



‘Upland Arboretum’ Feasibility Study

Lot 1 Feasibility, Research, Planning & design and scoping studies
Cynnal Y Cardi Consultancy Framework

Phase 1 Report - DRAFT

By CATALYS Ltd.
17/04/18



Cyngor Sir
CEREDIGION
County Council



Catalys
Raddle Hall, Church Street,
Broseley, Shropshire, TF12 5BX,
United Kingdom
Email: info@catalys.org
www.catalys.org.uk

Registered in the United Kingdom. Company number: 08090039

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Introduction

The purpose of this report is to bring the first stage of the feasibility work for the Upland Arboretum to a conclusion, presenting its findings and identifying the next steps.

The project brief specified the following:

- Establish the feasibility of cross sector working to develop forestry, farming, tourism and community resilience in the Hafod region
- Focusing on opportunities for tourism, historic landscape, training and skills, and landscape resilience, consult with regional groups to establish priorities for land use around the Hafod Arch
- Input into the design of the restocking of Natural Resources Wales owned land around the Hafod Arch to create an ‘upland arboretum’.

The research team have drawn together material from key sources, most of which is publicly available. The main sources are laid out in Appendix 1, along with a synopsis of each.

The work has been guided by a steering group comprising project lead partners, Ceredigion Council, Institute of Biological, Environmental & Rural Sciences at Aberystwyth University (IBERS), Coed Cymru, Tir Coed, Cambrian Mountains Initiative and Pentir Pumlumon. In addition, the team have contacted and gained input from a wider range of key stakeholders such as Natural Resources Wales, Hafod Trust, NFU Cymru and Coed Lleol.

Finally, the views of residents, community members, and farmers/land managers were sought through a well-attended workshop in January.

1. Establish the feasibility of cross sector working to develop forestry, farming, tourism and community resilience in the Hafod region

The report establishes the feasibility of developing an initiative focused on the Hafod region that can begin to address the issues set out in the brief. Although there is more work to be done, the initial need and demand are established.

The area centred around the Hafod Arch is an area that is clearly ready for change, due to a combination of agricultural change, tree health and the challenges faced by upland communities and their populations ¹. The timing of the study during the run up to Brexit also offers an opportunity, as the policy environment is potentially more flexible with an unprecedented openness to new ideas. Changes with the public sector may also mean that public assets (in terms of land and/or buildings) are more available to an innovative initiative that might feasibly make the difference for the area, whilst funding from the public sector is likely to be harder to source.

The consultation workshop, which was attended by 39 members of the local community and key stakeholders, demonstrated that there is appetite and willingness within the local community to engage with a new ideas and initiatives. One of the most significant findings was a desire to create a shared 'vision' for Hafod and the surrounding area. A summary of these findings can be found in section 2.2.

The study is therefore both apt and timely. However, the means to achieving the forestry, farming, tourism and community resilience hoped for by the original brief are not yet apparent. More work will be required to develop routes to achieve these objectives. Initially this could be through one or more projects that can lever new resources into the area, without which change will not be effective. The feasibility work so far has identified a range of ideas and potential developments. These require further work to refine them into one or two options for detailed consideration. One thing is certain, however; whatever is done will need to be based upon a partnership approach established on a cross-sectoral basis. A single sector or organisation is likely to be too narrow in scope to be viable. It is also clear that any initiative will require clear and effective leadership, so that ideas are developed, organised and presented to the communities in a logical and responsible fashion. The absence of such leadership and supporting coordination will have the effect of disappointing community aspirations, which have already been raised.

A particularly important illustration of this point is the land management "sector". CAP-led land management has focused on the place and the role of farming and farmers. The EU had no equivalent level of competence for forestry, meaning that CAP funds were significantly limited when it came to spending on forestry and woodlands, and resulted in a

¹ Although the area clearly benefits from a good community spirit and cohesion, the population is declining overall and new means are needed to make the area attractive to younger people both to come and to encourage those already there to stay.

lopsided policy environment. The repatriation of land management policy and support following Brexit offers the opportunity for a more integrated and comprehensive policy which will favour re-balancing toward forestry and woodland management and the workforce that depends upon them. This will offer a unique opportunity to explore alternative models that are driven by different considerations to those that have driven the CAP, e.g., giving a higher priority to forestry and wellbeing.

Finally, all of the above means that this is a good time to be looking at these questions and that a cross sectoral approach could offer the way ahead. A word of caution is however due, in that the challenges of the Hafod area should not be under-estimated; its geography, demography and economy are significant barriers and will need to be realistically assessed in any planned development. On the other hand, its unique history, location and landscape offer ample opportunity for appropriate rural leisure, recreation and tourism development, along with other land use activities. The level of community interest also augurs well for collective solutions.

2. Focusing on opportunities for tourism, historic landscape, training and skills, and landscape resilience, consult with regional groups to establish priorities for land use around the Hafod Arch

2.1 Study Area

The map given below sketches out the study area as agreed by the steering group. The boundaries are to be treated as ‘fuzzy’ as it was felt important not to limit potential opportunities in the surrounding area. The central focus is the Hafod Arch, which is considered to be a key feature in the development of the Upland Arboretum and has become the heart of the inner core area for visitor welcome and orientation.

Another important point of arrival and interpretation is the area including the Church of St Michael and All Angels or Eglwys Newydd and nearby Ysgoldy Goch, which is now considered as the community hall of the area. This Listed building was built as a Sunday School hall in 1891 and gifted to the church and community by The Waddingham Family who were possessors of Hafod Uchtryd at the time. It is used regularly and is a community meeting area. Some five years ago it was decided that a parking area was needed and a piece of land was bought from Pwllpeiran, with planning permission granted by Ceredigion County Council. That project has yet to come to realisation. Both locations offer themselves as key points of arrival and visitor parking.

The relationship between the Estate and the adjacent settlements of Devil’s Bridge, Pont-rhyd-y-groes and Cwmystwyth are also important to any future initiatives in terms of vehicular access, links to local businesses, access to services and community involvement. These aspects were explored in some detail at the Upland Management Workshop (see section 2.3).

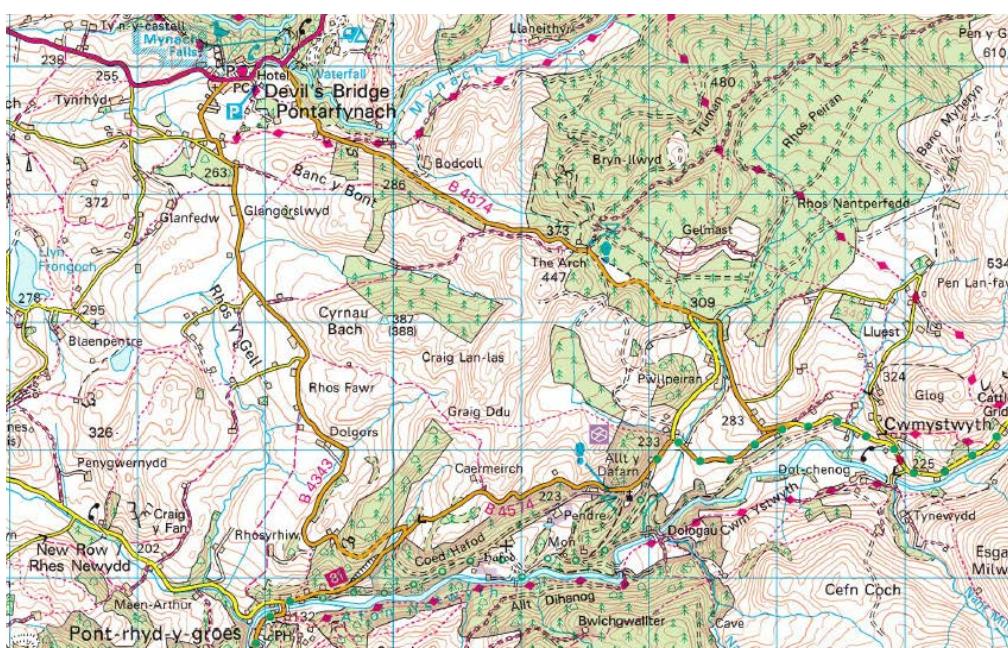


Figure 1: Proposed study area

2.2 Consultation - Site visits, meetings and appreciation of the landscape

Site visits

The study team visit the area on numerous occasions, including a drive and walkabout session with the Pwllpeiran Farm Manager. This allowed them to gain appreciation of the Hafod Estate and surrounding area and the historical significance of the work of Thomas Johnes and the 'Picturesque' landscape. It also provided insight into some of the difficulties of woodland management and felling on steep sided slopes, the narrowness of local roads and the lack of passing places, the potential of clear felled areas for replanting and redevelopment, and the relationship between local landowners.

