



Dear Sirs,

Re. Wind farm moratorium Petition

GALAR are a group of community volunteers who are committed to the conservation and reclamation of the Ecology, Environment and Biodiversity of Wales. In general we oppose the wind farm programme, because it has no community base and it sucks up all available funding, at the cost to the research and development needed by all other renewable energy systems. It is counterproductive to green energy systems and cannot stand alone to produce a consistent supply of electrical power, domestically or industrially.

Having said that, we are part of a democratic society, and the present state of the energy industry has the approval of the ministers of Government, to a greater or lesser degree. We can only seek to change that by the democratic levers available to us.

The Petition

In this instance we have persuaded over a thousand of our fellow citizens to support our call for a moratorium on windfarms, through the petitions system of the Welsh Assembly. The moratorium we feel is necessary, because in the headlong rush for planning approvals to meet political targets we are ignoring many safeguards which are designed to protect the rural environment. We ask only that a moratorium is in place until the safeguards are acted on.

While it may be felt that some of these matters are beyond Wales, I would ask you to consider the CAA (Civil Aviation Authority). The CAA and its predecessor organisations have led the world in providing a safe and acceptable framework, for a form of transport that started as an adrenalin rush for extreme sportsmen, to statistically the safest form of transport. Yet when the organisation was formed, Britain was one of the smallest players in civil aviation. The airline industry now allows millions to visit areas of the world they have never seen; and recognised as a major support for inward investment and business growth. To this day, the CAA investigates every air incident, from a youngster's hang gliding accident, through to major catastrophes, applying lessons learned to provide ongoing excellence, to which the rest of the world listens and learns. These application matters, regarding Wind Farms are well within a devolved Wales's scope.

What we would like the Petitions Committee to act on.

We realise that it is unrealistic to ask the petitions committee to make judgement on whether a moratorium should be imposed in any particular circumstance, or indeed any matters arising from the evidence we are submitting. We hope to make a case, where the committee can recommend further action within the assembly.

We would like to make representations to the committee on the items listed below. Although there are seven items, they fall into broad subgroups, and we have produced documentation, for the groups, which fall within our area of knowledge, and on which, we feel, the petitions committee can make recommendations.

1. Matters of health and safety in construction and design of wind turbines
2. Matters of planning and placement of turbines in rural landscapes
3. Matters where wind turbines are given unjustified precedence over other European and WAG regulation
4. Matters where TAN 8 guidelines need to become regulatory limits.
5. Matters relating to planning procedure for single turbine applications within County Councils, disclosure of imperatives placed on CC's so they can be challenged in a democratic manner within the planning system, and the matter of efficacy of a proposal and its contribution to the National Energy Policy.
6. Tourism
7. Community benefit

Sub Group 1

Items covered by 1&2 above, with TAN 15 (from item 3 above) Welsh Assembly Technical Advice Notes.

In this group we would like to put forward examples of the shortcomings of the existing system, and suggestions for remedies. If on the examples provided we fail to make a case for action, then there is little chance that a further fifty points will convince the committee, and would be a waste of time. We are willing to give evidence in person on any matters arising from these Items.

We are willing to give evidence in person on any matters arising from this Item.

Sub Group 2

Item from 3 above, 2002/49/ EC European Directive END (European Noise Directive). We believe this directive was written to promote and protect a very necessary health measure. Rural residents have been denied its protection by failure to enact its terms. Strategic Search Areas should have the basic sound mapping, provided for in this legislation, before construction of wind farms start. Sub group 2 also includes our representation on TAN 15

We are willing to give evidence in person on any matters arising from this Item.

Sub Group 3

Items from 4&5 above which are mainly related to planning matters at CC level and applications below 50MW. We would like to make a case here for a more open and

democratic system, which would not only better serve Wales, but by removing sticking points lead to a faster and more efficient planning system.

We are willing to give evidence in person on any matters arising from these Items.

Sub Group 4

Community Benefit. We would like to give evidence which we feel will change this contentious subject into a fairer distribution of funds to the communities affected. We would like to propose ways of introducing funding which will give affected communities a more realistic compensation for the imposition wind farms will have on their lifestyle.

We are willing to give evidence in person on any matters arising from this Item.

This leaves Tourism, and while some GALAR members have links at the 'coal face' of tourist activity, we lack the speciality to present or give direct evidence to the committee. We have asked associate members to supply evidence on tourism.

Please find attached evidence for Sub Groups 1 to 4 above.

Yours faithfully

James Shepherd Foster

Chief Petitioner.

Wind Farm Moratorium Petition

Sub Group 1

In this group we ask the **Petitions Committee** to recommend that **Natural Resources Wales** conducts a review of the safety aspects of wind farms within a rural setting, the placement of turbines with respect to TAN 8; and the threat to ecology and biodiversity from wind turbines.

PAGE	ITEM	BENIFICERIES
2	Introduction to sub-section 1	
3	Turbine Fire Safety Issues	Agriculture, Rural Populations, CC employees.
5	Forest Fire Safety Issues	Agriculture, Rural Populations, CC employees.
6	Wind Farm Plateau	Wind Turbine Noise Issues, Visual Impact, TAN 8
6	Wind Turbine Separation	Noise, Flicker, Efficiency, Rural Population, Consumers
6	Prevailing Wind	Noise, Efficiency, Rural Population, Consumers
7	Wind Shear	Noise, Efficiency, Rural Population, Consumers
7	Construction cement	Environmental impact, Rural Population, Consumers
7	Cut in, or start speed	Environment and Biodiversity, Consumers.
9	Turbines affecting Bats	Environment and Biodiversity, Protected Species.
9	Turbines Affecting Owls	Environment and Biodiversity, Protected Species
10	Water Habitats	Environment and Biodiversity.

The above items are a flavour of the subjects an **NRW** review would cover. Since TAN 8 in 2005 and subsequent installations many lessons have been learned, within Wales, the UK, and Internationally. A comprehensive update is required to onshore installation standards and operation to meet the Welsh Assembly Governments commitment to Environment, Environmental Health, and Biodiversity Standards.

The review would contain items, raised by **NRW, CC's, and Stakeholders.**

As the **Petitions Committee** can vouchsafe, these issues cause petitioners to respond in large numbers, and coupled with the largest ever peaceful democratic demonstration the Senedd has seen, all point to the public's concern in these matters, and the need that they are addressed.

In this sub group we ask the petitions committee to consider the need for action on the Safety aspects of wind turbines; their placement within a rural landscape; and whether we should demand a positive response in insisting on water retention in SSA's, as a flood prevention measure. Utilising the plant and machinery which is on site during a Wind Farm construction to create retention of water in upland areas. (See TAN 15 sub group 2).

Standards of Turbine Manufacture

Since the first wind farms were developed in Europe, the world market for wind turbines has dramatically changed. The majority of the working parts are now manufactured in countries outside Europe, with the emphasis on cheapness and not quality. Beyond that, because speed of manufacture and installation overrode prudence, and the safeguards good planning should deliver were set aside by DECC, and copied by the Welsh Assembly Government, there are few safe guards in place to inspire confidence in the product we are now importing.

Failing to address the shortcomings are a direct threat to **Agriculture**, the mainstay and primary source of revenue in rural economies.

Further, these operational shortcomings make turbine deployment in agglomerations, near motorways and on industrial estates unlikely, when these should be the prime area of exploitation, because the first rule of renewable energy states that “**Energy should be generated as close to the point of utilization as possible**” In layman's terms, ‘No pylons’ ‘No noise problems’ ‘No losses’ ‘Less cables and connection’.

A good set of standards would speed planning in areas where turbines would best operate, and deter applications in areas that do not meet TAN 8 criterion.

We would ask the Petitions Committee

We would ask the Petitions Committee to examine some of the issues raised in this topic, which are on the following pages. From this evidence we would like the Petitions Committee to recommend that the Minister for Environment and Sustainability forms an examining committee from within **Natural Resources Wales**; and that this committee co-opts interested stakeholders, for example:- NFU, NFUW, CC's Environmental Health etc. This Environmental think tank can look at the whole range of issues; and from their recommendations the Assembly can pass any legislation deemed necessary to address this matter. **Please note, we do not ask that the Petitions Committee examine the attached subjects in detail, and advise on them individually. We have included them so that the Committee can see a need for a review of Wind Farms which examines the historical lessons and new technological data to ensure best practise is legislated for in the interests of agriculture, rural residents, tourism, and the environment and biodiversity. The actual detail would be decided by NRW and stakeholders.**

TURBINE FIRE



Wind Turbine Fire in Ayrshire Scotland

The risk of turbine fires are low, but becoming more significant, as Turbine size increases. The well respected North American group 'El Fin Energy', commenting on a turbine fire in Germany in March 2012 said, "The machines now are much larger, with significantly greater stresses, and higher chances for catastrophic failure from the slightest malfunction. Insurers are quite aware of the danger to individual machines, and it is time for the public to become aware of the danger to wild lands, as huge new windfarms are built into vulnerable areas."

The Risk of turbine fire is small, but evident. An insurer against turbine fire GCubeUnderwriting say that turbine incidents similar to the one in Ayrshire; and last year in Lower Saxony, Germany, costs between £255 and £340 thousand pounds, but this compensatory figure is for the developer mainly for replacement and consequential loss, and while we are sure there is also cover for direct third party injury and property, we believe there is no cover for land contamination as a result of turbine fire.

