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Dear to whom it may concern,

BWEA would like to thank the Welsh Assembly Government (WAG) for their invitation to provide comment on proposals for ***Lifting the Planning Barriers to Domestic Energy Micro-generation: Proposed Changes to Permitted Development Rights.***

BWEA (British Wind Energy Association) is the UK's leading renewable energy trade association. Established in 1978, BWEA now has over 350 member companies active in the UK wind, wave and tidal stream industries. BWEA is at the forefront of the development of these industries, acting as an industry forum to find solutions, whilst representing membership views to government, the media, and the public.

BWEA is the leading voice for the UK micro- and small-wind industry, representing its membership which includes small wind turbine manufacturers, installers, distributors, utility companies, academia, and other related parties. This response has been prepared on behalf of these members although it should be noted that individual members may provide their own distinct responses.

When correctly sited and installed, micro- and small-wind technology has the potential to make a material contribution to UK and international carbon emission reduction and renewable energy targets, addressing fuel security and fuel poverty, and to promote public awareness as to these important issues.

If sufficiently supported, and if existing market barriers are adequately addressed, a fully developed UK micro- and small-wind industry will be capable of delivering such benefits. A developed small wind turbine (SWT) industry will also provide an important contribution to global renewable energy requirements and UK manufacturing aspirations through product export. It is therefore crucial that UK government, and devolved powers, provide the necessary incentives for market and industry development. Closer to Wales, the recently stated 2011 zero carbon vision coupled with targets embedded within the Microgeneration Action Plan for Wales introduces the potential for Wales to act as an example to national industry and market development. The experience and expertise gained from such development could position Wales to benefit from future industry and market growth.

To achieve WAG's 2011 zero carbon vision and the national government's 2016 zero carbon vision it is important that both energy efficiency measures and on-site

renewable technology contribute. With that in mind it is important that all microgeneration stakeholders are prepared and ready to contribute in a timely manner that will make such policies achievable. Once the "low hanging fruit" of more cost effective measures has been fully utilised, it is important that industry, developers, architects, and planners possess the experience, expertise, and ability to deliver further gains that microgeneration can contribute. BWEA endorses the use of General Permitted Development Orders (GPDOs) to allow for the steady and gradual ramp up in the necessary level of microgeneration technology uptake.

BWEA agrees with WAG that there is a need to make the process of installing on-site renewables less difficult and less complicated whilst at the same time upholding a level of control which protects the interests of neighbours, the wider community and environment. It is BWEA's view that relaxation of the planning laws will remove a barrier to market development and that the upholding of necessary control will not only offer the stated protection but will also protect the reputation of the industry at a critical and early stage in its development.

It is right that visual and noise impacts should be carefully considered within GPDOs. BWEA would suggest the proposed protective controls for SWTs should be revised to more appropriate levels, with related reasoning and further detail offered within the BWEA consultation response. It should also be noted that microgeneration within the domestic environment, or indeed the non-domestic environment, can deliver positive emotional impact upon viewers. For example the visibility of a small wind turbine can engage individuals and provoke awareness within the mindset of the viewer as to the environment, energy use and other behavioural considerations. Such emotional aspects of micro- and small-wind technology should not be underestimated.

BWEA strongly endorses the WAG approach to policy construction through implementing policy "based on evidence" and so would advise that specific methodology, embedded within proposed policy, be revised to reflect this notion. BWEA has been closely involved with the development of industry standards such as the BWEA SWT Performance & Safety Standard and the government supported UK Microgeneration Certification Scheme (UK MCS) against which both microgeneration products and microgeneration installers may be certified and accredited respectively. It is proposed that through these standards GPDO requirements, such as noise, be implemented, enforced and protected to the necessary levels of confidence.

BWEA has been working with DEFRA and DCLG on the subject of SWT noise control with the domestic built environment and would welcome the opportunity to work with WAG in developing the correct and adequate GPDO controls in Wales.

