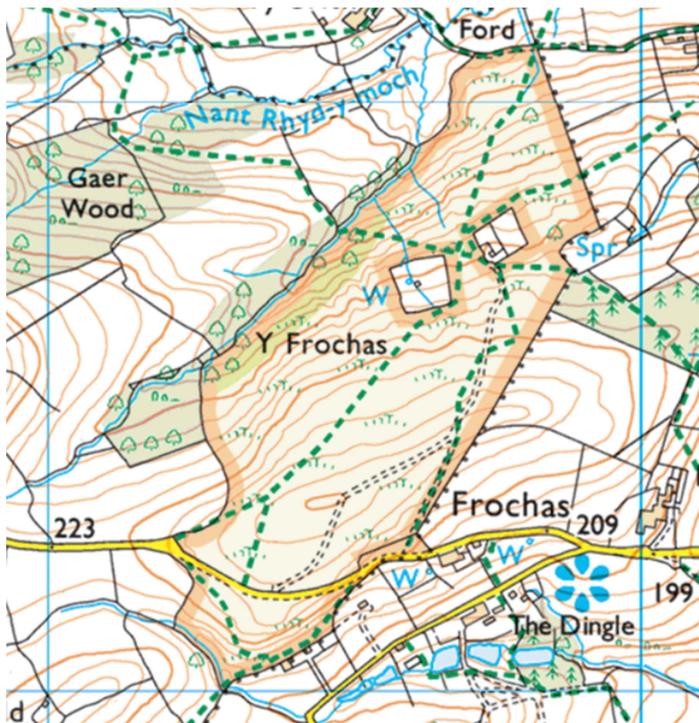
5.3 Y Frochas

5.3.1 The common and its land use

Y Frochas (Montgomeryshire CL3 (Francis et al. 1989)) is a 36ha common NW of Welshpool and around 1km NE of y Golfa. It straddles a ridge which rises to 300m, with most of the common sloping towards the N with the lower sections below 100m; the smaller south-facing slope drops to around 220m.

There are 9 sets of registered rights, for pasturing with sheep, cattle or horses and for estovers. In recent years, only one person has exercised a right to graze; the same person has on occasion cut the flat area of grassland at the highest point of the common. The commons is bisected by a minor road; the area to the south of this road has not been grazed for a number of years. 3 rightsholders have included the common on their Single Application Forms in recent years (Welsh Government unpublished data, c. 10 years old). In recent years, grazing has been by sheep only, but the grazier has become increasingly concerned with ewes getting caught up in brambles and numbers have been as low as 20 ewes; he is currently going out of sheep to focus on cattle only. Having previously been open to the road, the commons is currently stockproof, but the result has been a cessation in grazing of the smaller section to the south of the road.

The owner of the soil is Natural Resources Wales. The common is quite popular with ramblers and dog walkers. There are two enclaves of land not registered as common, one of which has an occupied dwelling.



Ordnance Survey map of the common. Crown Copyright



Google Earth view of the common – south facing is towards the bottom right. The area occasionally mown is clearly visible along the top of the site.

