

# **Programme of work for semi-natural grasslands in Wales – evaluation of priority areas**

Report No: 699

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Report number: 699

Publication date: April 2023

Contract number: GRASSPROGAREAS

Contractor: Pori Natur a Threftadaeth (PONT) and Plantlife

Contract Manager: Stuart Smith

Title: **Programme of work for semi-natural grasslands in Wales – evaluation of priority areas**

Author(s): J Korn, J Sherry, C Lodge, L Wilberforce

Technical Editor: Stuart Smith

Quality assurance: Tier 3

Peer Reviewer(s): Nick Thomas

Approved By: Liz Halliwell

Restrictions: None

## Distribution List (core)

NRW Library, Bangor	2
National Library of Wales	1
British Library	1
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Scottish Natural Heritage Library	1
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## Recommended citation for this volume:

Korn J, Sherry J, Lodge C, Wilberforce L. 2023. Programme of work for semi-natural grasslands in Wales – evaluation of priority areas. Report No: 699, NRW.

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## Crynodeb Gweithredol

Roedd y gwaith hwn yn adeiladu ar contract blaenorol (Buckingham et al 2022) a fu'n adolygu ystod o brosiectau a dulliau o warchod glaswelltir lled-naturiol ledled Cymru, y DU ac Iwerddon. Nod y contract presennol oedd datblygu'r gwaith mapio a wnaed yn yr adroddiad gwreiddiol i nodi chwe 'ardal glaswelltir â blaenoriaeth' lle gellid archwilio'r potensial ar gyfer gwella gwytnwch glaswelltir lled-naturiol ar raddfa eang gyda phartneriaid lleol.

Rhannwyd y contract yn ddau gam:

1. Dadansoddiad gofodol o ddisbarthiad a chysylltedd glaswelltir lled-naturiol yn seiliedig ar gyfres o setiau data a ddarparwyd gan CNC neu sydd ar gael fel data agored, gan gynnwys y mapiau diweddaraf o gysylltedd glaswelltir lled-naturiol. Canlyniad y gwaith hwn oedd llunio rhestr dros dro o chwe ardal glaswelltir â blaenoriaeth. Mireiniwyd y meysydd hyn ymhellach yn dilyn trafodaeth rhwng CNC, PONT a Plantlife.
2. Ymarfer cwmpasu yn gweithio gyda phartneriaid lleol i gytuno ar flaenoriaethau, dysgu am fentrau glaswelltir diweddar a pharhaus, nodi rhwystrau i weithredu gwaith glaswelltir ar raddfa fawr a gwneud argymhellion ar sut y gellid datblygu'r gwaith.

Y chwe maes blaenoriaeth olaf yw:

- Pen Llŷn
- Gŵyr
- Calchfaen Gogledd Ddwyrain Cymru
- Ceredigion
- Cwm Elan a Gorllewin Sir Faesyfed
- Blaenau'r Cymoedd

Cysylltwyd â sefydliadau partner ym mhob ardal i ddechrau trwy e-bost ac yna trwy gyfres o gyfarfodydd Zoom a chyfathrebu pellach dros e-bost neu dros y ffôn. Roedd ymgynghoreion yn cynnwys CNC (timau lleol), Cyrff Anllywodraethol fel Ymddiriedolaethau Natur, yr Ymddiriedolaeth Genedlaethol, Plantlife ac ati, awdurdodau lleol gan gynnwys ardaloedd o harddwch naturiol eithriadol, grwpiau dolydd lleol, Grŵp Cyngori Ffermio a Bywyd Gwyllt Cymru a chofnodwyr/naturiaethwyr lleol.

Ym mhob ardal, nododd yr ymarfer cwmpasu'r blaenoriaethau lleol, gan gynnwys y mathau o laswelltir y dylid eu targedu gan fenter yn y dyfodol. Roedd hyn yn amrywio rhwng yr ardaloedd, er enghraifft yng Ngogledd Ddwyrain Cymru mae'r pwyslais yn bendant ar laswelltir calchaid tra mewn ardaloedd eraill mae ffocws ehangach ar laswelltir niwtral, corsiog ac asidig, gyda glaswelltir morol cysylltiedig ar yr ardaloedd arfordirol (Gŵyr a Phen Llŷn).

Nododd y trafodaethau nifer o faterion a rhwystrau sy'n gyffredin ar draws y meysydd blaenoriaeth:

1. Diffyg gallu a chyllid i gydlynu a chyflawni'r gwaith o reoli glaswelltir ar raddfa fawr.
2. Colli staff profiadol a medrus pan ddaw prosiectau tymor byr i ben.
3. Anhawster cynnal perthynas rhwng partneriaid a'r gymuned ffermio oherwydd 1 a 2 uchod.
4. Diffyg arolwg diweddar (gan gynnwys arolwg maint a dosbarthiad) a data monitro ar gyfer llawer o safleoedd glaswelltir, yn enwedig safleoedd heb eu dynodi.
5. Dealltwriaeth wael gan y llywodraeth a'r cyhoedd o bwysigrwydd glaswelltiroedd lled-naturiol ar gyfer carbon, bioamrywiaeth a gwasanaethau ecosystemol eraill. Canlyniad hyn yw bod y cynefinoedd hyn yn cael eu tanbriso o'u cymharu â mawndiroedd a choetiroedd.

Mae argymhellion strategol a lleol wedi'u nodi yn yr adroddiad.

Argymhelliad strategol allweddol yw bod CNC yn cynnal neu'n comisiynu prosiect bwrdd gwaith i ddwyn ynghyd yr holl dystiolaeth ar garbon a buddion eraill glaswelltiroedd lled-naturiol a nodi meysydd ar gyfer ymchwil pellach a bwydo hyn i drafodaethau ar Gyllid Gwyrdd a Niwtraleiddio Carbon ac ati.

Yr argymhelliad lleol mwyaf hanfodol yw dod o hyd i fecanwaith o fewn CNC i ddarparu cyllid i staff cymorth i gynyddu gallu lleol. Heb y cyllid hwn mae'n annhebygol y bydd gallu i wneud y gwaith sydd ei angen i gydlynu a chyflawni mentrau glaswelltir ac i ddatblygu'r cysylltiadau parhaol â'r gymuned ffermio sy'n hanfodol i gadwraeth glaswelltir.



## Executive summary

This work built on a previous contract (Buckingham et al 2022) which reviewed a range of projects and approaches to semi-natural grassland conservation across Wales, the wider UK and Ireland. The current contract aimed to develop the mapping work undertaken in the original report to identify six 'grassland priority' areas within which the potential for enhancing semi-natural grassland resilience at scale could be explored with local partners.

The contract was divided into two phases:

1. A spatial analysis of semi-natural grassland distribution and connectivity based on a series of datasets provided by NRW or available as open data, including the most recent semi-natural grassland connectivity maps. The outcome of this work was to produce a provisional list of six priority grassland areas. These areas were further refined following a discussion between NRW, PONT and Plantlife.
2. A scoping exercise working with local partners to agree priorities, learn about recent and ongoing grassland initiatives, identify barriers to implementing grassland work at scale and making recommendations on how the work could be taken forward.

The final six priority areas are:

- Pen Llŷn
- Gower
- North East Wales Limestone
- Ceredigion
- Elan Valley and West Radnorshire
- Heads of the Valleys

Partner organisations in each area were contacted initially by email and then through a series of Zoom meetings and further email or telephone communication. Consultees included NRW (local teams), NGO's such as Wildlife Trusts, the National Trust, Plantlife etc., local authorities including AONBs, local meadows groups, The Farming and Wildlife Advisory Group Cymru (FWAG Cymru) and local recorders/naturalists.

The scoping exercise in each area identified the local priorities, including the grassland types which should be targeted in a future initiative. This varied between the areas, for example in North East Wales the emphasis is firmly on calcareous grassland whilst in other areas there is a wider focus on neutral, marshy and acid grassland, with associated maritime grassland on the coastal areas (Gower and Pen Llŷn).

The discussions identified a number of issues and barriers common across the priority areas:

1. A lack of capacity and funding to coordinate and deliver grassland management at scale.
2. Loss of experienced and skilled staff when short-term projects end.

3. Difficulty in maintaining relationships between partners and the farming community due to 1 and 2 above.
4. Lack of up-to-date survey (including of extent and distribution) and monitoring data for many grasslands sites, particularly non-designated sites.
5. Poor government and public understanding of the importance of semi-natural grasslands for carbon, biodiversity and other ecosystem services. This results in these habitats being under-valued when compared to peatlands and woodlands.

Both strategic and local recommendations are set out in the report.

A key strategic recommendation is for NRW to undertake or commission a desktop project to pull together all evidence on carbon and other benefits of semi-natural grasslands and identify areas for further research and to feed this into discussions on Green Finance and Carbon Offsetting etc.

The most crucial local recommendation is to find a mechanism within NRW to provide funding to support staff to increase local capacity. Without this funding it is unlikely that there will be capacity to undertake the work necessary to coordinate and deliver grassland initiatives and to develop the lasting relationships with the farming community that are critical to grassland conservation.

# 1. Introduction

## 1.1 NRW Project Brief

As set out in the Environment (Wales) Act, NRW must pursue sustainable management of natural resources (SMNR) in relation to Wales, and apply the principles of SMNR. SMNR means: 'using natural resources in a way and at a rate that ... maintain and enhance the resilience of ecosystems and the benefits they provide and, in so doing, meet the needs of present generations of people without compromising the ability of future generations to meet their needs and contribute to the achievement of the well-being goals'.

Semi-natural grasslands, as defined in SoNaRR (2020), occupy about 9% of the land area of Wales and have declined by more than 90% in the lowlands during the latter part of the 20th century. Remaining areas of the habitat are often in poor condition, especially due to under-grazing. Semi-natural grassland is the most fragmented ecosystem in the Welsh lowlands (SoNaRR 2020).

This contract built on recent work which proposed a programme of activity on semi-natural grasslands in Wales (Buckingham et al. 2022). It focused on grassland 'priority areas', conducting spatial analysis and evaluation, and developing ideas for future project work and priorities for delivery of enhanced grassland resilience at a local level. It is expected that this work, together with the previous grassland programme work, would contribute in a significant way to addressing both the nature and climate change emergencies.

It is expected that this work will feed into a number of initiatives for example:

- Development of the Sustainable Farming Scheme (SFS), for example potentially providing a template for how local partnership working might operate,
- Delivery of local plans and Area Statement priorities,
- Development of Nature Networks, a broader programme of work building the resilience of the protected sites series

## 1.2 Background

This work follows on from an earlier NRW contract undertaken by Pori Natur a Threftadaeth (PONT), which considered the requirement to improve grassland ecosystem resilience in lowland Wales and proposed a programme of work aimed at improving the resilience of grassland ecosystems (Buckingham et al. 2022).

The previous grassland report identified factors that impacted the success of previous grassland initiatives and identified key messages to inform future grassland activity. As ninety one percent of semi-natural grassland in Wales is in agricultural holdings, the report found that central to any future approach was a shared vision and the need to build

constructive relationships and work with farmers. Long-term sustainable management can be achieved if farmers are financially supported to embed grassland conservation measures in the farming system and physically supported through advice and facilitated farmer networks. Other important factors are a simple and pragmatic monitoring system, the need to work over long timeframes and at the appropriate scale, and raising the profile of the value of grasslands (Buckingham et al. 2022).

The long-term, landscape scale approach working with, and supporting, farmers to embed positive management of semi-natural grasslands in their farming systems aligns well with the principles of Sustainable Management of Natural Resources as set out in the Environment (Wales) Act (WG 2016) and NRW aspirations to deliver resilient ecological networks (Garrett HM et al 2021).

## 1.3 Scope

The initial data analysis for the current project covers the whole of Wales and focuses on the following priority grassland types:

- Neutral grasslands, including lowland meadows
- Lowland marshy grasslands, including purple moor grass and rush pastures
- Lowland and upland calcareous grasslands
- Lowland acid and calaminarian grasslands

A detailed description of the current condition of these grasslands is provided in Section 2 of the original PONT report (Buckingham et al. 2022).

That report also includes a summary of the current state of semi-natural grasslands taken from the resilience assessment in the SoNaRR (NRW 2020) report and summarised in Table 1 below.

Table 1. Assessment of The Resilience of Lowland Semi-natural Grassland

Practical habitat unit	Diversity	Extent	Condition	Connectivity
<b>Lowland semi-natural grassland</b>  Calcareous Neutral Marsh Acid Calaminarian	<b>Low</b> Naturally very high diversity and important for a wide range of flora and fauna. Loss of diversity due to huge decline in the habitat extent in the last half of the 20th century, as well as current poor condition and connectivity. Large number of grassland species under threat.	<b>Low</b> >90% loss in the last half of the 20th century. Losses continue. Main issues are agricultural intensification and undermanagement. Protected sites appear largely protected from loss, but 90% of grassland Priority Habitat is not on protected sites.	<b>Low</b> Generally poor on both protected and unprotected sites, due largely to undermanagement, combined with factors such as atmospheric deposition. Some evidence suggests trend in condition has stabilised.	<b>Low</b> The least well connected of all main habitat groupings. Surveys in 1980s/90s revealed very high fragmentation which is highly likely to be still worsening due to continued losses in extent. Less mobile species severely affected. Several better-connected landscapes remain locally.

The principal reasons for the poor condition and resilience of semi-natural grassland in Wales are identified in the 2022 report as:

- Agricultural intensification
- Abandonment and under-management
- Poor ecological connectivity between semi-natural grasslands
- Land-use change
- Climate change and air pollution
- Insufficient protection and management of important sites

This current work aims to identify priority areas within which mechanisms for improving semi-natural grassland condition and resilience can be developed by working with local NGO and statutory partners and the local agricultural community.

## 2. Legislation, Policy and Funding

### 2.1 Legislation and Policy

#### 2.1.1 Global Framework: The Nature and Climate Crisis

##### **Climate commitments**

Welsh Government (WG) has a statutory commitment to meet net zero by 2050 and has stated that the nature and the climate crisis are government priorities. This commitment is being embedded in legislation, policies and processes including the planning system, the new Agriculture Bill and their recent remit letter to NRW for 2022-2026.

NFU Cymru have committed the sector to achieve net zero by 2040. They have produced various guides for farmers, including one on 'What Carbon markets mean for farmers' (NFU Cymru). Within that they set out the principles of high quality offsets, explaining that they need to be additional, permanent and verifiable. Permanent means that changes in land management need to be long-term. Verifiable means that 'The amount of avoided/removed carbon needs to be verifiable using a robust and widely accepted MRV (measurement, reporting and verification) methodology. This means that cost-effective ways to accurately assess the impact of nature-based solutions such as soil carbon sequestration need to be developed' (NFU 2022). This methodology exists for woodland planting and upland peatland restoration but not for pasture management. Evidence is building on the value of well managed semi-natural grasslands for sequestering and storing carbon. Semi-natural grassland management could provide an opportunity to manage for carbon, biodiversity and contribute to a viable farm business if action is taken to develop the evidence base and verification process for the contribution to carbon capture.

##### **Biodiversity commitments**

Wales signed up to Kuming-Montreal Global Biodiversity Framework at the CoP15 Convention on Biological Diversity Conference (CBD) held in Montreal earlier this year. This sets out 4 goals and 23 Targets. A key target is the 30 by 30 target: 30% of terrestrial, inland water and coastal and marine areas protected by 2030. Welsh Government signed up to this ahead of the conference and the Wales Biodiversity Deep Dive report identifies themes and actions to achieve this ambitious target. Signatories also signed up to restore 30% of degraded ecosystems by 2030. Following the conference, the Minister for Climate Change Julie James (AS) committed to setting legally binding targets for Wales.

## 2.1.2 Wales Level - Legislation, Policy and Strategy

### **The Wellbeing of Future Generations (Wales) Act 2015**

This Act set out 7 wellbeing goals that public authorities have to consider in all that they do to improve the economic, social, cultural and environmental wellbeing in Wales now and for future generations. WG has appointed a Future Generations Commissioner to facilitate work towards the goals. The goals are

- A resilient Wales
- A prosperous Wales
- A healthier Wales
- A more equal Wales
- A Wales of more cohesive communities
- A Wales of vibrant culture and thriving Welsh language
- A globally responsible Wales

Managing semi-natural grasslands as part of a viable farming system and helping farmers and graziers through this transition delivers against these goals. This approach will support family farms in their communities, providing opportunities for young people to live, learn and work locally. The adoption of more extensive farming methods and integrating conservation grazing or moving towards a pasture fed approach also reduces the requirement for extra feed, fertiliser and pesticides, all of which reduces the global environmental impact of farming. Thinking beyond short-term projects and striving for long-term change in land management practices is something that younger farmers are exploring, such as those involved in the NFU 'Next Generation' farmer group, as well as others who are part of the Nature Friendly Farming Network (NFFN) or members of Pasture for Life.

### **The Environment (Wales) Act 2016**

#### ***Part 1 Sustainable Management of Natural Resources (SMNR)***

Part 1 of the Environmental (Wales) Act sets out the approach that Wales will take in managing and using its natural resources based on the 9 principles of SMNR. These principles are set out in the WG Factsheet 'Sustainable Management of Natural Resources (WG 2016). The principles will be important in informing the development and delivery of the new scheme.

#### **There are 3 main deliverables identified in the Environment (Wales) Act (Part 1)**

1. State of Natural Resources report (SoNARR) provides data on the state of a range of habitats and species with the first report produced in September 2016. SoNARR is produced by NRW and reviewed before the end of the calendar year in which a general election is held. The latest report was produced in 2020. Resilience is defined in the SoNARR as 'An environment that can respond to pressures by

resisting, recovering or adapting to change; and is able to continue to provide natural resources and benefits to people' (NRW 2020)

2. The National Natural Resources Policy (NNRP) is produced by the WG and reviewed after each general election. This high-level policy sets out how the WG will implement the SMNRs by setting out their national natural resources priorities and how these align with the WG National Strategy and other policies including: economy, agriculture and food, resource efficiency and education.
3. Area Statements produced by NRW in partnership with stakeholders (see below for more information).

The Environment (Wales) Act also sets out a new biodiversity duty (Section 6) and it committed WG to produce and publish a list of species and habitats considered to be of key significance to sustain and improve biodiversity in Wales (Section 7 list).

The Section 6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems (WBP 2023).

Purple Moor grass and rush pasture, lowland meadows, lowland calcareous grassland, upland calcareous grassland, calaminarian grassland and lowland dry acid grassland are all Section 7 habitats.

The full Section 7 list is published on <https://biodiversitywales.org.uk/environment-wales-act>)

### **The Agriculture Bill**

The Agricultural Bill will provide the framework for the Sustainable Farming Scheme. It is currently working its way through the Senedd with organisations and groups still feeding in amendments. The bill sets out a set of sustainable land management objectives, the exact wording of which is still being discussed. Wales Environment Link (WEL), which represent 30 environmental organisations, is calling for better alignment with the Wellbeing of Future Generations Act and the Environment (Wales) Act, the adoption of United Nations definition of Sustainable Land Management, and better alignment with the biodiversity and resilience ambition outlined in the Global Biodiversity Framework. The latter would strengthen the current commitment in the bill to maintain and enhance biodiversity by committing to restoring biodiversity. The Agricultural bill will also set the timeframe for the introduction of minimum environmental standards. The standards will set the baseline for the expectation of good environmental practice above which payments could be made.

### **Planning Policy**

Welsh Government have adopted Net Benefit for Biodiversity (NBB) instead of Net Biodiversity Gain (NBG). NBB is defined as 'the concept that development should leave biodiversity and ecosystems in a better state than before, through securing long term, measurable and demonstrable benefit, primarily on site.' (WG 2023). A WG consultation on a targeted update of section 6.4 of Planning Policy Wales (PPW) on NBB and the resilience of ecosystems, closed on 31 May 2023. The aim is to draw on the consultation to strengthen the policy.



In Wales there is a 3-tier planning system consisting of:

**The National Development Plan** (Future Wales) which includes Policy 9 on resilient ecological networks and green infrastructure. The WG requires strategic action to safeguard ecological networks and secure biodiversity enhancements (CIEEM 2022). PPW (Edition 11) includes detail on pages 136 -145 including recognition of the need to work across boundaries, to enhance ecological networks and deliver resilience by addressing Diversity, Extent, Condition, Connectivity and Adaptability (DECCA). DECCA is a framework developed by NRW to evaluate ecosystem resilience by assessing habitats or ecosystems against each of these key attributes.

**Strategic Development Plans (SDPs)** Each SDP is prepared by one of four Corporate Joint Committees (CJCs). This allows issues such as ecological networks and resilience to be addressed at a landscape scale crossing local political boundaries (see Table 2 below).

**Local Development Plans (LDPs)** produced at a local authority / national park level. The LDP will include policies for biodiversity and ecosystem resilience enhancement for the planning and development control processes.

The Section 6 Biodiversity duty provides a key legislative driver for the planning system and Planning Policy Wales reiterates this as it states “Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity. In doing so planning authorities must also take account of and promote the resilience of ecosystems...” (WG 2021).

Therefore, in Wales the legislative and policy framework for planning requires development to maintain and enhance biodiversity and to build ecologically resilient networks. The approach follows the avoid, minimise, mitigate and as a last resort compensate decision making formula (CIEEM 2022).

In Rhondda Cynon Taff County Borough Council (RCT), which is part of the Heads of the Valleys priority area, the biodiversity/ecology team has been working with planners and developers for 30 years to manage semi-natural grasslands through planning conditions. Section 106 agreements are used to secure funds to conservation graze mitigation land with funds provided by private developers. If the local authority is undertaking a development such as a road scheme, then agreement to conservation graze local authority land is secured. This has led to significantly improved condition on a network of grassland sites which are managed by local graziers who move their livestock to sites as required.

## **Biodiversity Deep Dive**

The Biodiversity Deep Dive was commissioned by Welsh Government to agree a set of collective actions that could be taken immediately to achieve the CBD 30 x 30 target. The Biodiversity Deep Dive sets the following recommendations:

- Transform Wales’ protected sites portfolio so that it is better, bigger, and more effectively connected so that plants and fauna are able to travel and adapt to climate change

- Create a network of Nature Recovery Exemplar Areas across a range of different semi-natural habitats and identify opportunity of Other Effective Area-based Conservation Measures (OECMs)
- Increase the footprint of the Marine Protected Areas network
- Unlock the potential of designated landscapes (National Parks and Areas of Outstanding Natural Beauty) so they deliver more for nature
- Ensure land and marine planning decisions consider biodiversity and that good decisions are incentivised
- Build a strong foundation for future delivery through capacity building, behaviour change, awareness raising and skills development
- Develop and adapt monitoring and evidence frameworks to measure progress against 30 by 30 (WG Oct 2022)

The WG responded with a number of immediate and longer-term actions it would take (WG Oct 2022).

### **Nature Recovery Exemplar Areas and OECMs**

In response to the Deep Dive, WG committed to set up an Expert Working Group to look at processes and criteria for recognising Nature Recovery Exemplar areas (opportunities for landscape scale collaborations) and OECMs (WG Oct 2022). OECMs are defined by the IUCN as ‘a geographic site, which is not within a protected area, that delivers long-term biodiversity conservation under equitable governance and management’. (WWF)

The recent NRW remit letter 2022 -2026 includes several strategic objects for NRW to implement including an objective to support implementation and delivery of the recommendations within the Biodiversity Deep Dive and specifically the development of Nature Recovery Exemplar Areas (WG 23 Dec 2022). Any alignment with grassland priority areas could provide strategic support for developing landscape scale grassland projects.

### **Area Statements**

As legislated for in the Environment (Wales) Act, NRW has prepared Area Statement in collaboration with a range of partners. The Area Statements have been published on the NRW website and set out the challenges and priorities for delivery of SMNR in each area. The six terrestrial area statements are: North West Wales, North East Wales, Mid-Wales, West Wales, South Central and South East Wales. The first 5 include one or more of the grassland priority areas (See Table 2 below).

The South-Central Area Statement includes Ecosystem Resilience as a key theme and grasslands is a priority ecosystem. A grassland profile has been written to set out how to build resilience for this ecosystem (NRW June 2022). This profile identifies the base-rich marshy grassland type ‘Molinia meadows’, stating that South and South West Wales form the UK stronghold for this European Protected habitat. It identifies Cwm Cadlan as a particularly significant site as it has the single largest area of this recorded marshy grassland in Wales (NRW June 2022 pg. 8)

### **Building Resilient Ecological Networks**

NRW is starting to work with partners on identifying Resilient Ecological Networks (RENS). Following on from work done on mapping resilience at a Wales level, South West Area Statement staff have started to identify local RENS. Currently this is relevant only to the Heads of the Valleys priority area but other areas intend to develop their own RENS in the future. This will help focus action on resilience within each area's statement.

The RENS identified that are relevant to the Heads of the Valleys are:

- The Taff and Cynon Headwaters in the BBNP REN which includes 8 SSSIs and extensive land in WG Woodland Estate ownership and public ownership including Dŵr Cymru.
- Rhondda (and possibly Cynon) Valleys and Uplands

Ecosystem profiles have been produced by South Central for various habitats including for grasslands.

The Grassland Priorities in South Central area Grassland Ecosystem profile are:

1. Enabling appropriate grassland management to improve condition
2. Create resilient ecological networks to extend, connect and buffer grassland sites
3. Connecting people with grasslands through those in urban areas, road verges and engagement about the benefits of grasslands, such as sustainable food.

(NRW 2022)

### **Local Resilience Mapping**

Swansea Council and the Bannau Brecheiniog National Park Authority have produced local resilience maps which cover their geographical areas. Gower and the part of the National Park that falls within the Heads of the Valley priority area are included.

### **Local Nature Partnerships**

The Local Nature Partnership network coordinates and facilitates the work of the Local Nature partnerships in Wales with a team consisting of staff who are based in different organisations such as South East Wales Biodiversity Records Centre (SEWBReC), the Wales Biodiversity Partnership (WBP) and the Wales Council for Voluntary Action (WCVA).

