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DUNSLAND TURBINES OPPOSITION GROUP (DTOG)

**Report to Torridge District Council opposing the
proposed wind farm at Dunsland Cross**

**including a brief
Non-Technical Summary**

Application No. 1/1250/2011/FULM

March 2012

This report focuses on the reasons for the refusal of the previous application (1/1263/2008/FUL) in March 2009. In the interests of brevity, sections which appeared in the previous 311-page DTOG report which did not relate directly to the reasons for refusal have been left out of this report.

The sections which have been left out, including a 42-page Litigation chapter and a 12-page chapter containing evidence of the negative effect of wind farms on House Prices, are still relevant and may be downloaded along with this 2012 report from the DTOG website at:

www.dunslandcrosswindfarm.net

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Non-Technical Summary

Relevant Information

Two wind farm developers have previously considered the Dunsland Cross site but neither took it forward to planning. nPower considered the site approximately 8 years ago but then decided to concentrate on bigger projects and sold most of its smaller ones to Cornwall Light & Power, who chose not to accept this site.

Bolsterstone plc, the current applicant, is a Midlands-based property and investments company which came too late into the wind farm developers' market to gain access to anything other than sub-optimal sites. Five of its eleven chosen sites were abandoned before any planning application was ever finalised. The first Dunsland Cross application, for 4 x 105m turbines, was refused permission by TDC Planning Committee by 7 votes to 0 (with 2 abstentions) in March 2009. The current re-application is for 3 x 100m turbines.

Impact on Landscape Character

Since the last application the new TDC/NDC Landscape Sensitivity Assessment (LSA) incorporating the Landscape Character Assessment (LCA) has been adopted by TDC and it is now a material consideration in wind farm applications. The LCA identifies the Dunsland Cross site as Landscape Character Type (LCT) 1F: Farmed Lowland Moorland & Culm Grassland. The key characteristics and special qualities of this LCT, which if lost would have a seriously adverse impact on the landscape character, include i) elevation, affording long views across the landscape and beyond to the high moorland landscapes of Dartmoor, ii) distinctive Culm grassland and associated birdlife and iii) tranquillity. The LSA states that the sensitivity of this LCT to development which includes small clusters of wind turbines in the 76-110m height range is Medium-High. At Dunsland Cross, where the 100m turbines are near the top of this height range and would be situated right next to a SSSI and a County Wildlife Site, the LSA sensitivity must be considered High. The LSA siting guidelines for wind farms advise keeping turbines away from ridgelines.

The current applicant for Dunsland Cross has acknowledged the existence of the joint LCA/LSA but has subsequently ignored it and has assessed the site using different criteria to claim that the sensitivity to wind farm development is only Medium. He has sited turbines on the Dunsland Cross ridgeline. Long views to Dartmoor from a number of local viewpoints and residences are shown in photomontages to be destroyed and tranquillity will be lost as a result of noise from the turbines. The Scoping Opinion required that site infrastructure (access tracks, control buildings and permanent hub-height anemometer masts) must be included in photomontages but this has been ignored. The true visual impact of the wind farm is, therefore, suppressed in some of the images. The applicant's Landscape Consultant identified 8 significant adverse visual impacts, acknowledging that many of these will 'redefine the character of the view'.

As a result of these infringements, the application fails to satisfy Policies ENV1, ENV3, ENV5, ENV6, DVT2C and DVT6 of the Torridge District Plan and Policies CO1, CO6, CO7 and CO16 of the Devon Structure Plan. It is also contrary to Part 3 of the Joint LCA and Policy COR6 of the Joint Core Strategy.

Visual Impact (Residential)

In response to a recommendation in the Scoping Opinion the applicant has undertaken a Residential Amenity Survey (RAS) to assess the visual impact of the turbines at nearby properties. The RAS shows that the visual impact at 12 properties will be significant, despite the reduction in the number and height of the turbines. No photomontages were provided for these properties, so DTOG has supplied a number of these instead. The applicant concludes that although there are a lot of significant visual impacts, none is considered to be unacceptable because the sight of the turbines is not overpowering or oppressive, and that they will not be visible at all times because some days will be misty or foggy. DTOG disagrees with some of the assessment and finds that the turbines will be oppressive and dominating at three properties. The 'OK on foggy days' argument is dismissed as weak, almost pathetic. As a result of the RAS, the application fails to satisfy Policies DVT8 and DVT11 of the Torridge District Plan.

