



INWG Consultation Response 27 February 2023

HM Government Department for Levelling Up, Housing & Communities Reforms to National Planning Policy Consultation

Consultation dated 22 December 2022

Closing date 2 March 2023

Our consultation comments are made referencing the two government documents provided for the consultation:

- Levelling-up and Regeneration Bill: reforms to national planning policy, the consultation, [open here](#).
- National Planning Policy Framework: draft text for consultation, marked up NPPF, [open here](#).

Our response is in two parts. In the first part we provide an introduction and discuss the issues as we understand them. Then in the second part we provide our detailed consultation responses. Our comments follow the format of the main consultation document with references in **bold** where applicable to the marked up NPPF. We note that the consultation relates to England only.

Text quoted from the consultation and marked up NPPF documents is shown in blue italics.

Suggested revisions (new text and ~~deleted text~~) to the NPPF are shown in red italics.

Other comments and recommendation shown in red and highlighted in grey

Web links identified by '[open here](#)' are provided for convenience to access web-based documents referred to in the text. We believe that all the websites accessed via these links are safe to use.

Introduction and the Issues

The Independent Noise Working Group (INWG) welcome this consultation and the opportunity to present our views on the proposed revisions to the planning framework.

Independent Noise Working Group

The INWG's mission [open here](#) is ensuring that the acoustic impacts from wind turbines are properly controlled in order to protect public health and wellbeing.

The INWG, formed during August 2014, is a multi-discipline team fully independent of the wind industry supply chain and was jointly sponsored by Chris Heaton-Harris MP, Conservative, Daventry [open here](#), and the National Alliance of Wind Action Groups (NAWAG). Most of the founding members of the INWG were associated with NAWAG but after the Written Ministerial Statement in 2015 from Greg Clarke [open here](#) that set much stricter controls for further wind turbine developments, the need for NAWAG in England was greatly reduced and it subsequently became dormant.

The main task of the INWG at that time being to conduct an independent and scientific study into wind turbine noise amplitude modulation (AM). This study needed to be able to credibly challenge the methodologies and findings of the Institute of Acoustics (IoA) sponsored AM study. There being great concern with the IoA working group member conflicts of interest due to most of them working for the wind industry.

The results of this INWG AM study were presented to Government at Westminster on 13 October 2015 (DECC presentations 1 [open here](#) & presentation 2 [open here](#)) and at the Institute of Acoustics Conference at Harrogate on 15 October 2015 ([open here](#)).

The recommendations made to Government by the INWG during October 2015 included:

- ETSU-R-97 noise guidance to be replaced with a code of practice based on BS4142:2014.
- Independent research is required into the health effects of wind turbine noise including AM and low frequency noise.
- An effective AM planning condition required for every wind turbine planning approval.
- Continuous noise monitoring (with data transparency) should be required for every medium & large wind turbine planning approval.
- Effective remedy required for retrospectively dealing with noise nuisance including AM from existing wind turbines.

While these recommendations have not been acted upon by Government, we see a continuation of cases where wind turbine noise is affecting host communities with no

effective remedy to obtain redress. In some cases, residents have had to leave their homes in order to obtain relief from the effects of the noise. Fortunately the written ministerial statement HCWS42 issued on 18 June 2015 [open here](#) has to date dissuaded further onshore wind power development in England.

Effects on wind turbine neighbours

Whereas onshore wind power development has been constrained in England since 2015, this has not been the case in Scotland where wind power development has continued with larger wind turbines being deployed and in some cases with disastrous results for the health and wellbeing of wind farm neighbours.

The following taken from a recent letter from residents living near the [REDACTED] wind farm to their local councillor complaining about the lack of action by the Environmental Health Manager (West) Argyll & Bute Council, illustrates the level of desperation being experienced, quote;

“Life is getting worse here and it is getting unbearable for everyone. Why is [REDACTED] ignoring us, why is no one listening to us, surely our word that this is seriously affecting our health should be enough for Argyll and Bute environmental health department to go all out and help us and not say to us that they are stuck between us and RESRES are not suffering, they are not tax payers...we are. We need this to end now, we cannot stand anymore torture. Especially our autistic granddaughter. We are pleading for help”

Low Frequency Noise and Amplitude Modulation

Scientific evidence is accumulating showing that inaudible low frequency noise and vibration is contributing to the misery being experienced by these residents. These residents being a rural based minority are least able to mount the expensive legal challenges to the acoustic intrusions into their lives.