Each local authority and national park in Wales have a Local Nature Partnership, a Local Nature Officer and have worked together to produce a Nature Recovery Action Plan (NRAP), which identifies the priorities for species and habitats and priority actions and projects for their area. The LNP work together to deliver action for these priorities. The authorities relevant to each priority area are set out in the table below. The NRAP will provide evidence and focus to grassland project development, and proposals need to be discussed with the LNP. Evidence also exists in local State of Nature reports.

Table 2. Priority Areas Set in the Context of Local Plans and Designations

Grassland Priority Area	Corporate Joint Committee (CJC) area	Area Statement	Local Authority/LNP	Landscape Designation (National Parks also form LNPs)
Pen Llŷn	North Wales	North West Wales	Cyngor Gwynedd	Llŷn Area of Outstanding Natural Beauty (AONB)
North East Wales Limestone Grassland	North Wales	North West Wales North East Wales	Conwy County Borough Council (CBC) Denbighshire County Council (CC) Flintshire CC Wrexham CC	The Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB)
Elan Valley	Mid Wales	Mid-Wales	Powys CC	
Ceredigion	Mid Wales	Mid-Wales	Ceredigion CC	
Heads of the Valley	South East (RCT & MT)  South West Carms & NPT)  Mid Wales (BBNPA)	South Central and South West Wales	Carmarthenshire Council Neath Port Talbot CBC (NPT) Rhondda Cynon Taff CBC (RCT) Merthyr Tydfil CBC (MT)	Bannau Brecheiniog National Park Authority (BBNPA)
Gower	West Wales	South West Wales	Swansea Council	Gower AONB

### Site Designation and Designated Landscapes

Semi-natural grasslands may be designated and protected at different levels

- (EU/UK/Local) EU: Special Areas of Conservation (SAC), Special Protected Areas (SPA);
- UK: Sites of Special Scientific Interest (SSSI) including National Nature Reserves (NNR);
- Local: Local Wildlife Sites (LWS) or Sites of Importance for Nature Conservation (SINC).

High quality grassland sites may also be managed sensitively as Local Nature Reserves, NGOs owned or managed reserves e.g., by the Wildlife Trusts or RSPB or local group, farms and land that are managed for nature e.g., National Trust (NT) estates and farms. Many of these may also include land that is designated.

Each priority grassland area identified as part of this report includes significant areas of high quality (or potentially high quality) semi-natural grassland habitat. This report sets out the scope for future projects to build on this foundation to develop functioning, resilient networks for semi-natural grasslands and the initial steps that need to be taken to achieve this in the long-term.

Four of the priority areas fall partly within designated landscapes and so may benefit from greater focus of those authorities on the biodiversity and enhanced opportunities to establish suitable governance arrangements for a future project. This has been significantly reinforced by the Biodiversity Deep Dive which commits the Welsh Government to realign designated landscapes to enhance and accelerate nature recovery with the necessary policy, resource and guidance. It also states that the potential new National Park for the Clwydian Range and Dee Valley would have climate change mitigation and nature recovery as key priorities (WG Oct 2022). The NRW remit letter 2022-2026 requests that NRW take forward a programme to consider the commitment to designate the new National Park. These developments would provide considerable opportunities for taking forward action for the North East Wales Calcareous Grasslands (Welsh Government Dec 2022).

## 2.2 Funding

### **Nature Networks Fund**

The Nature Network Fund has provided funding within NRW and through a grant program administered by the National Lottery Heritage Fund to build the resilience of the protected sites programme. The grant funding is investing in a number of smaller projects up to £250,000, including a grassland project led by the Wildlife Trust South and West Wales (WTSWW), and larger projects up to £1 million, which will be announced soon. The Biodiversity Deep Dive recommended expanding and scaling up the Nature Networks programme to improve the condition, connectivity and resilience of the protected sites. In its remit letter (2022-2026) the Welsh Government set an objective for NRW to further develop the Nature Networks programme, including the overall strategic approach and refining the priorities (WG Dec 2022). It is expected that a new round of the Nature Networks Grant will be launched in 2023.

The internal NRW Funds (also known as Biodiversity and Ecosystem Resilience Fund – BERF) has been invested in different ways in different areas. In Carmarthenshire and Pembrokeshire, it has funded a grassland project incorporating both protected and non-statutory sites, whereas in Ceredigion it has been invested in capital works on statutory sites through Section 16 Management Agreements.

### **Local Action for Nature funding**

Welsh Government initially provided funding for Local Nature Partnerships through the ENRaW fund. This came to an end in March 2022. In response to the Biodiversity Deep Dive, Welsh Government committed to Providing funding for Local Nature Partnerships to support collaborative partnership action for nature recovery at the local level (Oct 2022). However, even before that (since April 2022) the Local Nature Partnership Network was allocating Welsh Government funds to LNPs through the Local Places for Nature Scheme. This provides revenue funds for the LNP Officer and partnership and capital funds to deliver agreed priority actions. The capital allocation for each LNP is calculated based on population, meaning that rural authorities get less money.

### **Section 16 Management Agreement**

Section 16 Management Agreements are traditionally used by NRW to support management of protected sites. In response to the biodiversity Deep Dive, Welsh Government committed to exploring the opportunity to use Section 16 Management Agreement Land Management Agreements for match funding to secure additional funds. This would allow more ambitious work for nature recovery and could potentially be used to increase the scope and longevity of management for semi-natural grasslands at the landscape scale.

### **Planning / mitigations funds**

As noted earlier, the planning system can be used to as a lever to fund or facilitate conservation activity. This can be through using Section 106 agreements or through other mechanisms agreed with the developer. The Heads of the Valleys priority area includes RCT and Carmarthenshire, both of which are already doing this to pay for grassland management including through conservation grazing. This priority area runs through an area with high development pressure, which means high conservation value sites need protection but also opportunities exist to deliver conservation management through planning.

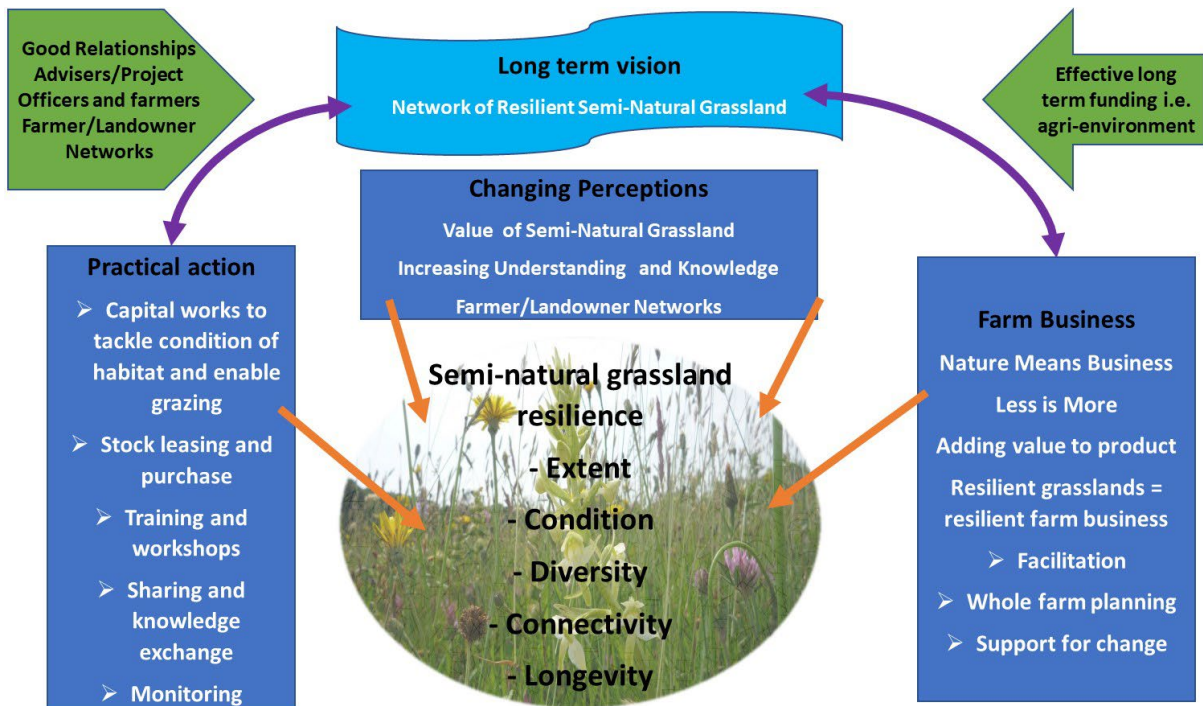
### **Sustainable Farming Scheme**

The Sustainable Farming Scheme will give farmers revenue and capital costs for the work they do managing their land and producing food sustainably. It is proposed that farmers will sign up to 5 year rolling agreements which will include longer-term objectives and guidance on business change.

Therefore, ensuring that information on requirements for positive management of grasslands and how to support, advise and work with farmers to achieve these outcomes needs to feed into the scheme as it develops. If landscape scale projects are to be developed and delivered there needs to be a clear communication link back into the scheme development through NRW and through the farming interest groups and individuals engaged in the process.

The Sustainable Farming Scheme is due to launch in 2025. It is likely to have different levels of funding. The universal level will be broad and shallow and encourage farmers to undertake specific work to secure environmental benefits over and above minimum standards. The middle tier proposal contains optional actions which are likely to include restoration and creation of semi-natural grasslands. The highest tier is being developed as a collaborative or partnership tier and may have an outcome focus. This could provide significant opportunities for groups of farmers or farmers and small-holders to work together to deliver ecosystem resilience at scale. Investment in building relationships with farmers now to support transition to conservation based agricultural practices could lead to longer-term funding through the future SFS to support continuation of positive change.

Figure 1. What we need to do to improve grassland resilience



(Buckingham et al. 2022)

## 3. Methodology

### 3.1 Spatial Analysis and Identification of Priority Areas

#### **Description of methods and layers used to identify priority areas**

The aim of the initial spatial analysis was to present a final list of six priority areas for the scoping exercise. The spatial analysis work was carried out by Plantlife on behalf of, and with steering from, Pori Natur a Threftadaeth (PONT). It focused on priority grassland habitats across lowland Wales, using existing datasets and information on grassland extent, distribution and condition.

The spatial layers and datasets shown in Table 3 were used to populate and inform the initial all-Wales map and the 'priority areas' maps.

Once the all-Wales map had been produced, PONT, NRW and Plantlife met to agree the priority areas. The selection process focused on hot-spots for grassland biodiversity, supporting, for example, particularly large or diverse areas of grassland habitat or particularly important populations of scarce or declining grassland species. Other parameters were also used in the selection process such as targeting areas where there were existing or recent partnerships, projects and mechanisms delivering positive management for semi-natural grasslands. The importance of certain grasslands to deliver ecosystem services was also considered. Six priority area maps were subsequently produced, based on the selection process. Additional data sets were added to these maps during the scoping process.



Table 3. Wales PONT/NRW Lowland Grassland Mapping Work - List of GIS Layers Informing Project

Key:	Visible layers (V)	Background/base layers (B)	Informative but not displayed on final maps (I)	
Group No.	Spatial Layer	Joins/intersects/ extractions	Categorisation / sub-separations	Source and Description
1 (V)	Lowland Grassland meeting SSSI Std (points)	Lowland Grassland SSSI (extracted)	Minimum standard / priority, and split into separated layers for those that intersect a SSSI, or those that don't	NRW: Point data from SS/NRW of grassland sites meeting SSSI std
2 (V)	SSSI Grasslands	Extract of grassland - only SSSIs spatial layer with added Condition info.	Condition: Destroyed, Favourable, Unfavourable, Unknown	NRW: SSSIs layer cross-ref'd and extracted with spreadsheet from SS/NRW of grassland only SSSIs with condition assessment data
3 (B)	PH2 Lowland Grassland group	None (yet)	Contains polygons of whole 'SITES' broken down into sub-polygons for each site of 'MOSPOLYS' and 'VEG'	NRW: 'MOSPOLYS': contains detailed NVC single codes of parts of overall sites 'VEG': contains detailed hab info and most with NVC code for whole sites 'SITES': contains whole site name/boundary
4 (V)	Priority Habitat Lowland Calcareous Grassland	None (yet)	Could use NVC codes to categorise but only a portion have this info	NRW: mix of sources: some Phase 1 Habitat Survey of Wales 79-97 OR Lowland grassland survey 87-04 OR CCW Phase 2 survey OR no source. Contains some Ph1 or singular NVC codes

Group No.	Spatial Layer	Joins/intersects/ extractions	Categorisation / sub-separations	Source and Description
4 (V)	Priority Habitat Lowland Dry Acid Grassland	None (yet)	Could use NVC codes to categorise but only a portion have this info	NRW: mix of sources: some Phase 1 Habitat Survey of Wales 79-97 OR NVC
4 (V)	Priority Habitat Lowland Meadows	None (yet)	Could categorise by NVC codes	NRW: Lowland grassland survey 87-04 AND complete NVC data – single codes
4 (V)	Priority Habitat Purple Moor-grass and Rush Pastures	None (yet)	Could use NVC codes to categorise but not all have this info	NRW: mix of sources: some Phase 1 Habitat Survey of Wales 79-97 OR NVC data – single codes
4 (V)	Priority Habitat Upland Calcareous Grassland	None (yet)	Could use NVC codes to categorise but not all have this info	NRW: mix of sources: some mixed Phase 1 Habitat Survey info OR NVC survey OR no source. Contains good portion of singular NVC codes
6 (V)	NRW Habitat Network Layers	Grassland only element extracted – with Level 1 & Level 2	<p><u>Level 1</u> (Core, Focal, Local layers separated as layers).  Core - indicate the strongest areas of connectivity and help to pick out key concentrations of habitat. Tight &amp; minimal.  Focal - indicate broad but relatively weak patterns of connectivity in the landscape. Extensive and general.  Local - pick out small-scale, or local concentrations of habitat the core and focal networks miss</p> <p><u>Level 2</u> - maps of key networks relating to sign existing SSSIs/protected sites and known high-quality grassland sites.</p>	NRW: Level 1: maps whole habitat resource and connectivity around them. Level 2: maps of key networks that contain the most significant examples of habitat. Minimal detail in Attributes tables.
7 (V)	Plantlife's Important Plant Areas 2020	Just trimmed for Wales	none	'Important Plant Areas – Plantlife'

Group No.	Spatial Layer	Joins/intersects/ extractions	Categorisation / sub-separations	Source and Description
8 (I)	WaxcApp Data			<a href="https://www.plantlife.org.uk/application/files/5116/3480/2509/Waxcap_ID_guide_PL_2014.pdf">https://www.plantlife.org.uk/application/files/5116/3480/2509/Waxcap_ID_guide_PL_2014.pdf</a> Explains the scoring categories
9 (I)	Marsh Fritillary Data 2014		From Butterfly Conservation	'Courtesy of Butterfly Conservation'
9 (V)	Marsh Fritillary Data 2019		Current colonies 2019	NRW
10 (I)	Unitisation Boundaries	Boundaries of SPAs, SACs and RAMSARs (SSSIs [all] removed)	Not used – note is divided into management parcels they only names, no habitat info	<a href="#">Lle - Unitisation Boundaries (gov. wales)</a> Contains Natural Resources Wales information © Natural Resources Wales and database right
11 (B)	NRW All SSSI Polygons	As ref'd above under 'Lowland Grassland meeting SSSI Std', this is the original SSSI layer used to cross-reference grassland data	None – categorisation and splits have resulted in new layers described above	NRW Wales full SSSI Polygon spatial layer
11 (B)	Grassland SSSI Gridref points	Intersect between full SSSI layer and SS/NRW Spreadsheet 'Grassland qualifying features and baseline assessment results' to give a point layer. This was then used to extract grassland SSSIs, resulting in above layer 'NRW Grassland SSSI (extracted)'	None – contains 'indicative condition' which has been used to categorise the resultant spatial layer 'NRW Grassland SSSI (extracted)'.  	From SS/NRW: spreadsheet 'Grassland qualifying features and baseline assessment results' - a list of all (lowland) grassland qualifying features and also a condition assessment of each feature - an extract of grassland areas from the data available on <a href="#">this link</a>

Group No.	Spatial Layer	Joins/intersects/ extractions	Categorisation / sub-separations	Source and Description
12 (V)	Gower SINCs	Polygon layer from Swansea Council	n/a. Note this contains a mix of habitats but not formatted to easily extract grasslands only	SINC data @SEWBRc 2022
12 (V)	Gower Hay meadows	Layer from PONT	n/a	PONT
12 (V)	Dolydd Llyn Project - grasslands		Point layer from this Llyn grassland project (marshy grassland, hay meadows and other semi-natural grasslands)	Dolydd Llyn Project 2023
n/a (V)	Unitary Authority Boundaries	Wales counties and Wales overall boundary: Intersect between unitary authority/county boundaries for UK with Wales country area to extract just counties within Wales	none	Boundaries of unitary authorities within Wales
13 (V)	WT SW Reserves	None	South West Wales Wildlife Trust reserve land. This contains a mix of habitats, many already SSSIs, but not formatted to easily extract grasslands only	The Wildlife Trust of South and West Wales. Citation WTSWW, Crown Copyright Open Data
13 (V)	Ceredigion CC HES Roadside Verge Reserves	None	Roadside verge grassland reserves.	Ceredigion County Council, Highways and Environmental Services (N.D.). <i>Roadside Verge Nature Reserves (RSVR's)</i> (CCC, N.D.)

**Base Layers:**

	Base layer name	joins/intersects/extractions	Categorisation / sub-separations	Source and Description
n/a (V)	World Imagery	None	Satellite imagery	ArcGIS Baselayer
n/a (B)	BGS 625k Geology	none	Bedrock and Superficial categories	Bedrock and superficial geology from the British Geological Societies available Living Atlas Baselayer on ArcGIS
n/a (V)	GB Base OS Outdoors Style	none	This style provides a detailed vector basemap for Great Britain using Open Data and is based on the style provided by the Ordnance Survey in their Outdoors Style	This style provides a detailed vector basemap for Great Britain using Open Data and is based on the style provided by the Ordnance Survey in their Outdoors Style

**Other related data (not spatial) used to intersect/overlay/inform the above spatial layers**

Relates to above no.	Standalone table name:	Joins/intersects	Categorisation elements	Description/source
1 (B)	LwInd Grsslnd Survey sites meeting SSSI std NOT SSSIs.csv	Used this (GR points) to select/overlay SSSI spatial layer where lands outside of existing SSSIs – this is the reverse of below.	Measured against SSSI standards – meeting 'Minimum' or 'Priority'	SS/NRW: CSV file from Lowland Grassland Survey sites meeting SSSI standard.xls
1 (B)	Lowland_Grassland_Survey_sites_meeting_SSSI_standard_CSV.csv	Used this (GR points) to select/overlay where lands on existing SSSI	Measured against SSSI standards – meeting 'Minimum' or 'Priority'	SS/NRW: CSV file from Lowland Grassland Survey sites meeting SSSI standard.xls
2 (B)	Grassland_SSSIs.csv	Used this (SSSI_CODE) to intersect with full SSSI layer to extract just grasslands	Used the 'Indicative Condition' field to show 'Destroyed', 'Favourable', 'Unfavourable', 'Unknown'	SS/NRW: CSV file from Grassland qualifying features and baseline assessment results.xls
n/a (I)	records-2022-11-09.csv	None. NBN Species data of yet unused.	Potential to use if we get a list of indicator species	NBN Phase 2 Lowland Grassland Survey of Wales

## 3.2 Scoping Exercise

For each priority area, meetings were held with key partners to identify future opportunities for improving grassland resilience at scale; if a meeting wasn't possible then emails were exchanged. The discussions were based on the following questions:

- Where should the focus be and what are the local priorities?
- What is already happening for grassland conservation in the area?
- Is current activity engaging and working with the farming community?
- Who are the key partners we should be talking to?
- What evidence is available to support a future project, where are the gaps?
- Are there any organisations who would be able/willing to lead a future project?
- If not, what are the barriers? What support is required to overcome barriers?
- What funding is available to kick-start grassland activity and what would be the initial steps required?
- How can work in this area influence the development of SFS or be used to inform policies such as Area Statements or future funding streams?

Information was followed up where clarification was required and a number of reports and other information were accessed to evidence information included in each priority area scoping report.

## 4. Results

### 4.1 Priority Areas

Six priority areas were identified from the spatial mapping exercise and subsequent selection process. These are shown in Table 4

Table 4. Priority Areas and Grassland Types

Priority area	Grassland habitat
Pen Llŷn	Maritime grassland Neutral pastures and meadows Acid grassland incl. grassland fungi sites Small areas of marshy grassland
North East Wales Calcareous Grassland <i>2 sub-units of Creuddyn (includes Orme), Clwydians</i>	Lowland calcareous grassland Acid grassland including species-rich examples Neutral grassland Incl. meadows
Ceredigion <i>North and West of Tregaron</i>	Marshy grassland/rush pasture Dry acid grassland Neutral pastures and meadows
Elan Valley and West Radnorshire	Marshy grassland/rush pasture Neutral grasslands incl. meadows Acid grassland incl. grassland fungi sites
Heads of the Valleys <i>Carmarthenshire – Merthyr Tydfil</i>	Marshy grassland/rush pasture Neutral grasslands incl. meadows Acid grassland
Gower	Neutral pasture and meadows Calcareous grassland Marshy grassland/rush pasture Maritime grassland

Priority areas were identified in the original PONT report (Buckingham et al. 2022) but this list did not take into account the existence of current successful partnerships and projects and so the six priority areas that were agreed with NRW differ from those listed in the previous report, for example the revised list included an area in Ceredigion instead of Pembrokeshire.

It should be noted however that this not a definitive list and valuable grassland habitat and networks exist in other parts of Wales. For example, areas of floodplain meadow in north east and east Wales are fairly sparse and scattered and are therefore difficult to include in a cohesive network, but would merit actions to improve their resilience.

There is also significant existing grassland conservation activity outside the six priority areas, such as the Conserving the Park Gwarchod y Parc scheme operated by Pembrokeshire Coast National Park which is supporting farmers and landowners to better

manage habitat including semi-natural grasslands. In others areas there are active partnerships that include farmers which are working towards farmer led approaches, such as the Tir Canol Partnership in the Dyfi area.

## 4.2 Scoping Exercise – Key Recommendations

The discussion with partners within the six priority areas identified some common themes which have been developed into the key recommendations listed below.

1. There is an urgent need for NRW to undertake or commission a desktop project to pull together all evidence on carbon benefits of grasslands and identify areas for further research. Climate mitigation initiatives and carbon offsetting tends to be focused on woodland and peatlands and the importance of grassland in carbon sequestration and storage is generally overlooked. Green finance and Payment for Ecosystem Services initiatives are highly likely to develop over the next decade and it is essential that grasslands are properly valued within these economic systems.
2. This information and other evidence on the significant value of semi-natural grasslands should inform the case for a Wales Grassland Programme. The PONT report in 2022 identified that long term, farmer-led initiatives delivered the best outcomes for grasslands, not short term projects (Buckingham et al. 2022); this report builds on that evidence. NRW is strategically positioned to lead a programme with its Wales wide remit, in-house expertise and it's legal requirement to deliver SMNR. NRW, with partners, has clearly set out the joint ambition for ecological resilience within the Area Statements and the Biodiversity Deep Dive. A Grassland Programme would deliver this ambition through partnership, with NRW as a lead and local staff outposted to organisations who can build relationships with farmers and other local stakeholders. This approach would deliver the recommendations below.
3. Funding for staff is a priority. As capacity is the key issues across Wales, partners felt there was a very great need for funding for staff (revenue) rather than the current emphasis on capital works. Ultimately, coordination, strategic planning, communication and engagement, and the delivery of capital programmes, can only happen with the right staffing levels. It is also critically important to have continuity of staff to build relationships (see 4).
4. These staff need to be permanent to build and maintain relationships. Discussions have identified a lack of capacity to build strong and lasting relationships with the farming community. Short-term projects result in frequent staff changes and a break in established relationships, which impacts negatively on communication and engagement.
5. Farmers need to be involved and enabled to take a lead. Farmer-focused events need to be led by those within the farming community.
6. Coordination at a local/regional level is essential to deliver at scale. This level of coordination exists in some places, such as the Llŷn Landscape Partnership, but even here it is under threat due to a lack of funding to provide the facilitation for the group.



7. Data on grassland sites, and grassland extent and distribution, needs to be updated and collated at a local level or national level and shared locally so that future action is evidence based. Making data available in a similar way to the Wales Peatland Portal (see link below) may help shape projects and allow stronger, better-evidenced bids to be developed.

<https://naturalresources.wales/evidence-and-data/maps/peatland-data-portal-map-layers/?lang=en>

8. Each area has grassland sites of SSSI standard that have not yet been notified. A strategic programme to confirm and notify Proposed SSSIs to enable greater protection and increased funding for these sites should be implemented. This needs to be supported by increased staff capacity to deliver.
9. An approach is required which embeds long-term change in the way grasslands are managed, and to do this, permanent funded staff are needed in each priority area. Such an approach might lead to additional funding from individual projects to support practical activity on the ground. A member would work with farmers and other partners to develop projects and draw down funding. This approach would aim to ensure continuity in the delivery of grassland management through support for:
  - Entry into the Sustainable Farming Scheme to secure management payments for semi natural grassland management.
  - Transition to a business model that manages semi-natural grassland optimally as part of a viable farm business.
  - Support for graziers to ensure continuity of their services.
  - Development of support networks for non-agricultural land owners.