The German incident last year at Gross Eilstorf wind farm, in Lower Saxony was allowed to burn out under "controlled conditions," because tackling a fire 100 to 120 metres above ground level is as impossible in Germany as it is in Wales. In fact, much of the SSA's in Wales are in dense forested areas, and there is an increased risk of both forest fire and contamination of the surrounding farmland.

Wind turbine fires do take place, and the more turbines deployed the greater the risk; Fraser McLachlan, chief executive officer of GCube Underwriting Ltd., an insurer of renewable energy projects said after the German incident, "You do get fires occasionally, it comes with the territory." El Fin Energy's assertion that catastrophic failure is more likely in larger turbines is borne out to some extent by the frequency of incidents accelerating. Although this is coincidental to foreign bought out equipment forming a larger part of turbines, with little evidence of manufacturing standards available.

The Threat

Insurance can be said to cover the developer, and immediate third party losses. Our concern is the **contamination of agricultural land** by unchecked fire. The turbines themselves and the turbine blades are a source of PCB and other constituent chemical contaminants. The spread of microfine dust over large areas is extremely hard to monitor, and once identified incredibly difficult to clean up. There is very strict legislation in place to avoid contaminants, such as PCB's entering the food chain,

and if tested for, and identified, the cleanup cost would be astronomic, and the negative publicity for the whole of Wales would be a death blow to much of our agriculture.

The 'horsemeat' scandal has shown us that in the public domain food worries are far from local. Welsh farmers identified the problem, as affecting their trade, even though they are demonstrably innocent. Land contamination is a much more serious and long term issue.

Agriculture is the prime Rural Industry in Wales, even a remote threat should be mitigated against if possible.

In this case, we can undertake such mitigation easily. Welsh farmers are rightly seen as producing excellent uncontaminated food, a hard won reputation which is a credit to farmers NFU and NFUW alike. This new industry, wind energy, operating completely at the whim of a Government continuing to pay subsidies; should not be allowed to disadvantage our core industry of agriculture. Agriculture is established and much more important to our economy.

Action

We ask the Petitions committee to recommend the Minister for E&S asks **Natural Resources Wales** to examine this and other issues arising from the petition.

In respect of this specific issue, we would recommend the fire departments of the CC's, the Civil Aviation Authority, (who have experience of dealing with remote fires), and Extinguisher Trade Associations be consulted for advice in this matter.

We Would Suggest

A shroud enclosure is fitted about the turbine. An automatic foam deployment would operate, as with aircraft engines, flooding the encased turbine, in the event of fire. This type of shrouding should also be applied to all the turbines electrical controls within the tower etc.

Such a shroud could also act for acoustic enclosure, removing a noise source from the machine. It would probably mean air cooling would have to be replaced by water cooling on the turbine, but this is known to improve noise emission.

These notes were assembled by J. Shepherd Foster

Forest Fires and Security

The Risk

Much of SSA land is within Forestry areas. Turbine fires have been identified as a risk, even though they might not be the primary contribution to the threat. There are two common causes which require to be examined, because turbine presence changes the dynamic in tackling the problem. The two major causes of fire in these areas are Accidental and Malicious. Accidental fire is bound to be an issue, because of the amount of access, of both public and forestry workers. Malicious fire has a greater range



of people who may cause the fires and they are potentially more dangerous to the public and fire fighters alike. There is evidence of forest fire occurrence annually, and when accompanied by long spells of dry, warm weather, they are almost a weekly incident in Wales.

This raises the issue of protection of wind farm sites, storage of equipment, maintenance of roadways and access etc. We ask that **Natural Resources Wales** examines the additional risks with stakeholders, to produce an action plan.

The Threat

Temporary felling will initially bring some relief around the turbines, and most forest fires are seated in the ‘underbrush’ in established forest areas. However, a wind farm comprises of control housing and cabling at 1 metre maximum below a surface, plus wooden poles in many instances taking the turbine outputs for distribution. The surface of the forest floor is largely combustible, made up of decades of debris and in many cases, peat. It is an extreme fire hazard, which becomes more difficult to extinguish with the passage of time. The use of fire breaks etc. would mean more felling. Climate change prediction is for extremes of weather patterns, encompassing long high pressure incidents leading to the extended dry spells which would create Australian like conditions.

Mitigation

In the evidence sheet on TAN 40 we ask for the site to be capable of water retention, pools of standing water could be created at advantageous points about the site, allowing multiple fire appliances to deal with a threat before it became a conflagration.

The standing water pools would need maintenance during the lifetime of the wind farm, as would fire implement access. Turbine blades should be removed from site immediately, when being replaced, and underbrush clearance be regularly undertaken to reduce the risk. Please note, forest fire is a

major threat to agricultural land contamination, without wind turbines. The presence of a wind farm increases the threat and strong measures and standards are needed to nullify this.

Issues we believe require legislation to ensure best practise is observed on Environmental matters. These relate to subjects 1

The following table raises issues which require legislation to ensure best practise, which the petitioners feel should be examined by **Natural Resources Wales**, in a comprehensive review of planning standards which are applied to all wind turbine installations below 50MW. These are not a totality of issues, rather examples which we, the petitioners feel are not examined, either without full rigour and diligence, or in some cases not at all. We submit these to the **Petitions Committee** to show the need for a comprehensive review.

Subject	Issue	Examination Necessity	Mitigation
Plateau	All wind turbines operate best in a situation where the ground they are mounted on is relatively flat. This is recognised in TAN 8 and by various wind industry experts. A set of standards which recognise a feasible plateau are needed.	TAN 8 recognised that the plateau should determine the capacity of a wind farm. It plays a large part in the efficiency of the turbines, the noise levels, and the visual impact. Recognition of good site criteria would lead to a better outcome from all aspects of wind farms. A science based set of standards are required to provide operational value to consumers, and a reduction in operational nuisance to rural dwellers.	Examples of Plateau legislation:- Turbine position on plateau determined by set distance from escarpment edge. Turbine heights to blade tip. Height above sea level compared to surrounding land mass. Allowable land contours and slopes on plateau.
Turbine Separation	It is recognised that turbulent interaction between wind turbines, (or wash), is a major cause of Aerodynamic Noise. M.D. Hayes of Hayes McKenzie has written papers on this and it is well recognised within the industry	Existing Wind Farms and Farms in planning are and potentially will be subject to noise and poor performance because spacing is not scientifically set, and subject to the vagaries of developers. Minimum separation distances dependant on blade tip height and span need to be established. Note a noisy turbine is not only a nuisance but it is less efficient.	Suitably separated turbines, based on science, will reduce noise complaints, and improve efficiency. Minimum separation distances will help planning by reducing the need to examine every turbine position relative to its neighbour; as this will be legislated for.
Prevailing Wind	DEFRA development site advice, establishes prevailing wind as key to site layout.	Prevailing wind is not key, and can be less than 50% of annual wind direction. We have recently had many days of Easterly winds, causing very cold and windy conditions, yet the prevailing wind in Wales is South Westerly. Wind turbines rotate to meet	We have a great deal of evidence from installed turbines, which states that noise generation occurs in only some wind directions. Prevailing wind is a nonsense, unless turbines are fixed to operate for wind from a fixed compass position.

		the wind in any of 360 degrees direction. Turbine spacing, positioning on the plateau and wind shear calculation should be subject to the same 360 degree examination.	
Wind Shear	By far the largest number of noise complaints refer, not to mechanical sounds, but those created aerodynamically. Wind shear relates to a variation of wind speeds over the turbine spans on a site. These variations are caused by ground effects and the terrain and geographic variation of a site.	Aerodynamically created noise, of which wind shear can be a component, increases the noise nuisance and reduces the turbine efficiency.	A new method of measuring site wind speeds, encompassing height variations of speed sampling and direction variations. Geographic and ground effect modelling. Consultancy on the practicalities with Acoustic specialists such as Hayes McKenzie. Environmental groups now have well qualified advice from specialists within groups, and CC's Environmental Health should be consulted.
Cement	One of the major causes of traffic disruption on developing sites is the stream of Ready-Mix cement lorries going to and returning from the site, (even for smaller turbines this reaches 50 double trips per turbine, a 10 turbine farm will require over a thousand trips).	Besides traffic disruption, the traffic density is set by the pouring of the bases and crane hard standings, this means days which are a constant stream of vehicles. This can be summer tourist days, or rush hour traffic with road use being used for schools and worker travel. The second issue is that 30% of the loads are water, probably mains water, treated and supplied for drinking. The third issue is that those vehicles require wash down and wheel cleansing to ensure that sites do not have invasive plant species introduced to 'clean' sites.	All Wind Farms should have on site mixing directly over the bases and hard standings, to reduce the spill risk. Water collected under TAN 15 will be available for mixing. Cement and quarry goods can be transported to the site in quiet periods, and stored for use when required, reducing the vehicle trips and saving treated water. Wash down of Ready-Mix vehicles uses a great deal of water and increases the carbon debt of the operation. This operation will produce significant carbon savings and alleviate traffic disruption. It will also produce local jobs operating the mobile mixing plants.
Cut In Speeds	Wind turbines operating at less than	Turbines operating and producing nothing of	Many people assume the power output of a turbine is

<p>(or start speeds)</p>	<p>half design speed produce nothing of value to Grid.</p>	<p>economic value to consumers are still are using operational hours from the turbines “life” and still pose a threat to birdlife and bats.</p>	<p>directly proportional to the speed of operation. i.e half speed equals half power. This is not the case and if the design speed is 20 RPM then nothing of value is generated if the actual speed drops to 12 RPM or less. It should be a condition of operation that turbines only operate at 60% or above of their design speed. This condition operates in many American states, as a protection to wildlife and operational relief to the turbine life. Recent studies suggest that the new larger turbines have a markedly less lifespan than the often quoted 25 years. Reducing operation when the output is of limited value will increase the lifespan and thus the energy cost. Winds which do not achieve operational speeds often occur in the summer and summer evenings when wildlife activity is at its peak, limiting the cut in speed will produce threat free hours.</p>
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Environment and Biodiversity Subjects 1

The following table raises issues of Environment and Biodiversity, which the petitioners feel should be examined by **Natural Resources Wales**, in a comprehensive review of planning standards which are applied to all wind turbine installations below 50MW. These are not a totality of issues, rather examples which we, the petitioners feel are not examined, either without full rigour and diligence, or in some cases not at all. We submit these to the **Petitions Committee** to show the need for a comprehensive review.