Meetings

A meeting with the Manager of the Hafod Estate explored the relationship between the Trust and other landowners, primarily Natural Resources Wales, in relation to the Hafod Silvicultural Systems Map and the Bwlchgwallter and Hafod FRP Forest Management and Ten-Year Harvesting Activities Maps. It also provided an understanding of the Trust itself and its position on future management of the estate. The Trust was already working closely with local groups such as Aber Actif Woods, Aberystwyth University, Mind Ceredigion and Tai Ceredigion.

Other key meetings included a discussion with Forest Research Cymru at Bangor University, looking more specifically at the implications of the Forestry Act 1967 and Section 83 of the Government of Wales Act, both of which relate to restrictions and protocols on the disposal of publicly held land and future management arrangements. The discussion also centred on the possibility of developing and implementing a new management mechanism whereby forestry and associated land might be transferred to an identified responsible body under a long-term lease-type arrangement, with the land remaining as part of the public estate but managed as a community asset.

The Vincent Wildlife Trust and their well-established Pine Marten Recovery Project provided an update on their progress in establishing a viable population in the area, including their community engagement work and ideas for introducing wildlife hides, remote camera viewing and other non-intrusive techniques (such as IR video loops at suitable venues) to enable people to appreciate this intriguing animal and its behaviour. Interest in the project was amply demonstrated when over 70 people attended a community update evening event at the Hafod Hotel in late November 2017, with extremely positive and active participation by those present.

The Hafod Hotel and its new owners also shared their aspirations for the hotel, including developing it as an outdoor activity hub. This builds on a study by Miller Research on upland regeneration² in the area that was initiated by Pentir Pumlumon and funded by Cynnal y Cardi. It is understood that a tourism development officer will be appointed by Pentir Pumlumon shortly to take that initiative forward.

² Upland Regeneration Study, July 2017, Miller

2.3 Upland Management Consultation Workshop

This event was seen as a crucial part of the engagement process, and considerable effort was expended in identifying wide range of local residents, relevant organisations and wider policy groups. The meeting held at Pwllpeiran on 16th January was attended by 39 people, details of which are given in Appendix 2.

Participants representing a wide range of relevant organisations and local groups, expressed their openness to ideas and for discussions around the opportunities for joint working and creating a ‘vision’ for the area that is both necessary and timely.

All workshop participants were invited to make a contribution. The workshop notes were circulated to all participants to a (ensure their accuracy and b) to demonstrate inclusion and acknowledge their inputs a potential onward involvement.

It was also agreed during the meeting that a smaller evening discussion group of local landowners would take place in order to counsel the views of those unable to attend the workshop due to daytime work commitments. This will take place in Phase 2 of the project.

2.3.1 Aims of the workshop

To explore common issues surrounding challenges to upland management, including:

- integration and collaboration
- delivering ecosystem services
- resilience of species
- resilience of the community
- physical and other forms of accessibility
- the development and promotion of innovative thinking
- training aspects

Participants were asked during their introductions to speak on behalf of their vision for upland management. There was then a discussion based on a series of prompted questions. Points to consider included:

- How much joint planning or working currently goes on in the area?
- How much appetite exists for joint working and what would participants prioritise?
- Is there scope for a common area management plan?
- Can an incentive scheme be developed for delivering integrated ecosystem services?
- What are the main challenges to resilience and how can they be addressed?
- Should there be a Hafod Area Forum involving all landowners and other stakeholders?

- Are there other viable revenue generating possibilities, such as ecotourism and cultural tourism?
- Is it possible to improve physical access to the area or should other forms of accessibility be explored, e.g. on-line awareness raising?
- What other ideas can we bring to the project?
- What training needs and opportunities subsequently arise?

The afternoon session split into three groups with specific tasks to look at area management issues of a) landscape and land use (2 groups), and c) people and community involvement (1 group).

2.3.2 Workshop discussion and findings

A wide variety of ideas and comments came from the discussion and, where possible, these have been considered in the report. There were some key findings that were particularly valuable in informing the analysis to date.

Key findings from discussion:

Engagement

- A desire to create a shared 'vision' for Hafod and the surrounding area
- A willingness to explore ideas for partnership working across different sectors, agencies and local groups
- An appetite for future co-operation and co-working
- The need for additional consultation with local farmers and landowners
- The need for local voices to be heard and listened to – there was some frustration that previous consultations had led to little perceived action on the ground
- There is a strong sense of community pride and engagement
- Recognising and supporting the importance and distinctiveness of the Welsh language

Ideas and opportunities to develop existing local buildings and services

- A point of arrival and interpretation is the area including the Church of St Michael and All Angels or Eglwys Newydd and nearby Ysgoldy Goch, which is now considered as the community hall of the area.
- The relationship between the Estate and the adjacent settlements of Devil's Bridge, Pontrhydygroes and Cwmystwyth are also important to any future initiatives in terms of vehicular access, links to local businesses, access to services and community involvement.
- A craft or skills centre.
- Potential for forestry training and need in relation to local opportunities
- A 'hub' to focus activities and information
- Encouraging outdoor activities for children and families
- Using charismatic species as a 'hook' to engage with the landscape

Ideas for future land and woodland management

- An alternative model to the current default 'clear-fell and restock' monoculture model including the potential for community ownership/management models \
- Integrated farming & forestry approach
- Has social values and well-being goals as a core principle
- Innovative approaches such as that of the Woodlanders Club who supply waste firewood to local people
- Contributes to the economic, social and environmental sustainability of the local area and community
- Potential role of agro-forestry
- The potential role of a local coppice sector, use of coppice products in environmental management.
- Create a functional working landscape
- Positive links could be developed with other local partnerships and projects
 - Opportunities to develop tourism - Pentir Pumlumon
 - Pumlumon Project – Montgomeryshire Wildlife Trust
 - Community woodland projects - Woodland Trust, Tir Coed, Coed Lleol
 - Pine Marten Project - Vincent Wildlife Trust
 - Large scale landscape restoration project, Summit to Sea - Rewilding Britain
 - Historical land management and restoration projects – Hafod Estate
 - Elan Links project – Elan Valley Trust
 - Cambrian Mountains Initiative
 - Strata Florida Project
 - Linking up with local events and groups e.g. walking groups and cultural events

Local issues and considerations

- The challenges faced by those who live and work in the Hafod area have a wide range of technological underpinnings – mobile connectivity, broadband etc.
- Transport links are limited and the roads are narrow
- Risk of over-tourism
- Young people don't stay in the area
- How to get community informed and involved in projects in the area
- More sure community ideas are taken on board and moved to the next stage – don't waste people's time
- Ensure sustainability – funding runs out so facilities are taken away

3. Input into the design of the restocking of Natural Resources Wales owned land around the Hafod Arch to create an ‘upland arboretum’.

3.1 The Concept of the ‘Upland Arboretum’

The term ‘upland arboretum’ was coined for this project and it has stimulated a number of discussions. The term was chosen specifically to distance the project from either ‘forestry’ or ‘woodland management’, and to embody a more inclusive and innovative approach that has its roots in the historical tree landscape of Hafod. It must be stressed, however, that the focus would be on native species and varieties rather than the introduction of exotic specimens from elsewhere. A further consideration of the right name is still required; ideally an appropriate name should be descriptive of both area and intentions.

During the consultation we have understood it to include the following aspects:

- A **mosaic** or **framework** for a multi-use, integrated woodland management approach
- Cross-sectoral approach
- An alternative model to the current default ‘clear-fell and restock’ model which could include alternative ownership models – community share ownership, partnerships with investors, social investment tax relief etc.
- Has social values and well-being goals as a core principle
- Contributes to the economic, social and environmental sustainability of the local area and community
- Improved diversity and resilience

A suggested alternative to ‘upland arboretum’ was a ‘historic tree landscape working for the future’.

3.2 General context

The desk research and consultation to date have raised a wide range of issues that are relevant to the future choices that might be considered regarding future restocking. Naturally, the choices that might be considered are dependent on the nature of the vision that might be agreed.