Current UK government endorsed planning guidance on wind turbine noise comprises ETSU-R-97 and the IoA Good Practice Guide, which consider only audible noise, and does not address infrasound or low frequency noise (ILFN) from wind turbines. ETSU-R-97, published in 1997, referred to infrasound (but only twice), yet the IoA Good Practice Guide, published in 2013, makes no mention at all of infrasound. Both ETSU-R-97 and the Good Practice Guide were authored by a group of acousticians affiliated to the Institute of Acoustics, the majority of whom work as consultants to, or as employees of the UK wind industry. Significantly there were no medical experts on the panel.

This conflict of interest could not be more obvious and is an ongoing concern to which the government continues to turn a blind eye.

Amplitude modulation is a further neglected characteristic of the ETSU-R-97 wind turbine noise guidance. Amplitude modulation literally means volume change and refers to the pulsing, beating nature of wind turbine noise which renders it much harder to ignore than a constant sound. Indeed, the World Health Organisation states;

"Wind turbines can generate infrasound or lower frequencies of sound than traffic sources. However, few studies relating exposure to such noise from wind turbines to health effects are available."; and,

"Wind turbine noise is characterized by a variety of potential moderators, which can be challenging to assess and have not necessarily been addressed in detail in health studies. As a result, there are serious issues with noise exposure assessment related to wind turbines."; and further,

"The noise emitted from wind turbines has other characteristics, including the repetitive nature of the sound of the rotating blades and atmospheric influence leading to a variability of amplitude modulation, which can be a source of above average annoyance (Schäffer et al., 2016). This differentiates it from noise from other sources and has not always been properly Characterized.".

Following the Den Brook judgment (see below), the Planning System has finally recognised Excess Amplitude Modulation as being an issue that needs control but has rarely, if ever, at the Planning Stage accepted that it exists. As a result, conditions to control this have rarely been imposed.

DBEIS wind turbine noise survey

During 2021 the Government (DBEIS) launched a stakeholder engagement survey on wind turbine noise and the effectiveness of ETSU-R-97. This survey and analysis was contracted out to WSP and was aimed to answer the question: *'in view of government policies on noise and commitments to Net Zero, should the existing ETSU-R-97 noise assessment guidance for wind turbines be updated, and if so, how?'*

INWG submitted a response during September 2021 [Open here](#) but as of early Feb 2023 the survey report still had not been released. However, on 10 Feb 2023, over 16 months after the consultation closing date the report was released by WSP on their website, [open here](#). It should be noted that the report is dated October 2022 so has been withheld for five months after its completion.

Analysis of this 400-page report still has to be carried out by INWG, however a summary is provided on the WSP website. WSP are recommending the existing guidance ETSU-R-97 would benefit from updating regarding noise limits and amplitude modulation. Additionally, WSP identify several areas as recommendations for further studies.

While INWG supports the principle of at least some of these recommendations, INWG are also concerned that not all the issues that are identified have been suitably addressed.

In view of the problems current wind farm neighbours are experiencing, INWG consider that this review of the Guidance (i.e., ETSU-R-97) should be completed before the current policy in relation to onshore wind turbine deployment is changed.

What is most striking about this WPS report summary is what has not been included. All these being areas that WSP will be fully aware of but have chosen to ignore:

- No recognition that ETSU-R-97 is proven to be unfit for purpose and should be replaced.
- No recognition that measuring noise using the dBA and LA90 metric as required by ETSU-R-97 does not address the full acoustic environment.
- No mention of BS4142 being an alternative to ETSU-R-97, with BS4142 being the standard for most if not all industrial noise assessment, with the exception of wind turbines. (Note: BS4142 could be readily applied for wind turbine noise)
- No mention that ETSU-R-97 fails to effectively support noise complaints post construction
- No mention that ETSU-R-97 fails to cater for post construction compliance testing.
- No recognition of low frequency noise or the evidence that has accumulated regarding its effects on wind turbine neighbours. This is evidence that WSP will be aware of.
- No recognition of the health effects of wind turbine noise, audible or non-audible; low frequency noise or infrasound, especially regarding long term exposure.
- Excludes health professionals from their research, conclusions and recommendations.

The findings of this report with recommendations for yet more studies and minor changes to ETSU-R-97 is unsurprising. WSP does make some positive recommendations but these do not go far enough. ETSU-R-97 with its recognised limitations, omissions and more permissive noise limits allows operators to effectively obfuscate and defend against noise complaints, so allowing turbines to continue operating despite ongoing complaints and suffering by wind farm neighbours.