Subject	Issue	Threat	Mitigation
Bats	Barometric variation causes fatality in Bats	Recent studies show that bats are migratory creatures, within defined areas. These migrations can be up to 60Km. The migratory paths are yet to be defined. These paths should be established and considered with static colonies which may be present within or near proposed wind farm sites.	<p>All SSA's should be examined and migratory paths established. This information should be examined along with the EIA of proposed sites.</p> <p>In the case of single turbines, there is no reason that these should operate at night. Turbines are mechanical devices with a lifespan measured in operational hours. If as a condition of planning, operation is confined to daytime, the same operational hours will be available over a longer period. The operational payback will still be available, but over a longer period. There will be no threat to nocturnal creatures, and the generation of the turbine will be restricted to a more useful peak demand time for electrical energy.</p>
Owls	Bird strike from turbine blades	The tip speed of a modern turbine blade can be 200mph and higher. The area displaced per revolution can be 6400 square metres, (a rugby pitch is typically between 5 and 6,000 square metres). A group of turbines are the equivalent of a stretch of motorway, the blade spans of even modest turbines are	The Barn Owl trust advise that nesting boxes are not placed close to (within 2.5Km) of a motorway. Of course a motorway has traffic restricted to 70mph and never achieves 60 vehicles a minute in a carriageway. (Design speeds of turbines are in the area of 20revs per min., that is 60 blade passes per minute).

		wider than a motorway. If the swept area of a typical 50MW wind farm is environmentally compared to a motorway it equates to 380metres per installed MW. (19Km of motorway per 50MW)	People living within 2.5Km of a wind farm should be similarly advised to deter Barn Owls establishing habitat. If single turbines are restricted in nocturnal operation, bird strike should be reduced
Water Habitats	Water retention on sites and approaches in upland areas, (see TAN 15), will provide water habitat to birds and small mammals		It will serve to offset a small part of the site industrialisation. These habitats should be encouraged and maintained during the operational life of the wind farm.

Wind Farm Moratorium Petition

Sub Group 2

In this group we ask the Petitions Committee to recommend that Natural Resources Wales seeks to fully ratify EU directive 2002/49/EC, in respect of rural areas; and that TAN 15 is strengthened and becomes part of Wind Farm planning.

Page	Item	Beneficiaries
2	EU/2002/49/EC	Tourism, Rural Communities
5	TAN 15	Rural Areas prone to flood.
6	Copy of EU Directive	

This sub group relates to the **European Noise Directive (END) Ref. 2002/49/EC and TAN 15**. The END directive was ratified in 2002 and concerns community noise. Most of the directive has been enacted and city and other population agglomerations are benefitting from this excellent legislation. The control of noise has been accepted unilaterally as being linked to stress and general health in communities, and we have an excellent example in our capital city. TAN 15 (see page) is a active advice note which we believe could be strengthened to the benefit of flood prevention in Rural Wales.

How 2002/49/EC Operates

Example.

Cardiff, has large areas of traffic and industrial noise, but this is kept away from amenity areas where walking and cycling can be a real pleasure, it is one of the lead cities in the UK providing a controlled noise environment, and is a credit to the Planning and Environmental Health departments. One of the weapons in the council's armoury when planning the inevitable road improvements to increase traffic flow is 2002/49/EC. The area in and around Cardiff has been sound mapped, and any new noise source being planned can be compared against the present situation and compensatory measures adopted, (acoustic barriers, tree screening etc.). The system works well and when it was introduced there were many examples, both in Wales and England where developments were put on hold, (**a moratorium**), until sound mapping was completed.



Acoustic Barrier against road noise, shrubs trees and greenery will visually 'soften' the dwelling side.

Where we have applied the directive it has been very successful, noise complaints related to manmade noise, (excluding domestic), in Wales are generally lower than in any other parts of the UK.

While the measures mitigating many sources of noise, airports, motorways, industrial estates etc., are considered non rural, there is a section within the scope of 2002/49/EC which is designed to **protect rural communities**.

It is this section of the directive we would ask the petitions committee to examine. A full copy of the directive is attached, but we have provided a table below which shows the most salient points.

Benefits to Rural Wales from implementation of 2002/49/EC

The basis of the Directive for rural areas is the same as for cities and agglomerations, first action is noise mapping. For rural areas this requires an agreed methodology between **Natural Resources Wales**, Acoustic Specialists and stakeholders, (consultation). This methodology is then submitted to the EU END committee for approval. Then mapping to the agreed methodology can commence, and sound maps, similar to those already produced, (available from the Environment Agency), will be able to be used in planning applications where manmade noise is an issue. Please note that this directive is not a club to beat progressive development with, it is a science led guide for CC planners to produce the best outcome from planning applications, and strengthens the LDP's.

Benefits to Rural Wales from Areas of Sound Excellence

The END committee of the EU would like the Directive to develop, so that areas of extreme sound excellence are recognised. This would be similar to the blue flag beach having a certified water quality, which any EU citizen can recognise has an area of excellence for bathing and family recreation. If areas with good public access are found to have a sound quality meeting the criteria of excellent, these rural ‘blue flag’ areas would be a boon to tourism, but most importantly dovetail into rural Wales’s backbone industry of farming. The **Supplementary noise indicators** page 8 item 3. demonstrates that the occasional passing tractor, or harvest operation would be quite acceptable as **natural sound within the environment.**

What would be the reduction in the authority of the Minister and NRW?

Absolutely none, subsidiarity is part and parcel of the directive. Whether it was a wind farm, water pumping station or theme park, the minister would be able to set aside objections raised against any development based on sound quality as determined by 2002/49/EC. In exactly the same way as the Minister can override objections in an agglomeration, where he sees that the public interest is better served by having a motorway extension allowed, when 2002/49/EC evidence would seem to point in the opposite direction.

However, if rural areas are noise mapped, and members of the public have both access and descriptive text to allow them the key to reading the maps¹, they can make better informed judgement and participate in an improved manner. 2002/49/EC is a tool of open government, and empowers the public to participate in executive decisions. That tool already exists and is in the hands of all people living in agglomerations, but it is denied to people in rural areas **until full implementation takes place.**

Key points we would ask committee to consider

1. Since this directive was ratified in 2002 the UK population has grown by 7%.
2. The land area per capita in the UK is the worst in Europe.
3. If the Scottish Independence vote leads to Scotland leaving the UK the area per capita within the remaining UK will dramatically sink even further. With an equivalent population to Germany we will have ½ the land mass. The ratio in all other major European states is worse than our deficit with Germany.
4. The only practical antidote to noise engendered stress and noise engendered sleep deprivation is areas of sound quality both within agglomerations, and most importantly the reservoirs of tranquillity in rural, and wilderness areas.
5. Although Directive 2002/49/EC precedes TAN 8 by three years, it has never been implemented in rural areas. If we fail to map Strategic Search Areas before construction and operation commences, a fair assessment and mapping of noise will be unable to be completed, and an historic opportunity will be lost.

We ask the Petition Committee to recommend

1. **That the NRW consults with stakeholders, and brings forward a programme to provide a noise mapping methodology for open country, to meet 2002/49/EU requirements.**
2. **That noise mapping precedes construction in Strategic Search Areas**
3. **That CC’s are made aware of mapping methodology**
4. **It is not felt necessary that any recommendation is made in respect of single turbine applications outside SSA’s as CC’s can make noise decisions compatible with their own LDP’s. Similarly turbine applications on brown field sites and areas already mapped do not require any moratorium.** (Salient points table overleaf with link to Directive).

¹ See Article 9 and Annex IV Item 2 and Item 4

Salient Points from the Directive.