## 4.3 Individual Scoping Reports

### 4.3.1 Ceredigion

#### Introduction

Ceredigion is a rural county on the west coast of Wales with a low population, and the local economy is largely based on rural industries such as agriculture and associated businesses. According to the 2021 census, based on Lower Layer Super Output Areas (areas smaller than vice-county), southern and central Ceredigion is split between areas where 30-50% of the population can speak Welsh, and areas where 50-70% can. This is substantially higher than the national average of 17.8%. As such, it is one of the Welsh speaking heartlands and the Welsh language is an important part of the traditional farming communities. Farms are mostly family run, small hill farms with enclosed fields and/or open ffridd and upland areas. In Wales, agriculture, forestry and fishing accounts for 2.8% of employment, but in Ceredigion it is 12%. In some areas away from the coast it is up to 20% including areas around Tregaron (Woods et al. 2021). This is far higher than some of the other areas identified as priorities for lowland grassland, except the very end of Pen Llŷn, the Elan Valley and the Carmarthenshire and BBNPA parts of the Heads of the Valley. In Ceredigion there is 173,400 hectares of agricultural land and of that, 102,900 is permanent pasture and 38,000 is rough grazing (sole owner and commons) (WG 2019). In conversations with partners, it also became clear that there are valuable semi-natural grasslands owned by small-holders, equestrians and NGOs.

Wales supports one third of all the priority grassland habitat recorded in the UK (Bullock et al. 2011) and Ceredigion has around 10% of the extent of priority grassland in Wales (Jones et al. 2003). Areas west and north of Tregaron have been identified as a priority for lowland semi-natural grasslands and include a range of grassland types; marshy, rush pasture, acid, neutral etc. In discussions with partners, two further areas were identified, south of Tregaron and west of Lampeter. The SSSIs in the priority area that include lowland grassland habitat are identified in Table 6. There are also many other high-quality sites including locally important sites, some of which are well managed by NGOs or by private owners. However, the condition of many of these is unknown and it is suspected that abandonment has occurred on some, resulting in scrub and tree encroachment. Others are over-grazed, often by horses. Any future project would need to agree the priority area in more detail, with a wider range of partners and local land owners/managers. Organisations and groups involved in grassland management include NRW, Ceredigion Council, WTSWW, the National Trust, Aberystwyth Botanical Society, FWAG, Game and Wildlife Trust and the Ceredigion Meadows group.

Figure 2. Ceredigion Priority Area Map 1

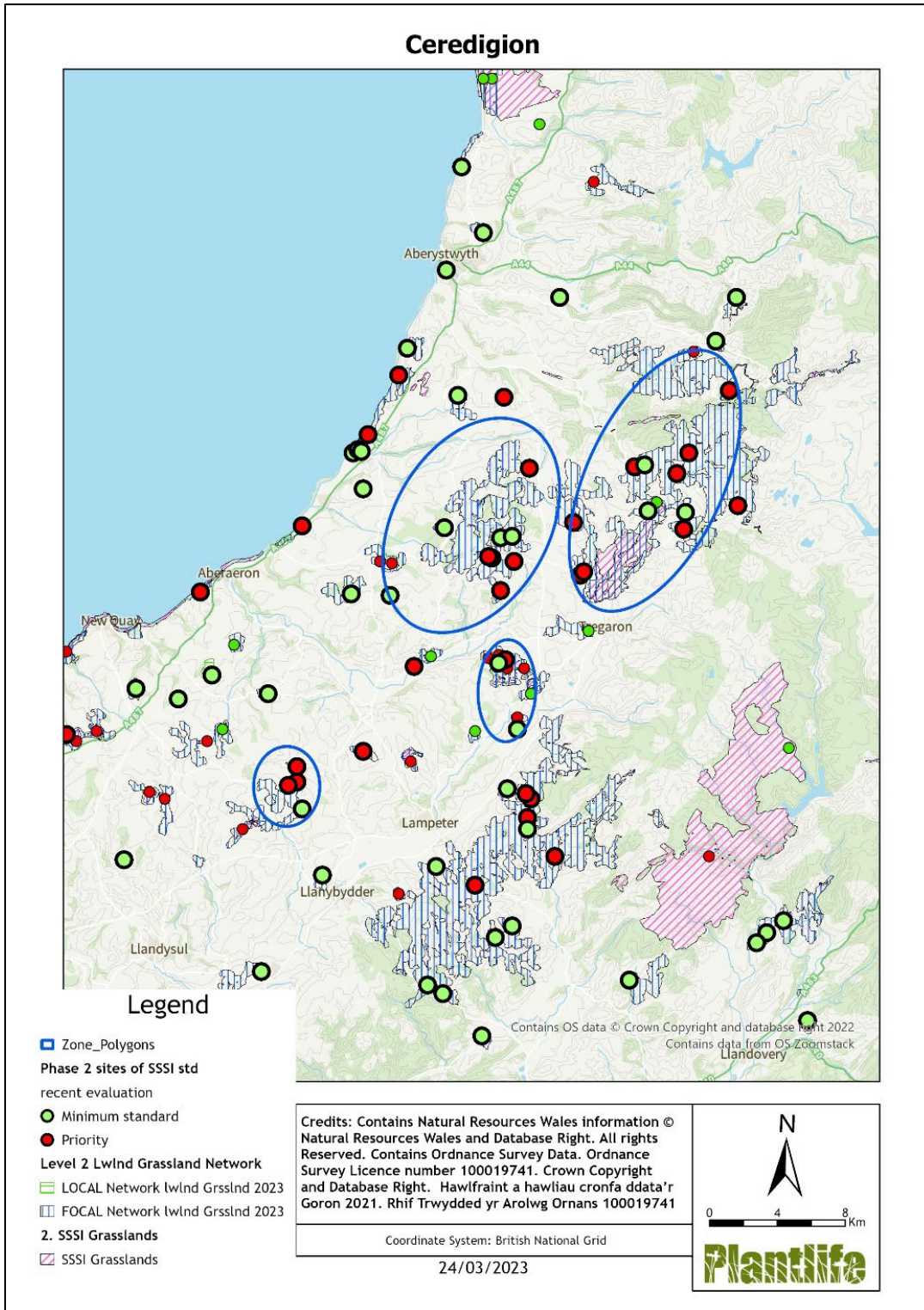


Figure 3. Ceredigion Priority Area Map 2

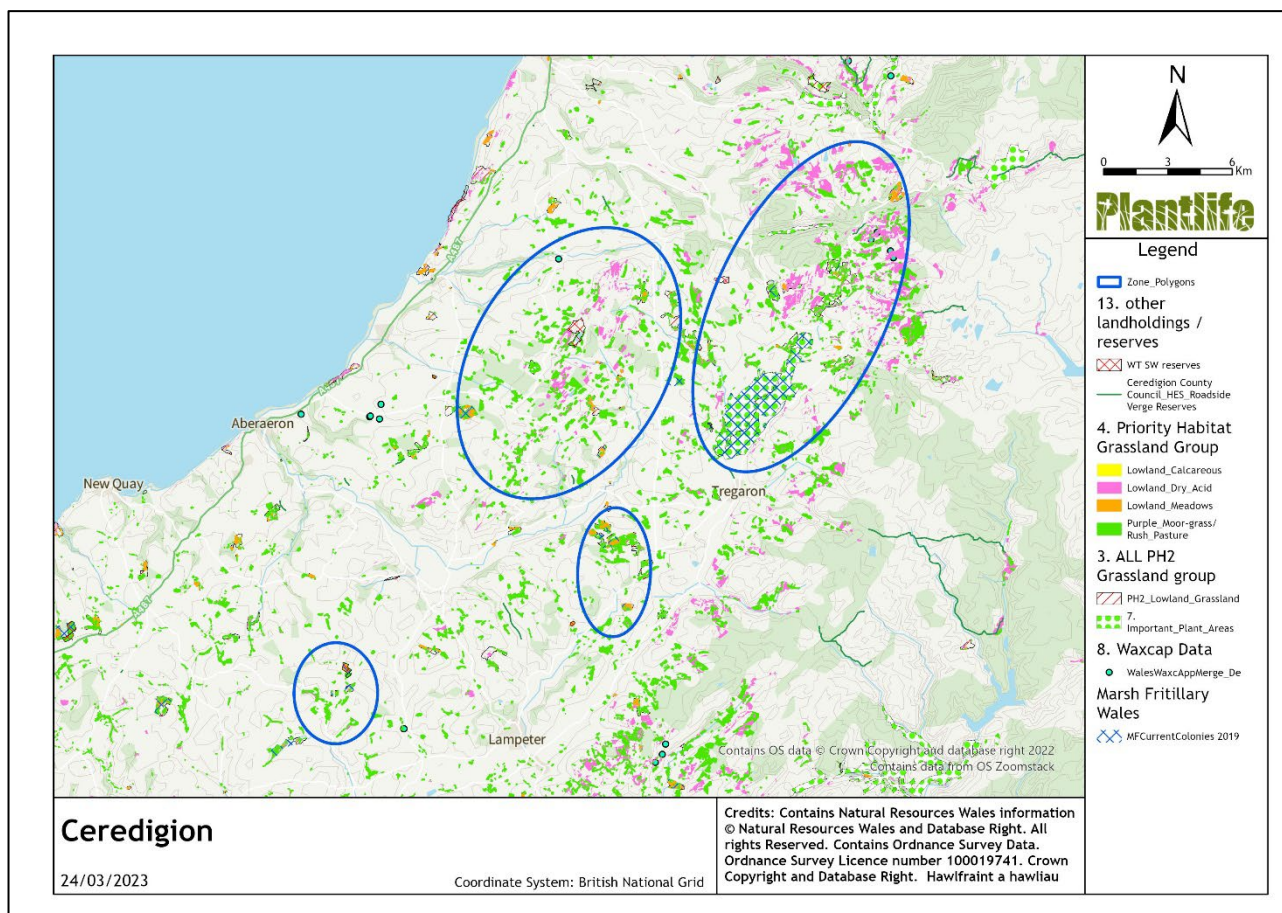


Table 5. Ceredigion Key Individuals Contacted

Contact	Organisation	Contacted by
Dafydd Parry	NRW	Zoom
Doug Lloyd	WTSWW	Zoom
Lizzie Wilberforce	Plantlife	Zoom
Rob Parry	Initiative for Nature Conservation Cymru (INCC)	Zoom
Gwyn Jones		Phone
Rachel Auckland	Ceredigion Council	Zoom
Alison Heal	Ceredigion Council	Zoom
Glenda Thomas	FWAG	Zoom
Bleddyn Thomas	Game and Wildlife Conservation Trust (GWCT)	Zoom
Andy Polkey	Ceredigion Meadows Group	Email

The following individuals/organisations would need to be contacted in the early stage of a future initiative:

- Teleri Fielding, Farmers Union of Wales (FUW)
- Interested landowners and managers

- Ceredigion Meadows Group
- Clare Williams, Butterfly Conservation
- West Wales Biodiversity Information Centre
- Local Recorders
- Dai Hart, National Trust
- Doug Lloyd, Wildlife Trust of South West Wales
- Dave Newham, National Trust
- Chloe Griffith, Aberystwyth Botanical Society

## Focus

Discussions with partners confirmed that the focus needs to be on getting the protected sites and, where possible, Phase 2 (Stevens et al 2010) sites worthy of designation into good condition, and develop a resilient landscape around and between them in line with SMNR. The priority grassland habitats in the area identified are largely marshy grassland/rhos pasture, with some dry acid grassland and lowland meadows. Marsh fritillary butterfly are recorded on many SSSIs and areas near to SSSIs. Although some SSSIs are doing well, this is often dependent on Section 16 Management Agreements, which are not in place on all SSSIs. Other sites may be managed by NGOs or landowners with an interest in conservation, but the condition of many sites is unknown.

Much of the work may be opportunistic, initially working with landowners who have an interest and may be willing to get more involved by sharing what they are doing and how they have benefited. The part of the priority area north of Tregaron includes Cors Caron, which is largely bog but also has semi-natural grassland around its fringes. There is high-quality grassland bordering the Camddwr as it comes into Cors Caron. There are also sizable grassland sites in the area north of Cors Caron. The potential exists to work with the farmer cluster leading the Game and Wildlife Conservation Trust (GWCT) Sustainable Management Scheme (SMS) project in the area. The farm cluster also graze Cors Caron. Future success will depend on the farming community to a large extent and to this end, needs to be farmer led.

Marsh fritillary is an important feature in many areas and needs consideration on a landscape scale for metapopulations to be viable in the long-term. Data has been collected and work undertaken on some sites in the priority area and a future initiative could look to expand this. Ceredigion marshy grassland sites may be important for other species too, such as lesser butterfly orchid (Plantlife 2011), hares and amphibians.

One suggestion was to initially focus on a small area such as one of the areas identified south of Tregaron or the area around Cors Caron and build outwards from there. An initiative could target working with specific landowners to develop ways of working that can be extended out.

The principal grassland SSSIs in Ceredigion are shown in Table 6.

Table 6. Ceredigion Grassland SSSIs

SSSI	Grasslands	Condition (Baseline Assessment 2020)
Caeau Llety-cybi	Neutral	Favourable
Cae Winllan	Neutral	Unfavourable
Cae Ffos-yr-odyn	Acid/marshy	Unfavourable
Cilfforch	Calcareous	Unknown
Coed a Gweunydd Gilfach-gwyddil	Marshy	Unfavourable
Glanfedw	Neutral	Unfavourable
Glanrhocca	Marshy/Neutral	Favourable
Old Cilgwyn and Cae Heslop	Neutral	Unfavourable
Rhos Talglas a Chors yr Hafod	Marshy/Neutral	Unfavourable
Aberarth - Carreg Wylan	Acid/Calcareous	Unknown
Bron Aberanerch	Neutral	Unknown
Comin Silian	Marshy	Unknown
Cors Caron	Marshy	Unknown
Cwm Doethie - Mynydd Mallaen	Acid/Neutral	Unknown
Gilfach Gwyddil	Marshy/Neutral	Unfavourable
Gro Ystwyth	Acid/Marshy	Unknown
Gwaun Ystrad Caron	Acid/Marshy	Unknown
Mwyngloddfa Cwmystwyth	Calaminarian	Unknown
Nant Cledlyn Pingos	Acid/Marshy	Unknown
Rhos Blaenclettwr	Acid/Marshy	Unknown
Rhos Cwmsaeson	Marshy/Neutral	Unknown
Rhos Esgairwen-fawr a Rhosgoch-fawr	Acid/Marshy	Unknown/Favourable
Rhos Fullbrook	Marshy/Neutral	Unknown
Rhos Gellie	Marshy/Neutral	Unknown
Rhos Llawr Cwrt	Acid/Marshy/Neutral	Unknown
Rhos Pil-bach a Phennar-fawr	Marshy/Neutral	Unknown
Rhos-Rydd	Acid	Unknown
Rhosydd Bryn-maen	Acid/Marshy/Neutral	Unknown

There are a large number of Phase 2 grassland sites within the area, with 89 sites reaching minimum SSSI standard. Around forty of these sites are not currently SSSIs (Table 7).

Table 7. Ceredigion Phase 2 sites.

*Confidential information removed*

### Existing and Recent Activity

There are Section 16 Management Agreements on several SSSIs and NRW internal BERF funds are being used on activities like bracken and scrub management, fencing on neutral and marshy grasslands, and cutting followed by aftermath grazing, usually with ponies.

NRW have invested £60,000 in Managements Agreements. An example is Rhosydd Bryn Maen, a large and complex marsh fritillary site with a varied ownership and which needs further focus.

Wildlife Trust Nature Reserves – The Nature Networks project secured by the WTSWW will include grassland management activity on two of their reserves in the priority area: Rhos Fullbrook and Rhos Glyn Yr Helyg SSSIs. Fencing will be carried out on both reserves and grassland management (flail cutting and collection of *Molinia*) at Rhos Glyn Yr Helyg. The WTSWW have a number of other reserves that are also managed for semi-natural grasslands and marsh fritillary butterflies.

WTSWW/ADAS Payment for Outcome trial on semi-natural grasslands has some sites in the area but details cannot be shared at this point.

Game and Wildlife Conservation Trust Sustainable Management Scheme (SMS). This is a farmer led project facilitated by the GWCT. A group (cluster) of 8 farmers /10 farms are delivering a project and undertaking various environmental activities such as planting hedges, controlling predators and providing supplementary feeding for native wild birds. These farmers own and manage land on the northern edge of the Cors Caron National Nature Reserve (NNR). Most of their land adjacent to the NNR is improved grassland but some of them also graze the NNR. The farmers involved in the cluster have an ambition to continue to work together but not using SMS funding. If interested, some of these farmers could provide opportunities to engage other farmers in order to develop opportunities for peer-to-peer support and advice.

Local Authority road verge reserves could provide connecting habitat; many of these are designated as Road Verge Reserves. As the local authority is continually looking for new verges to work on, it would be possible to select verges in areas where they maximise grassland connectivity between farms and grassland sites.

The NRW Four Rivers for Life project includes the Teifi, which borders the priority area south of Tregaron running along the border with Carmarthenshire and Pembrokeshire. Although this project is primarily involved with the ecological integrity of these rivers, it is also dependent on the management of land adjacent to these. It will therefore be working with farmers to improve land management practices and help reduce nutrient runoff.

Ceredigion Meadows Group has a number of meadow owners who manage their land for conservation benefit. This group would need to be consulted early on, and might provide information on how to engage with small-holders, informing them of what they need do to support conservation management practices.

Winllan is one of sixteen [Coronation Meadows](#) in Wales and periodically has open days to illustrate the example of a good quality hay meadow.

Plantlife led the Magnificent Meadows partnership project across Wales whilst National Trust were the lead in Ceredigion. They worked to restore and improve the condition of 9 meadows in Ceredigion, including investment in infrastructure and acquiring Welsh ponies for conservation grazing on the coastal cliffs. There was considerable success here and the meadows that were bought back into conservation management responded well to the changes made during the lifetime of the project (2014 - 2018). However, it is not clear that

such projects lead to long-term management change at the scale required, particularly addressing the issue of abandonment of important lowland grassland site.

The various NGO led projects have been successful at engaging with small-holders but less so with commercial farmers. The exception is the GWCT, who have facilitated a farmer led project comprising of 8 commercial farmers.

## **Ecological Evidence and Evidence Gaps**

Information and data exist for the area; however, it has not been collated and may not be fully up to date. For example, NRW holds site condition data for many SSSIs but this is not all recent data, and there is insufficient information regarding marsh fritillary populations. The local County Butterfly Recorder accompanied NRW staff and recorded marsh fritillary during 2022 and shared his records, but these do not give a complete, up-to-date picture regarding marsh fritillary population locations within Wales. West Wales Biodiversity Information Centre (WWBIC) and Butterfly Conservation would be able to provide a more complete picture. It would be also be useful to work with the local recorder to collect further data.

The Phase I survey was completed for Wales over 25 years ago, and consequently most data regarding extent and distribution, including of priority habitats, is not current. Phase 2 data is available for Cors Caron from 1999 but it has not been updated. Only a sample Phase 2 survey was undertaken; coverage therefore is not complete and, where it exists, much of it is out of date.

## **Challenges**

The key barriers to developing grassland work in the priority area are:

- A lack of up-to-date, coordinated and available of information. WWBIC will have species data and various online portals give access to some of the habitat data. This would need to be collated for the priority area.
- Capacity of local organisations to facilitate engagement and develop a proposal and write an application.
- Capacity to engage with landowners and a lack of coordination /consistency of approach.
- Traditional local farmers, small-holders and equestrians all require different approaches and engagement with all will be needed.
- Staff capacity/expertise to support work on the ground. The NRW Environment team has a limited number of Conservation Officers to work on SSSIs and develop relationships with landowners or agree Section 16 Management Agreements. There are examples of where this is happening with management such as appropriate grazing and scrub clearance having positive benefits.



- Grazing issues – in a number of cases either over-grazed or under-grazed/abandoned. Many semi-natural grasslands are grazed with ponies or considered too marginal for farming. Horse-grazed fields tend to be over-grazed as many horse owners have access to limited areas of land. Marginal land can be abandoned with no grazing, leading to encroachment by scrub.
- Cattle grazing can be challenging as farmers are nervous about tuberculosis (TB) and other diseases.
- The Welsh Government policy and funding mechanisms to plant trees threatens some semi-natural grasslands, especially sites that are not protected and have become abandoned. The lack of up-to-date habitat maps mean that areas of grassland priority habitat could be un-mapped and could potentially be planted-up.
- The gap between Glastir ending and the start of SFS could mean some grasslands are lost to improvements as farmers seek to make up for any financial loss in payments.
- To support long-term change, management payments are required. This could be through the SFS in the future, but this would not be enough on its own as some land will fall outside the scheme. Another issue is that the details of the SFS are still uncertain and therefore difficult to build into current farm business plans.
- Significant investment is needed to fence, build stock pens and establish other infrastructure to encourage conservation grazing. On statutory protected sites, this can be achieved through Section 16 Management Agreements to some extent; however, land agents have been reluctant to fund boundary fencing, although they have funded internal fences. Section 16 Management Agreements cannot currently be used outside protected sites, however there are moves to try and resolve this. Widening use of S16 agreements to outside protected sites would, in any case, require much increased resources, both financially and in staff time.
- Small-holders do not always own stock and find it difficult to access stock at the right time of year. Additionally, the availability of small machinery, particularly for hay cutting, is limited and there is over-demand at very specific times of year.
- There has been some hesitancy in recommending ponies as animal welfare issues can cause issues. There are, however, plenty of examples of Welsh ponies being used in the area e.g., coastal grasslands.

## Opportunities

The policy framework is in place to support increased action to improve ecological resilience through enhancing and restoring designated sites and connectivity between sites. Semi-natural grasslands are a priority at a Wales level (Section 7 list) and local level (NRAPs) and NRW is focused on delivering better condition on protected sites as part of their Biodiversity Deep Dive commitments. In Ceredigion that NRAP is in progress and the Local Biodiversity Action Plan is still in use.

This policy framework provides leverage for resources to support an approach that works with landowners and managers to explore what is required to implement long-term changes in grassland management and improve resilience across the sites network.

In Ceredigion there is some grassland conservation work already going on by farmers in the priority area and on the coast. This provides the potential to start engaging the farming community to develop a farmer led approach.

Funding may be available for specific aspects of the work including:

- NRW have BERF evaluation and monitoring funds which could be used to commission research. Time would be needed to write the specifications, source, procure and manage contractors.
- Additional S16 investment using the Nature Networks (NF)/BERF budget may continue until 2025, and continued funding for Section 16 Management Agreement beyond this, possibly within and beyond protected sites.
- There may be further application rounds for the external NN fund administered through the National Heritage Lottery Fund (NHLF) linked to delivering the commitments in the deep dive.
- Opportunities exist to connect areas of high-quality habitat may also be achieved through expanding the local authority Road Verge Reserves in a targeted way.
- The WTSWW Farm Officer, Rhodri Irranca-Davies, suggested there could be potential for the WTSWW to take a lead with the right funding and support in place.

## **Recommendations**

The Biodiversity Deep Dive and the Area Statement along with this priority grasslands report could be used to support the case for internal NRW funding to support a 3-year development period to co-produce approaches to managing grasslands in Ceredigion.

Funding would be required for a member of staff who could be outposted to an organisation working locally with farmers and small-holders. This could be WTSWW or another organisation that has good knowledge of conservation and excellent relationships with land owners and managers.

Funding would need to include on-costs, a budget to pay farmers and other individuals to get involved in the partnership, and any associated staff costs. It would also be useful to have a training, education and communication budget.

There is little coordination of action in Ceredigion and consequently the first step needs to be engagement with all stakeholders, beginning with those identified in the Key Partners section above. At this stage it would be useful to identify interested farmers and small-holders to join the partnership. Once the partnership is in place then the future initiative / project could be co-designed. Similar work is being undertaken in the Dyfi Biosphere through the Tir Canol project. With that initiative the facilitator is funded by the RSPB and

other organisations are now supporting another member of staff to work with farmers and other stakeholders.

Once a member of staff is secured activity would include:

- With partners, agree focus of priority area (geographical and specific sites).
- Collate evidence and target survey.
- Build relationships with the farming community and consider supporting a farmer group. Start with farmers that are already working with conservation organisations or local authorities.
- Develop appropriate training, education and communication plans based on needs identified by the partnership.
- Identify with all stakeholders the support required to achieve long-term management for semi-natural grasslands.
- Identify what could be funded through existing mechanisms or eventually through the SFS.
- Co-produce a project that can be used to secure funding for actions that support long-term change in management and that places those involved in a stronger position to enter the SFS or secure business viability from changes that are made.
- Coordinate with other funded activities to maximise delivery for grasslands in priority area e.g., Section 16 Management Agreement and other projects.
- Lead on writing and submitting application or applications.
- Lead on feeding into SFS scheme / advisory service for SFS.

## 4.3.2 Pen Llŷn

### Introduction

The Pen Llŷn (Llŷn Peninsula) lies to the west of a line which roughly runs between Aberdesach in the North and Criccieth in the South. The AONB includes the coastal belt from Aberdesach, around the tip at Pen y Cil, to Llanbedrog on the south coast. It takes in a number of inland hills such as Mynydd Rhiw and Mynytho Common in the South and Yr Eifl in the North. Along the coast, maritime grassland is found in more exposed locations with acid and neutral grassland along more sheltered stretches. Inland the grasslands are more fragmented with neutral hay meadows, acid grassland and areas of marshy grassland and fen. Ynys Enlli off the tip of the peninsula is also of significance for grasslands.

Species interest within the grasslands includes coastal lichens (*Cladonia peziziformis*, *Teloschistes flavicans* and *Heterodermia leucomela*), grassland fungi, eg. violet coral *Clavaria zollingeri*, spotted rock rose *Tuberaria guttata* and chough *Pyrhocorax pyrrhocorax*. Chough are a designated feature of the Glannau Aberdaron ac Ynys Enlli SPA and Mynydd Cilan, Trwyn y Wylfa ac Ynysoedd Sant Tudwal SPS and feed on the coast and in the fields adjoining the coast.

Pen Llŷn is a rural area with small towns which serve the community and are increasingly dependent on tourism. Farming is important in the area socially, economically and culturally; however, only the wards of Aberdaron and Botwnnog have over 10% of the population employed in farming (fishing and forestry), with tourism now accounting for 20-24.9% of employment on much of the Llŷn, with higher percentages within southern coastal towns such as Abersoch and around Criccieth (2011 Census). This does not adequately represent the importance of farming on the Llŷn as many farms have diversified to accommodate visitors and other businesses, and farming remains an important contributor to the local economy directly and indirectly. Many farms on the Llŷn are family farms, including privately owned and tenant farms, and the main types of farming are sheep, beef, eggs and dairy. Licensed processing sites are mainly eggs, fish, dairy and meat at the eastern end (Food standards Agency 2020).