The LA90 (10min) statistical level is the lowest 10% level of the noise measured for that 10 minute period. Subsequently, these LA90(10min) values are averaged over many days of observations in accordance with ETSU-R-97, thus further hiding the times when the most adverse noise impacts occur. The LA90(10min) statistical level hides 90% of the noise in each 10-minute sample and short duration noise events from such things as yaw brake release and squeal or other yaw drive noise will not be properly assessed. To better address short-term noise events, it may be beneficial to use a noise metric other than LA90(10min).

When investigating a noise complaint, it is also worth reviewing the practice of averaging data over several days of observations. One commonly used option is to assess the highest 10% of the noise metric instead of using the average.

The paper titled; '**Infrasound Exposure: High-Resolution Measurements Near Wind Power Plants**' Bakker et al 16 December 2022 [open here](#) concludes: *"This chapter provides a different approach to the measurement and analysis of infrasound in and around homes located in the proximity of wind power plants. Examples show how using higher temporal- and spectral-resolutions (1 second and 1/36 of an octave), and without any frequency weighting, can reveal acoustical features in the infrasonic range that may indicate a causal relationship with self-reported medical symptoms. This possibility is usually considered non-existent since the infrasonic range is generally viewed as inaudible, and thus innocuous, to humans. The suggestion therefore arises that current noise protection procedures are insufficient to protect public and occupational health. The approach used by these authors offers a more solid framework with which to pursue the establishment of dose-response relationships for infrasonic exposures. Future studies are being extended into noisy occupational environments and different environmental settings where wind power is not the acoustic source."*

Therefore, the wind industry must be required to do the same? It is their responsibility to prove that their turbines will not cause unacceptable levels of environmental acoustic pollution, which scientifically includes the impact of low frequency noise and infrasound-

It should be noted that the WSP report authors are well known to INWG from planning Public Inquiries and noise nuisance complaints where they have acted on behalf of wind turbine developers and operators. On an earlier version of their website, WSP proudly claimed their experience with onshore wind projects stating, *"We have a long track record supporting wind developers, utilities, funders and investors throughout the project life cycle."*

The conflict of interest with WSP undertaking this DBEIS survey could not be more obvious.

INWG recommend that government employ consultants from the scientific and medical community who are totally independent of the wind industry to review wind turbine noise guidance.

Summary of Issues

As we respond to this latest government consultation, we have the following concerns regarding permitting further wind power deployment in England:

- The noise assessment guidance for wind turbines dating from the 1990s used for planning assessment purposes, ETSU-R-97 is not fit for purpose and has failed to protect the residential amenity of wind farm neighbours.
- Once the wind turbines are built there still continues to be no effective process for dealing with noise complaints of the operational turbines.
- The statement repeated by the UK government and the Wind Power Industry; *"that that there is no evidence of health effects arising from infrasound or low frequency noise generated by wind turbines"* is fundamentally flawed.
- A similar situation regarding adverse effects from amplitude modulation was resisted and derided by the wind industry until scientific evidence became available to prove that amplitude modulation was a significant problem.
- INWG question why the UK government and the wind industry continue to ignore the mounting scientific evidence relating to low frequency wind turbine noise.

The significance of the planning balance between the protection of residential amenity and the deployment of wind power is summed up in the statement by Justice Richards in the Bald Hills judgement (*Uren v Bald Hills Wind Farm Pty Ltd [2021]*) Victoria, Australia) [open here](#) where he quotes:

"(6) What is the social and public interest value in operating the turbines to generate renewable energy?"

The generation of renewable energy by the wind farm is a socially valuable activity, and it is in the public interest for it to continue. However, there is not a binary choice to be made between the generation of clean energy by the wind farm, and a good night's sleep for its neighbours. It should be possible to achieve both."

In summary, it should be possible to successfully deploy sufficient renewable generation in the form of offshore wind power and solar to achieve New Zero objectives without resorting to additional onshore wind power.

Consultation Response

As INWG is focused on noise issues that arise from wind turbines, our consultation comments are primarily focused on the acoustic impacts of onshore wind. However, as INWG members are also concerned citizens with a range of other environmental interests we have included comments on some other relevant environmental issues.