Directive Ref.	Directive Wording	Notes
Article 2 Scope Page 2	<p>1. <i>This Directive shall apply to environmental noise to which humans are exposed in particular in built-up areas, in public parks or other quiet areas in an agglomeration, in quiet areas in open country, near schools, hospitals and other noise sensitive buildings and areas.</i></p> <p>2. <i>This Directive shall not apply to noise that is caused by the exposed person himself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport or due to military activities in military areas.</i></p>	The highlight is to show the scope of the directive refers to quiet areas in open country. The definition of open country is shown below.
Definitions Article 3m Page 3	(m) 'quiet area in open country' shall mean an area, delimited by the competent authority, that is undisturbed by noise from traffic, industry or recreational activities;	The competent Authority is the Environmental Agency Wales, (this information was given to me by The Environmental Agency Enquiry desk).
Definitions Article 3v Page 3	(v) 'the public' shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.	Defines consultancy groups and stakeholders who CC's and WAG need to consult ref. Methodology and application of Directive.
Article 9 Information to the public Page 5	<p>1. Member States shall ensure that the strategic noise maps they have made, and where appropriate adopted, and the action plans they have drawn up are made available and disseminated to the public in accordance with relevant Community legislation, in particular Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment (1), and in conformity with Annexes IV and V to this Directive, including by means of available information technologies.</p> <p>2. This information shall be clear, comprehensible and accessible. A summary setting out the most important points shall be provided.</p>	Availability of noise maps at WAG and CC planning levels.
Article 1 c Objectives Page 2	(c) adoption of action plans by the Member States, based upon noise-mapping results, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental noise quality where it is good.	Highlight to show spirit of Directive as set out in Article 1 is for the preservation of noise quality where it is good.

Please note full copy of Directive is attached.

It has been common knowledge that a large proportion of the houses in Wales are subject to flood threat. TAN 15 is a general advice note and has a section which seeks to address this threat in rural areas, where TAN 8 operates. Unfortunately it is not robust enough, and open to wide interpretation. We ask that it is modified to specifically address Wind Farms, which are the biggest potential development in Rural areas.

TAN 15	<u>Existing Advice</u>	<u>Preferred Advice</u>	<u>General Comments</u>
	The existing advice asks that a development should improve or, at least not detrimentally affect the water retention of upland areas.	That any development should significantly improve the site water retention. In respect of wind farms, this should be a combination of open water and ground water. We would like a defined lower limit of retained water to be set at 3,000,000 litres per installed MW.	<ol style="list-style-type: none"> 1. It should be noted that medium term climate projections point to a worsening of flood conditions. 2. Upland areas, especially adjacent to the West Coast, have significantly higher rainfall than the National Average. 3. At some point, retention will be a priority in flood control for all upland areas. 4. Open water is key to two other standards which need addressing. (These are marked in Red on Pages

In respect of this matter we would ask the **Petitions Committee** to recommend that **Natural Resources Wales** examine this advice note with a view to making significant water retention and control a part of Wind Farm planning.

**DIRECTIVE 2002/49/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 25 June 2002**

relating to the assessment and management of environmental noise

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE
EUROPEAN UNION,

Having regard to the Treaty establishing the European Community,
and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the Economic and Social
Committee (2),

Having regard to the opinion of the Committee of the
Regions (3),

Acting in accordance with the procedure laid down in Article
251 of the Treaty (4), and in the light of the joint text approved
by the Conciliation Committee on 8 April 2002,

Whereas:

(1) It is part of Community policy to achieve a high level of
health and environmental protection, and one of the
objectives to be pursued is protection against noise. In
the Green Paper on Future Noise Policy, the Commission
addressed noise in the environment as one of the main
environmental problems in Europe.

(2) In its Resolution of 10 June 1997 (5) on the Commission
Green Paper, the European Parliament expressed its
support for that Green Paper, urged that specific
measures and initiatives should be laid down in a Directive
on the reduction of environmental noise, and noted
the lack of reliable, comparable data regarding the situation
of the various noise sources.

(3) A common noise indicator and a common methodology
for noise calculation and measurement around airports
were identified in the Commission Communication of 1
December 1999 on Air Transport and the Environment.
This communication has been taken into account in the
provisions of this Directive.

(4) Certain categories of noise emissions from products are
already covered by Community legislation, such as
Council Directive 70/157/EEC of 6 February 1970 on
the approximation of the laws of the Member States
relating to the permissible sound level and the exhaust
system of motor vehicles (6), Council Directive 77/311/
EEC of 29 March 1977 on the approximation of the
laws of the Member States relating to the driverperceived
noise level of wheeled agricultural or forestry
tractors (7), Council Directive 80/51/EEC of 20 December
1979 on the limitation of noise emissions from subsonic
aircraft (8) and its complementary directives, Council
Directive 92/61/EEC of 30 June 1992 relating to the
type-approval of two or three-wheel motor vehicles (9)
and Directive 2000/14/EC of the European Parliament
and of the Council of 8 May 2000 on the approximation
of the laws of the Member States relating to the noise
emission in the environment by equipment for use
outdoors (10).

(5) This Directive should *inter alia* provide a basis for developing
and completing the existing set of Community
measures concerning noise emitted by the major sources,
in particular road and rail vehicles and infrastructure,
aircraft, outdoor and industrial equipment and mobile
machinery, and for developing additional measures, in
the short, medium and long term.

(6) Certain categories of noise such as noise created inside
means of transport and noise from domestic activities
should not be subject to this Directive.

(7) In accordance with the principle of subsidiarity as set
out in Article 5 of the Treaty, the Treaty objectives of
achieving a high level of protection of the environment

and of health will be better reached by complementing the action of the Member States by a Community action achieving a common understanding of the noise problem. Data about environmental noise levels should therefore be collected, collated or reported in accordance with comparable criteria. This implies the use of harmonised indicators and evaluation methods, as well as criteria for the alignment of noise-mapping. Such criteria and methods can best be established by the Community.

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(1) OJ C 337 E, 28.11.2000, p. 251.

(2) OJ C 116, 20.4.2001, p. 48.

(3) OJ C 148, 18.5.2001, p. 7.

(4) Opinion of the European Parliament of 14 December 2000 (OJ C 232, 17.8.2001, p. 305), Council Common Position of 7 June 2001 (OJ C 297, 23.10.2001, p. 49) and Decision of the European Parliament of 3 October 2001 (OJ C 87 E, 11.4.2002, p. 118). Decision of the European Parliament of 15 May 2002 and Decision of the Council of 21 May 2002.

(5) OJ C 200, 30.6.1997, p. 28.

(6) OJ L 42, 23.2.1970, p. 16. Directive as last amended by Commission Directive 1999/101/EC (OJ L 334, 28.12.1999, p. 41).

(7) OJ L 105, 28.4.1977, p. 1. Directive as last amended by Directive 97/54/EC (OJ L 277, 10.10.1997, p. 24).

(8) OJ L 18, 24.1.1980, p. 26. Directive as last amended by Directive 83/206/EEC (OJ L 117, 4.5.1983, p. 15).

(9) OJ L 225, 10.8.1992, p. 72. Directive as last amended by Directive 2000/7/EC (OJ L 106, 3.5.2000, p. 1).

(10) OJ L 162, 3.7.2000, p. 1.

(8) It is also necessary to establish common assessment methods for 'environmental noise' and a definition for 'limit values', in terms of harmonised indicators for the determination of noise levels. The concrete figures of any limit values are to be determined by the Member States, taking into account, *inter alia*, the need to apply the principle of prevention in order to preserve quiet areas in agglomerations.

(9) The selected common noise indicators are L_{den} , to assess annoyance, and L_{night} , to assess sleep disturbance. It is also useful to allow Member States to use supplementary indicators in order to monitor or control special noise situations.

(10) Strategic noise mapping should be imposed in certain areas of interest as it can capture the data needed to provide a representation of the noise levels perceived within that area.

(11) Action plans should address priorities in those areas of interest and should be drawn up by the competent authorities in consultation with the public.

(12) In order to have a wide spread of information to the public, the most appropriate information channels should be selected.

(13) Data collection and the consolidation of suitable Community-wide reports are required as a basis for future Community policy and for further information of the public.

(14) An evaluation of the implementation of this Directive should be carried out regularly by the Commission.

(15) The technical provisions governing the assessment methods should be supplemented and adapted as necessary to technical and scientific progress and to progress in European standardisation.

(16) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission (1),

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Objectives

1. The aim of this Directive shall be to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. To that end the following actions shall be implemented progressively:

- (a) the determination of exposure to environmental noise, through noise mapping, by methods of assessment common to the Member States;
- (b) ensuring that information on environmental noise and its effects is made available to the public;
- (c) adoption of action plans by the Member States, based upon noise-mapping results, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental noise quality where it is good.

2. This Directive shall also aim at providing a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery. To this end, the Commission shall submit to the European Parliament and the Council, no later than 18 July 2006, appropriate legislative proposals. Those proposals should take into account the results of the report referred to in Article 10(1).

Article 2

Scope

1. This Directive shall apply to environmental noise to which humans are exposed in particular in built-up areas, in public parks or other quiet areas in an agglomeration, in quiet areas in open country, near schools, hospitals and other noise-sensitive buildings and areas.

2. This Directive shall not apply to noise that is caused by the exposed person himself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport or due to military activities in military areas.

Article 3

Definitions

For the purposes of this Directive:

(a) 'environmental noise' shall mean unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport, road traffic, rail traffic, air traffic, and from sites of industrial activity such as those defined in Annex I to Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control ⁽²⁾;

(b) 'harmful effects' shall mean negative effects on human health;

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(1) OJ L 184, 17.7.1999, p. 23. (2) OJ L 257, 10.10.1996, p. 26.