According to the 2021 census, based on Lower Layer Super Output Areas (areas smaller than vice-county), Llŷn is the priority project area with the highest proportion of Welsh speakers in the resident population. Rates of Welsh speaking are over 70% in the majority of the area under consideration, dropping to 50-70% in some coastal areas. Welsh is at the heart of the rural farming community, so working with farmers through Welsh would be a definite advantage, if not essential. (Census 2021).

Figure 4. Pen Llŷn Priority Area Map 1

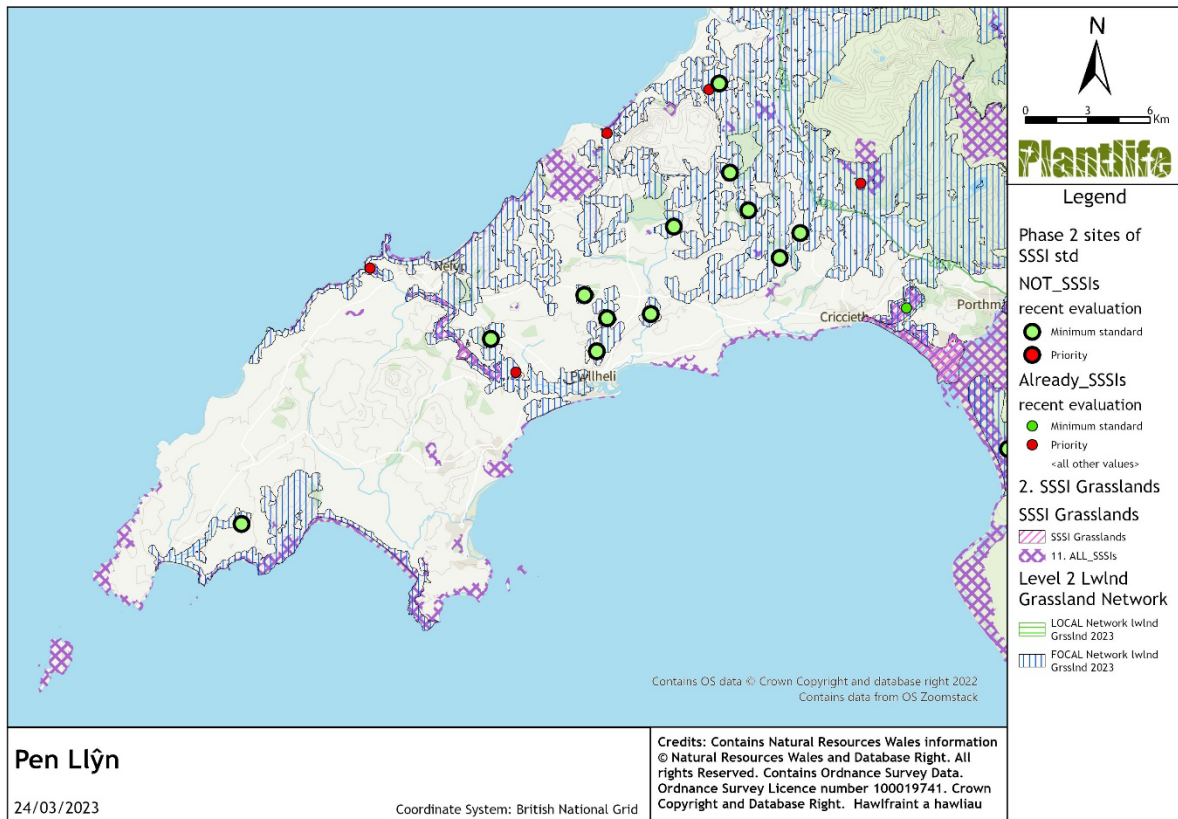


Figure 5. Pen Llŷn Priority Area Map 2

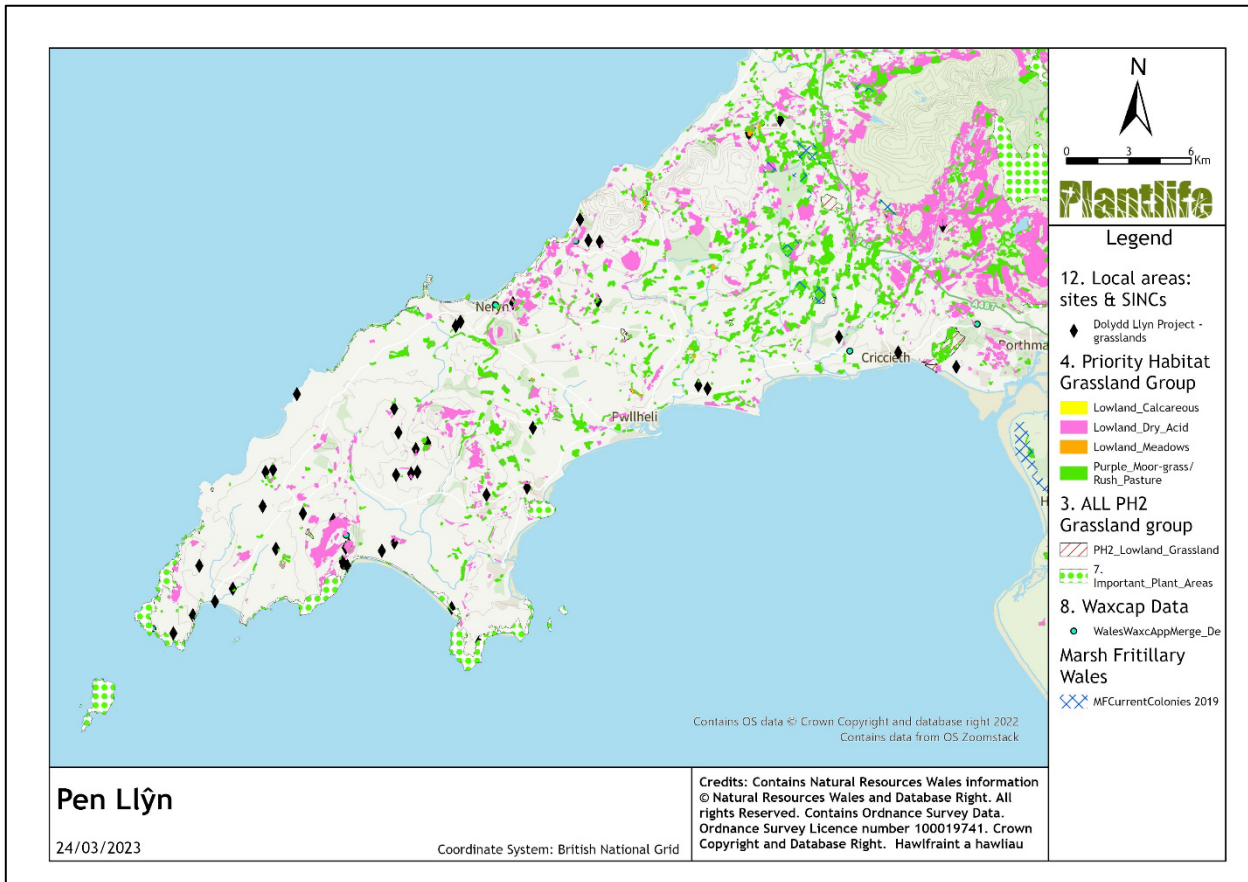


Table 8. Pen Llŷn Key Contacts

Contact	Organisation	Contact
Arwel Jones	Gwynedd County Council	Zoom and telephone
Andy Godber	National Trust	Zoom
Jan Sherry	PONT	Zoom
Jack Slattery	RSPB	Email
Chris Wynne	North Wales Wildlife Trust	Email
Jo Porter	Dolydd Llŷn	Zoom

The following people would need to be contacted in the early stage of a future initiative:

- Ifan Jones, Euros Jones, Rhodri Parry, NRW
- Dave Lamacraft, Plantlife
- Iestyn Pritchard, NFU
- Gwynedd Watkin, FUW

## Focus

Discussion with partners confirmed that the coastal belt, including the in-bye one field back, is a key focus. The principal aims are to improve the management of maritime, neutral and acid grasslands and associated heathland habitats along the coast, and to enhance and create areas of species-rich grassland and other priority habitat immediately adjacent to the coast to improve resilience and connectivity. Inland the focus is on the fragmented hay meadows, marshy and acid grasslands. In particular, there is a need to re-map, survey and safeguard the remaining areas of semi-natural grassland and to provide support and guidance to land owners to prevent further habitat loss. Marshy grasslands are a particular focus towards the top of the peninsula where there are a number of Phase 2 grassland sites.

Table 9. Pen Llŷn SSSI's

SSSI Name	Grasslands	Condition (Baseline Assessment 2020)
Aber Geirch	Marshy	Unknown
Caeau Tan Y Bwlch	Neutral	Favourable
Cappas Lwyd	Marshy	Unfavourable
Cors Geirch	Marshy	Unknown
Cors Gyfelog	Marshy	Unknown
Cors y Wlad	Marshy	Unknown
Ffriddoedd Garndolbenmaen	Acid	Favourable
Glannau Aberdaron	Maritime/(Neutral/Acid)	Partly unfavourable Partly favourable
Porth Ceiriad, Porth Neigwl ac Ynysoedd Sant Tudwal	Maritime/(Neutral/Acid)	Partly unfavourable Partly favourable
Rhyllech Uchaf	Marshy	Unknown
Ynys Enlli	Maritime/(Marshy/Neutral/Acid)	Unfavourable

Data from NRW 2020 Indicative Assessment, anecdotal evidence, Pfo monitoring

There are 26 Phase 2 grassland sites within the area, of which 12 were considered of SSSI minimum standard.

Table 10. Pen Llŷn Phase 2 SSSI Minimum Standard Sites

*Confidential information removed*

### **Existing and Recent Activity**

The Llŷn Landscape Partnership has developed a deep knowledge of the landscapes and wildlife of the Llŷn and has fostered excellent working relationships with those who live and work on the peninsula. Gwynedd County Council have provided a member of staff to coordinate a series of successful initiatives dating back to 2003; Cadw'r Lliw yn Llŷn, Partneriaeth Tirlun Llŷn, Nature Fund Connectivity Project and more recently the Tir a Môr SMS, Dawnsio ar y Dibyn SMS and Dolydd Llŷn. Only Dolydd Llŷn has been specifically focused on grassland, but the other initiatives have delivered substantial gains for grassland habitats.

Between 2018 and 2022 the Tir a Môr SMS, in partnership with the National Trust, developed and ran a Payments for Outcomes scheme on three National Trust tenanted farms which linked improvements in habitat condition to incremental payments. Over the four years the project recorded significant improvements in grassland habitats; these include:

- Enhancement of existing neutral hay meadows including an increase in the diversity and abundance of key indicator species;
- Creation of new hay meadows;
- Restoration of neutral grassland on the coastal belt – a notable achievement is the appearance of greater butterfly orchid *Platanthera chlorantha* in the restored sward in 2022;
- Restoration of maritime grassland on the coastal belt;
- Enhancement of acid grasslands;
- Reversion of semi-improved grassland.

In addition to successful habitat improvements the project has developed a model for working with the farmers, offering independent farm business assessments looking at the “less is more” approach, providing training and trialling a self-monitoring technique.

The Dolydd Llŷn/ Llŷn Meadows initiative has been running since 2019. The aim of the project is to conserve and restore flower rich grassland on the Pen Llŷn by supporting landowners to manage their land effectively. The project built on a survey of 38 meadows carried out in 2012 (Kehoe 2012) working with owners of a range of semi-natural grassland types in addition to neutral hay meadow. Many of the grasslands are semi-improved and are undergoing reversion. Dolydd Llŷn has also developed the collaborative 'Llyn natural seeding network' which has been established to identify, classify and monitor potential donor sites for the provision of local provenance seed. This network has expanded from the one site at Caeau Tan y Bwlch to 12 potential sites on Llŷn, some of which have been used for meadow creation and restoration in recent years both through the provision of green hay and brush harvested seed. Dolydd Llŷn has been supported by Magnificent Meadows and SMS funding.



Dawnsio ar y Dibyn SMS, which finishes in June 2023, is a Pan Wales framework to enable a more strategic approach to effectively address the environmental and socio-economic issues impacting on Wales' coastal fringe ecosystems. The project has showcased best practice, including work that has been undertaken through the Payment for Outcomes work on the Llŷn.

## **Ecological Evidence and Evidence Gaps**

There is good data available for the three Pfo farms which have been surveyed annually since 2018.

There are a large number of small semi-improved grassland sites across the Llŷn which have not been surveyed or which were part of the Phase 2 survey but have not been visited in many years. The Dolydd Llŷn project found that only 11 of the original sites surveyed in 2012 supported semi-natural grassland, mostly in poor management; the remaining sites are now considered to be improved grassland. The loss of semi-natural grassland has continued in recent years and has been reported to the Welsh Government EIA team although this has not always resulted in action. There is an urgent need to survey and record the remaining inland grasslands to prevent further loss and to target advice and support. This includes the original Phase 2 sites which have not been designated and, in most cases, have not been assessed since the original Phase 2 survey.

The coastal connectivity strategy was developed in 2013 and the entire coastal belt and adjacent land was walked and surveyed unit by unit in 2015. This baseline survey produced a digitised map with information on Phase I habitat type, habitat condition and potential and opportunity for enhancement. The strategy was reviewed in 2022 and some work on re-surveying the coastal belt is planned for 2023.

## **Challenges**

An effective, successful approach has been developed on the Llŷn over the last twenty years but this relies on continued funding to support a core member of staff (through Gwynedd County Council) to coordinate delivery of action and drawdown further funding. With the completion of the Dawnsio ar Dibyn SMS project in 2023 funding has become an urgent issue and there is the possibility that the partnership will be unable to continue beyond summer 2023 due to lack of capacity if the coordinating role is lost.

The Payment for Outcomes funding from SMS/National Trust came to an end in 2022. Without funding both to pay the farmers for habitat improvement and to provide guidance and advice, the gains since 2018 may not be sustained. This is particularly of concern for grasslands under reversion and restored/newly created hay meadows.

## **Opportunities**

The Llŷn is, in a Welsh context, in a unique position in that there is an established partnership with a paid coordinator and effective mechanisms for delivering action on the ground. The projects and approaches coordinated by the partnership fulfil many of the

recommendations in the original grassland report (Buckingham et al. 2022), for example they:

- Tailor individual plans for each site and provide flexibility in management (PfO, Dolydd Llyn);
- Take a whole farm approach (PfO);
- Have built trusting, constructive and long-term relationships with farmers (all project);
- Provide support for changes in farming systems (All projects);
- Empower farmers to make the decisions about land management (PfO);
- Work with the farm business including the 'less is more' approach (PfO);
- Engage with landowners and supporters (Partnership);
- Add value to farm produce (heathland bedding project);
- Are supported by a good network of landowners, farmers (and farmers unions) (Partnership);
- Have knowledgeable staff in place for many years to support the project and build good relationships with farmers.

The partnership prepared a bid for the Nature Networks 2 fund to deliver the Coastal Connectivity Strategy. This 3-year project, costing approximately £800,000 would have worked both within and outside the designated sites (SSSI, SAC and SPA). The aim was to further improve habitat management along the coast and to explore options to further extend and widen the coastal belt around Pen Llŷn through trialling new and innovative farming techniques in the in-bye one field back. This would have incorporated enhancement, restoration or creation of species-rich grassland. The bid also included funding for the Dolydd Llyn Project, with the aim of managing a series of species-rich grasslands which could provide seed/green hay for grassland enhancement/restoration/creation in the one field back zone. This bid was unsuccessful but a fully costed plan is ready for implementation should other opportunities arise.

Welsh Government have expressed interest in supporting a continuation of the Payment for Outcomes project as part of the trial process for SMS, and the partnership has been asked to submit an application for the trial. A 3-year project to continue the trial and develop the monitoring app has been costed at approximately £270,000. It is believed that support through the Integrated Natural Resources Scheme (INRS) will be announced in 2023, but as yet there is no timetable for the fund. Discussions with Welsh Government are ongoing.

A funding bid has been made through Natur am Byth to deliver grassland/heathland management at a local scale on the Llŷn coast for chough, large mason bee, spotted rock-rose and *Cladonia peziziformis* lichen. RSPB are the lead partner.

## **Recommendations**

The most urgent actions for 2023 are to find funding to maintain the coordinated partnership and to fund the payments to the PfO farmers to ensure enthusiasm and momentum is sustained and prevent any reversal in the gains made over the last five years.

A figure of around £50,000 would secure the coordinator post until March 2024 and pay the PfO farmers. It is hoped that the Welsh Government INRS or other mechanism will then be in place to take the work forward. This interim funding would allow the partnership to:

- Continue the PfO trial in Summer 2023 and submit a bid to Welsh Government for longer-term support
- Draw down a small amount of funding for Dolydd Llyn (possibly from the Local Nature Partnership)
- Review and resubmit the Coastal Connectivity Strategy NNF bid or seek other funding mechanisms
- Develop an assessment of inland lowland grasslands

### 4.3.3 Elan Valley and West Radnorshire

#### Introduction

The Elan Valley lies in the Cambrian Mountains to the West of Rhayader; much of the land is in the ownership of the Elan Valley Trust. Semi-natural lowland grassland is found in two principal valleys: eastwards from the Claerwen Reservoir dam along the Afon Claerwen to Elan village and northwards along a string of reservoirs from Caban Coch to Graig Goch. The grasslands include neutral hay meadow and pasture, acid grasslands with species-rich examples, and small marshy grasslands including areas of both *Molinia* and rush pasture. The lowland grasslands in the Elan Valley occur up to fairly high altitudes, for example hay meadows have been recorded up to 300 metres. The Elan Valley neutral and acid grasslands are noted for their high floristic diversity, including key populations of the nationally scarce wood bitter vetch *Vicia orobus*. There are a number of grassland SSSIs and Phase 2 sites meeting SSSI minimum standard but also many other high quality grassland sites plus species-rich semi-improved grasslands which enhance grassland connectivity. The Elan Valley has very little intensively improved grassland.

The area of Radnorshire to the east of the Elan Valley is particularly rich in marshy and rush pasture. However, there are also fragmented areas of neutral grassland and species-rich acid grassland, including on the Radnorshire Wildlife Trust's Gilfach Farm.

Small pearl-bordered fritillary *Boloria selene* is a key species throughout the priority area and is typically associated with marshy grassland and flushes where the caterpillar feeds on marsh violet *Viola palustris*. Both curlew *Numenius arquata* and water vole *Arvicola amphibius* are recorded on marshy grassland in the in-by, particularly in the Elan Valley.

Figure 6. Elan Valley and West Radnorshire Priority Area Map 1

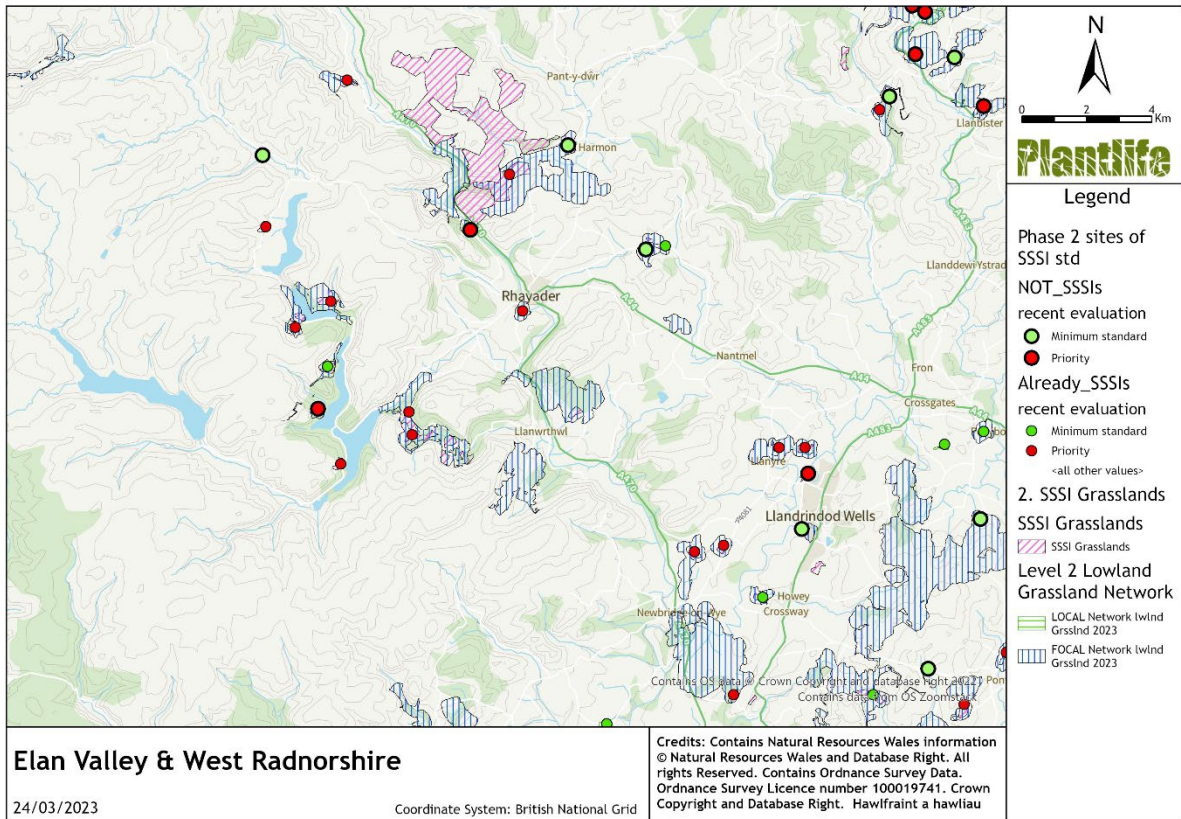


Figure 7. Elan Valley and West Radnorshire Priority Area Map 2

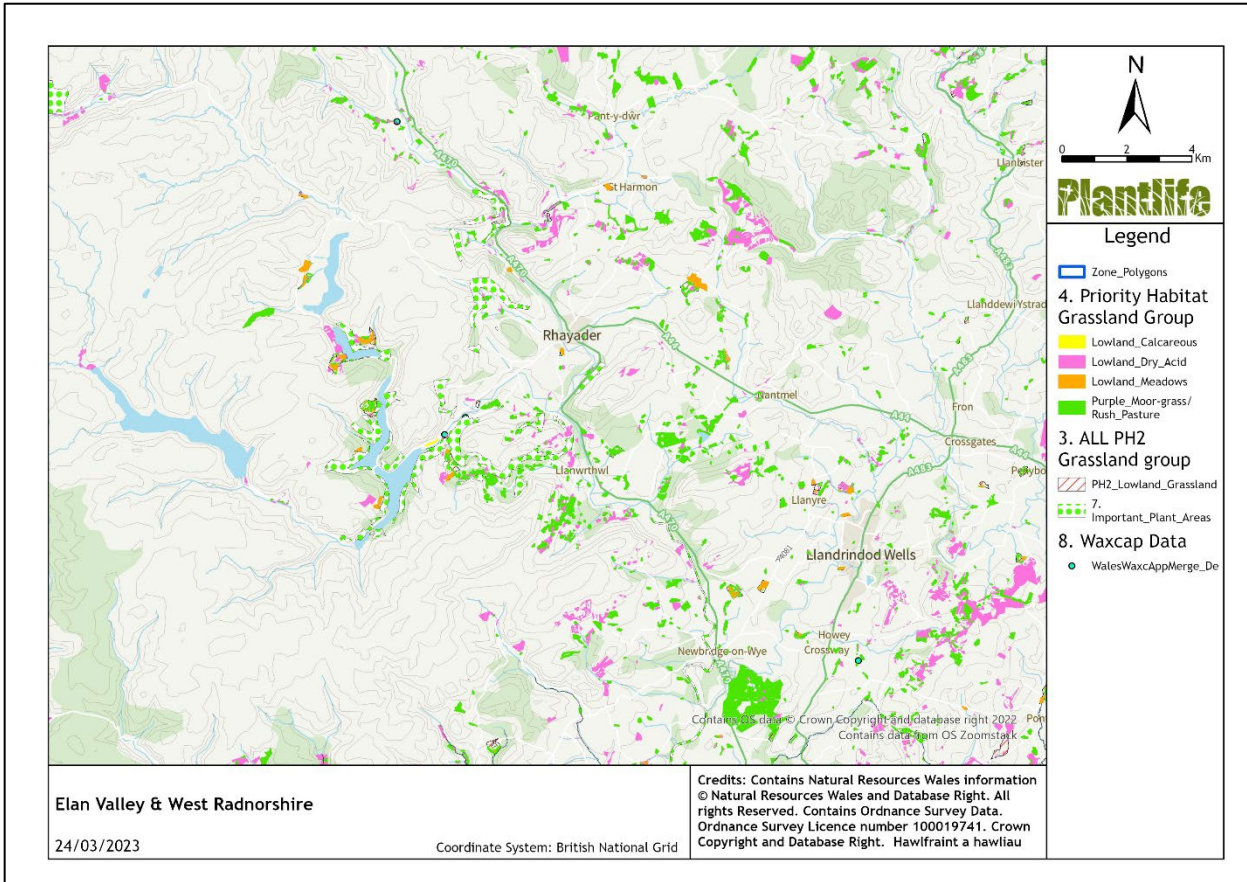


Table 11. Elan Valley and West Radnorshire Key Individuals Contacted

Contact	Organisation	Contacted by
Fiona Gomersall	Elan Valley Trust – Elan Links Project	Zoom
Lucy Morton	Radnorshire Wildlife Trust – Rhos Pasture Project	Zoom
Karen Heppinstall	NRW	Zoom
Dawn Parry	Independent (ex NRW)	Zoom
Sarah Woodcock	BIS	Zoom
Darylle Handy	Radnorshire Wildlife Trust – Green Connections Project	Email
Ezra Tattersall	Powys County Council	Email
Helen Barnes	Independent	Email

The following people/organisations would need to be contacted in the early stage of a future initiative:

- Cambrian Mountains Society
- RSPB
- National Trust
- Ray Woods – local naturalist ex-CCW

## Focus

Discussion with partners confirmed that neutral, acid and marshy grasslands should be the focus within the priority area. Species-rich acid grasslands, with species such as betony (*Betonica officinalis*) and harebell (*Campanula rotundifolia*), are particularly restricted in their extent and distribution, but other acid grassland sites may be important for grassland fungi and should not be excluded without further survey.