Noise Levels and Methodology

Although the applicant spent 4 weeks collecting background noise data in October/November 2010, the derived background noise levels are neither robust nor reliable. The assessment suffers from lack of data from a number of directions in the 6 - 12m/s wind speed range. As a result the best-fit lines in the data graphs from which the background noise levels are derived are skewed and yield the nonsense result of the night time background noise levels at some properties being higher than the equivalent daytime background noise levels at the higher wind speeds. In a second assessment for an alternative turbine, using the same background noise data, the applicant has derived a different set of values for the background noise levels. This is also clearly nonsense, as it means that the existing background noise level at Dunsland Cross is dependent upon the choice of turbine which may or may not be erected in a nearby field at some point in the future. The accuracy of the background noise levels matters, because the acceptable noise limits at nearby properties are set in relation to the background noise values.

The reason for these apparently ridiculous conclusions is that the applicant has become immersed in the virtual world of computer modelling and the mathematics of wind shear and has lost sight of the real world beyond the computer screen. He has used a noise prediction method which is a departure from ETSU-R-97, the government's preferred methodology. This prediction method, known as the IOA Bulletin Method, has been increasingly adopted by wind farm developers as it allows higher noise levels at nearby receptors which still appear to be within permitted noise limits. The applicant calls this 'best practice' but in reality it is 'sharp practice' and use of the IOA Bulletin Method is not official government policy. Clearly the amenity of local residents is even more adversely affected when this method is used.

Despite this 'sharp practice', the applicant can still only get the turbine noise predictions to be on the limit (not below) at one of the nearest properties by modelling the turbines running in single or double noise-suppression mode, ie, at reduced power with the blades rotating more slowly. To try to disguise the number of properties at which the margin of noise compliance is close to zero, the applicant has produced tables with only 10 of the 40 non-involved properties nearest the site in them, claiming that if noise limits are not breached at these properties then all other properties must be compliant too. The DTOG noise tables show all 40 properties.

More mathematical chicanery is evident when the two separate assessments for the candidate turbines are compared once more. Ground conditions between the turbines and nearby properties have an effect on the amount of noise reaching the property. The applicant was told in the Scoping Opinion to use acoustically hard ground (represented by $G=0$ in calculations). He has done this in one of the assessments, but has used acoustically mixed-ground ($G=0.5$) in the other. The applicant cannot have it both ways. It is the same piece of ground in both assessments. Either it is acoustically hard or it is acoustically mixed. It cannot be both at the same time, just to enable theoretical noise levels to be forced down to ETSU-R-97 limits.

No allowance for errors inherent in the calculations has been made. DTOG has identified more than 5dB of error in the calculations for the first choice of turbine and more than 6dB of error in the calculation for the alternative model. It has only been necessary to put back into the calculations 2dB or 3dB of these errors to show that the noise limits will be breached regularly at a number of the properties around the site. Once the corrected figures are used it can be shown that the application fails to satisfy Policies CO16, ST1, DVT11, DVT12 and DVT13.

Noise Impact

Noise impact is a comparison of the existing background noise levels at a particular property with the new noise levels once the turbines start operating. National guidelines PPS22 require noise *impact* to be assessed in parallel with, but separate to, noise *levels*. A scheme which is compliant in terms of noise *levels* is not automatically compliant in terms of noise *impact*. The applicant has, for a second time, not considered noise impact at all. DTOG has shown that the noise impact at Dunsland Cross and Brandis Corner, where the background noise levels are very low, will be unacceptable to residents and will trigger many complaints to Torridge District Council. Using the applicant's uncorrected figures, 27 properties will suffer unacceptable night

time noise impact. This rises to 38 properties when the corrected figures are used. When the turbines are switched back up to full power, as they will be for certain wind strengths and directions, all 40 properties around the site will suffer a night time noise impact high enough to trigger complaints with TDC.

Amplitude Modulation (AM) and Low Frequency Noise (LFN)

The applicant dismisses AM and LFN in just a few sentences by quoting 5-year old research which has been discredited many times since it was first published. AM, the pulsating swishing and (sometimes) thumping noises which are characteristic of large, commercial wind turbines, is now clearly recognised as one of the main cause of annoyance, sleep deprivation, distress and other health-related issues in wind farm neighbours worldwide. The wind industry, whilst continuing to deny that AM is a problem (despite it featuring prominently at the last four world conferences on Wind Farm Noise over the last eight years), cannot predict with any certainty whether or not it will be evident or intrusive in any specific development before the wind farm becomes operational. LFN is also present in the spectrum of sound emitted by the turbines and it travels much further through the air without attenuation (ie without being reduced), penetrating the solid walls of nearby buildings with ease and, in so doing, adversely affecting the health and well-being of the occupants. Where these phenomena are found to be present, complaints are inevitable. The closer the turbines are placed to occupied property, the more likely are AM and LFN to cause problems.