(c) 'annoyance' shall mean the degree of community noise annoyance as determined by means of field surveys;

(d) 'noise indicator' shall mean a physical scale for the description of environmental noise, which has a relationship with a harmful effect;

(e) 'assessment' shall mean any method used to calculate, predict, estimate or measure the value of a noise indicator or the related harmful effects;

(f) 'L_{den}' (day-evening-night noise indicator) shall mean the noise indicator for overall annoyance, as further defined in Annex I;

(g) 'L_{day}' (day-noise indicator) shall mean the noise indicator for annoyance during the day period, as further defined in Annex I;

(h) 'L_{evening}' (evening-noise indicator) shall mean the noise indicator

for annoyance during the evening period, as further defined in Annex I;

(i) 'L_{night}' (night-time noise indicator) shall mean the noise indicator for sleep disturbance, as further defined in Annex I;

(j) 'dose-effect relation' shall mean the relationship between the value of a noise indicator and a harmful effect;

(k) 'agglomeration' shall mean part of a territory, delimited by the Member State, having a population in excess of 100 000 persons and a population density such that the Member State considers it to be an urbanised area;

(l) 'quiet area in an agglomeration' shall mean an area, delimited by the competent authority, for instance which is not exposed to a value of L_{den} or of another appropriate noise indicator greater than a certain value set by the Member State, from any noise source;

(m) 'quiet area in open country' shall mean an area, delimited by the competent authority, that is undisturbed by noise from traffic, industry or recreational activities;

(n) 'major road' shall mean a regional, national or international road, designated by the Member State, which has more than three million vehicle passages a year;

(o) 'major railway' shall mean a railway, designated by the Member State, which has more than 30 000 train passages per year;

(p) 'major airport' shall mean a civil airport, designated by the Member State, which has more than 50 000 movements per year (a movement being a take-off or a landing), excluding those purely for training purposes on light aircraft;

(q) 'noise mapping' shall mean the presentation of data on an existing or predicted noise situation in terms of a noise indicator, indicating breaches of any relevant limit value in force, the number of people affected in a certain area, or the number of dwellings exposed to certain values of a noise indicator in a certain area;

(r) 'strategic noise map' shall mean a map designed for the global assessment of noise exposure in a given area due to different noise sources or for overall predictions for such an area;

(s) 'limit value' shall mean a value of L_{den} or L_{night}, and where appropriate L_{day} and L_{evening}, as determined by the Member State, the exceeding of which causes competent authorities to consider or enforce mitigation measures; limit values may be different for different types of noise (road-, rail-, air-traffic noise, industrial noise, etc.), different surroundings and different noise sensitiveness of the populations; they may also be different for existing situations and for new situations (where there is a change in the situation regarding the noise source or the use of the surrounding);

(t) 'action plans' shall mean plans designed to manage noise issues and effects, including noise reduction if necessary;

(u) 'acoustical planning' shall mean controlling future noise by planned measures, such as land-use planning, systems engineering for traffic, traffic planning, abatement by soundinsulation measures and noise control of sources;

(v) 'the public' shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.

Article 4

Implementation and responsibilities

1. Member States shall designate at the appropriate levels the competent authorities and bodies responsible for implementing this Directive, including the authorities responsible for:

(a) making and, where relevant, approving noise maps and action plans for agglomerations, major roads, major railways and major airports;

(b) collecting noise maps and action plans.

2. The Member States shall make the information referred to in paragraph 1 available to the Commission and to the public no later than 18 July 2005.

Article 5

Noise indicators and their application

1. Member States shall apply the noise indicators L_{den} and L_{night} as referred to in Annex I for the preparation and revision of strategic noise mapping in accordance with Article 7. Until the use of common assessment methods for the determination of L_{den} and L_{night} is made obligatory, existing national noise indicators and related data may be used by Member States for this purpose and should be converted into the indicators mentioned above. These data must not be more than three years old.

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2. Member States may use supplementary noise indicators for special cases such as those listed in Annex I(3).

3. For acoustical planning and noise zoning, Member States may use other noise indicators than L_{den} and L_{night} .

4. No later than 18 July 2005, Member States shall communicate information to the Commission on any relevant limit values in force within their territories or under preparation, expressed in terms of L_{den} and L_{night} and where appropriate, L_{day} and $L_{evening}$, for road-traffic noise, rail-traffic noise, aircraft noise around airports and noise on industrial activity sites, together with explanations about the implementation of the limit values.

Article 6

Assessment methods

1. The values of L_{den} and L_{night} shall be determined by means of the assessment methods defined in Annex II.

2. Common assessment methods for the determination of L_{den} and L_{night} shall be established by the Commission in accordance with the procedure laid down in Article 13(2) through a revision of Annex II. Until these methods are adopted, Member States may use assessment methods adapted in accordance with Annex II and based upon the methods laid down in their own legislation. In such case, they must demonstrate that those methods give equivalent results to the results obtained with the methods set out in paragraph 2.2 of Annex II.

3. Harmful effects may be assessed by means of the dose-effect relations referred to in Annex III.

Article 7

Strategic noise mapping

1. Member States shall ensure that no later than 30 June 2007 strategic noise maps showing the situation in the preceding calendar year have been made and, where relevant, approved by the competent authorities, for all agglomerations with more than 250 000 inhabitants and for all major roads which have more than six million vehicle passages a year, major railways which have more than 60 000 train passages per year and major airports within their territories.

No later than 30 June 2005, and thereafter every five years, Member States shall inform the Commission of the major roads which have more than six million vehicle passages a year, major railways which have more than 60 000 train passages per year, major airports and the agglomerations with more than 250 000 inhabitants within their territories.

2. Member States shall adopt the measures necessary to ensure that no later than 30 June 2012, and thereafter every five years, strategic noise maps showing the situation in the preceding calendar year have been made and, where relevant, approved by the competent authorities for all agglomerations and for all major roads and major railways within their territories. No later than 31 December 2008, Member States shall inform the Commission of all the agglomerations and of all the major roads and major railways within their territories.

3. The strategic noise maps shall satisfy the minimum

requirements laid down in Annex IV.

4. Neighbouring Member States shall cooperate on strategic noise mapping near borders.

5. The strategic noise maps shall be reviewed, and revised if necessary, at least every five years after the date of their preparation.

Article 8

Action plans

1. Member States shall ensure that no later than 18 July 2008 the competent authorities have drawn up action plans designed to manage, within their territories, noise issues and effects, including noise reduction if necessary for:

(a) places near the major roads which have more than six million vehicle passages a year, major railways which have more than 60 000 train passages per year and major airports;

(b) agglomerations with more than 250 000 inhabitants. Such plans shall also aim to protect quiet areas against an increase in noise.

The measures within the plans are at the discretion of the competent authorities, but should notably address priorities which may be identified by the exceeding of any relevant limit value or by other criteria chosen by the Member States and apply in particular to the most important areas as established by strategic noise mapping.

2. Member States shall ensure that, no later than 18 July 2013, the competent authorities have drawn up action plans notably to address priorities which may be identified by the exceeding of any relevant limit value or by other criteria chosen by the Member States for the agglomerations and for the major roads as well as the major railways within their territories.

3. Member States shall inform the Commission of the other relevant criteria referred to in paragraphs 1 and 2.

4. The action plans shall meet the minimum requirements of Annex V.

5. The action plans shall be reviewed, and revised if necessary, when a major development occurs affecting the existing noise situation, and at least every five years after the date of their approval.

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6. Neighbouring Member States shall cooperate on the action plans for border regions.

7. Member States shall ensure that the public is consulted about proposals for action plans, given early and effective opportunities to participate in the preparation and review of the action plans, that the results of that participation are taken into account and that the public is informed on the decisions taken. Reasonable time-frames shall be provided allowing sufficient time for each stage of public participation.

If the obligation to carry out a public participation procedure arises simultaneously from this Directive and any other Community legislation, Member States may provide for joint procedures in order to avoid duplication.

Article 9

Information to the public

1. Member States shall ensure that the strategic noise maps they have made, and where appropriate adopted, and the action plans they have drawn up are made available and disseminated to the public in accordance with relevant Community legislation, in particular Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment ⁽¹⁾, and in conformity with Annexes IV and V to this Directive, including by means of available information technologies.

2. This information shall be clear, comprehensible and accessible. A summary setting out the most important points shall be provided.

Article 10

Collection and publication of data by Member States and the Commission

1. No later than 18 January 2004, the Commission will submit a report to the European Parliament and the Council containing a review of existing Community measures relating to sources of environmental noise.
2. The Member States shall ensure that the information from strategic noise maps and summaries of the action plans as referred to in Annex VI are sent to the Commission within six months of the dates laid down in Articles 7 and 8 respectively.
3. The Commission shall set up a database of information on strategic noise maps in order to facilitate the compilation of the report referred to in Article 11 and other technical and informative work.
4. Every five years the Commission shall publish a summary report of data from strategic noise maps and action plans. The first report shall be submitted by 18 July 2009.

Article 11

Review and reporting

1. No later than 18 July 2009, the Commission shall submit to the European Parliament and the Council a report on the implementation of this Directive.
2. That report shall in particular assess the need for further Community actions on environmental noise and, if appropriate, propose implementing strategies on aspects such as:
 - (a) long-term and medium-term goals for the reduction of the number of persons harmfully affected by environmental noise, taking particularly into account the different climates and different cultures;
 - (b) additional measures for a reduction of the environmental noise emitted by specific sources, in particular outdoor equipment, means and infrastructures of transport and certain categories of industrial activity, building on those measures already implemented or under discussion for adoption;
 - (c) the protection of quiet areas in open country.
3. The report shall include a review of the acoustic environment quality in the Community based on the data referred to in Article 10 and shall take account of scientific and technical progress and any other relevant information. The reduction of harmful effects and the cost-effectiveness ratio shall be the main criteria for the selection of the strategies and measures proposed.
4. When the Commission has received the first set of strategic noise maps, it shall reconsider:
 - the possibility for a 1,5 metre measurement height in Annex I, paragraph 1, in respect of areas having houses of one storey,
 - the lower limit for the estimated number of people exposed to different bands of L_{den} and L_{night} in Annex VI.
5. The report shall be reviewed every five years or more often if appropriate. It shall contain an assessment of the implementation of this Directive.
6. The report shall, if appropriate, be accompanied by proposals for the amendment of this Directive.