Yours sincerely

Alex Murley
Small-systems manager, BWEA



Consultation Questions & BWEA Comments

QUESTION	YES	NO	COMMENTS
Question 1 – Do you agree with the principle of an impact approach for permitted development relating to domestic micro-generation?	YES		BWEA strongly endorses the impact approach for determining the type of development that can be appropriately permitted using GPDO powers. BWEA supports the statement in paragraph 13 of the consultation document: “changes to current arrangements should be based on evidence”.
Question 2 – Do you agree with a restriction on domestic micro-generation development in conservation areas and in World Heritage Sites?	YES		BWEA considers that a careful and appropriate balance has been achieved with the proposed restriction and would wish to resist any further restrictions of this nature.
Question 3 – Should the restriction apply in the same way to the other types of designated area such as National Parks, AONBs or registered parks and gardens?		NO	BWEA feels that further restrictions would be unduly limiting and unnecessary, as follows: <ul style="list-style-type: none">• Designations for flora/fauna protection – adequate safeguards already exist to prevent inappropriate development.• Designations for landscape protection – because of restrictions on the type and location of development that is proposed to be permitted under GDPO powers, proposals would always be relatively small-scale and located relatively close to other built development, in areas already modified by modern, human influences. Therefore, the impact on designated landscapes will be of a low order of magnitude. The proposed restrictions would therefore promote developments that broadly respect the CPRE’s tranquillity research which recognises that the most tranquil areas (and those most under threat) are those well away from modern human influences and conversely, that the least tranquil areas are those close to populated areas.
Question 4 Are the terms 'on or in front	YES		BWEA considers that a careful and appropriate balance has been

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of the principal elevation' and 'visible from a highway clear' and sufficient to protect amenity?			achieved with the proposed restriction and would wish to resist any further restrictions of this nature.
Question 5 – Do you agree that no special exemptions are necessary for listed buildings? If not, what specific protections do you think are necessary?	YES		BWEA strongly agrees that no special exemptions are necessary for listed buildings.
Question 6 – Do you agree that the impact of noise should be dealt with by specific noise restrictions based on decibel levels at/in neighbouring dwellings in the way proposed in Annex 2?		NO	<p>BWEA strongly disagrees with the methodology proposed within Annex 2 of the consultation.</p> <p>BWEA agrees with the use of noise level threshold in line with the World Health Organisation guidelines which represent figures founded on the sound application of science. At 1 meter from the external facade of a neighbour's residence a noise threshold of 45 dB $L_{A_{EQ}}$ is acceptable, as is the use of 35 dB $L_{A_{EQ}}$ noise threshold for interior space.</p> <p>The equivalent figures stated within the consultation, possessing a blanket reduction of 5 dB for a scenario involving multiple SWT installations within close proximity, are inappropriate for a number of reasons.</p> <p>Firstly, a scenario where multiple SWTs are installed in close proximity is likely to be very infrequent and thus should not discriminate against the vast majority of likely cases of solo SWT installations.</p> <p>Secondly, in an instance where multiple SWT are installed within close proximity, appropriate and proportional steps, based on science and proper logic, should be taken to uphold necessary protective measures.</p>

QUESTION	YES	NO	COMMENTS
			<p>The use of a 5 dB penalty is excessive when compared to the acoustic impact of multiple SWT installations calculated through the application of accepted acoustic theory. BWEA would question how appropriate the use of this figure is and would be interested to examine further detail as to how such a figure was arrived at.</p> <p>To briefly put the figure of 5 dB in perspective, noise is measured in decibels, a logarithmic unit, thus a 3 dB increase/decrease is the equivalent to a doubling/halving of noise power, a decrease of 5 dB is significant. BWEA proposes that the use of any noise penalty be quantified on the basis on the application of acoustic theory to likely scenarios through collaboration of government, industry, and field experts.</p> <p>Thirdly, should noise level thresholds be lowered below the figures embedded within WHO guidance, the proposed requirements would likely prevent the use and installation of the vast majority of SWT products currently available and would have a severe and negative impact on the industry as whole.</p> <p>BWEA views the proposed noise methodology for safeguarding the environment, neighbours, and the wider community as overly complicated and likely to prove problematic in implementation and enforcement.</p>
<p>Question 7 – If not, what alternative approach would best address this issue?</p>	<p>YES</p>		<p>BWEA has been closely involved with the development of industry standards such as the BWEA SWT Performance & Safety Standard (BWEA P&SS) and the government supported UK Microgeneration Certification Scheme (UK MCS) against which both microgeneration products and microgeneration installers may be certified and accredited</p>