Should consensus emerge that a vision for radical change is appropriate for this area - and that this is a vision shared by local people and the land-based³ community - then it would

³ Farmers, foresters, agricultural and woodland contractors and others whose livelihoods are derived in whole or in part from the land.

be appropriate to consider these radical solutions and changes. Without such agreement, changes based on a coherent vision will be difficult to achieve.

It is clear that the rationale for radical change should be considered, as the challenges that face the area are such that the “business as usual” option is no longer tenable. Change is inevitable and planned change is preferable to unplanned change that could result in further negative impacts. For instance, an unsustainable landscape framework that fails to plan appropriately could lead to increased depopulation and subsequent land abandonment. Alternatively, a far-sighted creative approach that considers the specific challenges of the area and joins up needs and opportunities, could lead to a unique approach based in community engagement, environment and landscape development.

3.3 Forestry context

According to **Woodlands for Wales Indicators 2015-16** the forestry and timber industry employs more than 10,000 people in Wales – and is worth more than £520 million annually to the economy. As well as providing a supply of timber, trees are crucial to Wales’ climate change ambitions; through Carbon sequestration. Wales’ Woodlands and forests also provide habitats for biodiversity, areas for recreation, reduce flood risk, as well as helping to filter air and water.

The **Public opinion of forestry survey (2017)** found that 96 per cent said they provided at least one public benefit to Wales; almost 8 in 10 saying they were good for wildlife and 68 per cent said they were important for recreation. Trees are clearly a well-loved and integral feature of the Welsh landscape.

However, 18000 Hectares (40 million trees) have disappeared since 2001 across Wales. New planting rates have dropped to almost zero in recent years according to Forestry Commission Statistics 2017 – and many businesses are warning thousands of forestry jobs could be lost unless planting of softwoods (conifers) increases rapidly.

According to a recent article by Martin Bishop of Confor, (Click on Wales Feb 2018) the wood using sector has an unmet demand for timber. For instance, Josh Sambrook-Jones of Clifford Jones Timber (Ruthin) says they would create more jobs immediately if it had more wood – and could double or treble production if they had enough trees to supply the demand. He also quoted Jonathan Poynton of Pontrilas sawmills, who said “As long as we have trees to harvest and process, we will employ people,” he told me “More trees equals more jobs.”

The reality is different. The **Climate Change Strategy for Wales** contains an aspiration to create 100,000 hectares (ha) of new woodland between 2010 and 2030 as a means to help Wales meet its carbon emission reduction targets. The recommendation from the Land Use Climate Change Group (2010) was accepted by the Welsh Government as a climate change target to achieve levels of reduction in Wales greenhouse gas emissions by long-term carbon sequestration. The aspiration required planting 5,000ha of additional woodland

cover per year from 2010 to 2030. This means 35000ha should have planted by now, the reality is just 3700ha, 11% of target.

The long-term 50 Year **Forecast of Softwood Availability** for Wales shows a decline in timber production in the near future. This will reduce investment by wood processing companies and threatens jobs. The UK is already the world's largest net importer of timber, a situation which is likely to become even more entrenched into at least the medium term.

In 2017 by the Welsh Assembly Climate Change, Environment and Rural Affairs committee published their "**Branching Out**" report calling for a sharp increase in planting, especially productive conifer species. Environment Minister Hannah Blythyn told the Welsh Assembly that improving and expanding the woodland of Wales is one of her top priorities. Lesley Griffiths, the Cabinet Secretary for Energy, Planning and Rural Affairs, has put climate change at the heart of her work

The report **Combating climate change – a role for UK forests** report stated that as well as soaking up, and storing, atmospheric carbon, planting trees will help Wales and the UK become more globally responsible by reducing imports of timber and timber products. The woodlands and forests of the Hafod Upland Arboretum area can play a role in this larger economy, whilst more importantly also showing new directions. Hafod can trial innovations in planting, management and value chain development that involve the community, at the same time as promoting local businesses and the local economy and promote the range of ecosystem services provided. This should lead to short term gains through better use of residues, the diversification of restocking, the introduction of shorter rotations, such as coppicing, diversification of skills of farmers, foresters and communities. Longer term a woodland/wood-using economy and wood culture can be developed through a more creative and inclusive approach to restocking, leading woodland development and management that deliver considerably more to the triple bottom line (economy, community and environment) than the traditional Forestry sector has managed to date.

4. PESTLE Analysis

The main factors identified in the research stage of the project have been organised under the headings of the PESTLE⁴ Analysis. The purpose of this is to ensure that the material collected is ordered under a logical framework and to ensure that gaps are identified and filled. For this reason PESTLE is often used as a preliminary step in SWOT analysis, ensuring that the landscape has been scoped efficiently. The approach has also been suggested in order to emphasise the many dimensions that influence land use change, beyond the simple operations that take place on the land itself. There is a need for a plan that achieves a new balance between forestry and farming, open land, recreation, social, economic and community use.

Although the PESTLE analysis is intended to provide a useful framework, it is not intended to provide an exhaustive summary, as this is often given elsewhere, for example in statements of policy. It is not intended to be comprehensive, but rather it should draw out the key relevant points.

4.1 Political

Under this heading we are looking to identify relevant factors in relation to current and existing laws and regulations, government policy and its goals. The short list of policy statements and legal texts shows the direction of travel in relevant areas of policy; i.e., it is

- Future focused
- Cognisant of climate change and forestry trends
- Attempting to create an environment for rural business diversification
- Legal/policy bodies such as Welsh government and NRW are now open to suggestions for change at strategic and local levels.

Wellbeing of Future Generations Act - requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change. It is relevant inasmuch as the partners place it within the scope of its future plans for the area, which would be sensible given partners' aspirations. The Act is explored in the Legal section.

Climate Change Strategy for Wales (See section 3.3) - contains an aspiration to create 100,000 hectares (ha) of new woodland between 2010 and 2030.

⁴ PESTLE (political, economic, socio-cultural and technological, Legal and Environmental) describes a framework of macro-environmental factors used in the environmental scanning component of strategic management. It is part of an external analysis when conducting a strategic analysis or doing market research; and gives an overview of the different macro-environmental factors to be taken into consideration. It is a strategic tool for understanding market growth or decline, business position, potential and direction for operations.

Branching Out (Welsh Assembly Climate Change, Environment and Rural Affairs committee - 2017) – calls for sharp increase in planting.

National Planning Policy Framework - is currently out for consultation (until 18th May) – Planning Policy Wales, the Technical Advice Notes, circulars and policy clarification letters comprise national planning policy which should be taken into account in the preparation of development plans, they are also material to decisions on individual planning applications and will be taken into account by the Welsh Ministers and Planning Inspectors in the determination of called-in planning applications and appeals. There is a short section on trees and woodland but otherwise very little specific mention of woodland or forestry, so it's difficult to gauge the impact it might have on forestry and woodland management “ancillary” structures, i.e., the sort of structures that are likely to be needed for woodland management, training and social forestry.

Rural Business Diversification

4.95 Small economic activities can often be sustainably located on farms and other rural businesses and provide additional income streams. Planning authorities should adopt a positive approach to diversification projects in rural areas. Diversification can strengthen the rural economy and bring additional employment and prosperity to communities.

This seems to be a place and time of opportunity as there are political and environmental reasons to look for a new balance between farming and forestry in the uplands and upland fringes. In addition, NRW are open to new ways of working, both in the context of Brexit and in the face of other challenges it is facing in the management of its Welsh land, woodland and forestry holdings. Partners should also support regulatory suggestions, such as that for Rural Business Diversification in italics above.

4.2 Environmental

Unsurprisingly the environmental section of the analysis has drawn in a great deal of detailed material, given the overall focus of the ideas. In addition to the environmental issues themselves this section is intended to identify community and stakeholder attitudes to the environmental issues identified.

4.2.1 Forest Resilience

Monoculture forestry can result in a reduction in natural resilience, where a single species is prone to disease, subsequent damage and death. The recent rapid spread of *Phytophthora ramorum* through larch plantations in Wales is known to have affected over 9000 ha, resulting in a radical revision of planned felling and replanting programmes. For instance, the recently received Forest Design Plan for the Myherin at the Arch Hafod Uplands produced by NRW came with the following caveat: *the woodland dynamics have changed due to infected larch felling mainly. It would therefore be sensible to take with caution this information, of planned felling and tree management.* Shading caused by dense and closed canopy planting is thought to contribute to Phytophthora pathology, as it lowers summer ground temperatures, allowing the pathogen to thrive. The impact of Phytophthora and the need to removed diseased stands before their economic maturity and bring forward the need to plan for a more resilient and therefore more diverse approach to restocking.

