



HECKINGTON FEN WIND TURBINE ACTION GROUP

LINCOLNSHIRE

Tel:

Email: reply.heckoff@outlook.com

31st January 2017

For the attention of :

Rt Hon Greg Clark

Secretary of State

Department of Business & Industrial Strategy

3 Whitehall Place

LONDON SW1A 2AW

Contact Keith Welford Case Manager

National Infrastructure Consents

email: keith.welford@beis.gov.uk

Ref: Heckington Fen Wind Farm Variation of Consent Application ref: 4038P019901-
Third Round of Consultations.

Dear Sir,

We are writing to you in response to the opening of a 3rd round of consultations to raise our communities significant additional concerns arising from further submissions by Ecotricity. We have also attached our letter to Keith Welford Case Manager @ DECC dated 15th March 2016, introducing us to your predecessor, Secretary of State Amber Rudd. This letter contains extremely relevant information that remains integral to our case and needs to be weighed in the planning balance when reaching your decision to approve or refuse the variation application before you.

We are a community group formed in February 2016 to represent the collective concerns of our local residents in respect of Ecotricity's Variation Application. The steering committee of HECK OFF comprises of representatives from 3 of our most affected local Parish Councils, a local North Kesteven District Councillor and residents surrounding the Heckington Fen wind farm, who genuinely believe our combined concerns have consistently **not** been given adequate consideration by the applicant Ecotricity.

We are pleased that a 3rd round of consultations has been opened by your new department, particularly as we have carefully reviewed Ecotricity's letter to you dated 18th October 2016, along with their response by Dr M Cand to the Wind Turbine Noise Impact

Appraisal commissioned and funded by our local communities, undertaken on our behalf by John Yelland MA DPhil (OXON) MinstP FIET MIOA AMASA dated 6th June 2016. It is in the light of these we wish to take this opportunity to provide you with further information updating you and to set out the significant ongoing material matters below:

(To assist you we have identified all extracts from HECK OFF previous submissions in brown italics in addition to any extracts from Dr Yelland's Noise Impact Appraisal).

1. ECOTRICITY's LETTER DATED 18th OCTOBER 2016.

Our letter to you dated 15th March 2016 contained the following information:

'We have attached 261 letters from concerned local residents letters expressing their views and are also aware that there are many more residents who also wish to have their concerns heard. These letters will be forwarded as soon as possible'.

'We have collected these letters over the past few days from very distressed, frightened and vulnerable local residents, the vast majority of who live in the extremely quiet and tranquil countryside to the north east and west of the wind farm site well away from the busy A17 to the south, who do not back the imposition of 22 industrial sized turbines 125m high, in the vicinity of their homes. Even residents in this southern area are expressing their concerns'.

Yet Ecotricity state in Paragraph 26:

26. 'Ecotricity is unclear as to whether BEIS have sent the applicant all the third party representations received after 19th January 2016. However we have received letters from North Kesteven District Council, a number of Local Parish Councils, a number of local residents and a number of statutory consultee organisations (see Appendix 7 for a list of those letters received to date). Therefore this response considers only those representations provided to Ecotricity by BEIS. Should further concerns be raised it is anticipated that Ecotricity will address these in a final response as indicated by BEIS in their email dated 21st July 2016 (see Appendix 2)'.

They then provide the following list:

Appendix 7: List of Representations Received following 19th January 2016

Consultation Letter from DECC (now BEIS)

Organisations • North Kesteven District Council • Lincolnshire County Council • NATS Safeguarding • Civil Aviation Authority • Natural England • Great Hale Parish Council • Swineshead Parish Council • Heckington Parish Council • Amber Hill Parish Council • South Kyme Parish Council .

All the above representations were sent to the applicant by the Department for Energy and Climate Change (now the Department of Business, Energy and Industrial Strategy) on 26th April 2016.

Individuals – 24 unsigned letters based on a template letter sent to the applicant by the Department for Energy and Climate Change (now the Department of Business, Energy and Industrial Strategy) on 22nd April 2016.

It is apparent from this list provided by Ecotricity, that HECK OFF's letter dated 15th March 2016 and an attached MOD report, along with the **accompanying 261** letters was either omitted from Ecotricity's list, or that these submissions were not forward to Ecotricity by DECC on the 22nd of April 2016, despite being sent to DECC on the 15th March 2016.