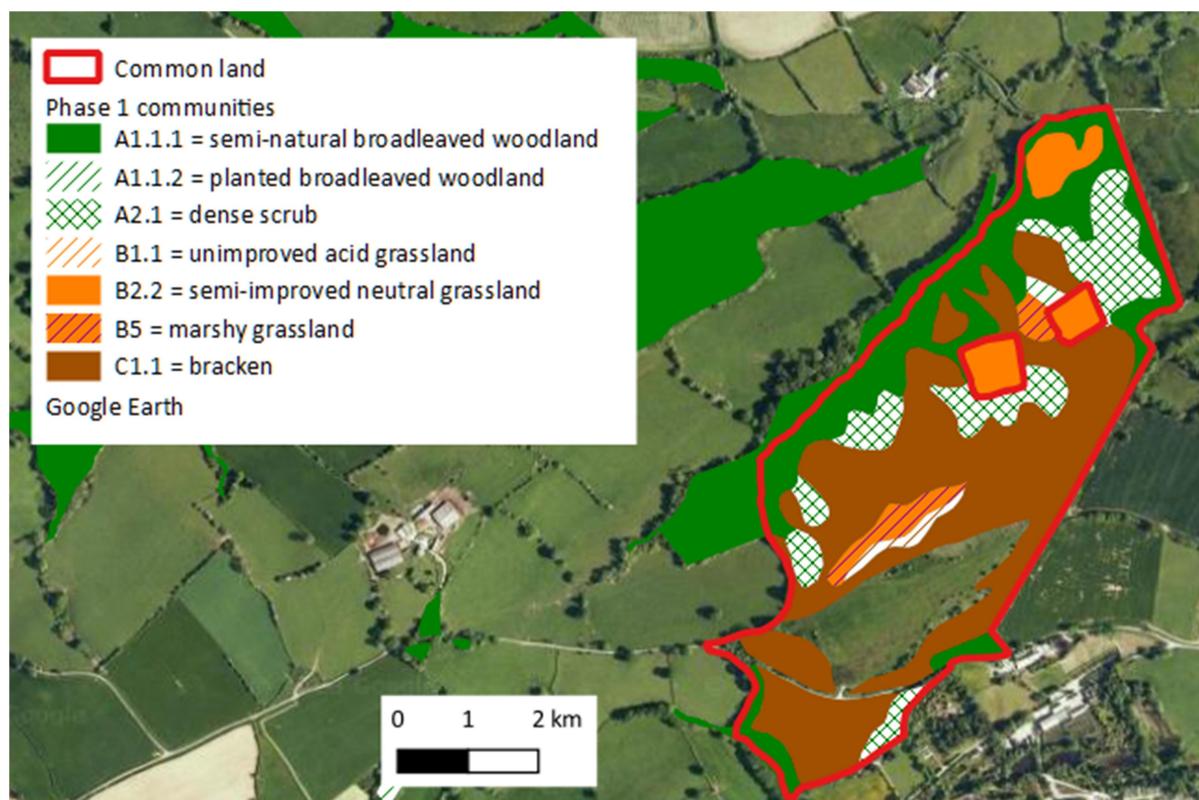
5.3.2 The nature conservation interest

The common is unusual in having a significant cover of both closed-canopy woodland and sparser scrub and wood pasture; wooded land covers are currently expanding on the site particularly, but not only, on the ungrazed side of the road. However, this is to the long-term detriment of the principal interest of the site, which is as part of the territory of the local metapopulation of the pearl-bordered fritillary butterfly, with y Golfa at its centre. As with the Golfa, a management plan has been written (Spencer and Kelsall 2003a) and regular monitoring is carried out (Montgomeryshire Wildlife Trust 2019). In contrast to the Golfa however, the site is regarded as being in unfavourable condition, passing in terms of population but failing in terms of habitat condition.

Unsurprisingly, the commons hosts a number of bird of woodland and woodland edge including pied and spotted flycatchers, tree pipit and marsh tit (Aderyn data) and is significant for yellowhammer and linnet (Montgomeryshire Wildlife Trust 2020). Dormouse is an important mammal present, and small heath butterfly is also noteworthy.

In the centre of the common is an area mapped as improved grassland in the 1990s Phase 1 survey (Francis et al. 1989). Whether or not it has in the past received additions of fertiliser, it currently forms an island poor in higher plants which is, as far as aspect is concerned, potential pearl-bordered fritillary habitat.

Areas of marshy grassland shown on the BSCL map are becoming overgrown with brambles and scrub.



Phase 1 land cover map from the 1990s; background image: Google Maps

5.3.3 Current/previous initiatives of relevance

The management plan for the common, written in 1993 makes a number of suggestions:

- A program of scrub and bracken cutting to improve the quality of the bracken habitat for pearl-bordered fritillary.
- A program of tree removal to open up the habitat for pearl-bordered fritillary.
- Either the reinstatement of the fence bordering the road or the provision of cattle grids to make the common stockproof
- Reintroduction of grazing particularly by cattle.
- Annual monitoring of pearl-bordered fritillary adults and habitat using CCW's Common Standards Monitoring methodology.
- The revival of a commoner's association and the negotiation of a management agreement with the commoners.

The fencing was subsequently carried out by NRW as has a programme of regular scrub clearance (see map below). There has been no cattle grazing to date and no management agreement has been signed with the graziers.



Habitat management work on Y Frochas 2017-21 (Tammy Stretton, pers. comm.)