There are also limitations to natural regeneration in softwood plantations due to the high levels of larch and spruce seed stock in the soil which may inhibit the pre-existing native woodland gene pool. In many places (including Hafod) planting has taken place on very steep slopes that are difficult to clear. Pre-existing broadleaved trees still stand within conifer stands and can be used in the future plans.

4.2.2 Biodiversity

Biodiversity in Wales is promoted via the Wales Biodiversity Partnership. Welsh Government has produced a Nature Recovery Plan which builds on the ground-breaking legislation listed in the previous section of this report. It is a live document which is effectively the National Biodiversity Strategy and Action plan for Wales. Hafod would appear to be a natural testbed for implementing and demonstrating some of its key objectives in terms of habitat and species protection.

One successful project already implemented in the area is the Vincent Trust's Pine Marten Reinforcement Project, which has seen the introduction of males and pregnant females from Scotland to strengthen the very weakened native population. This has resulted in a first and second generation of kits which have been closely monitored and studied. Recent research by Aberdeen University has indicated a potential link between pine marten and recovery of the red squirrel population, with marten thought to compete aggressively with grey squirrels for prey and habitat.

A more established initiative in mid-Wales has seen spectacular recovery of the red kite, which is now a common sight across many parts of Wales and a key element of its wildlife tourism offer.

In the context of biodiversity, the concept of rewilding the uplands has recently gained considerable resonance. This does not entail the abandonment of previously productive land and the indiscriminate introduction of large, fierce mammals, rather it is large-scale conservation aimed at protecting natural processes and core areas, providing connectivity between such areas and protecting or reintroducing apex predators and keystone species. Rewilding Britain has developed the Summit to Sea/O'r Mynydd i'r Môr (S2S) project which, if implemented, will be the first in Britain to establish a dynamic ecosystem from mountaintop to the sea. The plan is to establish one continuous nature-rich zone of at least 10,000 ha of land and 20km² of sea from the top of Pumlumon - the highest point in mid-Wales – down through wooded valleys to the Dyfi Estuary and out into Cardigan Bay.

According to the project proposal the flourishing ecosystems that emerge through the restoration of natural processes will support a resilient nature-based economy providing a sustainable future for local communities as well as creating opportunities for people to reconnect with wild nature. This will demonstrate a ground-breaking model for conservation and natural resource management which can be replicated in other areas of Wales and the UK. The core and outer areas are to the north and west of Hafod, but early discussions with Rewilding Britain has indicated a willingness to work together to create greater connectivity.

4.2.3 Ecosystem Services

Ecosystem services have come to be recognised as key and fundamental activities which maintain the health of the environment. These include provisioning services (such as food, fibre and timber), regulating services (including climate regulation, regulation of water, air and soil quality), supporting services (soil formation, nutrient and water cycling and primary production) and cultural services (including recreation and tourism, cultural heritage, spiritual and aesthetic aspects). Alongside this recognition comes the idea of payment for ecosystem services (PES), where landowners and land managers are actively encouraged and remunerated for appropriate land and water management practice. For example, this could include the role played by forests in attenuating flood peaks and carbon storage; the design and management of river corridors as wildlife corridors and to optimise their water management role. Hafod has the opportunity to provide both a research and best practice role in relation to ecosystem services and new mechanisms for PES in Wales. A planned meeting of local land managers could be used to explore potential principles and mechanisms of delivery.

As another practical example, and given the limitations to natural regeneration, there is a role for a community tree nursery to promote re-stocking that might promote the collection of local seedstock. This could be led by Llais y Goedwig and draw on input from the Future Trees Trust, so that resilient seedstock can be collected and grown. The local woodlanders club could play a vital and ongoing on-the-ground part in the project.

4.3 Social

The social aspects of the Hafod area are less well researched and data is most reliably gained from the Ceredigion community strategy, although this does not distinguish the area of study alone, it is the nearest proxy without undertaking a review of small area statistics. The latest LDP community strategy noted that there was “a lack of information regarding specific (social data such as) employment needs exists for the county.”

The Wales Spatial Plan noted that the area is a low wage economy, where socio-economic conditions were weighed by poor transport infrastructure, poor IT and other issues that impede social mobility, such as a lack of childcare. The LDP Community strategy work noted that Ceredigion communities faced the following issues, which contribute to the community conditions observed:

- Peripheral to main economic centres
- ICT and Transport infrastructure often inadequate
- Labour and skills shortages
- Low productivity and income
- Lack of community capacity
- Higher cost of service provision
- Declining sectors in economy
- Low population density
- access to services such as dentists, specialist treatments, closing post offices and other facilities (declining).

At the same time the community representatives felt there was a Good Quality of life in Ceredigion. They felt theirs was a self-reliant, multi-skilled and adaptable population. Although the young are keen (or forced) to leave Ceredigion in search of jobs/city life etc., however, Ceredigion remains a place that many chose to return to later in life.

Overall, however the area will continue to be a challenging place to live as the effects of the metatrends continue to be felt, i.e.:

- CAP reform and EU expansion
- Out migration of young and qualified
- Further effects of globalisation
- Demographic imbalance

4.3.1 Skills

One aspect of local community capacity that should not be overlooked is that of skills. The skills of a community can be the difference between capability and incapability. For example, were the partners to create new opportunities for woodland contracting this might be initially counterproductive if the practical and business management skills are not found locally and have to be imported from elsewhere.

The work on the Ceredigion community strategy highlighted that local people are adaptable and flexible. Similar comments were made in the consultation for this project.

Although this is a laudable point of view, the existing labour force's traditional forestry and agriculture skills sets may not be sufficiently diverse and adaptable to deliver what the future forest of the area might need without external support and development. Whilst the aptitudes are almost certainly present given the importance of the agricultural and forestry sectors locally, it will be necessary to up-skill and broaden the capabilities of farmers, foresters and new entrants in and around the area in order to meet the challenges and opportunities that the Hafod Arch initiative might bring. Such activity should be done in such a way to build local community resilience.

Training and development will be required to grow the capacity of the community to access any opportunities that might arise. This can also be considered a community/social issue as there is a tendency in rural communities (such as that of Hafod and the surrounding area) for social and economic capabilities to overlap.

4.3.2 Community engagement

The response to the community consultation and the community strategy work for the LDP show that there is a strong sense of community pride and engagement. The fact that community representatives cite the good quality of life and strong cultural identification with the area, for instance as noted by those who, although they leave the area for work and city life early on, express a strong desire to return later on, shows that if opportunities are created that there is likely to be a demand locally to make them work.

Communities have already demonstrated why it will be important to keep them involved in the process of developing and testing ideas and then in their implementation, in that there is already intense interest in the process. It will be important to facilitate the role of communities in future landscape planning and the structures and processes that might be able to support it; if successful Hafod would become a practical demonstration of how communities can become involved in landscape futures. Those responsible for this process will need to ensure that they enable younger people be engaged in the process?

4.3.3 The Welsh language

Recognising and supporting the importance and distinctiveness of the Welsh language as a cultural identifier for the area will be critical to the success of the initiative. This not simply about ensuring that the regulatory standards are observed, but also about identifying how the language can be employed positively and as a means of engaging visitors and non-Welsh speakers alike.

4.4 Technological

The challenges faced by those who live and work in the Hafod area have a wide range of technological underpinnings. The technologies that impact on community communication and cohesion are all regularly affected by technological change that is led from outside the area and to which the area needs to respond. The same is true of the infrastructure that is required to market, transmit and transport goods and services, the techniques and the technologies for managing forest resources and the somewhat different techniques involved in smaller woodland management.

This landscape of change is outside the control of those in the area, however, the way in which such technologies are employed in the many communities like those in the Hafod area, is a different matter. Communities such as this are largely responding with a 'make do and mend' philosophy that is common to agricultural communities. There is therefore an opportunity to look in more detail at how the community can develop a menu of approaches that could introduce a mixture of new techniques that could strengthen overall resilience.