While we recognise that the NPPF is not the platform for specific noise assessment guidance, we strongly believe that the NPPF should not permit development where the guidance elsewhere, ETSU-R-97 in particular, is inadequate and has been shown as being inadequate for over two decades. Indeed, in its 2018 Environmental Noise Guidelines the World Health Organisation, (WHO) [open here](#) states, "*Assessment of population exposure to noise from a particular source is essential for setting health based guideline values.*"; and that, "*Further research into the health impacts from wind turbine noise is needed so that better-quality evidence can inform any future public health recommendations properly.*"

It is unclear how the deployment of further onshore wind turbines can be allowed until this research has been performed especially as the emerging evidence is pointing to the failure of ETSU-R-97 to protect public health and wellbeing.

Chapter 1 – Introduction

At para 1, we support the intent to; "*reflect community views, and enhance protections for our precious environmental and heritage asset*".

INWG is of the view that the drive to respond to climate change and deploy more renewable energy should not be at the expense of harm to the environment, increasingly rare valuable residential amenity; and importantly to public health and wellbeing. In the case of wind or large-scale solar power, this invariably falls to rural communities to host these developments. To date the views of local communities have carried little weight both during the planning stages for wind power and afterwards when dealing with the adverse noise impacts. The current system of requiring the Local Planning Authority (LPA) to deal with the subsequent wind turbine noise complaints is not fit for purpose.

Chapter 3 – Providing certainty through local and neighbourhood plans

We note at para 3 that the presumption in favour of sustainable development remains an important part of the planning system. Also, that NPPF Para 7 is unchanged where it defines sustainable development as; "*meeting the needs of the present without compromising the ability of future generations to meet their own needs.*"

Chapter 7 – Protecting the environment and tackling climate change

At paras 1 and 2 we welcome the emphasis on protecting the environment for future generations by placing environmental objectives at the heart of planning system.

At para 3 we support the 3rd ‘main way’ to reduce exposure to pollution and hazards, and the 4th ‘main way’ in that there needs to be effective policies for regulation of energy generation to be in place.

Currently onshore wind power is unregulated by statute or statutory instrument and wind farm neighbours are reliant on their LPA planning enforcement and environmental departments to investigate and enforce any operational or environmental breaches. As far as noise is concerned, there is an anomalous situation regarding wind turbines. Generally, noise from industry is controlled by BS4142 but this (or its predecessor) was considered too restrictive for wind turbines during the 1990s.

As a result, it was determined that noise from wind turbines should be controlled by a unique form of guidance, ETSU-R-97 developed specifically for wind turbines and less restrictive than BS4142. This guidance, like the NPPF, is not statutory but over time has acquired an almost unassailable position when applications for wind farms were considered. ETSU-R-97 was drafted in 1996 when wind turbines were relatively small. Although a Good Practice Guide has since been released by the IoA, ETSU has not been revised despite wind turbines increasing in power by a factor of 10 since the time when it was originally drafted.

Although not a planning issue, a regulated wind power industry would require operational data (SCADA data) to be made available for operational compliance and independent investigation.

There is an extensive body of opinion that ETSU does not address all the issues arising from wind turbine noise, including amplitude modulation, low frequency noise or infrasound.

The current system of reliance on the LPA for enforcement is subject to differing interpretations of the rules across the country, LPA budgets and a general lack of the acoustic expertise needed when challenging wind turbine operators and their acoustic consultants. Importantly, LPAs complain there is inadequate government guidance on dealing with wind turbine noise and as a result are afraid to act against wind power operators. There is now sufficient evidence over many years to show that this system is not working for communities impacted by wind power generation.

This includes practical issues in proving a problem exists in the courts. Many wind farm applications were initially refused by LPAs but then taken to appeal by the applicants. Residents often raised noise issues at such Inquiries and in particular referred to amplitude modulation following the Court of Appeal judgment in the Den Brook case (**Hulme –v- Secretary of State for Communities and Local Government [2011] EWCA Civ 638**). At that

time, the occurrence of amplitude modulation (sometimes referred to as Excess Amplitude Modulation or EAM) was either denied or claimed it to be a rare eventuality by the wind Industry. As such they claimed it should not be controlled by condition. This was regularly accepted by Inspectors who often stated that, if there were in fact a nuisance, then Statutory Nuisance laws should be able to control the situation.

While the following points may go beyond what is contained in a revised NPPF, we represent that decision and policy makers should be aware of them when finalising their decision as to how to proceed with onshore wind farm proposals in the future.