The area selected covers the west of Radnorshire, including all the Elan Valley Trust's in-bye land (plus a small area of EVT land in Brecknock). Outside the Elan Valley the focus is on the area between Rhayader and Llandrindod Wells with Gilfach to the north and Newbridge on Wye to the south. This area roughly equates to the Wildlife Trust's Rhos Pasture Project (see below). It was suggested that a project could be expanded to the whole of Radnorshire and possibly northern Brecknock. This would be a very large area and it would probably be advantageous to focus initially on a smaller area but with the potential for certain aspects of the project to be delivered at a larger scale e.g., survey and mapping grassland sites. The area could be expanded at a later date to similar grasslands across northern Powys informed by lessons learnt from Radnorshire.

The focus area includes a large number of grassland SSSI's (Table 12)

Table 12. Elan Valley and West Radnorshire SSSIs

<b>SSSI</b>	<b>Grasslands</b>	<b>Condition (Baseline Assessment 2020)</b>
Caeau Penglaneinon	Neutral	Unknown
Moorlands Pastures	Acid	Unknown
Cae Henfron	Neutral	Favourable
Caeau Troed-Rhiw-Drain (Troed-Rhiw-Drain Meadows)	Neutral	Unknown
Crabtree Green Meadow	Neutral	Favourable
Caeau Wern	Neutral	Unknown
Rhos Dwfnant	Marshy	Unknown
Rhos Penrhiw	Acid	Unknown
Caeau Cnwch a Ty'n-y-graig	Neutral	Unknown
Gweunydd Coch-y-dwst	Acid	Unknown
Rhos Rhyd-y-ceir	Marshy	Unknown
Gweunydd Dwfnant (Dwfnant Pasture)	Neutral	Unknown
Rhos yr Hafod	Neutral	Unfavourable
Caeau Hirnant	Neutral	Favourable
Rhosydd Llanwrthwl	Marshy	Unknown
Gweunydd Ty'n-y-Llidiart	Acid	Unknown
New House Meadow	Neutral	Unknown
Cae Coed-gleision	Neutral	Favourable
Pentrosfa Mire	Marshy	Unknown
Marcheini Uplands, Gilfach Farm & Gamallt	Acid/Neutral/Marshy	Unknown
Cae Cwm-bach	Neutral	Favourable
Upper Nantserth Pasture	Acid/Marshy	Unknown

Date from NRW 2020 Indicative Assessment, anecdotal evidence, Elan Links in-bye survey

There are 33 Phase 2 grassland sites of which all but 4 are either included within the grassland SSSIs above or the larger Elenydd SSSI. Only one of these non-SSSI sites reaches minimum SSSI standard. One site is partially within Caeau Wern SSSI (see Table 13 below).



Table 13. Elan Valley and West Radnorshire Phase 2 Sites (not SSSI)

*Confidential information removed*

### Existing and Recent Activity

Elan Links is a 5-year National Lottery Heritage funded scheme running from 2018 to 2023 on the Elan Valley Trust estate. Under the enhancing nature and wildlife theme the scheme has delivered a number of projects which have been beneficial to lowland grasslands as shown in Table 14. The scheme ends in Autumn 2023 when a final report detailing progress will be produced.

Table 14. Elan Links Projects

<b>Project</b>	<b>Activity</b>
Hay meadows	Improving the condition of hay meadows by establishing favourable management. Providing training in traditional hay meadow management. Running stakeholder, demonstration and volunteer days. Field-by-field survey of the estate's in-by resource.
Rhos hay	Rhos hay has traditionally been cut on the open hill for forage/bedding in August/September. Only a few farms still followed this tradition at the start of the scheme. The project aimed to revive this management system by providing financial support and trialling best practice. A number of the farms have enclosed rhos pasture within the in-by where cutting has taken place.
Cattle grazing	This project aims to encourage farmers to reintroduce or increase the number of cattle on their holdings to target grazing on key habitats such as marshy grassland and bracken infested dry grassland.

The Rhos Pasture Restoration Project was a Sustainable Management Scheme project which was run by the Radnorshire Wildlife Trust from 2021 until March 2023. The project was focused in the north west of Radnorshire and worked with landowners to improve the management of rhos pasture for biodiversity, soil conservation, carbon and water storage. The project worked with 11 owners, covering 150 hectares of rhos habitat, and action included rewetting rhos pasture, cutting and collecting excess *Molinia* herbage, fencing sites ready for grazing, building cattle pens and the introduction of cattle grazing. The project aimed to promote a "rhos product" as a mechanism for improving the economic return for farmers grazing rhos pasture, thus ensuring continued management. An initial marketing report was produced, detailing the range of products which could be produced from rhos pasture and providing guidance on identity, branding and marketing (Kehoe and Douglas 2022). A follow up report on progress will be produced by a local farmer/farm shop owner at the end of the project.

Green Connections was a collaborative Wildlife Trust project funded by the Enabling Natural Resources and Wellbeing Fund (ENRaW). It was delivered across Powys by the three Wildlife Trusts from 2021 until March 2023. The project was working with local communities, small businesses, landowners and statutory organisations to take local action to address climate change and biodiversity loss. The project surveyed and mapped habitats and species using volunteers and staff, advised on habitat management and other

nature-based solutions and offered opportunities for upskilling and volunteering. Whilst not targeted specifically at grasslands, the project has had a positive impact on grasslands, working with over 100 landowners across Powys in just 2 years. The project also commissioned a number of valuable feasibility studies and reports, which included a case study on green hay and meadow seed harvesting and spreading (Gellor 2022) and a study exploring collaborative land management, which included information on mechanical and hand management for hay meadows, feasibility of machinery rings and different approaches to obtaining the appropriate livestock grazing (Barnes 2022).

## **Ecological Evidence and Evidence Gaps**

There is good data for the Elan Valley sites within the Elan Valley Trust ownership as the in-bye was surveyed in summer 2022 as part of the Elan links Project (Sherry and Douglas 2023). This survey assessed the condition of the in-bye habitats and provided information on current management. Recommendations for future management including advice on grazing, liming, manuring and cutting were included for each field parcel. The survey covered approximately 670 hectares of in-bye on 23 farms. A waxcap survey was also carried out on the EVT in-bye in autumn 2022, although the data are not yet available. More sites will be surveyed in 2023. Orchid counts, small pearl bordered fritillary recording and small mammal monitoring is undertaken across the EVT tenancies by one of the tenant farmers who is a former Elan Valley ranger and prominent member of the Nature Friendly Farming Network.

Some of the SSSI grasslands have been monitored in recent years e.g., Rhos yr Hafod (Rawlins 2022) but there is a large number of grassland SSSIs and a lack of capacity within NRW to carry out visits as frequently as desired.

Outside the Elan Valley there has been little systematic survey of lowland grassland since the Phase 2 lowland grassland survey. Additional sites of interest will have been identified by the Rhos Pasture and Green Connections Projects and this information could form the basis for future more specialist surveys.

## **Challenges**

The Elan Links Scheme finishes in 2023; additional 1-year funding was secured through Nature Networks 1 but a bid to continue this work through Nature Networks 2 has been turned down. Without this or other funding much of the management identified in the in-bye plan (Sherry and Douglas 2023) will not be taken forward. This work includes further restoration and enhancement of hay meadows and promoting traditional management on the in-bye rhos pasture. In addition, knowledgeable project staff will be lost and the learning, goodwill and working relationships developed during the project will not be built on.

The two projects run by the Radnorshire Wildlife Trust ended in March 2023 with a loss of staff and funding further activity. Both projects were shortened to two years, partly as a result of the pandemic, and both have been highly successful but have had little chance to develop the next phase in this short timeframe. As with Elan Links, the end of the project will result in the loss of staff and consequently their experience and the links they have made with farmers and other landowners will be difficult to maintain.

It was noted, in discussions, that farmers rarely attend training or demonstration days organised by the conservation organisations. Peer-to-peer learning is the best way to engage farmers. Training and demonstration days need to be run through farming organisations and have a focus on topics which are relevant to their farm operations and farm business but which can also demonstrate positive outcomes for semi-natural grassland. This could, for example, include demonstrating the benefits of pasture-fed systems, precision grazing techniques or marketing and branding.

Radnorshire is a very rural county with a low population and fewer conservation staff than other more populated parts of Wales. This means there is a lack of capacity to coordinate grassland work and to put time into preparing further funding bids. Additionally, there is no obvious lead body although, with funding, a coordinators post could be hosted by one of the local organisations.

## **Opportunities**

The recent project activity within the priority area has resulted in the production of a series well-developed and up-to-date plans, strategies and feasibility studies, an ideal position for taking a wider grasslands project forward. Costing for some of this work will have been prepared by the Elan Valley Trust as part of their NNF2 bid and, given their recent experience, Radnorshire Wildlife Trust should be in a good place to extend their work on rhos pasture. It is, therefore very timely to be thinking about how this project work can be built on and taken forward across the priority area.

Plantlife have submitted a project, Glaswelltiroedd Gwydn, to the Nature Networks 2 fund. The long list includes Carngafallt, Gilfach Farm and Llysdinam Important Fungi Areas; however, should the bid be successful the sites will be short-listed and some will be removed.

## **Recommendations**

As with many of the priority areas, there is a need to find funding to support coordination of long-term action for grasslands to ensure continuity beyond the lifetime of individual projects. Funding would be required for a member of staff who could be outposted to one of the partner organisations that has good local knowledge and excellent relationships with land owners and managers.

Funding would need to include on-costs, a budget to pay farmers and other individuals to get involved in the partnership, and any associated staff costs. It would also be useful to have a training, education and communication budget.

There is good communication between the local partners, and the current EVT and RWT initiatives have already done a considerable amount of work building relationships with the farming community and other land owners. Therefore, the basis of a coordinated grassland partnership is fairly well established.

Once a member of staff is secured activity would include:

- With partners, agree focus of priority area (geographical and specific sites).
- Collate evidence and target survey work building on the Green Connections work using both volunteers and specialist surveyors.
- Identify, with all stakeholders, support required to achieve long-term management for semi-natural grasslands.
- Continue to develop peer-to-peer learning and farmer-led demonstration days with the aim of encouraging farmers and small-holders to take an active role in the partnership.
- Identify what could be funded through existing mechanisms or eventually through the SFS.
- Co-produce a project that can be used to secure funding for actions that support long-term change in management and that places those involved in a stronger position to enter the SFS or secure business viability from changes that are made.
- Coordinate with other funded activities to maximise delivery for grasslands in the priority area e.g., Section 16 Management Agreement and other projects.
- Lead on writing and submitting application or applications.
- Lead on feeding into SFS scheme / advisory service for SFS.

## 4.3.4 North East Wales Limestone

### Introduction

This priority area covers 2 distinct networks. A future initiative may need to consider each network separately. They are:

- The Great Orme's Head, Creuddyn Peninsula and Llanddulas sites on the north coast of Conwy County Borough Council (Conwy CBC).
- Sites in the north east corner of Wales, in Flintshire and Denbighshire, running south from Prestatyn to Llangollen, including the Clwydian Range. Many of these sites are within the Clwydian Range and Dee Valley Areas of Outstanding Natural Beauty (AONB)

This priority area lies over a discontinuous band of Carboniferous limestone exposure that runs from east Anglesey, along the north coast of Wales to the English border and on a distinctive ridge southward towards Llangollen. The limestone exposure within the priority area supports a number of calcareous grassland sites which make up the most extensive and floristically varied area of calcareous grassland and limestone heath in the region (Stevens et al. 2010). Although most of the interest lies in the calcareous grassland, there are species-rich neutral meadows lying on the limestone such as at Maes Hiraddug SSSI. Calaminarian grasslands are also found in the area.

The calcareous grasslands are floristically diverse; species of interest include hoary rockrose *Helianthemum oelandicum ssp. incanum*, basil thyme *Clinopodium acinos*, spiked speedwell *Veronica spicata*, Nottingham catchfly *Silene nutans* and dark red helleborine *Epipactus atrorubens*. The calcareous grasslands are also important for bryophytes such as the nationally scarce *Pleurochaete squarrosa* and *Bryum torquescens*. The rare subspecies of silver-studded blue butterfly *Plebejus argus subsp. caernensis* favours short calcareous grassland with an abundance of its caterpillar's foodplant rockroses *Helianthemum* species, and is found on sites in the Great Ormes Head, Creuddyn Peninsula and Llanddulas area.

The majority of the calcareous grassland sites are within the protected sites network; however, many are in poor condition, suffering the impacts of a lack of grazing, the encroachment of scrub and exotic species, especially cotoneaster, damage from agricultural intensification and overgrazing. Projects, Section 16 Management Agreements and organisational work programmes have had varying levels of success in addressing the issues over the years. Significant effort has been made to control the spread of non-native cotoneaster, particularly on Great Orme's Head by Country Park staff, and some other sites have had clearance work done as part of Section 16 Management Agreements. Others have been cleared as part of projects with considerable progress currently being made at Llanddulas through the NWWT Nature Networks HLF project. The Landscape

Solutions SMS project worked to secure grazing on a number of sites, including producing grazing plans for each site.

Despite these efforts, these particularly vulnerable grasslands sites soon degrade if management is not sustained and this remains the main challenge for any future approach. The majority of the SSSIs close to the Great Orme are owned and/or managed by the local authority or NGOs such as the Wildlife Trust, The National Trust and the Woodland Trust. There is, however, farmland adjacent to the SSSIs which would benefit from management to extend the grassland, improve condition and support connectivity. The sites around Prestatyn and the Clwydian range are more mixed, with many in private ownership and only a small number of sites owned by NGOs or the local authority.

According to the North East Wales Area Statement, 60% of North East Wales is enclosed farmland (NRW not dated). Most of the priority area has low agricultural employment with less than 10% employed in agriculture, forestry and fishing. The wards of Llanfair Dyffryn Clwyd/Gwyddelwern, Efenechtyd and Llanrhaeadr yng Nghinmeirch have 10-14.9% employed in these industries (Woods et al 2021). There is a significant number of meat and dairy processing plants within this priority area (Food Standards Agency 2020) and livestock farming is important culturally, environmentally and to the wider local economy.

The 2021 census found that, based on Lower Layer Super Output Areas (areas smaller than vice-county), Welsh language use as a proportion of the population in this region is mainly comparable to the national average of 17.8%. Along the coastal strip from Great Orme to Prestatyn, only 10-30% of the population reported that they spoke Welsh. However, this rises to 30-50% in some of the southern parts of the project area along the Clwydian range.

Figure 8. North East Wales Limestone Great Orme's Head, Creuddyn Peninsula and Llanddulas Map 1

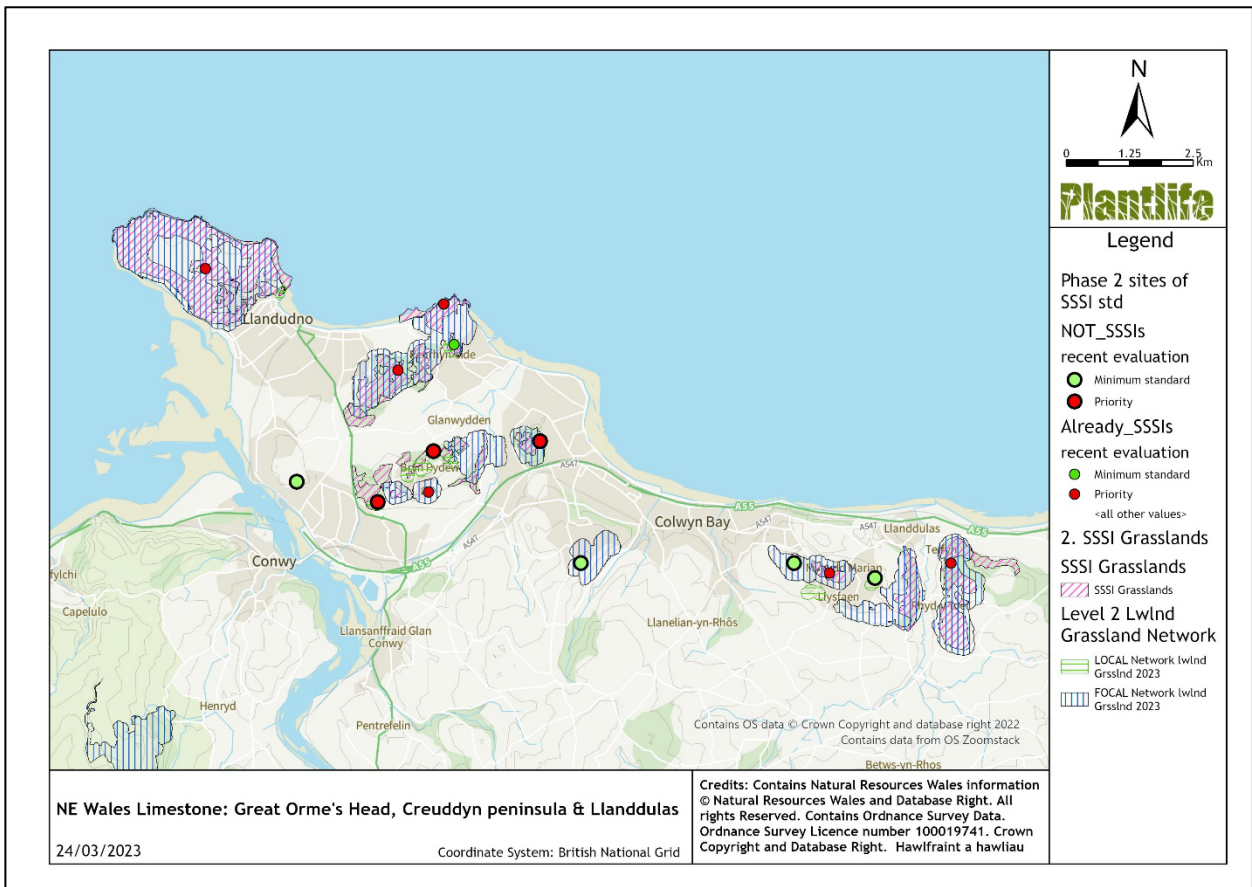


Figure 9. North East Wales Limestone Great Orme's Head, Creuddyn Peninsula and Llanddulas Map 2

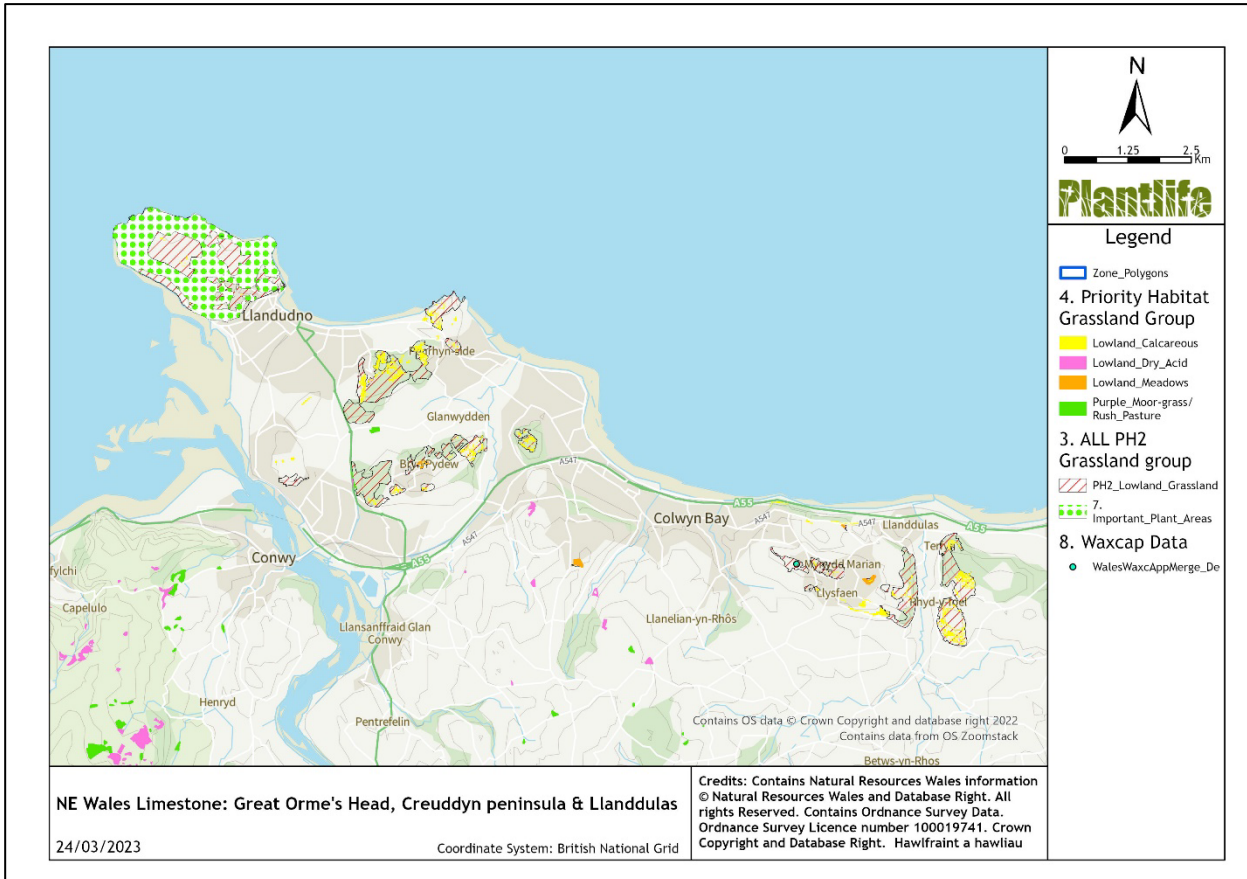




Figure 10. North East Wales Limestone Prestatyn and Clwydians Map 1

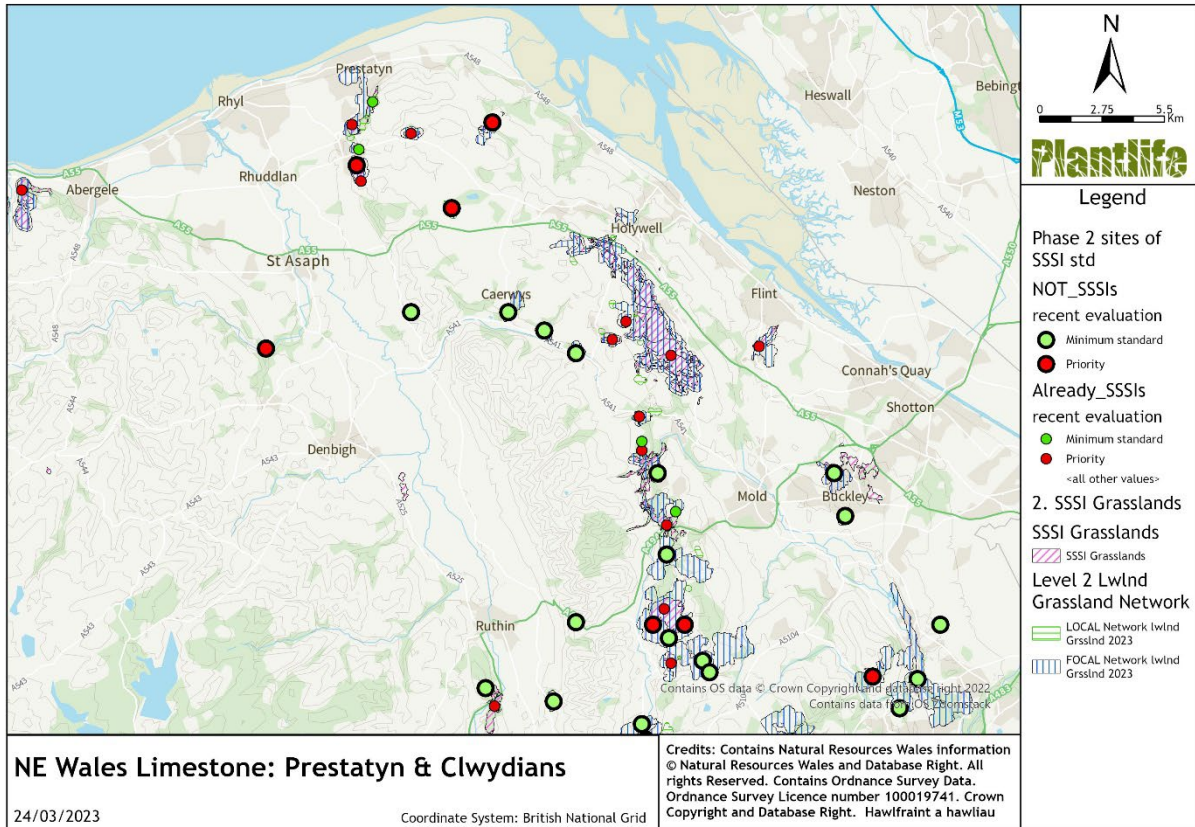


Figure 11. North East Wales Limestone Prestatyn and Clwydians Map 2.