Article 12

Adaptation

The Commission shall adapt Annex I, point 3, Annex II and Annex III hereto to technical and scientific progress in accordance with the procedure provided for in Article 13(2).
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(¹) OJ L 158, 23.6.1990, p. 56.

Article 13

Committee

1. The Commission shall be assisted by the committee set up by Article 18 of Directive 2000/14/EC.
2. Where reference is made to this paragraph, Articles 5 and

7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. The Committee shall adopt its rules of procedure.

Article 14

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive no later than 18 July 2004. They shall inform the Commission thereof.

When the Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication.

The methods of making such a reference shall be laid down by the Member States.

2. The Member States shall communicate to the Commission the texts of the provisions of national law that they adopt in the field governed by this Directive.

Article 15

Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 16

Addressees

This Directive is addressed to the Member States.

Done at Luxembourg, 25 June 2002.

For the European Parliament

The President

P. COX

For the Council

The President

J. MATAS I PALOU

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ANNEX I

NOISE INDICATORS

referred to in Article 5

1. Definition of the day-evening-night level L_{den}

The day-evening-night level L_{den} in decibels (dB) is defined by the following formula:

in which:

— L_{day} is the A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the day periods of a year,

— $L_{evening}$ is the A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the evening periods of a year,

— L_{night} is the A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the night periods of a year;

in which:

— the day is 12 hours, the evening four hours and the night eight hours. The Member States may shorten the evening period by one or two hours and lengthen the day and/or the night period accordingly, provided that this choice is the same for all the sources and that they provide the Commission with information on any systematic difference from the default option,

— the start of the day (and consequently the start of the evening and the start of the night) shall be chosen by the Member State (that choice shall be the same for noise from all sources); the default values are 07.00 to 19.00, 19.00 to 23.00 and 23.00 to 07.00 local time,

— a year is a relevant year as regards the emission of sound and an average year as regards the meteorological circumstances;

and in which:

— the incident sound is considered, which means that no account is taken of the sound that is reflected at the façade of the dwelling under consideration (as a general rule, this implies a 3 dB correction in case of measurement).

The height of the L_{den} assessment point depends on the application:

— in the case of computation for the purpose of strategic noise mapping in relation to noise exposure in and near buildings, the assessment points must be $4,0 \pm 0,2$ m (3,8 to 4,2 m) above the ground and at the most exposed façade; for this purpose, the most exposed façade will be the external wall facing onto and nearest to the specific noise source; for other purposes other choices may be made,

— in the case of measurement for the purpose of strategic noise mapping in relation to noise exposure in and near buildings, other heights may be chosen, but they must never be less than 1,5 m above the ground, and results should be corrected in accordance with an equivalent height of 4 m,

— for other purposes such as acoustical planning and noise zoning other heights may be chosen, but they must never be less than 1,5 m above the ground, for example for:

— rural areas with one-storey houses,

- the design of local measures meant to reduce the noise impact on specific dwellings,
- the detailed noise mapping of a limited area, showing the noise exposure of individual dwellings.

2. Definition of the night-time noise indicator

The night-time noise indicator L_{night} is the A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the night periods of a year;

in which:

- the night is eight hours as defined in paragraph 1,
- a year is a relevant year as regards the emission of sound and an average year as regards the meteorological circumstances, as defined in paragraph 1,
- the incident sound is considered, as laid down in paragraph 1,
- the assessment point is the same as for L_{den} .

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3. Supplementary noise indicators

In some cases, in addition to L_{den} and L_{night} , and where appropriate L_{day} and L_{evening} , it may be advantageous to use special noise indicators and related limit values. Some examples are given below:

- the noise source under consideration operates only for a small proportion of the time (for example, less than 20 % of the time over the total of the day periods in a year, the total of the evening periods in a year, or the total of the night periods in a year),
- the average number of noise events in one or more of the periods is very low (for example, less than one noise event an hour; a noise event could be defined as a noise that lasts less than five minutes; examples are the noise from a passing train or a passing aircraft),
- the low-frequency content of the noise is strong,
- L_{Amax} , or SEL (sound exposure level) for night period protection in the case of noise peaks,
- extra protection at the weekend or a specific part of the year,
- extra protection of the day period,
- extra protection of the evening period,
- a combination of noises from different sources,
- quiet areas in open country,
- the noise contains strong tonal components,
- the noise has an impulsive character.

ANNEX II

ASSESSMENT METHODS FOR THE NOISE INDICATORS

referred to in Article 6

1. Introduction

The values of L_{den} and L_{night} can be determined either by computation or by measurement (at the assessment position).

For predictions only computation is applicable.

Provisional computation and measurement methods are set out in paragraphs 2 and 3.

2. Interim computation methods for L_{den} and L_{night}

2.1. Adaptation of existing national computation methods

If a Member State has national methods for the determination of long-term indicators those methods may be applied, provided that they are adapted to the definitions of the indicators set out in Annex I. For most national methods this implies the introduction of the evening as a separate period and the introduction of the average over a year. Some existing methods will also have to be adapted as regards the exclusion of the façade reflection, the incorporation of the night and/or the assessment position.

The establishment of the average over a year requires special attention. Variations in emission and transmission can contribute to fluctuations over a year.

2.2. Recommended interim computation methods

For Member States that have no national computation methods or Member States that wish to change computation method, the following methods are recommended:

For INDUSTRIAL NOISE: ISO 9613-2: 'Acoustics — Abatement of sound propagation outdoors, Part 2: General method of calculation'.

Suitable noise-emission data (input data) for this method can be obtained from measurements carried out in accordance with one of the following methods:

- ISO 8297: 1994 'Acoustics — Determination of sound power levels of multisource industrial plants for evaluation of sound pressure levels in the environment — Engineering method',
- EN ISO 3744: 1995 'Acoustics — Determination of sound power levels of noise using sound pressure — Engineering method in an essentially free field over a reflecting plane',
- EN ISO 3746: 1995 'Acoustics — Determination of sound power levels of noise sources using an enveloping measurement surface over a reflecting plane'.

For AIRCRAFT NOISE: ECAC.CEAC Doc. 29 'Report on Standard Method of Computing Noise Contours around Civil Airports', 1997. Of the different approaches to the modelling of flight paths, the segmentation technique referred to in section 7.5 of ECAC.CEAC Doc. 29 will be used.

For ROAD TRAFFIC NOISE: The French national computation method 'NMPB-Routes-96 (SETRA-CERTU-LCPCSTB)', referred to in 'Arrêté du 5 mai 1995 relatif au bruit des infrastructures routières, Journal Officiel du 10 mai 1995, Article 6' and in the French standard 'XPS 31-133'. For input data concerning emission, these documents refer to the 'Guide du bruit des transports terrestres, fascicule prévision des niveaux sonores, CETUR 1980'.

For RAILWAY NOISE: The Netherlands national computation method published in 'Reken- en Meetvoorschrift Railverkeerslawaaai '96, Ministerie Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 20 November 1996'.

Those methods must be adapted to the definitions of L_{den} and L_{night} . No later than 1 July 2003 the Commission will publish guidelines in accordance with Article 13(2) on the revised methods and provide emission data for aircraft noise, road traffic noise and railway noise on the basis of existing data.

3. Interim measurement methods for L_{den} and L_{night}

If a Member State wishes to use its own official measurement method, that method shall be adapted in accordance with the definitions of the indicators set out in Annex I and in accordance with the principles governing long-term

average measurements stated in ISO 1996-2: 1987 and ISO 1996-1: 1982.

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If a Member State has no measurement method or if it prefers to apply another method, a method may be defined on the basis of the definition of the indicator and the principles stated in ISO 1996-2: 1987 and ISO 1996-1: 1982.

Measurement data in front of a façade or another reflecting element must be corrected to exclude the reflected contribution of this façade or element (as a general rule, this implies a 3 dB correction in case of measurement).

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ANNEX III

ASSESSMENT METHODS FOR HARMFUL EFFECTS

referred to in Article 6(3)

Dose-effect relations should be used to assess the effect of noise on populations. The dose-effect relations introduced by future revisions of this Annex in accordance with Article 13(2) will concern in particular:

- the relation between annoyance and L_{den} for road, rail and air traffic noise, and for industrial noise,
- the relation between sleep disturbance and L_{night} for road, rail and air traffic noise, and for industrial noise.

If necessary, specific dose-effect relations could be presented for:

- dwellings with special insulation against noise as defined in Annex VI,
- dwellings with a quiet façade as defined in Annex VI,
- different climates/different cultures,
- vulnerable groups of the population,
- tonal industrial noise,
- impulsive industrial noise and other special cases.

