

WIND FARM SURVEY PROGRESS

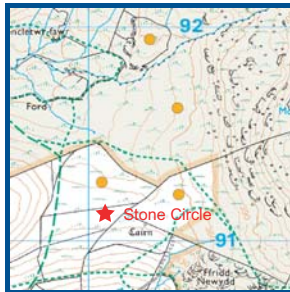
Since 2008 comprehensive surveys have taken place to determine site specific sensitivities. A database of design constraints is compiled to enable turbines to be sited in locations intended to have minimal impact on the immediate and surrounding environment. This panel contains information on some of these specific sensitivities and indicates what has been done to minimise any potential environmental impact.

ARCHAEOLOGY

Extensive surveys have been carried out and design alterations made to avoid direct impact on any Scheduled Ancient Monuments (SAM's), listed buildings or other archaeologically sensitive sites. Wherever possible the turbines and access tracks have been located to either avoid direct impact or minimise it through sensitive siting and mitigation. For example, the turbines shown on the map below were found to be situated close to an ancient stone circle known as Moel y Llyn. Due to the sensitive nature of this site these turbines have been removed from the proposed layout completely.



Photo of Moel y Llyn Stone Circle



Map showing removed turbines

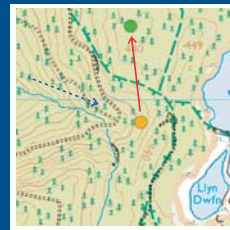
MINING

The site area contains the remains of historically significant metal mines including Esgair Fraith and Esgair Hir Lead and Copper Mine, Tynewydd Lead and Silver Mine and Bwlch Glas Lead Mine. There are also remains of a few minor post medieval metal mines. The utmost care will be taken to ensure that where possible turbines and access tracks completely avoid or minimise impacts on these sites and that no contaminated mine spoil is disturbed or disruption caused to the integrity of the mine sites.

ECOLOGY

Extensive ecological surveys have been carried out on and around the site following consultations with statutory bodies and other relevant organisations. These have included extensive bird surveys, mammal surveys including bats and water vole and important habitats such as peat bogs.

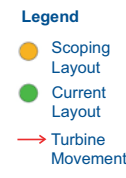
The circle marked in orange shows an original turbine location near Llyn Dwn. Surveys showed that bats were moving up the valley to feed around the lakes. In addition numbers of waterfowl were found to be using the lake, and whilst flights were not observed, despite many hours of survey, waterfowl are considered potentially at risk from collision with operating turbines. Therefore the turbine was moved to a new location 400 metres to the North as indicated by the green circle below.



Ecology Constraints



Hydrology Constraints



HYDROLOGY

The site layout will be designed to avoid potential effects to private water supplies and watercourses as well as minimising changes to surface water drainage patterns. During surveys in the Castell Bach area some deep sections of peat were discovered and due to the associated sensitive surface hydrology and the potential drainage problems that could arise, it was concluded that the proposed turbine should be moved to higher and more stable ground to the South East. This movement is indicated above by the original turbine location (orange circle) and the revised location (green).

PUBLIC RIGHTS OF WAY (PROW's)

There are several sections of footpath and bridleway crossing the site. Turbines will be located to ensure that, at a minimum, footpaths are not oversailed by turbine blades and where necessary any Public Rights of Way may be sensibly re-routed in agreement with the relevant Council bodies.

COMMUNICATION LINKS AND AVIATION

The Civil Aviation Authority (CAA) and the Ministry of Defence (MOD) have been consulted and they have not raised any objections to the scheme. Other relevant agencies such as mobile phone operators have also been consulted. Some communication links have been identified which run across the site and the turbines have been relocated to avoid them.

NOISE

Care needs to be taken in the wind farm design to ensure that noise levels will be compliant with government guidelines. Turbines have initially been placed at distances greater than 700 metres from inhabited local properties and background noise monitoring and noise modelling has been conducted to refine the layout. Additional acoustic survey work will potentially result in further changes to the layout later in the year.

VISUAL IMPACT

The impact of the turbines on the landscape is considered in detail and the final layout will represent the most satisfactory turbine locations in terms of landscape and visual requirements in balance with other technical and environmental constraints. Whilst the final layout has not been determined, some photomontages have been produced for this exhibition for illustration purposes. They show the current layout to illustrate what the development may look like from various viewpoints in the area.

Please Note: The photomontages on display at this exhibition are presented for illustration purposes only. The final turbine layout is expected to change as part of the design process and this new layout will be presented at the next exhibition.

CONCLUSION

The site surveys that have taken place so far are beginning to provide detailed information. Survey work will continue over the coming months and knowledge of the site will continue to improve. The final layout, which is expected in the autumn, will take into consideration all the technical and environmental constraints that have been identified and will ensure that turbines and other infrastructure are positioned in locations where they will have minimum impact on the environment.