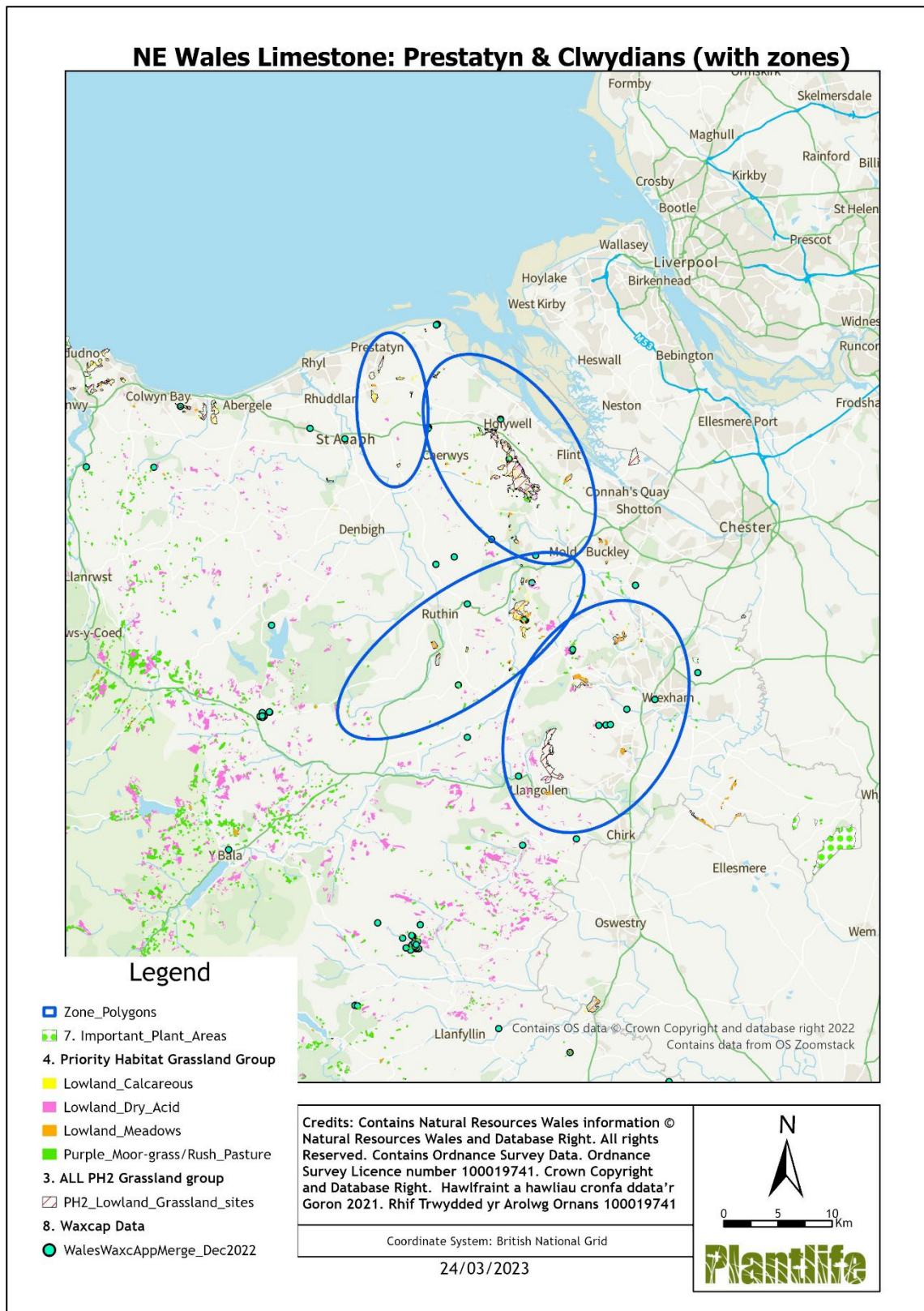


Table 15. North East Wales Limestone Grasslands

Name	Organisation	Area
Charlotte Williams	NRW	Orme/Creuddyn/Llanddulas
Joanna Clark	NRW	Orme/Creuddyn/Llanddulas
Caroline Bateson	NRW	Orme/Creuddyn/Llanddulas
Hannah Everett	NWWT/Cotoneaster project	All areas
Richard May	NRW	Clwydians
Rachel Jones	AONB	Clwydians
David Shiel	AONB	Clwydians
Jack Parry	AONB	Clwydians
Rhun Jones	AONB	Clwydians
Edward Sopp	AONB	Clwydians
Steve Williams	AONB	Clwydians
Veronica Moore	NRW	Clwydians

The following people/organisations would need to be contacted in the early stage of a future initiative:

- Sally Pidcock, Conwy Council
- Gemma Baron, National Trust
- Chris Wynne/Jordan Hurst, North Wales Wildlife Trust
- Grazing Association Clwydians
- Clare Williams, Butterfly Conservation
- Helen Mrowiec, Flintshire County Council
- Woodland Trust

## Focus

The majority of the calcareous grassland sites across this priority area are protected either as SSSIs and some also as SACs. However, the Wales Grassland and Heathland Group identified this area as a priority for action in 2011 and identified the potential for restoration or re-creation of grassland/heath outside notified sites, which would benefit ecological connectivity and make existing sites more robust.

The Great Orme requires specific focus as a large headland of approximately 300-400 hectares, much of which is calcareous grassland. It is a SAC, SSSI and a Local Nature Reserve managed by the Conwy CBC. The central part of the Orme (Parc) is owned by the National Trust and there is a tenant farmer who manages the Orme using sheep. The grassland on the Orme is threatened by invasive cotoneaster and other exotic species from neighbouring gardens, especially on its southern edge, and management to address this since the early 1970s has had some success, but cotoneaster invasion remains a problem in many areas. A new approach seeks to improve the grazing to help manage the grassland and heathland on the Orme. Recent infrastructure improvements include 2 cattle grids at Half Way Station which will allow the sheep to be fenced in, and the purchase of a new mobile livestock pen. Some areas of overgrown grass, resulting from past undermanagement, have been cut and will be grazed, and the Grazing Plan has been produced as a draft. The Great Orme's Head is a key component of a network of

Calcareous grassland SSSI sites in the area which also includes Little Orme (Creigiau Rhiwledyn), Bryn Pydew, Llanddulas Limestone and Bryn Euryrn.

Further east the priority focus is the rather fragmented network of sites which lies on the limestone running south from Prestatyn. This includes sites in public or NGO ownership such as Prestatyn Hillside SSSI, Graig Fawr SSSI and Loggerheads (SSSI) but also many others in private ownership such as Parc Bodlondeb and Gwenallt-parc SSSI, Parc Linden SSSI and Moel Hiraddug a Bryn Gop SSSI. A full list of grassland SSSIs in the area is given in Table 16.

Table 16 North East Wales Grassland SSSI

<b>SSSI</b>	<b>Grasslands</b>	<b>Condition (Baseline Assessment 2020)</b>
Alyn Valley Woods and Alyn Gorge Caves	Calcareous	Unfavourable
Bryn Alyn	Calcareous/Acid	Unfavourable
Cefn Meadow	Calcareous/Neutral	Unfavourable
Comin Helygain a Glaswelltiroedd Treffynnon / Halkyn Common and Holywell Grasslands	Calcareous/Calaminarian	Unfavourable
Craig Adwy-wynt a Choed Eyarth House a Chil-y-groeslwyd	Calcareous	Unfavourable
Graig Fawr	Calcareous	Unfavourable
Graig, Llanarmon-yn-Ial	Calcareous/Acid	Unfavourable
Herward Smithy	Calaminarian	Unfavourable
Llanddulas Limestone and Gwrych Castle Wood	Calcareous	Unfavourable
Maes Hiraddug	Neutral	Unfavourable
Moel Hiraddug a Bryn Gop	Calcareous	Unfavourable
Mynydd Y Fflint / Flint Mountain	Neutral	Unfavourable
Parc Linden, Lixwm	Calcareous	Unfavourable
Pen-y-Cefn Pasture	Calcareous	Unfavourable
Prestatyn Hillside	Calcareous	Unfavourable
Tyddyn-y-barcut	Neutral	Unfavourable
Buckley Claypits and Commons	Acid	Unknown
Glaswelltiroedd Trelogan / Trelogan Grasslands	Calaminarian	Unknown
Hendre Bach	Marshy	Unknown
Llyn Creiniog	Marshy	Unknown
Parc Bodlondeb and Gwenallt-parc, Lixwm	Acid/Calcareous/Neutral	Unknown

There are a large number of Phase 2 sites, many of which have been designated since the survey. The remaining non-designated Phase 2 sites of SSSI standard are shown in Table 18. Many of these will have changed since survey and would require updated survey information.

Table 17. North East Wales Phase 2 Sites

*Confidential information removed*

### **Current and Recent Activity**

The Landscape Solutions SMS 2019-2022, led by the AONB team in Denbighshire County Council, worked to secure management on a range of sites within the priority area, including 12 calcareous grassland and neutral meadow sites. All sites were surveyed and grazing plans were produced. The project undertook capital works such as fencing, provision of handling facilities and provision of water tanks and troughs. The project team worked with farmers and graziers to secure appropriate grazing following the recommendations in the grazing plans.

Investment in management is happening on some sites using Section 16 Management Agreements funding e.g., on the Little Orme where there is annual management of the cotoneaster. Elsewhere agreements are in place supporting management of scrub encroachment or providing capital funding to enable sites to be grazed. There may be potential to extend good practice on to neighbouring sites through engagement with farmers.

The North Wales Wildlife Trust (NWWT) is leading a National Lottery Heritage Nature Networks Fund (NNF) Limestone Restoration Project which is focused on cotoneaster control in North Wales, running from April 2023 until March 2025. This project is also surveying cotoneaster on a number of SSSIs and one local nature reserve, and is carrying out community engagement including training community groups and volunteers in cotoneaster monitoring and control for longer term site management. The sites run from Conwy through to Mold. It is not clear how effective after-math grazing is on these sites as the terrain is often difficult for livestock to access. The work is following on from a previous NNF cotoneaster control project which ran from 2022-2023.

The NWWT has a project at Bryn Alyn – working with farmers on the Woodlands for Water project. They work principally with small-holders and there is some grassland management such as meadow cutting within the project.

Previously, Plantlife worked with the National Trust at Graig Fawr SSSI to restore 25 hectares of species rich meadow as part of the Magnificent Meadows Cymru project.

There is a Road Verges Project with a focus on grassland verges within Denbighshire. This could help provide connectivity between the fragmented grassland sites.

AONB staff have had positive working relationships with farmers and have supported sustainable land management including using the Sustainable Development Fund.

### **Ecological Evidence and Gaps**

Twelve limestone and species rich grassland sites covering approximately 137 acres in Flintshire and Denbighshire were surveyed as part the Landscape Solutions SMS project in 2021. Grazing plans and monitoring plans were written for each.

The National Trust carried out a rare plant survey on Graig Fawr (Gurney 2021). This surveyed dwarf mouse-ear *Cerastium pumilum*, dark red helleborine *Epipactis atrorubens*, white horehound *Marrubium vulgare*, spring sandwort *Minuartia verna*, spring cinquefoil *Potentilla tabernaemontani*, small-leaved sweet briar *Rosa agrestis*, Nottingham catchfly *Silene nutans*, rock whitebeam *Sorbus rupicola*, spiked speedwell *Veronica spicata*.

The dark red helleborine population was surveyed and mapped on Moel Hiraddug SSSI as part of the cotoneaster project (Sherry 2022). The survey mapped nearly 800 helleborines on the site.

## Challenges

Managing the invasive cotoneaster and other exotic species that are encroaching the calcareous grassland is a significant challenge. Once cut, cotoneaster soon reappears without additional treatment. It is a problem on all the SSSI sites near to the Great Orme and some of the sites in Flintshire and Denbighshire such as Moel Hiraddug – the scale of the problem varies from site to site. A recommendation in the cotoneaster report produced by PONT in 2020 was that ‘effective delivery of a monitoring and control programme for non-native invasive cotoneaster species at a regional scale requires a full-time project officer’ (Sherry et al 2021). Control of cotoneaster in high density areas can damage the grassland habitat, if sufficient care is not taken (Sherry et al 2021). Aftermath grazing on these areas can be challenging and so priority should be given to controlling and managing stands on the best areas of habitat first.

Grazing remains a significant issues on many sites with both under and over-grazing. Getting the grazing right requires expert advice, on-going support, working with farmers and graziers, securing the right livestock at the right time of year and also managing the scrub encroachment on sites where grazing is not currently an option or in areas not favoured by livestock. Uncertainty about the SFS means some farmers are less willing to make changes now and there is the potential for more grasslands to be improved in the gap between Glastir ending and the SFS starting as farmers seek to make their farm businesses more profitable through increasing production.

Policies and reports such as the Biodiversity Deep Dive, the North East Wales Area Statement, the LBAPs / NRAPs and the ‘AONB Landscape and Nature Recovery in a Changing Climate’ report all provide the strategic steer to work with the farming community to facilitate and deliver sustainable farming practice; however there is currently insufficient capacity within any of these organisations to undertake the scale of work required. The Landscape Solutions SMS Project had dedicated staff to work with the farming community but these posts were lost at the end of the project. The NWWT Limestone Grassland Restoration Project, which is controlling cotoneaster, has allowed a dedicated member of staff to work in the area but work has been focused on the enormous task of coordinating the cotoneaster management with little time for farmer engagement.

## Opportunities

Recent and current activity through projects and Section 16 Management Agreements provide stepping stones for a landscape scale approach that brings together and builds on

existing work. There is considerable experience and expertise within the area and a good knowledge of many of the sites and their requirements

There is a great deal of enthusiasm among AONB, Denbighshire Council, NRW and others to develop a farmer led approach to managing these grasslands but currently no capacity to do this. The AONB could take a lead if funding was provided. If funding became available it would be possible to pilot a farmer-led approach such a results-based scheme for lowland grasslands. This could encourage farmers to get actively involved in change ahead of the SFS. Larger sites such as Bryn Alyn could benefit from such a pilot on both the SSSI and adjacent grasslands.

There are a number of local food producers and suppliers and there is a Clwydian Range Food and Drink Group and a Clwydian Range Meats Brand. The latter is accredited by the AONB. The potential exists to link with these initiatives to support farmers to promote products produced through conservation grazing and it would give them access to a range of expertise.

Plantlife have submitted a project, Glaswelltiroedd Gwydn, to the Nature Networks Fund. The long list includes the Great Orme and Llyn Helyg; however, should the bid be successful the sites will be short-listed and some will be removed.

## **Recommendations**

The first recommendation is that a member of staff should be employed to work across organisations and with graziers and the farming community to develop a long-term, landscape scale approach to grassland management. This post could be hosted a local organisation that already has excellent working relationships in these communities.

This post could be funded as part of an NRW strategic approach to manage the high priority grassland sites identified in this study. This would deliver priorities under the Area Statement and make a significant contribution to building ecosystem resilience while delivering benefits for biodiversity, carbon, local food, pollinators and a range of other benefits.

The AONB team in Denbighshire County Council could possibly host this person if resources were provided; however, this would be for the Clwydian Range and Prestatyn area. Ideally there should be a second coordinator in the Great Orme, Creuddyn, and Llanddulas sites hosted by different organisations.

This member of staff could:

1. Engage with farmers to facilitate grassland management that can be integrated into the farm business, and build capacity to access management payments through the SFS. By doing this the post would deliver on the Area Statement vision to support the creation of farm clusters and help land managers decide how best to farm sustainably, while also earning a healthy return. This could link into working with local food producers and tapping into the expertise to support farmers to access help and advice on selling products locally.

2. Work with NGOs, the AONB and others to access funds through involvement in project development and delivery, and target capital investment where is needed to support long-term change in grassland management practices.

3. Work with grazing associations and others to develop grazing networks to support management of NGO and other land holdings that do not have access to livestock. Other support could be the development of machinery rings or other ideas that those managing the land think would be useful.

4. Explore with stakeholders the potential for a place-based payment-by-results trial working with local farmers e.g. at Bryn Alyn. The Environment (Wales) Act gave NRW the power to undertake experimental schemes to develop new land-management techniques to deliver ecosystem resilience. This might be worth considering, to support the trial with its potential to develop long-term management practices which embed management for these important but vulnerable grasslands within farming systems.

The second recommendation is that there needs to be investment in staff to take a strategic approach to managing non-native cotoneaster across the area. Funding for practical management could be extended through Section 16 Management Agreements and NRW could look at how they can use Section 16 Management Agreements to fund cotoneaster management of designated sites, a power they have within the Environment (Wales) Act. The 2020 cotoneaster report recommended a member of staff to work across the priority area to control cotoneaster (Sherry et al 2020). This might be funded by an extension of the current NWWT cotoneaster project, which is due to finish in 2025 and only has funds/resources to tackle part of the cotoneaster control work required in the area. However, there was a strong feeling in discussions that the Great Orme needs a separate member of staff to do work on that site, given the scale of the problem. This role could possibly be extended to cover other siteworks in this network.



## 4.3.5 Gower

### Introduction

Gower, like Pen Llŷn, is a peninsula. It adjoins Swansea city on its north eastern side and extends south west into the Bristol Channel. It is part of the county of Swansea / Abertawe. The mid and western part of Gower became the first AONB in Britain in 1956. Its coastline is designated as a Heritage Coast. Gower is a rural area known for its exceptional and varied landscape which has been shaped by natural processes, a rich history and agricultural practices. The higher ground of Cefn Bryn and Penclawdd Commons separates the northern coastal area of the Loughor Estuary with its salt marsh, sand dunes and long sandy beaches from the south coastal area with steep limestone cliffs, sandy coves and adjacent coastal habitats, including semi-natural grassland.

The inland Gower commons support extensive areas of *Molinia*-dominated marshy grassland, dry (humid) heath and wet heath, much of which sits within the Gower Commons SAC. The Gower coast supports a mix of maritime, calcareous and neutral grasslands along with heath and scrub. There is a particularly long stretch of calcareous grassland on Rhossili Cliffs on the south western tip, which is owned and managed by the National Trust. Neutral grasslands including hay meadows are fairly scarce and fragmented on the Gower. Acid grassland is found on the drier sections of the inland commons.

Floristic species interest includes hoary rockrose *Helianthemum oelandicum ssp. incanum*, spiked speedwell *Veronica spicata*, basil thyme *Clinopodium acinos* and yellow whitlow grass *Draba aizoides* along the coast and chamomile *Chamaemelum nobile* on short dry grassland inland. The inland marshy grasslands are important for their invertebrate populations, particularly marsh fritillary *Euphydryas aurina*, the caterpillar of which feeds on devil's-bit scabious *Succisa pratensis*. Southern damselfly *Coenagrion mercuriale* is found in ditches and seepages on Cefn Bryn and Rhossili Down.

Agriculturally, the higher central common areas are still grazed by a handful of active graziers who help maintain the habitat, including areas of marshy grassland important for marsh fritillary, southern damselfly and other species. Livestock on the common include sheep, cattle and ponies, however factors such as the high number of livestock deaths on the roads and the economically challenging task of grazing these large open areas has led to a decline in livestock on some of the commons in the last few years. In the valleys and coastal areas there is a patchwork of small family farms and big estates with small enclosed and open fields. In some areas, old strip field patterns remain, with the 'Vile' landscape at Rhossili of particular historic value (NRW 2014).

Farming remains an important industry culturally, socially and economically; however, having the second largest Welsh city on its doorstep has led to the steady rise in tourism and the number of people living on Gower and commuting to work. The percentage of people directly employed in agriculture has fallen to less than 10% and those employed in

tourism is now 20-24.9% (2011 Census). There is a mix of livestock farming, dairy and, increasingly, market gardening on the Gower, and a number of Community Supported Agriculture Schemes are running as well as other local food producers and suppliers. Agriculture is still an important contributor to the local economy and there is still a number of licensed food processing sites for meat on the north eastern end of Gower towards Swansea City (Food standards Agency 2020).

According to the 2021 census, based on Lower Layer Super Output Areas (areas smaller than vice-county), Welsh language use (as a proportion of people) is generally lower on Gower than the national average of 17.8%. Around Swansea, and on parts of the southwest coast such as Rhossili, Welsh speaking falls to less than 10% of the resident population. It rises to between 10-30% on most of the north coast and around the central villages and commons.

Figure 12. Gower Priority Area Map 1

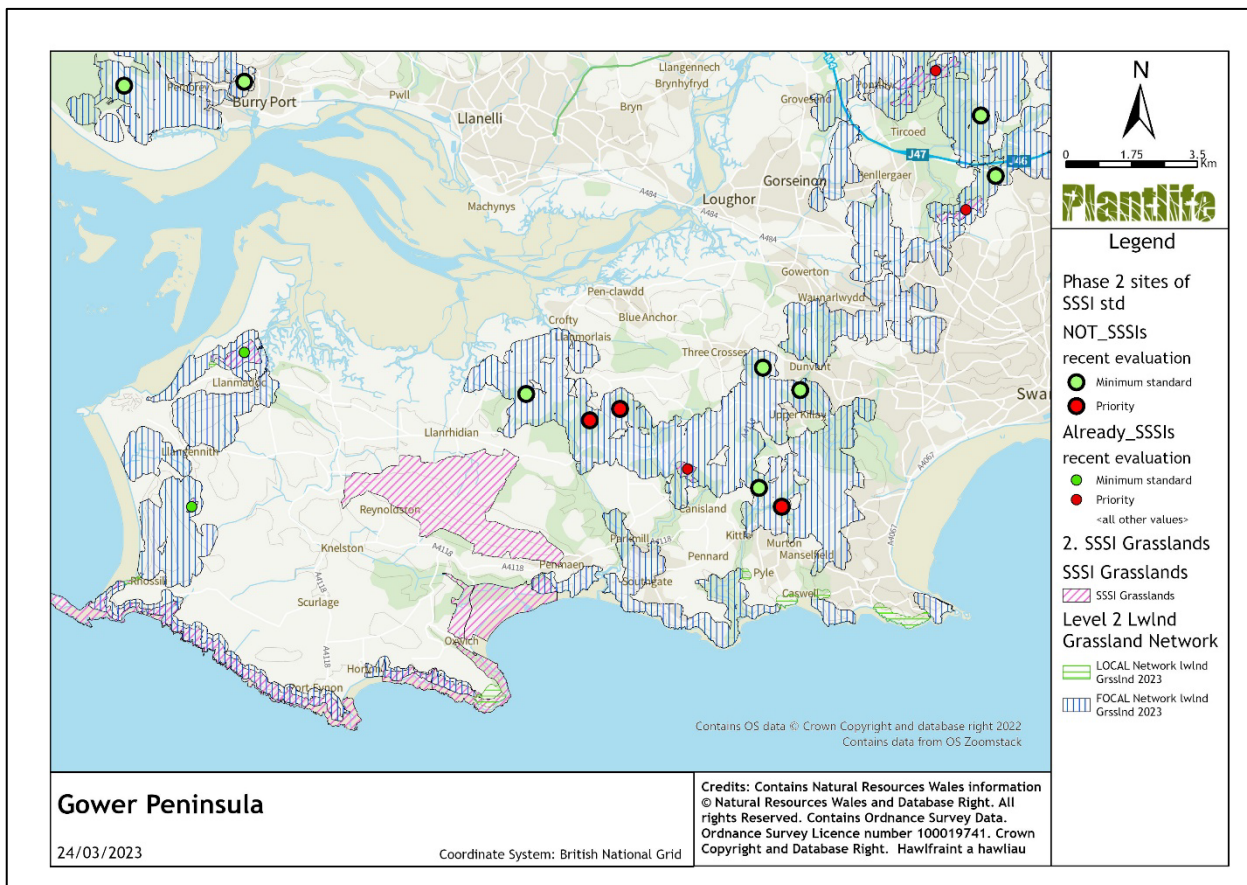


Figure 13. Gower Priority Area Map 2

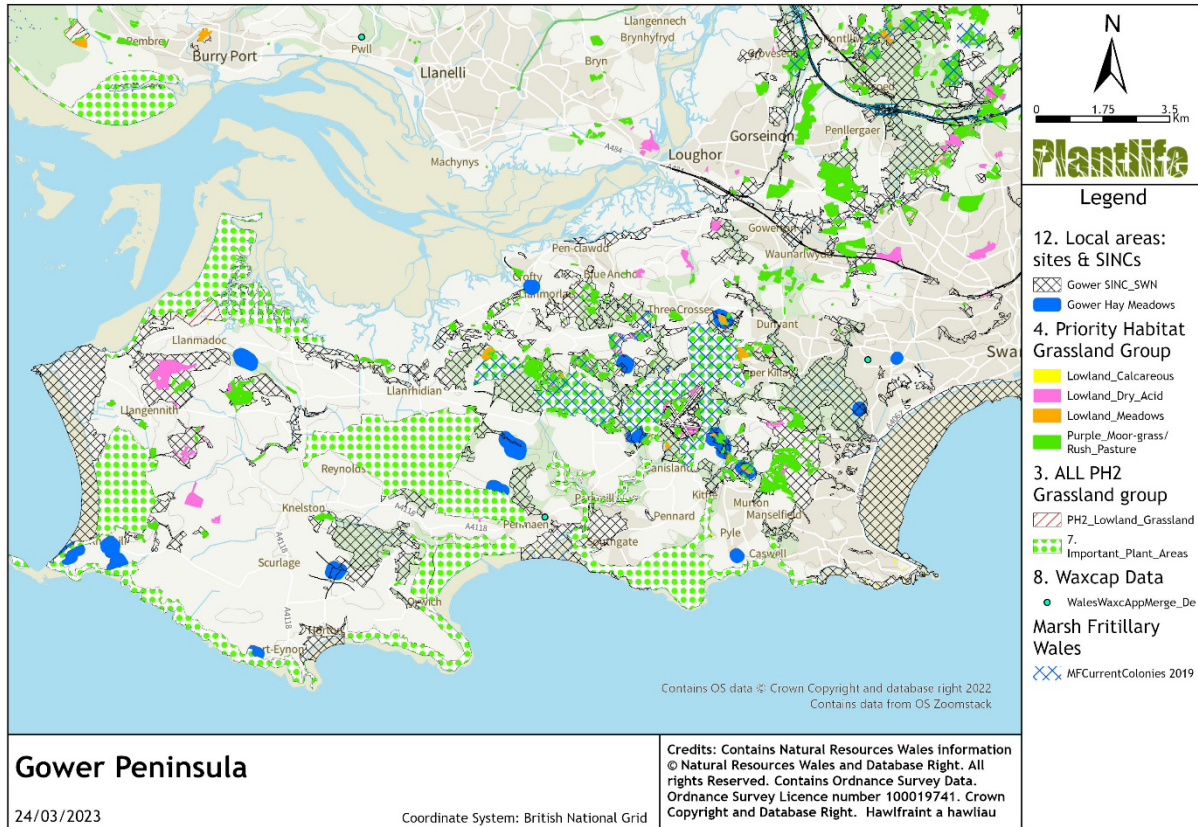


Table 18. Gower Key Individuals Contacted

Contact	Organisation	Contacted by
Hamish Osbourne	NRW	Zoom
Paul Thornton	WTSSWW	Zoom
Gwyn Jones	EFNCP	Zoom
Mark Barber	Swansea Council	Zoom
Christina Derrick	Swansea Council	Zoom
Alan Kearsley Evans	National Trust	Zoom

The following people/organisations would need to be contacted in the early stage of a future initiative:

- Mike Stott and Ursula Jones Gower AONB.
- Tanya Jones NRW,
- David Kilner Buglife/Naur am Byth,
- Richard Smith Butterfly Conservation

- Commoners Association
- Gower Meadows Group
- Cow Tan

## Focus

There are a number of designated sites and sites of SSSI quality on Gower as well as meadows managed by the meadows group. Important grassland habitats along the coast, within the lower lying farmed landscape and on the higher commons all make up a rich and diverse network of high quality semi-natural grassland which stretches beyond the AONB into the city of Swansea on the north eastern side of the Gower. The Gower grasslands occur in 3 distinct zones.