Noise Conditions (Planning)

DTOG has recommended the imposition of a condition for excess AM should the wind farm be consented and the problem arise. This wording of this condition has been tested and upheld in the High Court and, despite the wind industry's claims to the contrary, is straightforward to enforce in the field.

Impact on Wildlife and Conservation

Lest any doubts remain that the wind farm could still be acceptable in terms of visual and noise impact, the applicant's wildlife surveys and proposals for mitigation lead to the unavoidable conclusion that, as far as wildlife and conservation are concerned, this site is not suitable at all.

The applicant admits that *'The Environmental Statement predicted significant ecological effects and/or potential legal offences for some receptors.'* Despite these serious adverse impacts, the applicant believes that they can all be addressed by mitigation, and at the behest of Natural England in the Scoping Opinion, has produced an Ecological Management Plan (EMP) to deal with them. Unfortunately, this EMP will not work because it is fundamentally flawed.

Of all the protected species at risk, bats will be the most affected numerically, with the applicant stating that fatalities are *'probable'*. Three bat surveys have been undertaken. The first, in 2007-8, was to determine the level of bat activity in all parts of the site. The results showed that there was a very high level of activity involving a number of species, not just around the perimeter hedgerows and margins but in the central areas of the site as well. The second survey, in 2009, sought to find a link between the landowner's alleged on-site land management regime and the number of bats foraging in the central areas where the turbines would be located. No definitive link was found. The bats were found to be foraging around natural on-site features, such as individual trees and unmanaged wetland areas, not the grazing sheep or any specific type of cultivated ground cover. The third survey, in 2011, sought to find a link between weather conditions, particularly the wind speed at different heights (the wind shear), and bat activity. It concluded what every countryman already knows: bats do not like it when it is too windy or raining, they feed more intensively in the periods after emergence and before dawn and they are naturally attracted to tall structures.

The EMP proposes that once the turbines are erected and operational, cereal crops can be grown near them with pest control in the form of sprayed chemical biocides being used to kill insects thus deterring bats from foraging in those areas. The most objectional part of this argument is that the insects which the bats would have eaten, thus protecting any crop in a natural, ecologically and environmentally acceptable way, will be replaced by man-made chemical biocides which will ultimately leach into and pollute the watercourses draining the site into the River Claw to the west and Whiteleigh Meadow SSSI to the east. And this is to make way for a supposedly 'environmentally friendly' wind farm. This strategy will not work because i) the landowner cannot grow cereals successfully on this Grade 4 land and ii) since the bats will be attracted to the turbines themselves it is irrelevant what is growing beneath them.

The applicant proposes to let the turbines run for a couple of seasons and count how many bats are killed. Then, when the number of fatalities in a single season reaches a species-specific threshold (numbers range from 1 to 9) then mitigation can begin. The first action will be to raise the cut-in speed of the turbines from 3m/s wind speed to 5m/s, between 1st April and 31st October, for two hours at dusk and two hours just before dawn. If that does not reduce the number of fatalities then a cut-in speed of 6m/s can be tried the following season. If that does not work ... there is no comment. As with running the turbines in noise-suppressed mode, raising the cut-in speed reduces the electrical output of the turbines thus, once again, diminishing the main perceived benefit of the wind farm. It is also an obvious conclusion that as bats are killed their population numbers fall so there will inevitably be fewer future collisions. When the population is finally wiped out, no new corpses will be found, so the turbines can cut-in again at 3m/s, full time, and the developer can claim that the mitigation has 'worked'.

The applicant seems unconcerned by the prospect of a maximum fine of £5,000 per bat killed, 6 months imprisonment and forfeiture of the apparatus which killed the bat(s).

No mitigation strategy is proposed for any subsequent decline in the endangered Nightjar, Skylark, Barn Owl or Dormice populations, all of which are, or have been recently, on-site. The EMP will simply count and record the numbers at set intervals after the turbines become operational.