Although in Scotland, cases of statutory nuisance have been proved against wind farm operators, a major problem exists in respect of this process in England, where proceedings for Statutory Nuisance are criminal, not civil. This was exemplified clearly in a recent case taken against the operators of Cotton Farm Wind Farm in Cambridgeshire. Although residents had been complaining of noise problems for almost a decade and ever since the wind farm became operational, the local council was reluctant to take any action as they stated that the noise was claimed not to exceed the limit specified in the planning permission (calculated in accordance with ETSU-R-97). (It should be noted that compliance with a condition is not necessarily a defence to a claim for nuisance – see **Coventry v Lawrence [2014] UKSC 13**).

Eventually, a resident commenced statutory nuisance proceedings in the local Magistrates' Court. Although these are started by "complaint", a civil process, the courts have held that the proceedings are criminal as, in England, a fine can be imposed if a case is proved.

This means that the whole statutory nuisance procedure in England is a criminal one. As a result:

- the standard of proof is 'beyond reasonable doubt' as opposed to 'on the balance of probabilities'
- the prosecution (i.e., in the Cotton Farm case, the resident) is under a statutory duty to disclose unused material under the Criminal Procedure and Investigations Act 1996. This is an onerous duty which prosecuting authorities have often failed to meet and we believe it is an unacceptable burden to place on a private citizen claiming he is being harmed by a noise nuisance.
- Further, as the proceedings can only be heard in the Magistrates' Court so are summary only. Only evidence that has occurred within 6 months of the start of the proceedings is admissible. Given that such an action is likely to be as a result of evidence that has accumulated over a much longer period, this is an unrealistic situation and one that caused considerable anger in the Cotton Farm proceedings.

In order to ensure an effective and consistent route for dealing with wind turbine noise nuisance the INWG propose that industrial wind turbines should be licenced and subject to oversight by a national agency, such as the Environment Agency. This would bring wind power in line with other rural located polluting industries such as mineral extraction.

Regulation by a national agency would make it easier to ensure a consistent approach and to maintain appropriate levels of technical competence. There can be no good reason why wind power should be unique in being treated more leniently without any form of regulation and with a much more lenient noise guidance (ETSU-R-97) to other industries, other than the well-funded lobbying by the wind industry driven by commercial expediency taking advantage of the climate emergency. This deficiency in the planning system becomes much more relevant with this latest Levelling-up and Regeneration Bill that aims to put communities and the environment at the heart of the planning system.

Arguments for the regulation of wind power are presented by Prof David Unwin in his paper dated April 2019: **Wind turbine noise & shale gas extraction; towards a robust regulatory roadmap?** [open here](#).

In his executive summary Prof Unwin states;

“This paper compares and contrasts the regulatory framework in place for onshore wind turbines with those for shale gas extraction and minerals working. A central feature of the current roadmap for building and operating onshore wind farms in England is the absence of an effective regulatory roadmap of the type that is commonly imposed on other large industrial developments in essentially rural areas.

It is concluded that the current regulatory regime for onshore wind is too light, unable to inspire the confidence of communities close to operating wind farms that is essential to any further developments. It would benefit from any or all of the following additions:

- *national oversight of development proposals;*
- *replacement of the discredited ETSU-R-97 with a noise assessment based on the principals of BS4142 as the basis for the noise assessment;*
- *better supervision during construction to ensure compliance with relevant planning conditions;*
- *immediate post-construction forensic testing for compliance with agreed planning noise conditions;*
- *continued post-construction monitoring to ensure that this compliance is maintained;*
- *establishment of local liaison committees together with a licensing scheme to monitor operation for the lifetime of any WTF project.”*

At para 3 should be added a 7th 'main way': "*by ensuring planning policies and decisions build on existing protections by including protection of residential amenity from impacts such as noise, shadow flicker, traffic, air quality, odour and light pollution of new development*". Noise and shadow flicker is especially relevant when considering onshore wind power development.

Q.37 – Biodiversity net gain and local nature recovery

The INWG agree with the intentions outlined at paras 5 to 9 concerning biodiversity gain and local nature recovery. However, this needs to be more than a box ticking exercise for developers to enable approval of their development. There needs to be a robust system of compliance post development with an adequately funded agency to monitor and enforce long term compliance.

National policy could be strengthened by increasing the level of protection to all ancient and veteran trees, typically over 100 years of age including those located outside of ancient woodland and conservation zones. Additionally, greater emphasis and funding is required to deal with rural litter, fly tipping and plastic pollution.