ANNEX IV

MINIMUM REQUIREMENTS FOR STRATEGIC NOISE MAPPING

referred to in Article 7

1. A strategic noise map is the presentation of data on one of the following aspects:

- an existing, a previous or a predicted noise situation in terms of a noise indicator,
- the exceeding of a limit value,
- the estimated number of dwellings, schools and hospitals in a certain area that are exposed to specific values of a noise indicator,
- the estimated number of people located in an area exposed to noise.

2. Strategic noise maps may be presented to the public as:

- graphical plots,
- numerical data in tables,
- numerical data in electronic form.

3. Strategic noise maps for agglomerations shall put a special emphasis on the noise emitted by:

- road traffic,
- rail traffic,
- airports,
- industrial activity sites, including ports.

4. Strategic noise mapping will be used for the following purposes:

- the provision of the data to be sent to the Commission in accordance with Article 10(2) and Annex VI,
- a source of information for citizens in accordance with Article 9,
- a basis for action plans in accordance with Article 8.

Each of those applications requires a different type of strategic noise map.

5. Minimum requirements for the strategic noise maps concerning the data to be sent to the Commission are set out in paragraphs 1.5, 1.6, 2.5, 2.6 and 2.7 of Annex VI.

6. For the purposes of informing the citizen in accordance with Article 9 and the development of action plans in accordance with Article 8, additional and more detailed information must be given, such as:

- a graphical presentation,
- maps disclosing the exceeding of a limit value,
- difference maps, in which the existing situation is compared with various possible future situations,
- maps showing the value of a noise indicator at a height other than 4 m where appropriate.

The Member States may lay down rules on the types and formats of these noise maps.

7. Strategic noise maps for local or national application must be made for an assessment height of 4 m and the 5 dB ranges of L_{den} and L_{night} as defined in Annex VI.

8. For agglomerations separate strategic noise maps must be made for road-traffic noise, rail-traffic noise, aircraft noise and industrial noise. Maps for other sources may be added.

9. The Commission may develop guidelines providing further guidance on noise maps, noise mapping and mapping softwares in accordance with Article 13(2).

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ANNEX V

MINIMUM REQUIREMENTS FOR ACTION PLANS

referred to in Article 8

1. An action plan must at least include the following elements:

- a description of the agglomeration, the major roads, the major railways or major airports and other noise sources taken into account,
- the authority responsible,
- the legal context,
- any limit values in place in accordance with Article 5,
- a summary of the results of the noise mapping,
- an evaluation of the estimated number of people exposed to noise, identification of problems and situations that need to be improved,
- a record of the public consultations organised in accordance with Article 8(7),
- any noise-reduction measures already in force and any projects in preparation,
- actions which the competent authorities intend to take in the next five years, including any measures to preserve

quiet areas,

- long-term strategy,
- financial information (if available): budgets, cost-effectiveness assessment, cost-benefit assessment,
- provisions envisaged for evaluating the implementation and the results of the action plan.

2. The actions which the competent authorities intend to take in the fields within their competence may for example include:

- traffic planning,
- land-use planning,
- technical measures at noise sources,
- selection of quieter sources,
- reduction of sound transmission,
- regulatory or economic measures or incentives.

3. Each action plan should contain estimates in terms of the reduction of the number of people affected (annoyed, sleep disturbed, or other).

4. The Commission may develop guidelines providing further guidance on the action plans in accordance with Article 13(2).

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ANNEX VI

DATA TO BE SENT TO THE COMMISSION

referred to in Article 10

The data to be sent to the Commission are as follows:

1. For agglomerations

1.1. A concise description of the agglomeration: location, size, number of inhabitants.

1.2. The responsible authority.

1.3. Noise-control programmes that have been carried out in the past and noise-measures in place.

1.4. The computation or measurement methods that have been used.

1.5. The estimated number of people (in hundreds) living in dwellings that are exposed to each of the following bands of values of L_{den} in dB 4 m above the ground on the most exposed façade: 55-59, 60-64, 65-69, 70-74, > 75, separately for noise from road, rail and air traffic, and from industrial sources. The figures must be rounded to the nearest hundred (e.g. 5 200 = between 5 150 and 5 249; 100 = between 50 and 149; 0 = less than 50).

In addition it should be stated, where appropriate and where such information is available, how many persons in the above categories live in dwellings that have:

- special insulation against the noise in question, meaning special insulation of a building against one or more types of environmental noise, combined with such ventilation or air conditioning facilities that high values of insulation against environmental noise can be maintained,

- a quiet façade, meaning the façade of a dwelling at which the value of L_{den} four metres above the ground and two metres in front of the façade, for the noise emitted from a specific source, is more than 20 dB lower than at the façade having the highest value of L_{den} .

An indication should also be given on how major roads, major railways and major airports as defined in Article 3 contribute to the above.

1.6. The estimated total number of people (in hundreds) living in dwellings that are exposed to each of the following bands of values of L_{night} in dB 4 m above the ground on the most exposed façade: 50-54, 55-59, 60-64, 65-69, > 70, separately for road, rail and air traffic and for industrial sources. These data may also be assessed for value band 45-49 before the date laid down in Article 11(1).

In addition it should be stated, where appropriate and where such information is available, how many persons in the above categories live in dwellings that have:

- special insulation against the noise in question, as defined in paragraph 1.5,

- a quiet façade, as defined in paragraph 1.5.

It must also be indicated how major roads, major railways and major airports contribute to the above.

1.7. In case of graphical presentation, strategic maps must at least show the 60, 65, 70 and 75 dB contours.

1.8. A summary of the action plan covering all the important aspects referred to in Annex V, not exceeding ten pages in length.

2. For major roads, major railways and major airports

2.1. A general description of the roads, railways or airports: location, size, and data on the traffic.

2.2. A characterisation of their surroundings: agglomerations, villages, countryside or otherwise, information on land use, other major noise sources.

2.3. Noise-control programmes that have been carried out in the past and noise-measures in place.

2.4. The computation or measurement methods that have been used.

2.5. The estimated total number of people (in hundreds) living outside agglomerations in dwellings that are exposed to each of the following bands of values of L_{den} in dB 4 m above the ground and on the most exposed façade: 55-59, 60-64, 65-69, 70-74, > 75.

In addition it should be stated, where appropriate and where such information is available, how many persons in the above categories live in dwellings that have:

- special insulation against the noise in question, as defined in paragraph 1.5,

- a quiet façade, as defined in paragraph 1.5.

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2.6. The estimated total number of people (in hundreds) living outside agglomerations in dwellings that are exposed to each of the following bands of values of L_{night} in dB 4 m above the ground and on the most exposed façade: 50-54, 55-59, 60-64, 65-69, > 70. These data may also be assessed for value band 45-49 before the date laid down in Article 11(1).

In addition it should be stated, where appropriate and where such information is available, how many persons in the above categories live in dwellings that have:

- special insulation against the noise in question, as defined in paragraph 1.5,

- a quiet façade, as defined in paragraph 1.5.

2.7. The total area (in km²) exposed to values of L_{den} higher than 55, 65 and 75 dB respectively. The estimated total number of dwellings (in hundreds) and the estimated total number of people (in hundreds) living in each of these areas must also be given. Those figures must include agglomerations.

The 55 and 65 dB contours must also be shown on one or more maps that give information on the location of villages, towns and agglomerations within those contours.

2.8. A summary of the action plan covering all the important aspects referred to in Annex V, not exceeding ten pages in length.

3. Guidelines

The Commission may develop guidelines to provide further guidance on the above provision of information, in accordance with Article 13(2).



Wind Farm Moratorium Petition Sub Group 3

In this group we ask the **Petitions Committee** to recommend that **Natural Resources Wales & Central Planning** conducts a review of Planning Advice to **CC's** regarding wind farms, and wind turbines within a rural setting, and with a plate capacity of 50MW or less. We would also ask the **Petitions Committee** to recommend a review of advice to developers when applying for planning on Wind Farms, or turbines with a plate capacity of 50MW or less.

Below, and on the attached sheets we list some of the aspects we feel need review, the full scope of the review will be determined when **Natural Resources Wales & Central Planning** have consulted stakeholders. At this stage we are asking the **Petitions Committee** to determine if a review is justified.

Page	Item Considered	Beneficiaries
2	Disposal of Turbine Blades	Environment
2	TAN 8 Limits	Environment, Rural Populations
3	Owls	Environment, Bio-Diversity
3	Bats	Environment, Bio-Diversity
3	Advice to Councillors on Planning Committees	Rural Communities, Environment
4	Open Declarations	Rural Communities, Consumers, Welsh Population

Please note, we do not ask that the Petitions Committee examine the attached subjects in detail, and advise on them individually. We have included them so that the Committee can see a need for a review of Wind Farms which examines the historical lessons and new technological data to ensure best practise is legislated for in the interests of agriculture, rural residents, tourism, and the environment and biodiversity. The actual detail would be decided by NRW and stakeholders, should a review be granted.

Planning Issues

The table below demonstrates issues that need review to ensure best practise Wind Generation in rural areas.

