



Llywydd/President: Iolo Williams

Cadeirydd/Chairman: Prof. Roger Earis: chair@cambrion-mountains.co.uk

Gwefan/Websites: www.cambrion-mountains.co.uk

30th August 2018

To: The Welsh Affairs Committee – a submission to the inquiry on renewable energy in Wales

Executive Summary.

- Who are the Cambrian Mountains Society /CMS? (Introductory box)
- The use of Natural Resources Wales' LANDMAP in evaluating areas suitable for wind farm/wind turbine developments (in the Cambrian Mountains). [Para 1]
- Scottish Government's Wild Land Areas. [Para 2]
- Solar parks and micro-hydro renewable schemes. [Paras 3 & 4]
- Use of the precautionary principle in high value landscapes. [Para 5]
- The 'Cambrians' part in; renewable energy generation, the low carbon economy, ameliorating climate change and ecosystem services. [Paras 6, 7 & 8]
- Grid connection or local consumption. [Para 9]

Introduction -The Cambrian Mountains Society (CMS) was formed in 2005 with the following objects:

- To promote, for the benefit of local communities, and of the wider public, measures which will sustain or enhance the landscape, natural beauty, biodiversity, archaeology, scientific interest, and cultural heritage of the Cambrian Mountains.*
- To advance the education of the public in the landscape, natural beauty, biodiversity, archaeology, scientific nature, cultural heritage and geodiversity of the Cambrian Mountains.*

CMS is a registered charity and at present has a membership of around 300. At the heart of the Society's work is that the glorious landscape of Cambrian Mountains might be better protected probably by joining the Welsh family of Protected Landscapes. This could be either as Wales' 4th National Park (NP) or 5/6th Area of Outstanding Natural Beauty (AONB). Since its inception the Society has campaigned over many issues facing the Cambrian Mountains ranging from;

- the implementation of Local Development Plans in the Counties which cover these hills,
- land management techniques,
- off-road use of motorised vehicles on public rights of way,
- and the spread of wind farms, as well as individual wind turbines, across the area.

- Para 1. Relating to the final bullet point in the above Introduction, CMS does emphasise that it is not an anti-wind turbine organisation, but that it considers the spread of such technology, especially across areas of outstanding landscape value must be better evaluated. CMS did see some merit in Welsh Government's TAN 8 (2005) which among other advice did demarcate 'Strategic Search Areas' (SSAs) suitable for large scale wind farms. But how areas of such high landscape status such as Clocaenog Forest (SSA-A) in North Wales and Nant y Moch (SSA-D) in the Cambrian Mountains were chosen as suitable still troubles the Society. Perhaps today, using Natural Resources Wales' *LANDMAP*, with its multiple layers of landscape evaluation, WG might make more informed decisions as to locating its SSAs. Whilst CMS is primarily concerned with large-scale wind farms encroaching on the "Cambrians" the Society also sees the proliferation of single "small" turbines as effectively producing a wind farm landscape. Again co-ordinated planning, using *LANDMAP* would help to prevent this.
2. Tan 8's approach seemed to be one of finding areas suitable for large scale wind farm developments, a better alternative might be to look at Scottish Government's **Wild Land Areas**. These recently designated areas, under Scottish planning law, move toward preventing developers constructing wind farms in these glorious wild landscapes.
 3. Not only are CMS concerned about the multiple deleterious effects of wind farm developments on the "Cambrians", including all of the assets stated in the Society's first object (see Intro box) but also from the intrusion of other renewable technologies on the Cambrian landscape. Firstly, as can be found in the recently formulated Powys CC Local Development Plan, large areas very close to the Cambrians have been demarcated as suitable for large arrays of solar panels. It is the Society's opinion that these "parks", if built, will have a very negative effect on the landscape in which they are sited as well neighbouring countryside. Again the use of *LANDMAP* may help to prevent such damage.
 4. Also, recently there has been a proliferation, in and around the Cambrians, of micro-hydro schemes. Whilst these schemes, which are usually 'run of the river', may have little effect on the visual and sensory aspect of the landscape their influence on riparian ecology is questionable. It is not sufficient to state that these schemes have no effect on migrating salmonids, other organisms in these small streams such as; bryophytes (mosses & liverworts), lichens and also freshwater invertebrates are adversely affected by such technologies. NRW must thoroughly evaluate future schemes before planning permission is granted and the agency's environmental impact assessment should not only look at the individual scheme but also the cumulative effects of several such installations on the whole catchment's biodiversity and ecology.
 5. What CMS is suggesting is that the Precautionary Principle is applied when considering renewable energy schemes in areas such as the Cambrian Mountains. Always to be taken into account when considering industrial developments in these hills at the very heart of Wales is that in 1976 the Countryside Commission designated this area as Wales' 4th National Park (unfortunately the Secretary of State for Wales at the time refused to sign off the designation order).

6. This is not to say that the Cambrians should be ‘preserved in aspic’ – they have a part to play in the Nation’s low carbon future and ameliorating climate change. Large tracts of these hills are clothed in blanket bog but much of these have become degraded, probably by a combination of factors including inappropriate grazing and acidified rainfall. Perhaps some of the £557 million of funding available could be diverted into restoring these bogs which environmental scientists now see as vitally important in sequestering carbon. Alongside this, funding could also be used to increase native woodland cover in the area, again sequestering carbon.
7. As regards actual renewable electricity generation the Cambrians have significant areas covered in Bracken and Purple Moor Grass. Experimental schemes to harvest areas covered in these highly invasive plants are underway in which the ‘crop’ is used to indirectly generate electricity. These schemes utilise either anaerobic digestion or pyrolysis/biochar production to generate renewable electricity as well as other products such as plant fertilisers and soil improvers. Funding could be used to scale-up these experimental/pilot schemes.
8. CMS see using the funds available to subsidise both carbon sequestration and biomass technology as good value for money. Following these paths would not only generate electricity and remove excessive CO₂ from the atmosphere but also help to repair and maintain upland habitats. These schemes would also have the benefit of providing payment for ecosystem services to the farming community – “public money for public goods”.
- ...9. CMS is also concerned about the effects of grid connection across the Cambrian landscape as pylon/mast connection routes can be almost as damaging as the renewable energy schemes themselves. The answer might be found in a greater emphasis on local consumption of the electricity generated from small-scale renewable technology. The growing importance of electricity storage using modern battery banks may assist in maintaining electrical supply in ‘remote’ areas like the Cambrian Mountains.

Trustees of the Cambrian Mountains Society are very willing to expand on the above ideas at the public evidence sessions of the Committee.