Q.38 – food production value of farmland

The INWG agree with the need to increase the consideration given to preserving high value farmland. The Best and Most Versatile land is a vital and limited resource that is being continuously depleted by greenfield development across the country. To ensure food security this land resource must be provided with a significantly higher level of protection than currently exists and needs to conform with the sustainable development principles as discussed at Chapter 3.

Calculations made from earlier onshore wind power planning applications indicate that the land-take per typical 2MW turbine when accounting for the turbine base, hardstanding, access roads and other infrastructure amounts to an average of around 0.4Ha per turbine. For wind power developments in lowland England this usually impacts some of the Best and Most Versatile agricultural land. Once this land has been developed in this way with 600 tonne or more of concrete per turbine base plus crushed rock access roads and hard standings, it will create a permanent degradation to this ever-reducing agricultural land resource. Despite claims by developers at the planning stage of the temporary nature of this land take, in reality this land will never be restored to its pre-development condition. The concrete and crushed rock foundations will likely remain forever.

One of the largest users of agricultural land over recent years has been the development of industrial scale solar power. Once again some of these developments may be claimed to be temporary, but once developed this will inevitably become permanently degraded land. Whereas INWG encourages the development of solar power we believe it should be

directed at large industrial and commercial buildings, brownfield sites and residential houses.

We believe that the best and most versatile agricultural land should be given a much higher weighting in the planning process when considering applications for both solar and onshore wind power.

Q.38 - climate change mitigation: exploring a form of carbon assessment

The INWG supports the intention to introduce a more robust carbon assessment into planning policy as outlined at paras 12 and 13. In the case of renewable energy, primarily wind and solar, an informed planning balance of benefits versus impacts is only possible if realistic values for the renewable energy to be generated, carbon footprint of the development and lifetime carbon savings are known.

The lifetime carbon emissions savings needs to be based on real world capacity factors given the over optimistic claims by developers and intermittency of wind and solar power. Also, the actual carbon footprint to manufacture and install the wind or solar renewable generation equipment and the real-world life expectancy of the installation.

Whereas we were previously told during planning applications and planning inquiries that wind farms would have a 25-year life, the actual lifetimes being realised are significantly less with some wind turbines needing replacement or repowering after only 10 years. Claims regarding power generation and carbon savings made in the not-so-distant past by wind farm developers during the planning phases have been shown to include excessive commercial optimism that bear little resemblance to real world performance. Some of these issues are discussed by Professor Gordon Hughes of Edinburgh University in his June 2021 paper, 'Costs, Performance and Investment Returns for Wind Power' [open here](#).

Chapter 8 – Onshore wind and energy efficiency

Government should face up to reality in that the target date in the Net Zero Strategy for power generation decarbonisation by 2035 is unachievable.

Whereas the INWG support the government's Net Zero Strategy aims [open here](#) including the decarbonisation of power generation as outlined at paras 1 and 2, there is great concern with the 2035 mandatory target date to fully decarbonise UK power generation. To achieve decarbonisation while ensuring security of supply and containing costs is totally unrealistic given current technology.

Adding a step change increase to wind and/or solar intermittent generating capacity now as is being proposed, will not advance the date for decarbonising the power grid or make any

significant further reduction in carbon emissions in the short term. There is currently an excess of intermittent wind and solar generating capacity on the UK grid when it is windy and sunny, often requiring constraint payment to maintain grid stability, and insufficient capacity during the all too frequent low wind conditions. This has been demonstrated multiple times over this winter with the now regular threats of blackouts in the daily national news reports.

Adding more intermittent wind or solar generation capacity without a corresponding increase in dispatchable or base load generating capacity, will only exacerbate this situation making power rationing inevitable. One only has to look at South Africa today to see the economic and social consequences of a failing electricity system.

Note:

- Dispatchable generation can be described as relating to a source of electric energy production whose output can be switched off or on, or otherwise moderated according to demand. It usually applies to gas fired combined cycle, coal fired and hydro generators.
- Baseload generally refers to a type of dispatchable generation generally needing to run continuously and at a stable output such as nuclear generation.

There needs to be a corresponding increase in nuclear base load and dispatchable generating capacity if grid stability (voltage and frequency) and security of supply are to be ensured. The existing gas fired dispatchable generating capacity, vital for grid stability and energy security will need to be increased and there needs to be a massive nuclear building programme over and above the current projects of Hinkley Point and Sizewell to expand the base load capacity.