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			<p>respectively. It is proposed that through these standards GPDO requirements, such as noise, be implemented, enforced and protected to the necessary levels of confidence.</p> <p>UK MCS (and BWEA P&SS) certified SWTs possess standardised noise power curve unique to each product, this process is verified by UKAS accredited certification bodies. Through applying acoustic theory to such information the range from each particular product at which noise pressure levels will decrease to WHO guideline thresholds can be arrived at. It will be the responsibility of the UK MCS accredited installer to evaluate whether neighbouring property fall within this theoretical range and thus will evaluate whether the proposed installation is compliant with GPDO noise requirements, or will require planning permission. This methodology will introduce simplicity as well as ensure those actioning control (UK MCS accredited installers) are accountable to processes which will be inspected and enforced, as well as basing judgement on verified technical information and proper science.</p> <p>For instances where multiple SWTs are proposed to be installed in close proximity, further requirements will be necessary so to uphold GPDO protective controls. BWEA proposes that any noise penalty, or dB subtraction to WHO guideline thresholds, be based on firm evidence. BWEA views a 5 dB penalty as excessive for instance of multiple SWTs installations and calls for WAG to engage with industry to arrive at an appropriate and evidence based approach to policy construction.</p>
<p>Question 8 – Do you support a general restriction on permitted development so as to require that visual impact is</p>			<p>BWEA appreciates the importance of considering the visual impacts domestic installations may deliver through GPDO. The proposed restriction should be revised in light of the following points:</p>

QUESTION	YES	NO	COMMENTS
<p>minimised in exercising the rights?</p>			<p>(1) Building mounted SWT size – Product characteristic limit should be specified in terms of swept area, as opposed to diameter, so to accommodate vertical as well as horizontal axis SWT. BWEA would strongly recommend increasing the proposed limit for building mounted products from 12.57 m² (diameter of 2m for horizontal SWT) to 13.86 m² (diameter of 2.1m). This increased limit is appropriate for sufficient control and reflects the characteristics of products currently available on the market (the photographed products on page 26 of the consultation possesses a swept area of 13.86 m²).</p> <p>(2) Free standing SWT size – Product characteristics should be restricted to a swept area limit of at least 28.3 m² (diameter of 6m). The restriction for stand alone wind turbines hub heights are unduly restrictive and should be relaxed to permit hub heights of up to 12m (i.e. the height of the centre of a turbine’s swept area).The relatively small incremental increase in allowed hub height would lead to a disproportional large increase in potential resource as a result of the physics of wind energy generation relating to both swept area and increased wind speed. Furthermore, French legislation has for many years operated with a 12m hub height restriction without problem and aligning with this would create cost economies for UK manufacturers.</p> <p>(3) BWEA understands the need for a carefully balanced approach to the scale of SWTs permitted under the proposed new legislation. The scale of the stand alone wind turbines proposed is felt to allow a far greater proportion of the UK’s excellent wind resource to be harnessed in an economically feasible manner by UK householders while also reflecting the nature of the UK’s landscape. For instance,</p>

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			<p>the proposed scale of stand alone wind turbines is broadly equivalent to a typical, small indigenous tree specimen; the Common Rowan for instance, at maturity, has a height of 15m and spread of 7m.</p> <p>(4) BWEA would support a single separation distance of a standalone wind turbine from a highway or neighbour's property but would wish to define it as the maximum height of the structure to be installed (ie tip-height). This would satisfy guidance in "A companion guide to PPS22" relating to larger wind turbines: "Although a wind turbine erected in accordance with best engineering practice should be a stable structure, it may be advisable to achieve a set- back from roads and railways of at least fall over distance, so as to achieve maximum safety" (emphasis added). To clarify, BWEA does not see the need for an additional safety threshold in the light of either the guidance for large wind turbines or international operational experience gained from wind turbines over the past 2 decades or more.</p>
<p>Question 9 – Do you agree that local planning authorities should be able to restrict permitted development rights for micro-generation in places where the benefit from the technology is outweighed by its impact?</p>		NO	<p>BWEA has serious reservations about the proposal to allow local planning authorities to impose more restrictive criteria for micro-generation, for the following reasons:</p> <ul style="list-style-type: none"> • The utility benefit to a consumer of micro-generation cannot be accurately predicted or, therefore, appropriately weighed by a planning authority. • The proposal understates the benefits of microgeneration in respect of efforts to tackle climate change. Indeed, Government policy on climate change has for several years been careful to promote all measures – large and small – that can reduce greenhouse gas emissions. • The proposed wording could entirely, and in the BWEA's opinion,