One aspect of technological development which is particularly critical is broadband infrastructure. Access to 3G enabled (and increasingly 4G and 5G), will be fundamental to future community sustainability, as more and more social and economic interactions move online. Operating a tourism (or indeed any sort of) business, using mobiles, satnav, GPS, running a community group or indeed a family all increasingly depend on the internet and the poor/patchy nature of the network in the area will become ever more restrictive.

On another technological level, it is clear that land managers, whether farmers, foresters or conservation based find it very difficult to be aware of the wide range of techniques and equipment that might be on the market. This is particularly the case for those who for example may be in farming, but have access to woodland resources, but lack skills and equipment for their exploitation. There is a constant need for the transfer of skills and technologies at this level.

4.4.1 Rural innovation

It should not be forgotten that the Hafod area has a reputation as a centre of rural innovation, with Pwllpeiran as a centre of rural/land-based research and experimentation. This is a reputation that can be built upon, however, as the university is considering its options regarding the future of the site, time is short.

A possible way forward might be to establish the area as a test bed for future land management change. There is a clear rationale for such an approach but it would need community and land owner support to be effective. The workshop discussions appear to demonstrate a definite appetite for future co-operation and co-working. This could be undertaken by an existing organisation, a combination of organisations, or by a new, as yet undefined, entity.

4.5 Legal

Under the terms of the Forestry Act 1967 the Forestry Commission was charged with the general duty of promoting the interests of forestry, the development of afforestation and the production and supply of timber and other forest products in Scotland, England and Wales. Under Section 83 of the Government of Wales Act 2010, responsibility was transferred to the Welsh Ministers, with the duties of the Forestry Act vested in the Natural Resources Body for Wales. The amalgamation of the Forestry Commission, Environment Agency and Countryside Council for Wales into the new Natural Resources Wales in 2013 saw responsibility pass to the new agency. Disposal of forestry land remains the preserve of the Welsh Ministers.

Recent legislation including the Environment (Wales) Act 2016 has attempted to put in place the measures necessary to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up manner. Section 6 under Part 1 of the Act introduced the enhanced duty for public authorities in Wales to 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. In order to do this, and in order to increase ecosystems' ability to adapt to events such as climate change, public authorities should seek to improve the diversity between and within ecosystems, the connections between and within ecosystems, the scale and condition of ecosystems (including their structure and functioning).

The latest Climate Change Risk Assessment (CCRA) identifies flood risk, stresses on water resources and threats to biodiversity and natural habitats as some of the main threats to the UK. Ecosystems are highly vulnerable to climate change, therefore action is needed now to help improve the resilience of our ecosystems and the services they provide, such as clean water, food production, control of disease and recreational and tourism benefits so that these services may continue in the future.

The Well-being of Future Generations (Wales) Act 2015 requires public bodies to put long-term sustainability at the forefront of their thinking, to work with each other and other relevant bodies in improving the social, economic, environmental and cultural well-being of Wales. It contains statutory measures such as the establishment of Public Service Board in order to achieve this. Under its obligations under Act, NRW has a statutory responsibility to work with others through the Public Service Board to ensure implementation of the legislative requirements, which include helping people to live healthier and more fulfilled lives. This includes:

A PROSPEROUS WALES - providing opportunities for learning and skills development, which will help people into jobs

A HEALTHIER WALES - enabling access to green space and encouraging people to become more active; working with partners to understand how its work can contribute to social inclusion and public health

A MORE EQUAL WALES - enabling equal access to green space and ensuring good air and water quality and waste reduction is available to everyone, regardless of where they live

A WALES OF COHESIVE COMMUNITIES - bringing communities together in attractive environments to live and work, while also developing skills that can help people into jobs.

A WALES OF VIBRANT CULTURE AND THRIVING WELSH LANGUAGE - using our natural environment to inspire the arts, sports and recreation

During the consultation workshop held at Pwllpeiran in January 2018, NRW representatives expressed their openness to ideas and for discussions around the potential for resourcing in the future and for Hafod in particular developing the existing sense of place and creating a destination/image around a central hub, working with the picturesque vision of Hafod, centred on the strong image of the Arch, a picturesque vision for the future.

In order to encourage and facilitate greater co-operation and co-working on forest planning and supply chain development, Welsh Government has introduced a Co-operative Forest Planning Scheme as part of the Rural Communities – Rural Development Programme 2014-2020. This is a revenue scheme aimed at improving woodland creation in Wales by identifying opportunities at a strategic level and supporting proposals seeking to facilitate, develop or establish new collaborations and activities, to facilitate agreements of local priorities and to help potential new collaborations develop project proposals. It recognises that woodland creation requires involvement of stakeholders in the planning process and the scheme will cover the standard costs of that inclusion. Stakeholders can be considered as beneficiaries in certain cases or may be reimbursed indirectly for their contribution to forest plans through the payment made to the forest holder.

Any woodland creation plans put forward as a result of the scheme must be in line with the principles of sustainable forest management set out in the Forests Europe initiative and in the EU Forestry Strategy. In Wales, all plans will be assessed by Welsh Government to determine that they are in line with the UK Forestry Standard which translates the Forests Europe and the EU Forestry strategy into a UK context. The scheme is meant to complement Glastir and other Welsh Government Rural Communities - Rural Development Programme 2014-2020 schemes.

This still leaves the matter of woodland ownership and, in the case of NRW forest holdings in the Hafod area, the need to explore new longer-term and innovative leasehold options tied to agreed and evolving felling, restocking and management plans. It also opens up scope for an all-area management approach involving a mosaic of land ownership linked by a common ecosystems approach.

In the current context of Brexit and the future management of uplands post-CAP, Hafod also offers opportunities for new ways of working and generating or supporting incomes. A conference held in Llanrwst in March 2017 on the Future of Upland Farming concluded the following.

We are not starting from nowhere; indeed, we have a wealth of understanding, experience and expertise upon which to build our common future from this point forward. It is also important to understand who is listening and not listening, so as to overcome the “us and them” culture within farming today. We need to create a mutual understanding of the situation facing agriculture and farmers.

The conference summariser went on to note that one of the key discussion points was how to place value on wildlife species and habitats and other ecosystem services and how such attributes can be assessed or measured as part of appreciating the true worth of agriculture. Similarly, how can we place value on health and wellbeing, including the health and wellbeing of farmers themselves? We may need to develop new qualitative as well as quantitative measures to address these challenges, especially where payment systems are concerned.

We also need to establish a new foundation of support for agriculture, one which offers options for all. This could include a new form of Glastir, one which is more equitable, less prescriptive and based more on facilitation than policing. We could begin with new guidelines starting from the farmer’s perspective and build new partnerships based on practical compromise rather than restrictive regulation. We need to develop a new common understanding and a renewed spirit of cooperation.

We may even need to consider taking some land out of productive agriculture entirely and have wider conversations on the types of sustainable landscape and environment we want in the future, as part of our reassessment of the direction of upland farming in Wales following our departure from the European Union. We face a new future, one to which we can all contribute, as farmers and landowners, public bodies and the third sector working together. It is a challenge for all of us!

A more recent report on The Implications of Brexit for Agriculture, Rural Areas and Land Use in Wales produced by Prof Janet Dwyer for the Public Policy Institute for Wales states that:

Managing the challenges faced is key, to prevent undesirable impacts on natural capital, landscape quality and community identity. Three policy directions are recommended:

- Foster resilience in farm and other land management businesses; supporting successful adaptation, enhanced efficiency, diversification, adding value and inter-generational transfer, as well as some moves from farming in to other sectors;
- Invest in longer-term partnerships between government, food retailers, rural service providers, and commercial lenders to promote stronger business networks and SME infrastructure across Wales;
- Design a future funding framework to support natural resource management and rural vitality in Wales.

SOURCE:

https://docs.wixstatic.com/ugd/f06571_00c7b7cb284e472396b073f909824d4a.pdf

4.6 Economic

It isn't the role of this overview to give a detailed economic appraisal of the area. Even if such an appraisal were possible, it would be beyond the resources available to this project to compile. Rather, the overview will draw from published sources, such as the community strategy and economic work done for the LDP, along with material drawn from the consultations and stakeholder discussions.