In order to fully decarbonise UK power generation, the gas fired dispatchable generation will need to be replaced ultimately with a zero-carbon alternative. While battery storage has been suggested as a solution, this technology is currently extremely expensive, inefficient and slow to deploy. Battery storage is currently years away from deployment on a scale that could make any meaningful contribution towards grid support during low wind/cloudy/night-time conditions.

It is therefore argued that in order to fully decarbonise UK power generation, the number one focus should be technologies that could allow the deployment of dispatchable zero carbon renewable generation. This is a long-term objective and clearly not achievable by 2035. In the medium term there is a need for significant expansion of gas fired generating capacity in order to meet maximum demand during low wind conditions and to meet the rising overall demand as electrification of home heating (heat pumps) and transport (electric cars) develops. This subject is discussed by James McSweeney in the Critic magazine in the article, **'2035: the end of civilization – Where is energy policy taking us'**, [open here](#).

Allowing wind and solar capacity to increase as a percentage of the total installed capacity will simply add to grid instability and increase constraint payments, so increasing generation costs unnecessarily. This will ultimately be passed on to the electricity customers. Also, while the existing electricity generation payment system ties renewable generation power prices to gas there will be no financial advantage to UK consumers by installing excess wind power capacity.

There are also concerns that focusing blindly on the 2035 target date to decarbonise UK power generation while ignoring the technical realities will encourage a political weakening of the planning protections currently being advanced in this consultation for the planning framework. This would have negative implications for biodiversity, residential amenity, rural communities and the wider environment.

The Net Zero Strategy roadmap dated October 2021, [open here](#) outlines how the renewables targets can be met by expanding offshore wind without needing to increase onshore wind power capacity. Offshore wind has the advantage of deployment on a significantly greater scale and is physically located away from communities so minimising their impacts. **In contrast, it is most unlikely than any sites could be identified in England for new onshore wind development that would not locate a wind turbine far too close to existing homes.** As such there is no way that unacceptable impacts, especially from noise could be avoided.

Q.41 – repowering of existing onshore wind turbines

NPPF Para 157 (old 155)

Inevitably, larger wind turbines with associated larger rotor diameters will be installed on new concrete pads to accommodate greater base loads. Larger wind turbines require greater separation distances between wind turbines to prevent increased wake turbulence that both increase noise emissions and reduce wind turbine lifespan with associated increased maintenance costs.

Consideration should be given to the full acoustic (noise) impacts from any such development, mainly applicable to wind power. This to include the low frequencies that are mostly inaudible but evidence shows are having adverse effects on health.

Therefore, NPPF new Para 157 item a) should be changed to; *“provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and maintenance, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape, visual impacts, heritage, biodiversity and full acoustic environmental noise impacts);”*

Q.42 – repowering of existing onshore wind turbines

NPPF Para 158 (old 156)

Whereas the INWG agrees that local planning authorities should support genuine community-led initiatives for renewable energy, this should not be at the expense of a minority who could be adversely affected. In reality a community-led initiative would most likely be sponsored by a local minority with a financial interest and likely supported by a renewable energy developer with a larger commercial interest. There would most likely be a non-vocal minority that would not benefit and would later find they are impacted negatively by the development.

Therefore, the INWG believes that any community-led initiative should be subject to the same planning assessment criteria as any other renewable energy initiative. All should be required to have wider community support with all objections and adverse impacts satisfactorily addressed-

NPPF Para 155 (old 153)

Greater consideration should be given to the loss of agricultural land and damage to peatland with its associated release of locked in CO₂. Also, the wording relating to the risk of rising temperatures is unnecessary in the context of this paragraph, so the first sentence should be changed to; *“Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, loss of agricultural land, biodiversity, loss of peatlands and landscapes, ~~and the risk of overheating from rising temperatures~~”*⁶¹.

NPPF Para 160 (old 158)

While there should not be a requirement to demonstrate a need for renewable energy, the value of the renewable energy to be generated, the carbon footprint and lifetime carbon saving of the proposed development should be quantified. Only by quantifying the renewable energy and carbon saving, and comparing against any adverse impacts can an informed planning balance be carried out.