QUESTION	YES	NO	COMMENTS
			<p>inappropriately undermine growth in micro-generation by making all such development a “hostage to fortune” to local planning authority discretion.</p> <p>Visual (and other) impacts accruing from micro-generation are by their nature localised, short-term and reversible (and are deemed to be positive by some members of the public, e.g. wind turbines and visual effects). In contrast, climate change is a global, long-term and irreversible phenomenon. The balance in respect of what would be relatively small-scale development within man-modified and populated areas should therefore come down firmly on the side of permitting all developments that comply with the proposed Statutory Instrument (reflecting the amendments proposed in this submission) and other relevant legislation.</p>
<p>Question 10 – Do you have any evidence of damage to protected species or other wildlife that may be caused by these forms of micro-generation? Do you agree that the existing protection is adequate?</p>	YES		<p>BWEA views existing protection as sufficient but will welcome further consultation and engagement should related information evolve in future.</p>
<p>Question 11 – Is guidance sufficient to address the potential impact on archaeologically sensitive areas?</p>	YES		<p>BWEA firmly believes that no further restrictions are necessary in order to protect archaeological interests. Adequate safeguards already exist to prevent inappropriate development.</p>
<p>Question 12 – In addition to providing advice as to the scope of the changes to the GPDO, what could guidance also usefully cover?</p>	YES		<p>Guidance document would benefit from further information as to existing national and international microgeneration standards and further details of point sources of salient information e.g. trade associations.</p>
<p>Question 13 –Do you agree with the proposals for solar micro-generation? If</p>			<p>No comment.</p>

QUESTION	YES	NO	COMMENTS
not, what alternatives would you suggest?			
Question 14 – Do you agree that there should be no restriction in terms of the coverage of roofs and walls by solar panels? If not, what would be an acceptable percentage?			No comment.
Question 15 – Generally, should the same level of permissiveness apply to solar panels on a wall as on a roof?			No comment.
Question 16 – Do you agree with a minimum separation distance of 5m to the boundary of a highway or neighbouring property for a stand-alone solar unit?			No comment.
Question 17 – Do you agree with the proposals for heat pumps? If not, what protection measures do you think are needed?			No comment.
Question 18 – Do you agree that the likely impact of noise from ASHPs should be dealt with by specific noise restrictions in the same way as proposed for domestic wind turbines?			No comment.
Question 19 –Do you agree with the proposals for wind turbines? If not, what alternatives or additions would you suggest?		NO	See consultation responses to Questions 6-9. BWEA would encourage the following: Vibration – BWEA would question on what scientific or legal basis a

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			<p>vibration threshold of 0.5mm/s has been arrived at. Therefore we suggest that it be adopted with a 95% time applicability (i.e. a threshold not exceeded 95% of operational time) but only on a provisional interim basis with a view to reviewing it in 24 months after further research.</p> <p>Radar – Radar is currently a significant issue for large wind with ongoing discussions involving BWEA, industry, the aviation community, and government. However, it is BWEA's view that Radar is unlikely to prove problematic for micro- and small-wind systems possessing swept areas which should be allowed within GPDO (28.3m²). Some study has been undertaken and BWEA would welcome further dialogue on this subject in the future should this be invited.</p>
<p>Question 20 – Do you agree that the likely impact of noise from turbines should be dealt with by specific noise restrictions in the way proposed?</p>		NO	<p>See BWEA response to consultation question 6 and 7.</p>
<p>Question 21 – Do you agree with the proposals for biomass?</p>			<p>No comment</p>
<p>Question 22 – Do you agree with the proposals for CHP?</p>			<p>No comment</p>
<p>Question 23 – Do you agree there should be no additional permitted development rights for hydro?</p>			<p>No comment</p>