In fact we confirm that a further 81 letters were sent by HECK OFF on the 31st March 2016 stating:

"Dear Mr Welford, I have attached a further 81 letters of objection. These will arrive in 4 separate emails due to the size of each PDF. I am also aware that some local residents have sent letters directly to you".

These were acknowledged by Keith Welford on the same day, 31st March 2016 @ 11.58am, with the accompanying statement, as were all of our submissions:

Dear Ms Stephenson,

Thank you for your messages – I confirm receipt of four e-mails and their attachments. We will consider the contents of the letters you have submitted in our decision-making process.

Regards,

Keith Welford

In the light of this apparent discrepancy between Ecotricity's letter, containing no reference to HECK OFF's submissions, which includes a total of 342 residents letters, request that an explanation is provided by your department as to whether any of these submissions were actually forwarded to Ecotricity.

In addition we note that Ecotricity state that they have only received '24 unsigned letters based on a template letter'. Whilst the combined total of 342 of resident's letters forwarded by HECK OFF prior to the 22nd April in the main were formatted letters, these were signed and dated, and contained the resident's name and addresses. It is of concern that the few letters said to have been received by Ecotricity, are recorded to be 'unsigned', this suggests that Ecotricity are seeking to contend that there has been a minimal consultation response from local residents, which is in fact a misrepresentation of reality.

An additional 29 resident objection letters were sent by HECK OFF on the 29th April 2016 and acknowledged by Keith Welford on the 10th May 2016 @ 10.10am, along with a further 139 sent and acknowledged by Keith Welford @ 10.09am 2nd August 2016.

We wish to advise you that HECK OFF hold PDF copies of all the combined total of 509 letters, in addition we have checked through all of these and have only found one that is unsigned. We are aware that additional letters have been sent by local residents direct to DECC and it is possible that some of these may have been unsigned. It is also clear that the combined total of letters sent to DECC will be higher than 509 and not merely the 24 that Ecotricity record.

We stated in our letter dated 15th March 2016 the following:

'As you are no doubt aware from previous correspondence and submissions, many local people in the area have not been properly informed and consulted on Ecotricity's application submitted to DECC dated 5th February 2015 for a Variation of their consented wind farm in February 2013'.

'Furthermore the local communities were belatedly informed that there was a 2nd round of consultation between the 19th January -10th February 2016, after this closure date'.

It is with some concern that we note in Ecotricity's letter in Paragraph 30:

The concerns of the letter can be summarised as:

30 c. *'Concerns regarding the consultation and publicity of the Variation Application. As above, Ecotricity complied with its statutory obligations regarding consultation and publicity. In addition, consultation was subsequently undertaken by North Kesteven District Council (including consulting parishes within its District e.g. Heckington Fen Parish Council, Great Hale Parish Council and South Kyme Parish Council'2).....,*

Refers to foot note 2:

2 'These Parish Councils are listed in the Council's Committee Report of 2 June 2015 so that Ecotricity assumes they were consulted. The report further confirms that neither Heckington Fen PC nor Great Hale PC provided comments to the Council as part of their consultation'

There is an ongoing serious issue we wish to again highlight here.

To the extent that Ecotricity have continued to justify an unsatisfactory notion, even within this 3rd round of consultations, that they have complied with their '*statutory obligations regarding consultation and publicity*', by narrowly focusing their attentions on the Planning District of North Kesteven, and as a worrying consequence, solely on the '*parishes within its District*', by only naming Heckington, Gt Hale and South Kyme Parish Council's, whilst as far as the local communities are concerned, **in effect neglecting** the neighbouring district of Boston Borough Council, which includes the Parishes of Amber Hill, Holland Fen & Brothertoft, Hubberts's Bridge and Swineshead encompassing Swineshead Bridge, in which hundreds of affected concerned residents live.

HECK OFF is aware that these Parish Council's have now submitted representations to both DECC and latterly to DBEIS, as residents living within these parishes are also affected, as are those within the District of North Kesteven, in fact, many even more so, especially those living in close proximity to the wind farm site in the North and North Eastern direction at a distance of merely a few hundred metres, to those further away from the nearest turbines, in all directions of the wind farm, in terms of visual and noise impacts.