NPPF Para 160 item a) should be changed to; *“not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to ~~significant~~ cutting greenhouse gas emissions. To support the application, the lifetime renewable energy and carbon savings should be quantified;”*

Most if not all existing onshore wind power sites in England were approved as temporary developments, usually for a period of 25 years after which it was claimed the site would be restored to its original condition. The temporary nature of these developments was stressed in every wind farm planning application and every public Inquiry that INWG members are familiar with. The temporary nature of these developments was a key determining factor in the planning balance considered by decision makers at the time of granting planning permission. It is now apparent there is an intention by default through these NPPF revisions

to extend the use of these wind farm sites indefinitely, despite the earlier promises of their temporary nature.

This 'temporary' requirement has already been compromised by Footnote 54 to the NPPF July 2021 version [open here](#) which excludes applications to "repower" from the previous provisions of the WMS of 2015. If the NPPF is now further amended as proposed in paragraph 160c (old 158c) to include applications to 'life-extend' existing wind turbines, it will make the existing 'temporary' nature of existing planning permissions meaningless. Indeed, we believe that such a move may give rise to action under Human Rights law if nearby residents are adversely affected by wind turbines, whatever may be said about making the impacts acceptable.

We also question how applications to 'Repower' or 'Life-extend' such sites will be made. We assume that developers may be considering "Variation" applications under Section 73 of the Town and Country Planning act 1990. However, we represent that in most, if not all, cases this would not be legal as a result of the judgment in **Finney v Welsh Ministers [2019] EWCA Civ 1868**, [open here](#) here which determined that only conditions can be changed under this procedure, not the headline of the planning permission itself. Indeed, we note that applications have been made for "life-extensions" to 40 years when the application was clear that the useful life of the turbines was 25 years, no doubt in anticipation of this becoming policy.

Repowering of these existing wind power sites is expected to require fewer but larger turbines. It is also expected that these larger turbines would require a new site layout requiring new foundations, new hard standing areas and additional access roads. Therefore, the repowering application should be considered as a new site. The baseline to be considered during the assessment of the application should be the baseline prior to its original development. This baseline should include the background noise environment prior to the original wind farm development.

NPPF Para 158 item c) should be changed to; *"approve an application for the repowering and life-extension of existing renewables sites, where its impacts are or can be made acceptable. The impacts of repowered and life-extended sites should be considered for the purposes of this policy from the baseline existing on the site prior to its initial development."*

Chapter 8 para 6 is incorrect where it states *"we know that achieving net zero and meeting the UK's legally binding decarbonisation targets will require an increase in locally supported onshore wind."* There is no evidence to support this statement and achieving net zero is dependent upon many other factors not least finding a carbon free replacement for gas fired dispatchable power generation. In reality, additional onshore wind capacity is incidental and unnecessary for the achievement of net zero and is only being considered again by government due to lobbying by the wind power industry.

Chapter 8 para 7 recognises that the new generation of onshore wind turbines will be taller and more visible than previous turbines. These significantly larger turbines will generate increased acoustic environmental impacts including inaudible low frequency noise (sound pressure waves) which adversely impacts on the residential amenity of affected neighbours.

Experience has shown that the only effective mitigation against this noise is to increase the separation distance between turbines and homes. Separation distances of 5km or more may be required for the largest turbines currently being considered. This requirement alone is likely to rule out most of lowland England for locating these industrial scale wind turbines.

NPPF Para 178

The INWG support the addition of the new sentence to footnote 67; "*The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.*"

NPPF Para 188

We note that there is no proposal to amend paragraph 188 of the NPPF (marked up 2022 version) relating to noise. The INWG believe this protection needs to be strengthened. We represent that the proposals for onshore wind turbines will have significant noise implications so paragraph 188 should be considered during this revision to the NPPF. The current planning system is failing to provide adequate protection given the specific noise impacts being experienced by wind power neighbours as identified in this document.

NPPF Footnote 62

Local Development Orders, Neighborhood Development Orders and Community Right to Build Orders should only be used to identify an area suitable for wind energy development, and not to grant planning permission. This way all applications including those for areas identified in a local development plan or a supplementary planning document will be assessed by the LPA in the same way using the same assessment methodology.

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Chapter 8 para 7 and Footnote 54

There would appear to be a typographical error in the consultation as footnote 54 relates to Para 110 (now 112) covering sustainable transport and does not show any proposed changes. We suspect this reference is to footnote 54 of the 2021 version of the NPPF [open here](#) that is shown as footnote 63 in the marked up NPPF provided with this consultation.

We have already outlined our concerns with these changes proposed for footnote 63 above under Chapter 8, **NPPF Para 160 item a)**.

End