The EMP will be administered and operated by a 5-person committee comprising the landowner, the wind farm developer/operator, a Devon Wildlife Trust representative, a Natural England representative and an Ecological Clerk of Works (whom DTOG thinks must be appointed by TDC, not the developer). Summary annual reports will be published with more formal reviews at five-yearly intervals. DTOG considers this committee needs to be augmented by the inclusion of two more people. One should be a parish councillor from Bradford & Cookbury Parish Council, whose stakeholder interest is as Joint Custodian (with Black Torrington PC) of Whiteleigh Meadow SSSI. The other should be a member of the Brandis Corner Wildlife Group, which now has a paid-up membership of 100 local people and whose stakeholder interest is the wildlife of the wind farm site itself and the Brandis Corner County Wildlife Site next to it.

The fundamental flaw in the EMP is that it is reactive, not proactive. That an EMP is needed at all is confirmation of the fact that the site, in its present state, is simply not suitable for the dual rôle of wildlife habitat and industrial wind farm. At least 2 or 3 years' remedial work is needed before any permanent change in the land management regime can be evaluated and shown to be successful in terms of shifting bat activity from the centre of the site to the margins. Interim ongoing bat surveys will be needed with tall, static, dummy structures erected to confirm that these do not still attract the bats into the central foraging areas. Only then should consideration be given to preparing an application for a wind farm at Dunsland Cross.

As presented at the present time, the application fails to satisfy Policies PPS1, PPS7, PPS9, RE6, COR6, SS20, EN1, SD3, CO1, CO9, CO10, CO13, ST1, ENV1, ENV5, ENV7 and ENV10.

The Wind Resource

The fifth and sixth reasons for refusal of the last application related to the lack of wind data which is needed by case officers to quantify and verify the claimed benefits of the proposal before they can be set against the adverse impacts in the balancing exercise preceding the determination.

The applicant has failed to supply 12 months' worth of wind readings to prove the viability of the site and enable TDC to verify the claims made in respect of the annual amount of electricity produced and, in consequence, the number of homes supplied and the amount of CO₂ saved. The applicant is in possession of these readings as a hub-height anemometer has been on-site gathering relevant data for the 14 months preceding the submission of the application. In the absence of this information, DTOG has supplied valid proxy data for the same period from the next nearest official Meteo Group reporting station, 16 miles away from the site, where the anemometer is subject to the same weather patterns and is located in similar land form at a similar altitude.

The hub-height proxy readings show that the Dunsland Cross site is sub-optimal in terms of wind speed, with an average hub-height value for the 15 months up to 31st December, 2011 of 5.83m/s, well below the 6.5m/s the applicant states in other applications is the minimum needed for viability. Using the proxy wind readings in conjunction with the power curves of the nominated turbines shows that, if the turbines were running in unrestrained power mode all of the time (which we know from the noise and wildlife assessments will not be the case) the capacity factors will be between 15.4% and 15.9%. The applicant has used 26.4% in his calculations, together with an artificially low domestic electricity consumption figure for Torridge households. This leads to the number of homes supplied figure being inflated by 100% from 1,795 to 3,645 homes. A similar avoidance of local figures from Hinkley Point and Langage Power Stations, the output and emissions from which this wind farm seeks to reduce, enables the applicant to inflate the CO₂ saved figure by 400%, from 1,864 tonnes saved annually to 7,458 tonnes.

Road Safety

It had been the intention of DTOG to concentrate only on the 6 reasons for refusal of the last application and analyse whether the current application overcomes these reasons. However, a new road safety issue has arisen as a result of the applicant relocating Turbine 1. It has been moved 90 metres towards the A3079, where it is now only 120 metres from the roadway. This brings it closer to the point where the pedestrians, cyclists and horse-riders using the Ruby Way will cross this road. Motorists driving northward will reach a point in the road where they will be startled and surprised by their first clear, close-up view of the giant, moving structures, just when their concentration needs to be total as the Ruby Way crossing will be just 6 seconds further on. As a result the application now fails to satisfy Policy DVT18.

The Balancing Exercise

DTOG has drawn together all of the evidence weighing in favour of granting the wind farm planning permission and all of the evidence weighing against the proposal. The listings are presented side by side in the report and fall into two categories: general and site-specific. There are 3 general factors weighing in favour of the wind farm and 5 weighing against. There are 0 site-specific factors weighing in favour and over 22 weighing against. A total of 30 National, Regional, County and District policies fail to be satisfied by this application.

Other Conditions

Should the application still be approved, despite all of the evidence weighing against the proposal, DTOG has supplied 14 extra conditions which need to be attached to any consent, over and above the aforementioned noise conditions and the standard construction conditions normally attached to such applications.

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