4.6.1 Overall economic conditions

Using the work done for the LDP, the WSP and the RDP as a proxy, it is clear that the area is encountering challenges common to rural/peripheral areas in Wales and the UK. The challenges include:

- There is a decline in traditional industries (agriculture).
- Availability and frequency of transport
- Peripheral to main economic centres
- ICT and Transport infrastructure often inadequate
- Labour and skills shortages
- Low productivity and income
- Lack of community capacity
- Higher cost of service provision
- Declining sectors in economy
- Low population density
- CAP reform and EU expansion
- Out migration of young and qualified
- Further effects of globalisation
- Demographic imbalance
- Lack of investment in infrastructure.

However, at the same time, the following strengths have been identified. Whilst not all will be directly relevant, such as QINETIQ, there is definitely a relationship with the “high value” capabilities and technologies being developed by IGER. Positive developments and potentials include:

- There is growth in “high-end” employment sectors at QinetiQ and IGER.
- A growth in the “value-added” sector in the county has been observed, particularly in the food sector.
- ICT and facilitation of a substantially knowledge-based economy
- Expanding business sectors compatible with rural economy including tourism and renewables
- Supporting ‘strategic hubs’ and significant centres
- Demand led growth in HE/FE
- Strong base for innovation and technology transfer both locally and to meet wider markets –FCW, IGER, AberTechnium, new and existing businesses

- Potential to retain and attract skilled Workforce/ entrepreneurs
- Safeguard and enhance quality of natural And built environment to promote quality of life and local economy
- Targeted and managed infrastructure Development
- Unique development of UAV sector
- Growing community capacity

4.6.2 Sectoral and local dimensions of the Hafod area

The Hafod area is sparsely populated and has a relatively narrow economic base. This should not however be used to justify the assumption that the area is in inexorable decline. As the previous sections have shown there are many changes going on within and out with the area that offer opportunities to its communities and businesses.

The working population of the area are substantially involved in the tourism, agriculture and forestry sectors and it will be important to recognise those skills and the motivations of those people/businesses in developing new opportunities.

It will also be important to recognise the existing dynamics of the predominant sectors, for example the seasonal and cyclical nature of forestry work makes managing small scale businesses in the sector a challenge.

An emerging theme is that of the opportunities that forestry and woodland management can offer the agricultural sector. However, one of the factors holding this back is the (at least perceived) lack of integration between farming and forestry. If farmers take up the opportunities that are likely to be offered in future, and as post-Brexit land based incentives become more holistic in nature, this lack of integration will need to change markedly. New skills will need to be embraced and new roles forged in land management, community woodland management, and in areas like Hafod, promoting Community Supported land management. In this way the forests and woodlands can become an engine in reconfiguring the role of farmers in the area.

Another aspect of the current local economic character of the area is in the current nature of the area's tourism sector. Visitors tend to have an interest in outdoor tourism and it will be important to build on this market.

In capitalising on these opportunities it will be important To ensure all sectors are engaged. This should include, but by no means be limited to farmers and landowners. Although their collaboration will be critical, it will be even more important to encourage connections between farmers and other sectors.

Any new ideas would need to be rigorously tested, for instance a range of ideas have been suggested, including

- a craft or skills centre.
- Potential for forestry training and need in relation to local opportunities.

With regard to new land management approaches:

- Tried and trusted Community Woodland models exist.
- Potential role of agro-forestry
- The potential role of a local coppice sector, use of coppice products in environmental management.

4.6.3 Moving forward

The partnerships, ideas and approaches that have brought to the study have been broad and optimistic. The next stage of the testing will need to look at what is needed to take these ideas forward and whether the partnership has the capacity to realise the opportunities. For example, does it need to widen the area to make sure linkages can be made and critical mass achieved without losing focus.

A lead partner is needed to take the responsibility for the initiative if it is to move forward effectively. The current loose partnership is finding it hard to make progress, as there is no single person or body who is driving the initiative forward. This is probably the reason for its frequent losses in momentum.

One option might be to seek a larger scale partner. This could have the benefit of helping to “carry the risk” implicit in the initiative. For example, there is a potential role for a body such as the University or Coed Cadw/Woodland Trust, that has the capability and the motivation to lead large scale change. The advantage of the university taking a lead is that it already has a research footprint and the potential clearly exists to make stronger links to its existing portfolio of research, development and innovation interests, eg, through IGER.

5. Conclusions and recommendations for Phase 1

Broadly, the conclusions of the study are drawn out in Section 1. It is clear that this is an appropriate time and place to be looking at the questions of future land management and to be doing so in a creative and challenging way. The opportunities are significant, and so are the challenges and call for new approaches.

We recommend that the study is taken forward to narrow the options and work in more detail on the favoured way forward. New funds will be needed, but it is unlikely that opportunities are going to be realised through money alone, it will require the use of other mechanisms as well to release land and other assets and bring them into close and directed alignment in support of an appropriate (resilience) plan. Discussions with the communities, with stakeholders and the proponents of the ideas shows that there is appetite for an appropriate resilience plan that is innovative and be able to attract new ideas and new blood.

If you keep on doing what you are doing, you will get what you got – Henry Ford.

The study therefore recommends that The Upland Arboretum Feasibility Study moves to Phase 2 that should:

- Pick up on the conclusions of Phase 1 articulated through the PESTLE Analysis and taking it into a SWOT that would be used to stimulate the Steering Group to guide drawing conclusions and priorities.
- Refine the options and establish a single way forward.
- Identify a resourcing framework for the way forward and supports applications for funding.

This work could be accomplished in 6-9 months, depending on the availability of the Steering Group.

6. Next Steps

- Commission Phase 2
- Hold Steering Group meeting to prioritise the options
- Hold community consultation and consultation with land owners and managers to inform the process
- Determine preferred draft option
- Hold further steering group
- Support process of application for external funds
- Explore governance options and alternative models of ownership (initial thoughts at Appendix 3)

APPENDIX 1: Hafod Upland Arboretum Baseline Research Notes

Landscape Characteristics and Historical Context

An Attempt to Depict Hafod, David S Yerburgh	A pictorial journey around the estate of Hafod, made famous by Thomas Johnes in 1783-1815. Illustrated by sketches, paintings and prints of that period, and by modern photographs
The Hafod Landscape: An Illustrated History and Guide, Jennifer Macve	<p>Account of the history and background of the Hafod Estate. “Such is the curiosity of the world to see a house, when nine in ten neglect to go through the walks which are <u>worth seeing</u>.” T Johnes</p> <p>The Picturesque - Hafod is an example of ‘Picturesque’ landscape design. Johnes created a landscape of rocky outcrops, waterfalls and streams with a network of paths, bridges and follies to give the perfect views of the ‘sublime’, or nature untamed. Much of these features remain and have been restored by the Hafod Trust.</p> <p>Features added by Johnes – Alpine Bridge, Hafod Arch, Cold Bath, Tyloge Bridge, Chain bridge, Walks, etc...</p> <p>A working landscape – Johnes attempted to convert upland pasture into plantation woodland in response to a national concern about depleted timber stocks – much of this was European larch with broadleaves and Norway Spruce. He tried a number of innovative ideas with various rates of success. He was noted and given awards for his forestry and is said to have planted around 34 million trees.</p> <p>Mining – lead and zinc deposits were mined on a small scale</p> <p>Notable species – the damp climate supports a wide range of lower plants and fungi including lichens, liverworts, ferns, mosses and waxcaps. Specimen trees and original trees planted by Johnes remain.</p> <p>Designations – 2 Sites of Special Scientific Interest – Elenydd SSSI (Red Kites) and Gro Ystwyth Shingle Heath SSSI (unique riverside shingle) Cae’r Meirch SSSI Designated as a Historic Park and Garden</p> <p>Hafod Estate Timeline 1748-1816 - Thomas Johnes</p>