### 1. The Coast

Gower is an Area of Outstanding Natural Beauty and parts of the South Gower Coast are included within the Limestone Coast of South West Wales SAC which extends from Pembrokeshire to Pwll Du Head and Bishopston Valley SSSI. Semi-natural dry grassland is an Annex 1 habitat present as a qualifying feature within this SAC, although not the primary reason for section (JNCC not dated 1).

Much of the coast of Gower is designated as SSSI with Twyni Chwitffordd, Morfa Landimor a Bae Brychdwn / Whiteford Burrows, Landimore Marsh and Broughton Bay and Burry Inlet and Loughor Estuary SSSI to the north and important grassland sites along the West and Southern coasts. A significant proportion of these sites are owned and managed by the WTSWW, the National Trust, Swansea Council and NRW and are covered by Section 16 Management Agreements. The South Gower Coast Reserve is owned by the National Trust and managed by the Wildlife Trust and stretches from Rhossili to Port Eynon and includes Overton Cliffs and Mere. There are a number of WTSWW reserves on the Gower which include semi-natural grassland, including Lucas Reserve at Llanmadoc and Llanrhidian Hill on west / north of Gower coast, Killay Marsh nearer Swansea City and Redley Cliff reserve at Caswell on the South Coast. Key grassland/heathland SSSIs within this area:

- Caswell Bay- coastal and limestone grassland and heath
- Great Tor (3 Cliffs Bay) – limestone grassland
- Horton, Eastern and Western Slade – limestone grassland with some heath
- Gower coast; Rhossili to Port Eynon – extensive limestone grassland with coastal and neutral grassland and limestone heath; is also a NNR
- Oxwich Bay – has some limestone grassland and meadows around Oxwich Point
- Pwll Du Head and Bishopston Valley – Some meadows, limestone grassland

### 2. The Central Commons

The commons which run from Rhossili Down on the south west to Fairwood on the north east near Swansea City are of particular interest for heathland and wet grassland communities. Gower Commons SAC is selected for its stands of M24 *Molinia caerulea* – *Cirsium dissectum* fen-meadow set in a heathland context (alongside other habitats). M24 is particularly prominent at Fairwood, Pengwern and Welshmoor. It is

selected for Marsh Fritillary and Southern Damselfly, being one of the most important areas for the former in Wales. Key sites within the area:

- Cefn Bryn Common SSSI
- Rhossili Down SSSI
- Fairwood, Pengwern and Welshmoor Commons SSSI Courthouse Grasslands SSSI -
- Sluxton Marsh, Whitemoor SSSI
- Malthouse Farm and Little Hills Grasslands SSSI

The commons are grazed by local graziers and there is an established Gower Commoners Association. Fairwood is owned by Swansea Council, and Rhossili Down, Welshmoor and parts of Cefn Bryn are owned by the National Trust

### 3. North East of Gower/Swansea City

There are a few grassland SSSIs on the northern and eastern end of the Gower into and around Swansea City. Key sites within this area:

- Nant y Crimp – neutral and marshy grasslands (Swansea)
- Penplas Grasslands – marshy grassland and wet heath (Swansea)
- Six Pit - Calaminarian grassland (Swansea)

There are also Local Nature Reserves (LNRs) and Sites of Importance for Nature Conservation (SINCs), especially eastwards towards Swansea City, which could act as stepping stones to amenity grasslands and parks. Some of these will include semi-natural grassland potentially of SSSI quality.

Table 19. Gower Grassland SSSIs

<b>SSSI</b>	<b>Grassland</b>	<b>Condition (Baseline Assessment 2020)</b>
Morfa a Chraig Cwm Ivy / Cwm Ivy Marsh and Tor	Marshy	Destroyed (now saltmarsh)
Oxwich Bay	Calcareous	Favourable
Gower Coast: Rhossili to Porteynon	Calcareous	Unfavourable
Nant y Crimp	Marshy	Unfavourable
Penplas Grasslands	Marshy	Unfavourable
Cefn Bryn Common	Acid	Unknown
Courthouse Grasslands	Marshy	Unknown
Horton, Eastern and Western Slade	Calcareous	Unknown
Sluxton Marsh, Whitemoor	Marshy	Unknown
Malthouse and Little Hills grasslands	Marshy	Not assessed (new SSSI)

There are 15 Phase 2 grassland survey sites reaching SSSI minimum standard of which 6 have been notified. The remaining 9 sites are shown in Table 20.

Table 20. Gower Phase 2 Sites

*Confidential information removed*

### **Recent and Current Activity**

The Wildlife Trust has received funding from the Nature Networks fund for its Resilient Grasslands Project. On Gower it is funding work on Overton Cliff and Roydons Corner, building on ongoing efforts to get sustainable grazing management implemented on its South Gower Cliff reserves. The project is also funding some equipment which will be used across a number of its designated sites to help build better grazing partnerships.

Natur am Byth is in a partnership project working across Wales to deliver species recovery and reconnect people to nature. The development phase is complete and a £4 million project application has been submitted to the National Lottery Heritage Fund (NLHF). Gower is included in this project and although the focus is species rather than habitat, significant habitat management including conservation grazing is planned to achieve management for the target species.

The work of the graziers by grazing their livestock is incredibly important for managing the various habitats of the Gower Commons SAC, including the semi-natural grassland. Over the years cattle, ponies and sheep have been grazed and even in recent times the numbers have been high enough to have a positive impact on the habitat. However, in the last few years, numbers of grazing animals have dropped and this has led to encroachment of scrub onto the grassland habitat and some issues with burning. On Cefn Bryn the number of animals dropped from 200 to 40 between 2018 and 2020. In 2021 a study undertaken by PONT and commissioned by NRW explored the key barriers to grazing. More information on this is given in the opportunities section. A pilot Payment by Results scheme for Fairwood Common has been developed by the European Forum for Nature Conservation and Pastoralism (EFNCP) and is seeking funding.

The Gower Tomorrow's Heathland Heritage Project and Gower Commons Initiative invested in building relationships with the graziers and in infrastructure and scrub management with significant habitat benefits. The Wales Heathland and Grassland Group recommended in 2013 that further work to encourage graziers to graze the commons with heavy stock as part of their agricultural systems was needed to sustain the benefits from these projects.

The AONB works extensively on the Gower and has built strong relationships with farmers. The Sustainable Management Fund allocated by the AONB has supported a range of initiatives over the years. This includes support and match funding for a PONT project with the Gower Meadows Group. The Gower Meadows and hedgerows project was funded by NRW and the AONB between March and the end of November 2021. The project worked with meadow owners to extend meadows and hedgerow management, collect information and trial ways of working including different management approaches, soil testing and laying hedges in the 'Gower Flyer' style. This work followed on from previous work undertaken with the AONB to support the Gower Meadows Group and grow its membership. There are currently a number of meadow owners involved in conservation management and these meadows are identified on Maps 13 and 14 above. A Project

Enquiry Form was written by PONT to develop this work further and could be used in the future to secure funds for further work on the meadows.

The NGO community is very active on the Gower. The Wildlife Trust, NRW and PONT worked closely to re-introduce grazing at Overton in 2017. This approach has been successful at engaging the local community and overcoming the barriers to grazing livestock in publicly accessible spaces. The model could be used elsewhere.

Section 16 Management Agreements are in place on a number of SSSIs to support grassland management including conservation grazing.

A Nature Networks project has been submitted by Swansea Council and if successful it will undertake works on marshy connected to marsh fritillary networks on council owned land. Scrubbed over SINCS /LNRs and calcareous grasslands between Mumbles and Pwll ddu will be the priority. If successful this project could be a lever for more funds, if not all the work to develop it could be used elsewhere. There will be significant capital investment if the project is successful.

The Plantlife Nature Networks Fund 2 bid Glaswelltiroedd Gwydn has a long list of sites across Wales based on Important Plant Areas (IPAs) and Important Fungi Areas (IFAs). If successful then a number of sites will be short listed for active management. The Gower sites on the long list are:

- Gower IPA
- Whiteford Burrows IFA
- Longhole Cliff IFA
- Oxwich IFA
- Clyne Gardens IFA

The National Trust is undertaking significant work through its Wales-wide Coast to Commons project which will work to improve condition of protected sites through innovative action to secure better grazing management. The project focus is on six areas across Wales where funding can lead to the greatest impact on site condition and wider landscape resilience, including on the Gower. The project will address the underlying causes of inappropriate management, identify innovative solutions such as no-fence collars for cattle, contribute to the circular economy and promote stakeholder engagement.

## **Ecological Evidence and Gaps**

A wealth of information has been collected on grassland sites on the Gower over the years including Phase I survey data and lowland grassland Phase 2 data. Many of these data sets are decades old and there is a need to update. Additional to this will be information collected by organisations and projects over the years. In discussions it was not felt necessary to undertake a desk top study to pull the data together; however some ground truthing through targeted survey would be useful especially on private land and non-designated sites. The current connectivity data for the original LBAP was based on Phase I survey and so is out of date. The SINC/LNR sites are mapped which could help focus survey activity.

Species data-sets also exist with data collected for marsh fritillary and other species e.g. by local recorders or as part of the development of projects such as Natur am Byth and the Gower Meadows project. Much of this data can be sourced from the South East Wales Biodiversity Records Centre (SEWBRc).

Swansea Council has prioritised delivering on the nature recovery and climate change agendas within its corporate plan (Swansea Jan 2023) and has produced a Swansea Ecosystem Resilience map (Rowe et al March 2022). The extent maps of semi-natural habitat confirm that the coast has the highest extent of semi-natural habitat closely followed by the commons. The Local NRAP is currently being produced.

A number of reports exist which include information about the Gower Commons.

## **Challenges**

Capacity to work at a landscape scale remains an issue despite significant amount of joint working on the Gower. Working with farmers, commoners and small-holders to encourage grazing and other management would benefit from a member of staff to support this work. One of the main management issues is grazing practices and more specifically abandonment of land that is considered by many farmers as marginal and uneconomical or too difficult to graze. Organisations, farmers and graziers have had some success with conservation grazing on Gower, however it remains challenging to sustain these practices in the long-term.

Many small farms on Gower tend to farm sheep as it is easier on large open areas of land. Although useful for conservation grazing in some instances, it is the heavier animals such as cattle and ponies that can have a bigger impact on the habitat particularly where abandonment is the issue. Sheep are generally unsuitable grazers of tussock marshy grassland, but maybe more suitable on coastal sites with difficult terrain.

Roads are a major threat to livestock and a particular worry to those grazing cattle. This was identified as the main barrier to grazing the commons in a report produced by PONT in 2021.

Gower no longer produces the range of local food it used to although there are pockets of success. Developing this potential could help delivery of conservation grazing.

There are no local staff dedicated to building relationships with farmers. The AONB team is the natural lead but has capacity issues and unfortunately we were unable to speak to them as part of this report.

Grants such as Nature Networks Fund generally require agreements to be in place before application is submitted (and the application period is short). This has led to a focus on publicly owned and NGO owned land, missing huge opportunities to work with private land owners. There is a need for staff time to build relationships with farmers and graziers and this needs a completely different approach.



The council leases land to horse graziers but this is not managed for biodiversity as the leases are set up by the Estates or Housing departments. It would be helpful to see a shift to conservation type grazing as a service to manage the habitat (free or ideally paid).

## **Opportunities**

The sites are well known by local staff employed in the sector and there is no need for a desk top survey to collate the information. Ground truthing to target sites would be useful, however.

The local staff working in the area for NGOs, NRW and the AONB work well together and have a huge amount of expertise. They have built relationships with some farmers and graziers and good practice can be showcased. This needs to be extended.

Understanding the issues that prevent grazing is an important element of bringing semi-natural grasslands back into condition. PONT was commissioned by NRW in 2021 to explore the reasons for a fall in livestock numbers on the Gower Commons and one of the main barriers was the high numbers of animals killed by traffic. This is particularly the case on Cefn Bryn which has seen a sharp drop in grazing animals in the last 5 years. On Fairwood, cattle had been removed due to risks of TB, and another key barrier to grazing the commons was lack of succession as graziers retire (Douglas et al 2021). This information can help inform the solutions. Any future initiative would need to work with graziers to address barriers to grazing. In response to this report PONT has worked with NRW and others to trial the use of NoFence collars on Cefn Bryn to keep cattle away from the road with good results.

There are examples of best practice on the Gower, established local food producers and suppliers, and good opportunities to support local supply chains and possibly a local public sector procurement trial. Gower Meadows Beef is a successful small business where the products are solely sourced from conservation grazed livestock. Models such as this need to be supported and showcased more widely. A grassland project would benefit from strengthening and supporting this sector.

The Local Places for Nature funding over next 2 years will fund LNP Coordinators and also has a capital budget that could support grassland management as part of the NRAP.

## **Recommendations**

A significant amount of work is already underway or been completed through the NGOs, NRW and Swansea Council (including the AONB), and staff work well together leading to a coordinated approach. With the right funding support there are organisations that could lead a landscape scale project but further funding and engagement with a wider range of partners would be needed first.

The main recommendation is that a member of staff be employed to work across organisations and with farmers and graziers to develop a long-term, landscape scale approach to grassland management. This post could be out-posted to a local organisation that already has excellent working relationships in these communities.

This post should be funded as part of an NRW strategic approach to managing the high priority grassland sites identified in this study. This would deliver Area Statement priorities

and make a significant contribution to building ecosystem resilience while delivering benefits for biodiversity, carbon, local food, pollinator and a range of other benefits.

Budget would be needed to support this member of staff to build a partnership that has the capacity to work with all stakeholders to initiate change in grassland management practices. This would include budgets to facilitate partnership, funds to pay farmers, graziers and other individuals to attend and contribute, and also training and communication budgets to support peer to peer learning, demonstration farms and public engagement.

The staff member could:

- Facilitate partnership and ensure all stakeholders are represented, especially those who farm, graze or manage land.
- Work with the partners to tap into existing projects and funding streams to target agreed sites that need infrastructure improvements and other management e.g. use of the Local Spaces for Nature fund through the LNP.
- Support existing groups such as the Gower Meadows Group and the Commoners Association to explore how best to encourage grazing if these groups think this is helpful. Seek funding to deliver solutions. The Gower Commons initiative established best practice and further work needs to be done to work with the graziers to agree how to make this approach more economically and ecologically sustainable on the long-term.
- Engage with tenants and private farmers to encourage conservation or similar grazing practice on the Gower, working with NGOs and the AONB and ensuring that the work they do builds on, and is additional to, what is already going on. Find out what support farmers would like and seek funding to deliver this.
- Work with farmers to seek opportunities to share best practice on local food production and sale. Develop ways to encourage and support more farmers and graziers to consider food production from semi-natural grassland management. Where it is wanted, seek help for farmers to embed this as part of the farm business.

The second recommendation is that investment is needed to booster local supply chains, including local food outlets and community agricultural schemes. This could be helped by establishing local procurement agreements with public authorities and coordinating supply to meet the needs of these. This needs additional exploration and investment and could be something that the partnership develops, working with the appropriate stakeholders.

The third recommendation is that consideration should be given to funding the EFNCP Payment by Results pilot to trial at Fairwood Common by NRW or Welsh Government. This could help establish a mechanism whereby Commoners are paid to graze the commons to secure specific habitat outcomes. The Area Statement talks about 'payment for outcomes and innovative approaches' and such a scheme could provide a model for future payments at the collaborative tier of the SFS.

As with the other priority areas, the approach adopted for grassland management needs to include graziers, farmers and small-holders from the beginning. The aim is to work with these communities to develop grassland management practices that are supported and sustainable in the long-term either through SFS management payments or as part of a viable farm business or both.

## 4.3.6 Heads of the Valleys

### Introduction

The Heads of the Valleys priority area is an extended area which runs north east and east of Cross Hands in Carmarthenshire. It includes a number of SSSIs and potentially SSSI quality sites west of Ammanford around Cross Hands, north east into the Bannau Brecheiniog National Park (BBNPA) including Carmel NNR. It also includes sites running east through the Amman Valley, the northern part of Neath Port Talbot (NPT), and then follows the A465 from Glynneath through the northern part of Rhondda Cynon Taff (RCT) to Merthyr Tydfil and northwards from there into the BBNPA. It includes areas within the jurisdiction of the 4 local authorities and the BBNPA.

This priority area includes a diverse landscape from the industrial eastern valleys to the rural areas of Carmarthenshire and the BBNP. The industrial heritage of coal mining and other industries, the rich farming history, the forestry industry and natural processes have shaped the landscape and its ecology and culture. The Valleys are characterised by steep valleys running south between expansive upland blocks. The valley sides, known as 'ffridd', are made up of a mosaic of habitats including marshy grassland/rhos pasture, heath, enclosed fields and wet flushes, giving clues to the farming landscape that dominated before the industrial revolution (NRW NLCA37 March 2014).

This priority area is particularly noted for extensive marshy grassland and rhos pasture and is an area of critical importance for marsh fritillary *Euphydryas aurinia*. Well-managed marshy grasslands within the priority area are floristically rich, supporting species such meadow thistle *Cirsium dissectum*, whorled caraway *Carum verticillatum*, lesser butterfly orchid *Platanthera bifolia* and globe flower *Trollius europaeus*. These grassland are also locally of importance for curlew *Numenius arquata* and lapwing *Vanellus vanellus*. In addition to the wet grasslands, there are species-rich natural grasslands, acid grasslands and habitat mosaics with grassland on coal spoil.

The eastern part of this area from Merthyr Tydfil through to Ammanford includes some urban fringe areas with high development pressure and low employment in agriculture. The areas west of the Valleys in Carmarthenshire and northwards into the park are rural and have higher levels of employment in agriculture (Woods et al 2021). There are only 2 meat processing plants along the Heads of the Valleys; however in Carmarthenshire and south into Swansea there is a high number of these businesses (Food Standards Agency 2020). Farming remains important culturally, environmentally and to the wider local economy, especially in Carmarthenshire and within the BBNP with a number of graziers as well as farmers active across the area.

According to the 2021 census, based on Lower Layer Super Output Areas (areas smaller than vice-county), the use of Welsh language as a proportion of the population in this focus area is very variable. At the eastern end (in the Glamorgan authorities) it is generally 10-30%, approximately in line with the national average of 17.8%. However, at the western

end of the focus area, principally after crossing the border into Carmarthenshire, it reaches 30-50 minimum, and 50-70% in some parts.

Figure 14. Heads of the Valley Map 1.

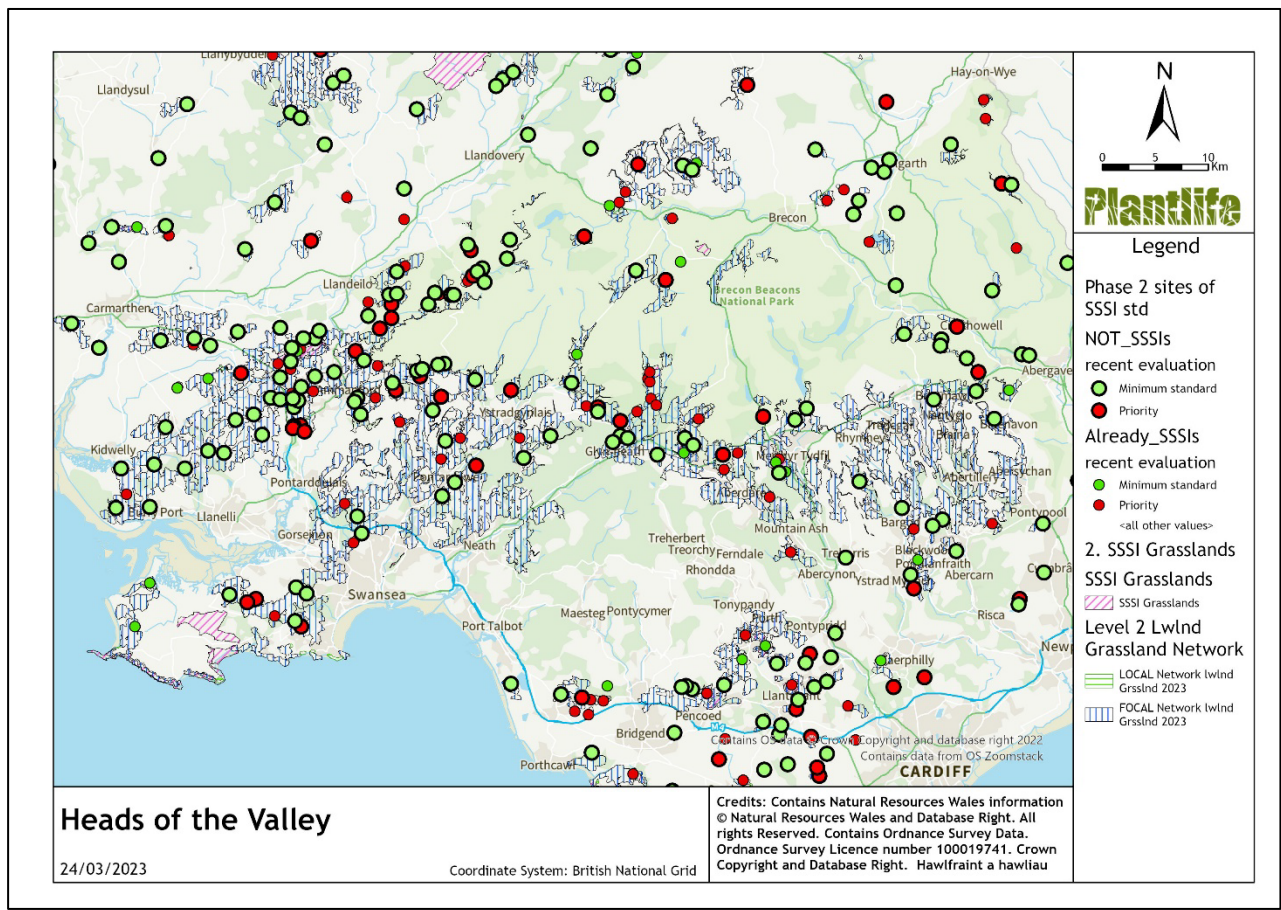


Figure 15. Heads of the Valleys Map 2

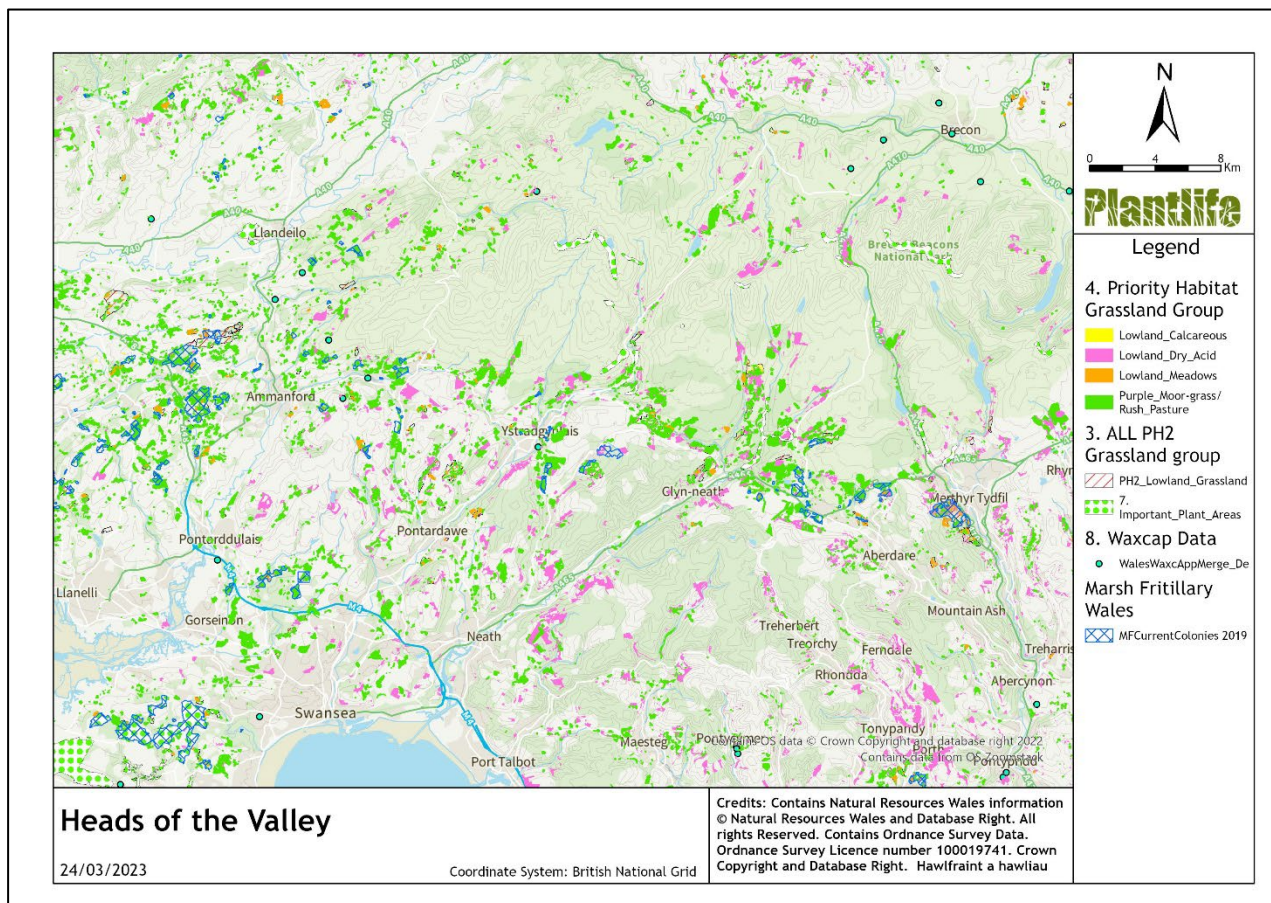


Table 21. Heads of the Valleys Key Individuals Contacted

Contact	Role	Contacted by
Amanda Evans	Caeau Mynydd Mawr Project	Zoom
Richard Wistow	RCT CBC	Phone
Rose Revera	NPT CBC	Email
Scott Hand	NRW	Zoom
Nick Sharp	NRW	Zoom
Nicola Broadbridge	NRW	Zoom
Duncan Ludlow	WTSWW	Zoom
Manon Williams	NRW	Zoom
Becky Wright	NRW	Zoom
Rachel Willis	NRW	Zoom
Jonathan Davies	Ecologist	Zoom
Liz Hancock	NRW	Zoom
Rob Parry	INCC	Zoom
Lizzie Wilberforce	Plantlife	Zoom
Rebecca Price	BBNPA	Email
Isabel Macho	Carmarthenshire County Council	Email

The following people/organisations would need to be contacted in the early stage of a future initiative:

- Local Graziers
- Local Farmers
- Local Recorders
- NRW Sites Staff
- Toby Young BBNPA
- Gill Hampson Merthyr Tydfil LNP Officer
- Stephanie Coates WTSWW
- Carmarthenshire Meadows Group
- National Botanical Gardens
- Emma Williams Coal spoil fungi
- Gwent Wildlife Trust
- Huw Williams NRW
- Paul Aubrey Carmarthenshire Council
- Isabel Macho – Carmarthenshire Council
- Richard Smith Butterfly Conservation

## Focus

Discussion with local partners confirmed the priority semi-natural grassland in this area as marshy grassland/rhos pasture, along with neutral grasslands and dry acid grassland. Although there is far more marshy and dry acid grassland, the importance of neutral grasslands was raised, especially the need for more information on these sites. Marshy grassland occurs on free draining soils of varying pH that are wet for most of the year but shallower peat deposits than peatlands. Neutral grasslands grow on dry to moist soils with a neutral pH and dry acid grasslands on drier soils with a lower pH. Marshy grasslands are often found in a mosaic with wet heath and peatlands and this is what is known in Wales as rhos pasture. (NRW June 2022). These habitats need to be managed through cutting and/or grazing or they quickly revert to scrub and woodland.