6 Overall assessment of the current state/management of the commons and potential issues arising

6.1 The Begwns

All stakeholders are broadly, often enthusiastically positive about the site, and particularly about its pools and grassland fungi interest. It is also seen as being significant for bird life, but its potential in that regard is seen as limited by the high levels of disturbance from ramblers generally and dog walkers most specifically, with the site seen as functioning as an feeding adjunct to nearby Ireland Moor for some species.

There is some interest in the positive benefits of cattle grazing on both the vegetation and invertebrates, but a degree of caution in how they might be reintroduced; a return to practices such as high-impact winter feeding on the commons would be regarded as highly negative, and there is recognition that the balance between necessary disturbance and damage when it comes to the

ponds is one which would need to be taken carefully and accompanied by monitoring. The potential of NoFence collars to allow trials areas with and without cattle grazing has been noted, as well as the benefits for management and herd biosecurity.

The non-mown areas, especially those with scrub, dense bracken or extensive areas of gorse are a potential focus for discussion. In general the common is a low fire risk, due to the large areas managed by cutting or kept short by grazing, so this common rationale for cutting is insignificant. In general, the consensus seems to be that except in the case of large areas of dense gorse, and particularly where they are actively spreading, these taller land covers, exceptions on the scale of the commons as a whole, should be seen as valuable additions to the mosaic.

The large proportion of rightsholders still actively using at least some of their rights is gratifying and getting to be quite unusual; the high proportion using estover rights, even when not grazing is particularly uncommon.

6.2 Y Golfa

The common currently falls under three management regimes:

- The golf course areas, consisting of the greens and bunkers which are intensively managed and could not be considered agricultural, and the fairways which while intensively mown remain as semi-natural grassland, of potentially considerable interest for grassland fungi, and a big attraction (unwelcome from the golf club's perspective) for the sheep currently grazing
- The main south-facing slope including the fritillary area, which is certainly used by sheep to some extent (paths and dung are widespread and their home farms are along the bottom of that slope) but perhaps not that much used for grazing (Tammy Stretton, pers. comm.). This is the area where the Wildlife Trust has used a contractor to carry out mowing of the bracken and carried out some tree cutting/coppicing
- The rest of the common, largely north-facing. Signs of livestock are rare to absent here, even on areas where the golf club has mown (away from the fairways) in an attempt to attract the sheep away from the course. We didn't walk the northern boundary, where stock have been turned out previously, but our understanding is that none have been turned out there for some years.

The fritillary area certainly feels different from other bracken areas on the common, even from higher parts of the same south-facing slope – flowering plants were much commoner and more varied (though violets were rather scarce – it is not clear whether the few robust plants seen were just early-growing phenotypes). But it is less evident the extent to which that is an unchangeable result of topography (flushing, perhaps) or whether these favourable characteristics could be extended by management.

It is not clear either whether the fritillaries are in fact restricted to the area regularly monitored or are also present (or could be present) in other south-facing areas, for example, the patch to the north of the clubhouse access road.

Tammy Stretton confirmed our impression that the impact of grazing sheep seems quite limited in the core fritillary area, with the effects of the litter-shifting efforts of the resident badgers much more obvious; bracken litter is rather thick in many parts of the area. It would seem unlikely that increasing the number of sheep would remedy this situation, while causing increasing tensions with the golf club, whose greens and fairways they favour.

We noted also that brambles are almost absent in the fritillary area but that mowing, originally intended above everything as a means of controlling brambles continues. While it will certainly help with limiting the spread of scrub, it is fundamentally a destructive process to be avoided if at all possible.

Our feeling is that an increased presence of widely-ranging cattle would be likely to benefit not only the fritillary core area, but other areas of the common. They would help open up the bracken area as well as playing a part in controlling both brambles and scrub, especially if present in winter, hopefully lengthening the mowing cycles and/or limiting the need for mowing to areas of scrub invasion. The associated dung and perturbation of the soil and vegetation would also have wider benefits, we believe.

The advent of NoFence collars opens up the possibility of targeted grazing not only to ensure some presence on the fritillary area, but avoiding nuisance on the main areas of the golf course. The golf club's practice of opening up areas by mowing could be a useful complement of benefit to all concerned.