Item	Issue	Resolution	Notes
Wind Turbine Blades	<p>Wind Turbine blades are made of composite materials, which, when broken down, or burnt, can release toxic chemicals, harmful to humans, animals and the environment.</p> <p>Larger turbines and areas where the stress on the blades is high is causing blade failures. This means the blades are not lasting the lifetime of the turbine.</p> <p>Evidence shows that turbines are failing to achieve predicted lifetimes.</p>	<p>How will turbine blades be disposed of? How will they be cut up for disposal? Are special requirements for storage needed? How safe is storage on the windfarm site? How safe is landfill?</p> <p>With the onshore and offshore programs needing many turbines to achieve targets, what are the projected numbers for scrap blades by 2030? Where will the blades be cut up? Who bears the costs of specialist disposal? Is WAG responsible for turbine blade disposal for sites above 50MW?</p>	<p>The only existing methods suggested are Land Fill, or repatriation. Both have costs involved.</p> <p>Would repatriation be viewed as a derogation of duty in Wales's 'green' reputation?</p>
TAN 8 Limits & Guidelines	<p>Ove Arrup spent a great deal of time and effort providing a comprehensive document on the SSA's, which the developers have largely ignored.</p> <p>The first minister has said that TAN 8 guidelines should be kept to. The minister for E & S has said he stands by TAN 8 yet evidence shows developers ignoring limits and guidelines</p>	<p>Example: Brechfa Forest East. SSA G There are twelve turbines in this development, all twelve exceed TAN 8 limits on at least 2 points per turbine. Some as many as 4. The whole site has been spread to accommodate turbines which are 45% taller than the TAN 8 limit and the site now encroaches on land below the SSA G minimum of 300 metres above sea level, and encompasses fluvial valleys, which TAN 8 said should be avoided.</p> <p>This extreme disregard is commonplace on all SSA's. WAG has little influence on sites above 50MW. On sites 50MW and below the developer should have to demonstrate why the TAN 8 limit or guideline is flawed, to the satisfaction of the CC's planning committee.</p>	<p>Evidence on these breaches can be provided, if required.</p>

	on sites of 50MW and below in SSA areas.		
Item	Issue	Resolution	Notes
Owls	Owls are selected as a representation of avian species, in that all variations of strain are protected under EU legislation. Most Owls are nocturnal and are threatened by birdstrike.	<p>On single turbine installations off peak operation should be prohibited to protect wildlife. Because turbines have a mechanical life, set by the number of operating hours, turning them off for biodiversity reasons only affects payback speed, in fact because the turbine will operate over a greater number of years, the greater future price of energy will offset the payback period calculation.</p> <p>On wind farms, because they are part of base load, they cannot be required to turn off at night. However, if cut in speeds are adjusted, (as suggested in Sub Group 1) the risk will be reduced.</p> <p>The Barn Owl Trust's map describes the majority of Wales as suitable territory to encourage nesting and breeding, by supplying nesting boxes. Domestic premises within 2.5 Km of a wind farm should be advised not to encourage Owls, (a similar warning is given with regard to motorways and high speed train lines).</p>	<p>Scotland have an eagle breeding and habitat building program which is based on its separation from wind turbines.</p> <p>Wales has the largest potential unbroken land area suitable for owl habitat in the UK by percentage or per capita.</p>
Bats	All bats are protected species under EU legislation.	<p>Recent research has shown that bats have migratory patterns which can be as far as 60Km and that in transit nesting and feeding takes place. The times and distances of these migratory moves need to be established so that each CC has mapping of its territory, and WAG holds a master copy for the whole country.</p> <p>The conditions for Owls also apply to bats with regard to turbine operation.</p>	<p>There is no program to identify migratory paths in respect of turbine applications.</p>
Advice to Councillors in respect of single turbine planning applications	<p>Councillors, especially those outside SSA's do not have access to full advice with regard to planning.</p> <p>During the past year several applications have been monitored and a wide range of results obtained, as to the advice available.</p>	<p>The main cause for criticism is that councillors do not have access to a full and comprehensive package of information with regard to either general informed knowledge, or knowledge specific to the application being considered.</p> <p>Various CC Planning representatives claim that noise monitoring can be undertaken by Environmental Health Departments, without disclosing that this is a 'by appointment only' service and there is no weekend or night cover.</p> <p>There is no information offered as to the type or generic characteristics of the turbine under consideration. (Example: It is a well known fact that</p>	<p>Much of the information available to councillors is tainted 'wind lobby' either from presentations or visits to trade consultation events. Central planning needs to address this for all renewable energy. It must be remembered that outside SSA's councillors cannot be expected to be fully briefed in order to fulfil their role as monitoring the executive.</p>

		water cooled turbines are far quieter than air cooled).	
Item	Issue	Resolution	Notes
Open Declaration of Central Planning Advice and Efficacy of Wind Energy Developments	<p>Central Planning Advice on applications below 50MW is not open for public scrutiny and challenge.</p> <p>The efficacy of renewable energy, its seasonal and intermittent nature and value for money within the wider community requires to be known, in the interests of open Government and historical record.</p>	<p>Open Government is built into WAG. There is no reason Central Planning Advice should not be open to all, and to challenge. A opaque system has been developed which favours developers and land owners acting in concert with 'green' NGO's. It is to the detriment of democracy that this should continue.</p> <p>Efficacy should be at the heart of any application, because ultimately it is paid for by the consumer. It may be that Central Government, whether it be DECC or WAG dictates a renewable energy programme, but it is important historically that it should be documented, to show who the winners and losers were over time, and why the choices were made. Also it is important to open Government and democracy that information should not be concealed behind a legislative fug .</p>	

Wind Farm Moratorium Petition

Sub Group 4

In this group we ask the **Petitions Committee** to recommend a cross party **Wind Farm Compensation Committee** be formed to establish a fair community compensation system, which would expand and equalise the existing system, without further charges being levied to the consumer.

Page 2. Evidence and Proposal from Galar

Community Benefit for Wind Farms

The present system of community benefit for wind farms has no regulatory level, and seems to be more fiscally effective, the more a wind farm is opposed. Example: Bryn Llywelyn in Carmarthenshire attracted a late offer from the developer RES, an offer of a direct payment on electricity bills to people living within a very tight circle around the proposed development, this was in addition to the 'community benefit' offered during the initial application. This might sound munificent on the behalf of the developer, or equally that the developer was hanging out as long as possible to avoid paying the amount they should.

This raises two points:

1. WAG seems to be trying to get planning approvals moved forward more quickly, yet are admitting the more opposition and delay, the better the fiscal result.
2. If the head of a household signs up to the sort of deal RES offered on Bryn Llywelyn then he can be seen to be having a pecuniary advantage from a development and therefore must accept inferior sound emission protection. Please note the head of the household can impose inferior sound emissions on his children, partner, and anyone else living in the property. RES demanded specifically that the head of the household signed up to this deal.

We feel that a set amount per installed MW (face plate capacity), should be paid. RWE nPower already work on this basis and they offer £5,000 per installed MW per annum. This is ludicrously low, and to some extent is kept so by the psychological picture the word benefit portrays. Benefit and benevolence have the same Latin stem of Bene i.e well. Webster's Dictionary defines the words in similar manner, one definition been exactly common to both as "An act of kindness". Wind farms are imposed on communities, any payment is compensation for the hurt caused. Kindness doesn't enter into it, morally and practically those imposing hurt have a responsibility to pay.

At the same time, simply asking the developer for a bigger contribution may make us feel better, but would limit the monies that should be paid. While the developer could easily accommodate £8,000 per installed MW, it still wouldn't approach the real figure needed. We should also be aware that the electrical consumer finally pays any monies raised from the developer, and close to 30% of those consumers in Wales are already suffering fuel poverty.

At this stage we should look beyond simply further taxing the poor and look at the other beneficiaries of wind farms. That is the landlord on whose property the wind farm resides, DECC, and WAG. Jointly they could make a contribution far higher than the developer, without further punishing the consumer.

We ask the Petitions Committee

To recommend to the Assembly that a **cross party Wind Farm Compensation Committee** is formed, this committee would examine all aspects of the Compensation needed to redress wind farm costs to a community. Further, that comments and proposals are sought by all CC's, stakeholders etc., to inform the Wind Farm Compensation Committee of the democratic mood in this matter.

Galar's Proposals would be.

Galar believes compensation is required in two parts in respect of wind farms:

1. Cover for immediate community costs on granting of planning. This funding would be raised from financial beneficiaries of the development in list A below, and be a once only charge, per installed MW.
2. Cover for ongoing community costs during operational lifetime of the wind farm. This funding would be raised from financial beneficiaries of the operation in list B below, and be an annual charge per installed MW and tied to inflation.

Funds from lists A would for the exclusive use of properties within 12 proposed turbine lengths of a development. Properties within this band would be given the option of selling outright for a full market rate, or having their property renovated to give the best possible relief from the environmental impact of the scheme.

This funding should be cost neutral as DECC maintains there is no loss in property value due to wind farms. The fund would have the choice of selling the properties or renting them, and on completion of build, monies accrued from list A should operate as a trust fund for the length of time the development runs. The benefits of the trust would provide an annual annuity for communities local to the development to spend as they thought fit.

When the operational life of the wind farm ends the trust would pay any decommissioning costs which cannot be met by the developer, should they prove to be financially unable to meet their commitments, and the residue passed to community charities.

Funds from list B should be used to pay compensation for loss of amenity and visual impact, for those dwellings within 20 turbine lengths of a development. The fund would also be used within the wider community to provide, job training, infrastructure for local enterprise, and needs based environmental upgrades of dwellings within the wider community. The fund should also recognise the damage to the natural habitat wind farm construction and development, and be used to establish habitat improvement

This fund would be administered by CC's, with councillors local to the wind farm being obligatory members.