Marshy grasslands and rhos pasture are an important habitat for marsh fritillary butterflies and the narrow-bordered bee hawk-moth *Hemaris tityus*. Marsh fritillary are well recorded across the heads of the valleys and ammanford/cross hand areas. Other species considered important in discussions with partners were waxcaps, a range of other invertebrates, amphibians, barn owl *Tyto alba* and bats. Dormice *Muscardinus avellanarius* are also important in the focus area and their habitat requirements sometimes conflict with grassland management e.g., scrub control. In this discussion, it was agreed that if the focus is on good semi-natural, species rich grassland then these species would be likely to benefit.

Table 22 proposed suite of target and supporting habitats

Grassland category	NVC type	NVC name
Target	M25	<i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire
Target	M23	<i>Juncus effusus</i> / <i>acutiflorus</i> – <i>Galium palustre</i> rush pasture
Target	M24	<i>Molinia caerulea</i> – <i>Cirsium dissectum</i> fen-meadow
Target	MG5	<i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland
Supporting mosaic habitat	MG6	<i>Lolium perenne</i> – <i>Cynosurus cristatus</i> grassland (species-rich)
Target	U2	<i>Deschampsia flexuosa</i> grassland
Target	U4	<i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Galium saxatile</i> grassland
Target	n/a	Coalfield and brownfield grasslands (important mosaic habitats)

It was agreed during the discussion that although the primary focus should be in the protected sites it was also important to look for opportunities to improve connectivity through targeting non designated sites in the wider landscape. Opportunities to do this exist through the planning system and through existing work with farmers and graziers. This area is unusual in still supporting a relatively large area of locally well-connected lowland grassland (see Fig 15), although much of it is thought to be in poor condition due to under-management.

There is a large number of grassland SSSIs within the priority area, as shown in Table 23.

Table 23. Heads of the Valleys SSSIs

SSSI	Grasslands	Condition (Baseline Assessment 2020)
Gyfartha	Marshy	Destroyed
Caeau Bronydd-mawr	Marshy	Favourable
Caeau Pant-y-Bryn	Marshy	Favourable
Broad Oak and Thornhill Meadows	Marshy	Unfavourable
Bryn-bwch	Marshy	Unfavourable
Cae Gwernllertai	Marshy	Unfavourable
Caeau Blaenau-mawr	Marshy	Unfavourable
Caeau Capel Hendre	Marshy	Unfavourable
Caeau Ffos Fach	Marshy	Unfavourable
Caeau Lotwen	Marshy	Unfavourable
Caeau Rhyd-y-gwiall	Neutral	Unfavourable
Caeau Ton-y-fildre	Marshy	Unfavourable
Cernydd Carmel	Marshy	Unfavourable
Coed Mawr - Blaen-Car	Neutral	Unfavourable
Craig y Rhiwarth	Calcareous	Unfavourable
Cwm Cadlan	Marshy	Unfavourable



Cwm Glo a Glyndyrys	Acid	Unfavourable
Derwen-fach Meadow	Marshy	Unfavourable
Felin Fach Meadows, Cwmgwili	Marshy	Unfavourable
Hafod Wennol Grasslands	Marshy	Unfavourable
Nant y Crimp	Marshy	Unfavourable
Penplas Grasslands	Marshy	Unfavourable
Tairgwaith	Neutral	Unfavourable
Tir Mawr a Dderi Hir, Llwydcoed	Marshy	Unfavourable
Waun Ton-y-spyddaden	Marshy	Unfavourable
Woodland Park and Pontpren	Marshy	Unfavourable
Caeau Nant y Groes	Neutral	Unfavourable
Blaen Nedd	Calcareous	Unknown
Bryncarnau Grasslands, Llwydcoed	Acid	Unknown
Cae Bryn-tywarch	Marshy	Unknown
Cae Gwynfryn	Marshy	Unknown
Caeau Blaen-yr-Orfa	Marshy	Unknown
Caeau Bryn Ifor	Marshy	Unknown
Caeau Heol y Llidiart-coch	Marshy	Unknown
Caeau Nant Garenig	Marshy	Unknown
Caeau Nant y Llechau	Marshy	Unknown
Caeau Tir-mawr	Marshy	Unknown
Cilybebyll	Neutral	Unknown
Cors Bryn-y-Gaer	Marshy/Acid	Unknown
Cwm Cadlan	Marshy/Neutral	Unfavourable/Unknown
Frondeg	Marshy	Unknown
Gorsllwyn, Onllwyn	Marshy	Unknown
Gweunydd Dyffryn Nedd	Marshy	Unknown
Gwrhyd Meadows	Marshy	Unknown
Illtyd Pools	Marshy	Unknown
Llety - Wen	Marshy	Unknown
Mandinam a Coed Deri	Marshy	Unknown
Nant y Rhos	Marshy	Unknown
Pen-y-graig-goch	Marshy	Unknown
Penllwyn-yr-Hendy	Marshy	Unknown
Rhos Cruglas	Marshy	Unknown
Rhos Hen-Glyn-Isaf	Marshy	Unknown
Rhosydd Castell-du & Plas-y-bettws	Marshy	Unknown
Tir Mawr a Dderi Hir	Marshy/Neutral	Unknown
Waun Goch, Penrhiw-Caradog	Marshy	Unknown
Y Gors	Marshy	Unknown
Six Pit, Swansea Vale and White Rock	Neutral	Unknown

Over 120 sites were surveyed as part of the Phase 2 grassland survey; many have been notified but 59 sites of minimum SSSI standard remain undesignated.

Table 24. Heads of the Valleys Phase 2 Sites.

*Confidential information removed*

Neath Port Talbot Council prioritise focus on the Nature Recovery Action Plan (NRAP) marsh fritillary sites, to maintain and enhance current management and monitoring of sites in the Dulais Valley and extend into additional sites where possible, to continue to support the marsh fritillary meta-population. The Carmarthenshire LNP has an objective to 'positively manage grassland habitats and connect and expand where possible', enabling these sites to 'function as core areas of a resilient ecological network' and also to 'maintain and expand the range and/or population of species associated with these habitats'.

All the local authorities have identified Sites of Interest for Nature Conservation (SINCs). These are the local authority ecology planning designations which identify areas which meet the SINC criteria and are designated through the local authority Local Development Plan process. A significant number of SINC sites support grassland and marshy grassland in the Heads of the Valleys. These sites could be the focus of management to improve connectivity between the various SSSIs within the focus area.

NRW has produced a number of ecosystem profiles for priority ecosystems, including grasslands, to support delivery of the South Central Area Statement. The next stage is to develop Resilient Ecological Networks (RENs) for these profiles. These could inform focus in the eastern parts of this priority area from Merthyr Tydfil to Glynneath.

The Taff and Cynon Headwaters in the BBNP REN is relevant to this area.

A second REN is being developed that may also include sites relevant to this priority area: 'Rhondda and Cynon Valleys and Uplands Valleys' (NRW 2023)

## Current and Recent Activity

Rhondda Cynon Taff County Borough Council (CBC) Living Landscapes pilot has been developed based on the long history of working to protect and manage the best grassland sites and is aimed at linking nature conservation and people. The pilot will be managed through community projects run by the LNP and focuses on a network of sites that the council and /or partners own or manage. The 29 sites within this network are made up of sites adopted by the council which have Section 106 (S106) funding for management works; sites owned by developers with S106 management commitments and requirements; sites that the local authority or partnership owned and managed. There are many more grassland sites that could be included in future phases as there is the potential to include additional partner land and S106 agreement sites into a larger biodiversity land management project. A number of the sites identified fall within or close to the priority area in RCT.

RCT Planning Mitigation sites -There are a large number of significant grassland, marsh fritillary and peatbog mitigation commitments that have been secured through long-term S106 planning agreements and other planning commitments. These include the following key examples which collectively provide an opportunity to secure a near continuous west-east connectivity of land along the A465 in RCT and which should help to physically link the Blaencynon SAC in the west to the three closely adjacent SSSIs which lie in the centre and east of the A465 corridor in RCT:

1. Hirwaun Industrial Estate Peat Bog restoration (including marsh fritillary habitat) on a large rare lowland bog owned and managed by National Grid and closely adjacent to the Blaencynon SAC. This includes conservation grazing with ponies on drier parts of the bog.
2. Tower Colliery restoration – a S106 commitment for a large scale habitat restoration of upland edge grassland, heath and marsh fritillary habitat which has included conservation grazing with cattle.
3. Bwlffa Dare windfarm – a S106 commitment for large-scale habitat enhancement of approaching 100 hectares management of very long-established moderately species-rich marshy, neutral and acid grassland on ancient opencast. The scheme undertakes specific marsh fritillary measures and the site is being conservation grazed with cattle. The scheme also includes areas of upland bog restoration.
4. Hirwaun College – a 4/5 hectare marshy grassland and marsh fritillary S106 mitigation which is conservation grazed.
5. Cynon Gateway Road. Recently approved A465 link road which includes a large area of marshy grassland and marsh fritillary habitat mitigation to be managed as mitigation/enhancement/compensation around and adjacent to SSSI.
6. Marsh fritillary long-term planning mitigation for dualling of the A465 through Welsh Government. Two large areas of species rich marshy grassland and marsh fritillary habitat at the eastern end of the A465 in RCT, one of the two areas being conservation grazed with cattle. This scheme includes long-term (30yr) commitment to appropriate management.

The area of habitat enhancement and long-term management secured is likely to exceed 200 hectares and the ambition is to map the sites. As mentioned, there is a lot of work involved in trying to secure the mitigation and enhancement secured through planning conditions and agreements, and the different trigger points for the bringing forward of different sites means that not all of the above are currently in action, but it shows what can be achieved through the planning system. Co-ordination of conservation effort is vital, as is support amongst potential project partners to help maximize these opportunities.

BBNP/RCT Enviroparks S106 Agreement. This S106 was set up to provide compensatory management of marsh fritillary habitat within a 5km radius of the Hirwaun Industrial estate, taking a landscape area roughly half in the BBNP part of RCT and half in RCT outside the BBNP. The S106 was primarily administered through BBNP with Butterfly Conservation and RCT involved. The S106 commitment was for approximately £200,000 and tied to planning applications to BBNPA and RCT CBC. Butterfly Conservation are identified to deliver the project with BBNP administering the S106. The life of the agreement is 15 years and it started around 2010. The project will have developed useful case study of landowner engagement in grassland conservation work, and may have learnt useful lessons to take forward in any future farmer/landowner grant offer engagement work.

The Caeau Mynydd Mawr marsh fritillary Project has used section 106 agreements to manage marshy grassland that provides habitat for marsh fritillary butterflies in the Cross Hands area of Carmarthenshire. The agreements work with graziers to secure conservation grazing on key sites based on local metapopulations. The project area has been reviewed and expanded. This is a long-term project of 20+ years and has a dedicated member of staff to work with land owners and graziers with excellent habitat results.

NRW Grassland Project is a 3-year project (2022-2025) working to restore grassland sites in Pembrokeshire and Carmarthenshire. It is funded by NRW's Biodiversity and Ecosystem Resilience Fund (BERF) and there is a dedicated project officer. Work is focused on improving the condition of land outside SSSIs, mainly through improved grazing management, and follows on from work re-mapping key areas of habitat. It is expected that project delivery will be through a range of mechanisms, including Section 16 management agreements and licences. A range of partner organisations re involved.

Initiative for Nature Conservation Cymru (INCC) have been proactive in the Amman Valley for the last 4 years working to restore grasslands. They are working with landowners to enhance grassland sites, e.g. working with landowners to produce green hay and reintroduce grazing, and are mainly focused on non-designated sites. The work is core funded by INCC and is based on the principle of building long-term relationships with the farmers. The value of long-term personal relationships cannot be over emphasised. Many of the farmers have another income stream, however one farmer is solely reliant on his farm economically and enthusiastic about implementing conservation management on parts of the farm. INCC are working closely with the NRW Grassland Project to secure funds for work on the farms they have developed relationships with.

Butterfly Conservation lead a group of organised volunteers, to find, survey and monitor marsh fritillary sites in NPT and neighbouring areas of Carmarthenshire. It has become clear that the marsh fritillary is largely, if not entirely, confined to the Dulais and Amman

Valleys, in the northern sector of the county. Each year known and potential breeding sites in these areas are monitored for the presence of larval webs and their condition is assessed. Butterfly Conservation have also worked in partnership with Natural Resources Wales to reclaim and manage marshy grassland suitable for marsh fritillary in the Dulais Valley, on NRW owned land previously planted with Sitka Spruce or intensively grazed. An important part of the conservation management strategy throughout has been the organisation of sympathetic grazing regimes to keep habitats in a condition favourable for marsh fritillary. At present there are seven known occupied marsh fritillary sites in NPT as well as a number of apparently suitable sites that have not yet been colonised. There are strong populations in the Dulais Valley in the vicinity of Blaendulais but the largest populations are found in the Amman Valley and particularly near Tairgwaith and Cwmgors. Connectivity analysis reveals that these habitats form parts of larger, complex meta-population networks that reside mainly in Dyfed and south Powys.

NRW Conservation staff spend significant time engaging with farmers and owner/occupiers of SSSI, securing Section 16 agreements to ensure long-term management of grasslands. BBNPA and NGOs currently also work with farmers and graziers to manage grasslands throughout the priority area. Small community focused projects are delivered as part of the LNPs.

The WTSWW are working to secure grazing management on their own reserves with excellent results. The Trust have also secured funding through the NNs Fund to deliver the Resilient Grassland Project. This two-year project includes a number of WTSWW sites, with one in the Heads of the Valleys. Planned work includes implementing No-Fence collars for stock control, fencing, walling, habitat mapping, bracken and scrub control.

The Healthy Hillides Project is a Welsh Government funded partnership project led by NRW. The project is working to explore land management practices that reduce the risk from wildfire whilst delivering positive conservation management. This includes cutting scrub and bracken and introducing grazing. The project works across South Wales, including within the priority area, and demonstrates how work to meet different objectives could contribute to longer term positive management for grasslands.

Plantlife had been exploring opportunities to work with landowners in the area around their nature reserve Cae Blaen-dyffryn. Early indications had been that there was some interesting habitat in the surrounding landscape, and land use in the area is primarily beef and sheep farming. Plantlife made the decision to invest in the recruitment of an Agricultural Advisor role. A significant part of the role has been to make contact with farms in the 1+ mile radius of the nature reserve and to talk to the farmers about their farm businesses, find out about their interests and the pressures on them, and the potential opportunities on their land. The focus has been on understanding the farms' stories, identifying the barriers that might prevent them wanting to be involved, and to find opportunities for biodiversity gain that would be genuinely mutually beneficial. In recruiting the Agricultural Advisor, the normal conservation recruitments were avoided, in favour of local outlets and community groups, and word of mouth, and with a much stronger focus on personal agricultural experience than ecological knowledge. Early indications are that this approach is going to generate better information for delivery, and is a good future model for work planning.

Plantlife has submitted an application to the Nature Networks Fund - Glaswelltiroedd Gwydn. A long list submitted with the application was based on the co-occurrence of statutory sites and Plantlife's Important Plant Areas and Important Fungus Areas, which, for example, included Carmel NNR, a site part managed by the WTSWW and part managed by NRW. If successful, the sites will be looked at again and only some will make the short list based on opportunities available.

The National Botanical Gardens of Wales (NBGW) are leading the way in demonstrating use of green hay and meadow management/enhancement on their land near Cross Hands.

Carmarthenshire Meadows group are active and work on Gwrhyd Meadows SSSI and Cilybebyll SSSI.

### **Ecological Evidence and Gaps**

The NRW Grasslands Project is re-mapping Phase I habitats in their target area in Carmarthenshire, providing more up to date local habitat information, but the lack of recent habitat distribution data remains an evidence gap for most areas.

RCT Local Nature Plan contains grassland information and grassland conservation information.

Plantlife Waxcap data – Plantlife's citizen science app for waxcap recording identifies some sites of potential importance for grassland fungi.

Mapping work done for the BBNPA - Developing Habitat Networks and Ecosystem Resilience Mapping for the Brecon Beacons National Park Authority (Rowe et al Aug 2021).

Butterfly Conservation survey - marshy grassland data, mapped data of meta populations outside protected sites in Carmarthenshire and NPT.

Data exists for the part of this priority area between Merthyr and Hirwaun through the planning system. Possibly some of the most surveyed areas in Wales. The A465 dualling program delivered a huge programme of marsh fritillary survey and monitoring which included the corridor either side of the road. Some waxcap records were also collected as part of planning work/A465 work but it is more scattered.

NRW undertook marsh fritillary monitoring of SSSIs 2 years ago. This was mainly driven by marsh fritillary meta population work so there is a lot of habitat data for fritillary sites. Neutral grasslands will have been picked up with these surveys so there is now better information on where some of these sites are.

In Carmarthenshire there is good data on marsh fritillary distribution, especially through Caeau Mynydd Mawr, Butterfly Conservation and the NRW grassland project on non-designated sites. The Carmarthenshire Council Strategic Land Review has led to a better idea of quality sites they own.

It was agreed with those consulted that a desk top survey is needed for habitats and target species to pull together all the information across the area and identify the gaps.

## Challenges

- Effective coordination of work on grasslands across the area. There is no capacity at the moment as very few dedicated staff for grasslands. The exception is the Caeau Mynydd Mawr Project and the NRW Grassland Project but these are local projects and could not work at this scale in their current form. In contrast, the Peatland Programme have a core team to focus on peatlands with dedicated staff. There may be a case for splitting the large area into smaller regions but this was not suggested by the partners.
- No clear organisation to lead. Local authorities don't have the remit or capacity. NRW could lead but that may not be the most effective way forward. NGOs can be more agile. However small NGOs may not be in the position to manage a large programme of work and the associated finances, especially given the geographical scale and number of key partners in this target area.
- Promoting grasslands for carbon sequestration and carbon storage is a challenge. The evidence on the carbon benefits of grasslands needs to be collated and communicated locally and nationally. Plantlife is currently doing some work in this area; Floodplain Meadows Partnership have done some work on it, focused on floodplain grasslands. This is picked up as a strategic recommendation.
- Tree planting schemes on important grasslands is a significant threat and needs to be raised regionally and strategically to ensure important semi-natural grasslands are not damaged or lost to poorly designed schemes.
- The above is also linked to the erosion of the farming community through the purchase of land for carbon-offsetting.
- No coordination or targeted support for graziers. A grazing network that is appropriate and matches the number of sites and is flexible enough to graze sites is needed. Support for graziers is important, including the availability of land for graziers to use for livestock when they are not conservation grazing, and initiatives that encourage new, young graziers.
- Graziers sometimes have to pay to graze. It is rare that they are actually paid for the service to land management that they deliver. Funding to pay graziers to graze as service deliverers is important.
- No clear mechanism for feeding back to Welsh Government to help inform the development of the SFS scheme and uncertainty among farmers about SFS.
- A lack of funds that prioritise on nature and farming.
- Ongoing development pressures e.g. new housing developments adjacent to priority sites.

## Opportunities

- Enthusiasm from local authorities, NRW and NGOs to achieve semi-natural grassland management at a landscape scale to improve the resilience of these vulnerable habitats and the species they support.
- Plenty of best practice of working with planners and developers to deliver significant long-term grassland improvements and management through the planning system.
- Section 16 agreements are used to improve management on SSSIs and NRW has the power to use these on non-designated sites. This provides an opportunity to pay farmers and graziers to positively manage site outside of the protected site series (subject to appropriate funding availability).
- Significant experience, local knowledge and networks in the area within local authorities, the National Park, NRW and NGOs and the opportunity to work together at landscape scale.
- Availability of graziers although support for a network would be beneficial (see barriers).
- There is likely to be another round of NNF in summer 2023 so there is potential for a local project or projects to be submitted. These projects need to focus on identified sites and are useful to support activity on the ground. However, such projects could do so much more if there was dedicated staff working long-term with farmers and if project applications were coordinated across the area to support this work on the ground.
- The new SFS should offer opportunities that encourage farmers to manage grasslands positively using management payments.
- There may be immediate opportunities on publicly owned land to develop best practice further e.g. through the RCT Living Landscape Project and on NRW Estate where approx 20% is not forested.
- The co-ordination of and promotion of multiple sites in need of conservation grazing can provide opportunities for entrants to the agricultural sector who may otherwise struggle with the more traditional approach of owning land. Given the high cost of agricultural land, a 'mobile' herd that can take advantage of multiple sites that need grazing can provide a feasible agricultural model for graziers without the high capital costs associated with purchase of land, enabling sustainable food production and economic benefits along with a valuable service to conservation and habitat enhancement.



## Recommendations

The Heads of the Valleys has unique challenges and opportunities due to high development pressure and the large number of high value, semi-natural grassland sites. Partners active in the area have undertaken significant works over the years to bring degraded habitat back into condition, engage graziers and work with the planning system to finance site management through grazing and other mechanisms. There is a long history of partnership working both at a local and a regional level and this was reflected in the number of people who engaged in the scoping exercise.

The on-going work with farmers, graziers, communities and developers provides plenty of best practice and strong relationships on which a future project or projects could be built. Coordination is needed to bring this together and build on the best practice at a regional scale.

To do this, the main recommendation is that at least one dedicated member of staff is required who is funded over the long-term to work with others and build long-term relationships with farmers, graziers and small holders.

This member of staff could bring together a partnership with all stakeholders. To do this farmers, graziers and other individuals would need to be paid to participate so that meaningful discussion can take place on how the approach should develop.

The Caeau Mynydd Mawr model has shown how this can work locally, and the work of organisations such as INCC also demonstrate what can be achieved if investment is made in building relationships.

As work is already happening in places, a member of staff would work in targeted areas to complement, not replace, what is happening, but also to facilitate work and encourage a more coordinated approach. This could include supporting and expanding work undertaken through the planning system, helping to target Section 16 money and helping partners to develop projects to target funds at agreed priorities.

It is also recommended that:

A desk top survey is commissioned to bring together the information available on lowland semi-natural grasslands and to target species in this priority area and identify further evidence gaps. Funding for future survey work can then be built into project applications. Bringing together more detailed information on habitats and activity in a spatial form would also be a big step towards coordinating the activities of those involved and making strategic decisions about where best to target future effort and investment.

Consideration is given on how best to support graziers, and that funding is made available to pay graziers for the services they provide to habitat management in the same way that a contractor would be paid to use mechanical management.

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## Data Archive Appendix

No data outputs were produced as part of this project.

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