One aspect of concern was the presence of a pheasant feeding right in the middle of the fritillary area. Pheasants eat butterfly caterpillars and it is desirable for any feeders to be moved to a less sensitive part of the site.

Finally, we feel that there needs to be greater consideration of fire risk management on what is the core of the Welshpool metapopulation of a rare priority species. While it benefits from a position set back from the main road, the main butterfly area has ideal conditions for wildfire – a southerly aspect, a steep slope and ample fuel. We feel that a discussion with Jeremy Turner, the MWWFRS farm liaison officer, on how best to balance the needs of the butterfly with the lowering of fire risk would be most beneficial; the Fire Service may well volunteer to carry out remedial work at no cost to the commons stakeholders.

In general, we felt that the majority of the site was under-recorded and undervalued; with the presence of the golf club facilities, it lends itself to a Bioblitz day.

6.3 Y Frochas

Of all of the commons in this report, the Frochas is the one where the current management seems inadequate in the face of the changes taking place there, which are working to the detriment of the pearl-bordered fritillary in particular but which will also lead to a greater uniformity and the loss of edge habitats in general.

At present, the woodland is being held at bay mostly by the efforts of NRW staff and occasional topping, not always at the most appropriate time, by the sole active grazier. Sheep are having a minimal impact and are in a negative feedback relationship with the brambles whereby any expansion in cover or vigour serves to make that area less attractive to the sheep and to the grazier, who fears them getting tangled. The attractiveness of the improved/semi-improved area just serves to make the rest of the common less of a draw for the sheep, while the separate area across the road is not grazed at all.

As on the Golfa, we see the potential of cattle to improve the situation, first as a complement to ongoing control of scrub and brambles by human management and then potentially as a way of lengthening the return period of that management or doing away with the need for it in at least some areas.

7 Feedback from graziers and others and issues arising

7.1 Y Begwns

On the Begwns, there was a preliminary meeting with the secretary followed by a meeting of graziers attended by 21 of them; another grazier who had missed the meeting expressed a desire to hear about the possibilities and the contractor will carry this out after the end of the contract (contact has been made but no reply received).

The questioning was carried out in good spirit and the questions were either pertinent or were based on common misconceptions which it was good to be able to deal with. The consensus at the end was that there is no risk in keeping in touch and the contractor has undertaken to contact the office holders immediately when any suitable calls for Expressions of Interest for funding are released. The National Trust has expressed its supportiveness of the graziers in any such application, even being willing when it can to give help – NoFence collars were mentioned.

The main issue which the authors see as arising is how to distribute the rewards between grazing and mowing. Taken narrowly, the payment rationale would focus payment on the additional costs of grazing, while it could be argued that mowing bracken is a cheaper option than buying straw. On the other hand, there is no doubt that the mowing is part of the positive management and it is likely that were mowing to cease, 'capital works' funding would be used to get it going again. Some workable solution will need to be found; the fact that most rightsholders are active is probably a help in this regard, as is the likelihood of at least some of the common being guaranteed a really good score.

7.2 Y Golfa

For the Golfa, we held one-to-one meetings with the current family of graziers and with two of the three other recent graziers (we tried to meet the remaining individual and failed; it sounds unlikely that he would recommence grazing, but this failure to have a discussion with him would need to be righted were it to come to a working scheme). We also spoke with both tenants (golf club, one of whose officers is also a rightsholder, and Wildlife Trust) and with the owner and manager of the Estate.

One grazier on the south side regularly turns sheep out, with another on the north side occasionally does so. The third rightsholder we spoke to allows the most active grazier to use his rights, but is nevertheless an active sheep farmer, albeit keeping a breed not the best suited for rough grazings. Both the first two have cattle (although the second thinks, wrongly, that he cannot substitute cattle for sheep). All three would be interested in participating in a results-based payment pilot and there is interest in trying NoFence collars and reintroducing cattle.

Any increase in sheep numbers would be regarded negatively by the golf club, commons rights or not, since they would, they say, be drawn immediately to the managed areas of the course. Fortunately, there seems little reason to encourage more sheep from what we saw. The issue more likely to arise is how to target payments at the active without encouraging new activity just to claim the money; there are possible ways to deal with this, but it will require some advisory/facilitation effort.