	<p>1833-1871 – under various ownership</p> <p>1871 - 1940 - John Waddington (died 1890) and Thomas James Waddington, leased part of the estate to the Forestry Commission</p> <p>1940-1946 – changed hands three times</p> <p>1946 – house declared vacant</p> <p>1950 – acquired by the Forestry Commission</p> <p>1958 – house demolished</p> <p>1990 – project to restore the estate began through the Welsh Historic Gardens Trust</p> <p>1994 – Hafod Trust established</p> <p>1998 – Heritage Lottery project to create a permanent office base in the old stables, restore the network of paths and other historic features</p> <p>2001-2003 Additional funding from Cydcoed, The Headley Trust and private donors to further restore historic features</p>
Peacocks in Paradise, Elizabeth Inglis-Jones (biography of Thomas Johnes)	History of the Hafod estate and Thomas Johnes' vision to create a Romantic idyll in West Wales.
LANDMAP Methodology Overview, June 2017, Jill Bullen	<p>LANDMAP - An all-Wales landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated in a nationally consistent data set</p> <p>The five LANDMAP spatial datasets are the Geological Landscape, Landscape Habitats, Visual & Sensory, Historic Landscape and Cultural Landscape.</p> <p>LANDMAP</p> <p>Champions many of the principles of the European Landscape Convention</p> <p>Is recognised as an <i>important information resource</i> in Planning Policy Wales 9 (2016, section 5.3.13)</p> <p>Evidence is consistent, transparent and Quality Assured</p> <p>Provides seamless landscape information at local and National Park planning authority boundaries</p> <p>'Natural beauty' includes flora, fauna, geological and landscape features, as does LANDMAP in the 5 layers</p>

	<p>Provides a comprehensive baseline of environmental, cultural and heritage information to assist with sustainable decision-making at a range of levels from local to national scale whilst ensuring transparency in decision-making</p> <p>Is used to monitoring landscape change & trends using remote sensing and professional interpretation</p> <p>Builds landscape knowledge and supports capacity of small teams and limited resources</p> <p>Training and guidance encourages users to be proportionate, selective and focus effort on what matters</p> <p>By being publicly available it gives everyone an opportunity to take landscape into account when making decisions</p>
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Policy and Strategic Context	
NRW Area Plan	This has been requested from Natural Resources Wales
<p>Forest Resource Plan - Bwlchgwallter and Hafod Design Brief, NRW</p> <p>https://naturalresources.wales/guidance-and-advice/business-sectors/forestry/welsh-government-woodland-estate/forest-resource-plans/bwlchgwallter-and-hafod/?lang=en</p>	<p>This Forest Resource Plan covers the Bwlchgwallter and Hafod forests in the Ystwyth valley and situated in the southern portion of the study area. It is now recognised it as one single forest area of 593 hectares. Hafod forest is highly visible and much it is a designated Historic Park and Garden and is managed in partnership with the Hafod Trust.</p> <p>Characteristics - moderately productive forests for timber; soils and climate are good at lower elevations and poorer at higher elevations but are mostly suitable for growing a wide variety of tree species.</p> <p><i>Phytophthora ramorum</i> - larch will need to be removed in the coming years as part of the larch replacement programme currently being implemented.</p> <p>Ancient woodland - in varying ecological condition from Ancient Semi-Natural Woodland (ASNW), to significant areas of Plantation on Ancient Woodland Sites (PAWS) with few remnant features.</p> <p>There are a number of archaeological features designated as Scheduled Ancient Monuments</p> <p>Tourism - Hafod and the lower elevations of Bwlchgwallter – around the grotto, Bwlchgwallter Falls, Dologau – have medium (to high in peak season) recreational usage. There are a number of promoted Public Rights of Way (via Ceredigion County Council) running through the forest which connect the forest to nearby communities and longer distance routes. There are also a variety of additional, promoted, Natural Resources Wales signposted permissive paths and trails catering for a variety of recreational activities including walking, running, cycling, and</p>

	horse riding. Just under a half of all visitors to the forest are tourists. Areas around Dologau and Pont Melyn are promoted for wild swimming.
NRW Forest Resource Plan consultation	Notes from Forest Resource Plan Meeting Thursday 28 July 2016 – ideas for multi-use, amenity woodland around the Hafod arch and Estate.
Upland Regeneration Study, July 2017, Miller	<p>A tourism-focused study to explore issues around the regeneration of the Uplands area of Ceredigion. An Action Plan for the Uplands was created with the two following themes:</p> <p>Increasing Demand Raise awareness of the tourism assets in the Uplands by, for example: Devising an identity and a marketing campaign for the Uplands without introducing confusion of brands with the Cambrian Mountains / Ceredigion / Mid Wales Harnessing existing loyalties of visitors and businesses through an ambassador scheme; Devising an events programme to draw in fresh audiences Using the Hinterland brand to attract visitors.</p> <p>Building Capacity Raise awareness of the potential for tourism development by: Establishing a working group of engaged businesses, with a view to establishing a collaborative Upland Tourism Group; Actions to improve the range and standards of hospitality, Improve infrastructure Improve linkages and transport, through provision of electric bikes, Twizy lease scheme and a pilot programme of shuttle buses from Devil's Bridge. Build entrepreneurship and support new tourism businesses to increase engagement with the backstory of the Uplands; linked, for example, to farm enterprises. Explore funding to support a part-time tourism project officer to deliver the above actions.</p> <p>Summary</p>

	<p>The research has demonstrated the great potential of the Uplands to attract a range of visitors with diverse interests, to enjoy what it has to offer. However, the attractions and</p> <p>hospitality need to be upgraded to reflect the needs of today's visitors and to ensure the sustainability of visitor numbers in future.</p> <p>This will require continued engagement with businesses, to encourage investment and collaboration; both within the private sector and with Ceredigion County Council and other public-sector bodies.</p> <p>There are a number of key opportunities, such as the current interest in Hinterland and the remaining window for access to EU funding, which imply that this is a critical time for the development of the Uplands. Hence it is essential to act now to boost the tourism economy and build sustainable economic prosperity in the area.</p> <p>N.B. the findings of this report have led to the creation of a Tourism Development Officer post</p>
Environment Act: Natural Resources Policy 2017	<p>3 national priorities for the management of Wales' natural resources have emerged. The 3 priorities are:</p> <p>Delivering nature-based solutions - working more effectively with nature to tackle our big challenges. This in particular reflects the conclusions drawn in our SoNaR report;</p> <p>Increasing renewable energy and resource efficiency – and setting out a clear pathway for investment in these areas; and</p> <p>Taking a place-based approach – to respond to local needs and opportunities.</p>
NRP Area Statements and Funding Update, September 2017	<p>NRW is in the process of developing Area Statements informed by a set of National Spatial Priorities that reflect some of the key opportunities in the NRP and will support implementation.</p> <p>This could bring together existing spatial evidence on opportunities to deliver nature-based solutions, for example (not exclusively):</p> <p>Opportunities to maintain Wales' productive capacity; for crops, livestock, fish, timber and natural fluxes of energy</p> <p>Opportunities for supporting health outcomes, including in relation to air and noise pollution through to</p>

	<p>conditions associated with physical inactivity. Opportunities for hazard protection, particularly in relation to the impacts of flooding and climate change, etc.</p> <p>Funding – NRW will remain a funding organisation but are developing a new approach We are going to fund projects in each of the areas covered by Area Statements – over time, aligned to the priorities, risks and opportunities in those places. We will fund ‘All Wales’ projects recognising the interventions that are best delivered once for Wales, or at a particular spatial scale. We will use this process to help identify challenges that together we need to address. Expressions of interest will be taken from November 2017.</p>
Well-being of future generations act 2015	<p>The Act places a duty that the public bodies will be expected to carry out. The well-being duty states: Each public body must carry out sustainable development. The action a public body takes in carrying out sustainable development must include:</p> <ul style="list-style-type: none"> a. setting and publishing objectives (“well-being objectives”) that are designed to maximise its contribution to achieving each of the well-being goals, and b. taking all reasonable steps (in exercising its functions) to meet those objectives
Well-being of Wales, National Goals and Indicators for Wales	<p>The Well-being of Future Generations (Wales) Act 2015 puts in place seven well-being goals for Wales.</p> <ul style="list-style-type: none"> Goal 1 A Prosperous Wales Goal 2 A Resilient Wales Goal 3 A Healthier Wales Goal 4 A More Equal Wales Goal 5 A Wales of Cohesive Communities Goal 6 A Wales of Vibrant Culture and Thriving Welsh Language Goal 7 Globally Responsible Wales <p>A set of 46 indicators have been identified to monitor progress against these goals.</p>