It is also worth noting that the activity of the golf club, not just on its fairways (which may be good for grassland fungi), but in making other areas more attractive to livestock by means of topping bracken etc. is also a valuable activity in terms of the overall quality of the grazings. We would suggest to the graziers that some money to recognise the expenditure involved might be not only appropriate but a positive way of helping ease the undoubted costs which the exercise of grazing property rights by the graziers imply for them.

The Powis Estate is likely to be a positive if passive partner, but some adjustment to the management of its pheasants, and in particular the avoidance of feeding on the main butterfly areas, would be appreciated by those interested in the pearl-bordered fritillary.

7.3 Y Frochas

There is only one grazier on the Frochas, and that situation seems unlikely to change, according to our soundings. It appears that our discussions with him are coming at a time of likely change in his farming policy, as he shifts from a mix of cattle and sheep towards cattle only. However, he appears to be interested in pasturing cattle on the commons; he also expressed a willingness to undertake some of the capital works, and to secure a water supply for his stock if necessary.

One potential issue which has arisen previously is unhappiness on the part of the occupier of the house which is surrounded by the commons regarding livestock disturbance of various types. Gates have also been left open in the past. The advent of NoFence means that these issues should no longer be germane and the grazier is seemingly willing to trial its use.

A priority will be the introduction of stock to the area below the road, as well as the ongoing management of scrub and preventing the encroachment of brambles (there is already plenty of experience of doing this in a lawful dormouse-mindful way). In the longer term, the fate of the improved/semi-improved area will be interesting – would the financial incentive of a scorecard move it towards being more butterfly-friendly?

In summary, while the Frochas probably needs the most change, it looks likely to be the one where this would be easiest to put in place from a sociological/governance perspective.

8 Addressing gaps in current results-based scorecards

A key question for the project was to evaluate the scorecards produced by EFNCP in recent years (Jones et al. 2021) – do they ‘see’ the positive features of the three commons in order to reward their good condition and to steer their management appropriately if their condition is sub-optimal? When they fall short, are there potential simple amendments or additions which can make them more suitable? We consider here three aspects where the scorecard struggled with key features.

8.1 Ponds

A major asset of the Begwns, and the first one to be recognised, is the numerous ponds which support a rich flora (arguably of European importance for pillwort, according to Ray Woods (pers. comm.)) as well as some uncommon invertebrates. While these species require some degree of disturbance to maintain the open areas which are their niche, there is also a concern that large-scale disturbance, for example, clearing them out with diggers, could put their flora at risk.



A pond on the Begwns. Image: Martin Evans, Creative Commons Licence

The scorecard as currently written struggles with linear or point features, especially ones of unusually high significance – scores are designed to produce and are subsequently reflected in per hectare payments.

We cannot think of a way to change this which is logical and doesn't lead to further complications down the road. However, we feel that the card offers a solution in that it potentially penalises scores across the piece for damage or other negative features which occur only locally (the presence of rhododendron is another example). Indeed this means that there can be potentially very expensive consequences for a very local failing. We suggest then that damage to the ponds, described in as detailed a language as is felt to be necessary, should be added to the list of damaging actions on the card, perhaps for this site only or perhaps, after due consideration, more widely.

8.2 Grassland fungi

Areas with low higher plant diversity which are important for grassland fungi (for which Wales apparently has European-level significance) and probably for invertebrates as well were a gap we were aware we needed to fill from the start of the work here. (Areas of high flowering plant diversity will get a high score even if fungi are ignored.) Unfortunately, we were unable to secure the services of an expert at the time of our LEADER project; this work provides an opportunity to fill that gap.

Plantlife have produced a scoring methodology for grassland fungi (Plantlife 2013), but it not only cumulates the score over a site but provides no mechanism for narrowing down which areas within that site are in fact worthy of a good fungi score. On the other hand, our methodology, centred on what is recorded at individual 314 m² locations on across a site has no cumulative aspect at all, something which has the potential to be problematic for a species group as unpredictable as grassland fungi.

The proposed solution is to combine our approach with Plantlife's as set out in the text box below. This would enable the elevated payment to be related to certain areas and not others, while recognising that in the case of fungi, the overall picture is greater than the sum of its parts.

The aim is to ensure that spots in an area of high fungal diversity at the larger scale which would otherwise receive low scores get an uplift; while fungi recorded at an assessment point would add to the species score at that point, there is no general uplift for points which already receive a high score.

The one obvious weakness of the proposal arises when a diversity of fungi is recorded in the wider area, but they happen to turn up at few assessment points (or they turn up outwith the scoring exercise). In such cases, few assessment points would benefit from the potential uplift, thereby negating the intention of the adjustment. We would recommend a rapid resurvey at that point, scoring only the fungal element.

Proposed adjustment to scorecard to take account of grassland fungi

- Adjust recommended scoring period to account for fruiting period
- Include all of the listed variations as possible indicator species in A.1 Indicator Species Presence (and A.2, but unlikely to shift the score much there by being abundant)
- Tot up the species in the Plantlife way separately at the end and allocate extra points to each assessment location where there were fungi (otherwise you could be adding points to areas with no grassland fungi) so that a good fungi grassland gets the same points as a good heathland (a common alternative priority on open rough grazings), maybe something like this
 - o Fungi score 5-10, take total positive score up to 3 (i.e. no addition if they're already at 3; if the plot already gets a high score, nothing is added; negative scores still apply, otherwise no incentive to keep on top of brambles, say)
 - o Fungi score 11-15, take total positive score up to 4
 - o Fungi score 16-20, take total positive score up to 5
 - o Fungi score >20, take total positive score up to 6
- For the 'Plantlife calculation' element additional records could be submitted at any time in the form of a geolocated and dated image (training in taking such images would need to be given); this could also be permitted in the baseline or update or audit surveys
- Once a positive score is established, it should be maintained unless there is a clear reason to change it, reflecting the variation in the appearance of fruiting bodies over time (and the persistence of the mycelia). Where fire fits is this as regards 'a clear reason to change it' is not clear and would need to be further discussed with experts and/or tested.

8.3 Pearl-bordered fritillary butterfly

The grassland fungi issue is one with universal application; the solution, if workable, should be added to the default card. The pearl-bordered fritillary issue is more specific and local; it does not imply *a priori* the need for a wholesale re-evaluation of the default card.

The default card is deficient in terms of the optimal conditions for the butterfly in a number of ways:

Default card message	Pearl-bordered fritillary needs
'Blind' to bracken (e.g. as against grassland)	Needs bracken, not too much grassland
Tolerant of brambles, though not if spreading	Brambles shade out the food plants
Bracken one of few habitats where not only presence of trees but natural regeneration is encouraged	Spread of scrub implies shading and eventual loss of habitat
'Blind' to gorse, as long as not spreading	Rotational management of any gorse is a positive thing
Rewards broad range of flowering plants	Good population of violets is essential; in practice, specific nectar sources are important

In the light of these divergences, we suggest a new scorecard (below), to be used instead of the 'general' card alongside the woodland card in specifically-delineated pearl-bordered fritillary polygons. A survey would need to be carried out to re-fix the boundaries of those polygons in the light of actual or likely potential use by the butterfly, in the process allowing areas not amenable to being good pearl-bordered habitat to be scored using the default card. The scorecard needs intensive field testing. It is noteworthy that many of the ideas it contains were derived from work by one of the authors on habitat scoring for the high brown fritillary (Spencer 2022), suggesting that it has the potential to be more widely applicable, albeit in particular circumstances.

<u>This protocol is only to be followed within a designated pearl-bordered fritillary polygon</u>			
Section 1 - elements contributing to a positive score			
Q1. Is the area woodland? (over 75% canopy cover of native trees)			
If yes, use the normal woodland card			
If no, then go to Q2			
Q2. What is the cover of bracken with at least 3cm of litter underneath?			
0-25%	25-66%	>66%	
0	2	4	
Q3. How frequent are violets in the area?			
Less than 150 (less than 1 per 2 square meters)	150 to 1% (between 1 per 2 square meter and 1% of total area)	Over 1% of total area	Over 10% of total area
0	0.5	1.5	4
Q4. How frequent are nectar plants?			
Relevant plants are: ground ivy; dandelion; bluebells; primrose; lesser celandine; tormentil; speedwells; bugle;			
None-present (less than 1 plant per 5 square meters)	Common (between 1 plant per 5 and 1 square meters)	Frequent (more than 1 plant per square m)	
0	1	2	

Section 2 - elements which detract from the positive score

Q5. Is the cover of grass (apart from Molinia) more than 30%?