Agenda 2030: Wales and the Global Sustainable Development Goals	Maps the well-being indicators against the 17 UN Sustainable Development Goals
Building a low-carbon economy in Wales Setting Welsh carbon targets, Committee on Climate Change December 2017	<p>The Environment (Wales) Act sets a 2050 target to reduce emissions by at least 80% from 1990 levels and provides the legislative framework for establishing a carbon budgeting approach in Wales.</p> <p>The Act requires that before the end of 2018, Welsh Ministers must set in regulation interim emissions targets for 2020, 2030 and 2040, together with 5-year carbon budgets for the periods 2016-2020 and 2021-2025</p> <p>Areas of relevance to this study:</p> <p>Agriculture policy is fully devolved to the Welsh Government, which should now take the opportunity to put in place farming policies to reduce emissions that move beyond the current voluntary approach and replace the Common Agricultural Policy with a framework that links support to measures aimed at emissions reduction and removals, and to improving the resilience of the natural environment to the impacts of climate change.</p> <p>Forestry is also devolved to Wales. Whilst the Welsh Government has previously announced highly ambitious tree-planting targets, current rates are far below the level needed to reach these. The Welsh Government should simplify and streamline the process for supporting tree planting, in order to reduce the barriers to action.</p> <p>Electricity generation. The recently announced target for electricity equivalent to 70% of Welsh consumption to be generated from renewables in Wales by 2030 is consistent with our scenarios and complements the emissions reduction targets under the Environment Act (including on-shore wind).</p>
National Forest Strategy 2014-2024, England	<p>The National Forest has been a successful project to increase tree cover and boost the visitor, recreational and woodland economies of a 200 sq mile area in England.</p> <p>The strategy prioritises making the most of the asset created and securing the forest's future, through:</p> <p>sensitive achievement of the landscape change, with increased targeting to get the greatest benefits</p>

	<p>making the most of forest sites (woodlands and other habitats, attractions, connections and views)</p> <p>increasing engagement, enjoyment and well-being by the widest range of people</p> <p>effective partnerships taking the forest to the next stage</p> <p>bringing in new income and investment</p> <p>the national exemplar role, research and being a centre of excellence</p> <p>securing a sustainable lead body into the future based on a balanced funding model and the reputation of the National Forest Company</p>
<p>The Future of the Welsh Uplands after the Common Agricultural Policy: Stakeholder Policy priorities, May 2017</p>	<p>In the context of Brexit and uncertainty about leaving the EU, this report is based on the findings of a conference and associated workshop for farmers and others closely involved with the Welsh uplands, and which form the basis of this stakeholder voices report on post-Brexit policy priorities for the Welsh uplands.</p> <p>Key issues</p> <p>A clear vision for the Welsh uplands is needed to guide the direction of future policy.</p> <p>Long term commitments (possibly measured in decades) would increase stability and enable more stakeholders to engage with the vision for the uplands.</p> <p>There is an underlying certainty that continued financial support for the uplands, albeit in an improved form, is essential: a smooth transition to whatever replaces the Common Agricultural Policy is seen as vital in protecting upland farming and the wider community.</p> <p>There is much scope to improve the marketing of existing farmland products from the uplands, specifically red meat.</p> <p>With the right support, upland farmers and land managers are also keen to provide a large number of other benefits, including new primary agricultural products, adding value to existing produce, diversifying land uses and providing a range of wider benefits, such as enhancing and maintaining habitats for wildlife, clean water, energy generation and other ecosystem services.</p> <p>In order to deliver the many possible benefits afforded by the Welsh uplands, relationships between all the actors and stakeholders must be improved, with genuine co-operation and partnerships being built on mutual trust.</p> <p>Policies that are developed to achieve the vision for the uplands should be flexible, farmer- or locally-led and avoid excessive paperwork and bureaucracy.</p>

Local land management strategies – e.g. NRW, Pwllpeiran, Hafod Trust	None supplied to date

Appendix 2: Workshop Attendees		
Linda Ashton	Senior Partnership, Access & Recreation Officer, NRW	linda.ashton@cyfoethnaturiolcymru.gov.uk
Karen Heppingstall	Senior Conservation Officer North Ceredigion NRW	Karen.Heppingstall@cyfoethnaturiolcymru.gov.uk
Richard Sumner	Landscape Architect, NRW	Richard.Sumner@cyfoethnaturiolcymru.gov.uk
Emma Sharp	Biodiversity Officer, Ceredigion County Council	Emma.Sharp@ceredigion.gov.uk
Marie Evans	Rural Communities Officer, Ceredigion County Council	Marie.Evans@ceredigion.gov.uk
Liz Probert	Planning Ecologist, Ceredigion County Council	Liz.Probert@ceredigion.gov.uk
Gareth Owen	Rights of Way Ranger, Ceredigion County Council	Gareth.Owen@ceredigion.gov.uk
Dave Newnham	Development Officer, Hafod Trust	david.newnham@btconnect.com
John Wildig	Hafod Trust, Tir Coed	johnandsuewildig@gmail.com
Phillip Ellis	Hafod Trust	pjnellis@btinternet.com
Gareth Davies	Coed Cymru	garethd@coedcymru.org.uk
Cath Seymour	Tir Coed	c/o Leila Sharland director@tircoed.org.uk
Bob Shaw	Tir Coed	c/o Leila Sharland director@tircoed.org.uk
Adam Thorogood	Ancient Woodland Restoration project officer, Woodland Trust	AdamThorogood@woodlandtrust.org.uk
Esther Wakeling	Operational Support Officer, Cambrian Mountains Initiative	mynyddoeddcambrianmountains@gmail.com
Simon Ayres	Cambrian Wildwoods	wwlf@cambrianwildwood.org

Steve Neville	Local resident	steve@thenevilles.net
Robin Morris	Bro Ystwyth and Mynach Group of Churches	robin_catherine@btinternet.com
Cathy Morris	Bro Ystwyth and Mynach Group of Churches	robin_catherine@btinternet.com
Dic Evans	Community walks leader	rhedwr@gmail.com
Jane Hopkins	Community Councillor	tjwhop@hotmail.com
Geraint Coles	Senior Lecturer in Heritage Management, University of Wales Trinity Saint David	Geraint.Coles@uwtsd.ac.uk
John Davies	Resilient Crop and Resource Manager IBERS	jod28@aber.ac.uk
Peter Howells	County Adviser Ceredigion & Pembrokeshire NFU Cymru	Peter.Howells@nfu.org.uk
Charlotte Priddy	Policy Officer, FUW	charlotte.priddy@FUW.org.uk
Zena Wilmot	Dyfi Woodlands	info@dyfiwoodlands.org.uk
Vicki Chism	Woodlands Caravan Park	enquiries@woodlandsdevilsbridge.co.uk
Tony White	Ceramicist	tonyjohnwhite@btinternet.com
Mary Raw	Local accommodation provider & Pentir Pumlumon	mary@welshaccommodation.co.uk
Tina Edwards	Toad and Wren Trees	doctora.collodia@gmail.com
Sharon Millar	Toad and Wren Trees	doctora.collodia@gmail.com
Wynne Jones	Pentir Pumlumon	wynne@pumlumon.org.uk
Dave Bavin	Pine Marten Project Officer, Vincent Wildlife Trust	davidbavin@vwt.org.uk
Elliot Hails	Volunteer, Vincent Wildlife Trust	

Josie Bridges	Pine Marten Project Officer (community engagement) Vincent Wildlife Trust	josiebridges@vwt.org.uk
Mick Green	Rewilding Britain	mick@gn.apc.org
Tony Porter	Local resident	teeport@btinternet.com
Brython Davies	Local resident & Siloam Chapel	
Gladys Morgan	Local resident & Hafod Church	
Mary Lewis	Project Manager, Catalys	mary@catalys.org
Arwel Jones	Lead Consultant, Catalys	arwel@catalys.org

Appendix 3: Governance

Governance models to deliver chosen option could include:

- Trust
- Co-operative
- Community Interest Company
- Community Interest Organisation
- Company Limited by Guarantee

Options for consideration - **Local Development Agency** – an agency which might be called “Menter Hafod” or “Menter y Pentir” and promoted economic, social and environmental objectives for the benefit of both the local community and for wider benefit would have merit. However, it would need to be clear about the wider benefits, focusing on a small number of things that will lead to genuine wider benefit, at the same time as being aligned with local community interests. A series of objectives might be fashioned along similar lines to other LDAs, such as Menter Mon.

A less formal arrangement could include an accord and a commonly developed and agreed management plan for the area which provides an overall vision, objective, actions and timelines. This could be the subject of negotiation with NRW and Welsh Government as part of the new approach to upland management.