Yes	No
-3	0

Q6. What is the cover of gorse?

Less than 10%	Between 10 and 33% but at least half in regrowth stage	Over 33% but at least half in regrowth stage	Between 10 and 33% but at less than half in regrowth stage	Over 33% but at less than half in regrowth stage
0	-0.5	-1.5	-2	-4

Q7. What is the cover of bramble, not counting seedlings and regrowth of less than 30cm?

Absent	Present but less than 10%	Over 10%
0	-0.5	-5

Q8. Trees and scrub (except gorse)

Fewer than 5 stems over 1m tall present and no regen >30cm	5 or more stems over 1m tall present but no regen >30cm	Fewer than 5 stems over 1m tall present but regen >30cm present	5 or more stems over 1m tall present and regen >30cm present
0	-1	-2	-5

Q9. Is there evidence of any damaging activities anywhere within the scored area?

This would include summer mowing of the pdf polygon. Feeding livestock in the pdf area? And...?

Yes, direct impact on pbf	Yes, other impacts	No
-6	-4	0

Q10. Have you seen rhododendron in the scored area since leaving the last stop?

If found during the initial assessment, has no impact on payments; but no payments will be made in subsequent years unless the issue is addressed

If found in any other annual assessment, no area payments will be made before issue is addressed

Q11. What is the combined cover within the scored area of the polygon of the following negative indicators: Crocosmia(Monbretia), nettles, spear or creeping thistles, ragwort, self-seeded non-native conifers, other exo

High: Are they common over 10%	Medium: between 1 and 10% cover	Absent or negligible: Less than 1%
-3	-1.5	0

9 Conclusions and recommendations

The three commons studied were all of high environment significance, notably for ponds and grassland fungi (the Begwns), for pearl-bordered fritillary (y Golfa and y Frochas) and hazel dormouse (y Frochas). In all three cases, the apparent value of the sites rose in the last 30 years, with the first recording of pearl-bordered fritillary by one of the authors in the case of the Montgomeryshire commons and with the increased awareness of grassland fungi in the case of the Begwns.

In all three cases, the results-based payment scorecard methodology as developed so far in Wales did not adequately reflect these values; a generally-applicable amendment is proposed in this report for the grassland fungi, while for the pearl-bordered fritillary, a new species-specific approach for use in polygons delimited by butterfly experts has been designed. Both require field testing.

The commons differ markedly in terms of the exercise of rights of common and in terms of their current state and resilience as regards their major biodiversity assets. On the Begwns, a high proportion of the commoners use their rights of pasture or estovers (in the form of cutting bracken for bedding) or both. The current state of the Begwns seems to be positive and sustainable in terms of management practices.

On both the Golfa and the Frochas, there is only one active grazier at present, and in the latter there are no obvious additional/alternative graziers waiting in the wings. While the Golfa was considered to be in favourable condition from the perspective of the pearl-bordered at the time of the last survey, our impression is of a sub-optimal and not very resilient situation. Meanwhile the Frochas is already considered in unfavourable condition and appears to be moving in a more unfavourable direction.

However, on all three commons there was an interest in potentially being involved in a trial of a results-based payments package. It is clear that there would be challenges in each case – dividing funds between mowers and graziers; rewarding activity without increasing the number of grazing sheep; recognising and contributing to the costs of non-graziers, and so forth. In each case, the graziers are left waiting for contact to be made if and when a relevant funding call is issued by the Welsh Government, at which point many of these issues will need to be worked through.

In the interim, we make the following recommendations

- If possible, test both the new and existing scorecards in the coming field season
- If possible, score the whole of the commons and in particular the Golfa and Frochas where the uncertainty is highest; the opportunity could be taken to demonstrate the methodology to the commoners and other interested stakeholders
- Resurvey both the Golfa and Frochas from a pearl-bordered fritillary point of view to ascertain
 - o Whether there is pearl-bordered fritillary habitat outwith the current polygon
 - o Whether there are areas within the current polygon which would not profit from being scored using the pearl-bordered fritillary card
- Contact the MWWFRS regarding fire risk reduction on the Golfa

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