We wish to raise concerns that none of the Parish Councils have been offered or provided with hard copies of Ecotricity's Variation Application. photomontages to enable them to in any meaningful way be in a position to assess any potential increased visual and landscape

impacts. We acknowledge that these are accessible on line, but this does not enable the montages to be assessed on site. We have concerns that the photomontages are not compliant with SNH most recent guidance and appear to under represent any potential adverse impacts to our visual and landscape amenity. On behalf of the local communities HECK OFF wish to register a holding objection on the grounds that we are not satisfied that the landscape and visual impacts have been satisfactorily assessed.

Regarding *foot note 2*, HECK OFF is also aware that the position of Heckington Parish Council during the 1st round of consultations in 2015 for the variation application, was still that as expressed in their comments contained within NKDC's Officer's Report Dated 30th January 2012, i.e., that at that time they were still of the opinion that their Parish Council's views would not be considered, so in effect "*why bother to respond*", as a Government appointed Inspector had given consent to the wind farm despite the local communities concerns and similarly in the case of Gt Hale, that is assuming that they were even aware of the variation application.

However HECK OFF is also aware that further submissions have been made by Heckington, South Kyme, Gt Hale, Amber Hill, Swineshead, and Holland Fen & Brothertoft Parish Councils, in response to the Noise Impact Appraisal undertaken by Dr Yelland commissioned and funded from within all of the local communities, including the Parish Councils.

There again is a suggestion by Ecotricity that four of Parish Council letters were based on a template letter, are they seeking by this statement to undermine these Parish Council's legitimate planning concerns?

We also reiterate our concerns raised in our 15th March concerning autistic children:

'In one rural village alone, we have been approached by 2 families each with an autistic child, living between 1 and 2 Km of the turbines. These two particular families are saying they had absolutely no idea about the development, through a lack of awareness and information, regarding their specific concerns on behalf of their own children. The potential impacts on autistic children was briefly considered by the Inspector in his report and recommendation dated 01-11-2012 to the Secretary of State, apparently with reference and regards to another child or children within the vicinity of the wind farm;

@ Para 328: ..., 'and the possible impact on autistic children were also raised. However, there is no substantive evidence available that the development would cause any material harm in these spheres, and hence these matters cannot weigh against the proposal'.

However it is now apparent that the serious and legitimate concerns of these families were not addressed by the applicant Ecotricity during the application process and that the developer through the dismissive nature of their consultation process, have failed to adequately engage with the local communities. This is evident in the consultation comments recorded in the Officers report to the Council (NKDC) dated 30 January 2012.

We have seen nothing in Ecotricity's response that acknowledges this serious issue and request that Ecotricity do not continue to avoid but address this issue of real concern to these families.

2. ECOTRICITY'S COMMENTS CONCERNING MOD CONSULTATION RESPONSE IN RESPECT OF AMENDING CONDITION 5.

We maintain our position on this matter and refer you to the substantive grounds we set out in our letter dated 15th March 2016, which legitimately conclude that:

"We also wish to state that after carefully considering the evidence we have available, we are totally opposed to Ecotricity's proposed variation to amend Condition 5 Radar Mitigation to change the wording of the condition from, 'no development shall take place' to 'no construction of a turbine.'"

We would however like to comment on statements made by Ecotricity in their letter 18th October 2016, which are extremely misleading, there are two separate issues in play here.

Firstly the variation of the blade length and secondly the amendment to the wording of condition 5.

Ecotricity are seeking to take a position that as MOD have registered no objection to both the variation of the blade length and the change of the condition 5 wording, then taken together the amendments to Radar Mitigation Scheme Condition should therefore be consented.

To illustrate this point Ecotricity state at Para 9.

9. "As there will be no increase in the overall tip height of the proposed turbines or changes to their locations, there will be no increase in risk to radar. As required by condition, radar mitigation will be required irrespective of blade length. We have consulted with the Ministry of Defence (MoD) who have stated no objection to the variation of the wording proposed"

Ecotricity then state:

"Furthermore, in their letter dated 20th May 2015 to DECC, the MoD go on to state: "In respect of the variation proposed to Condition 5, it should be noted the MOD has commenced discussions with Ecotricity (Next Generation) Limited regarding radar mitigation and it is understood that all parties are in agreement regarding the requirement for mitigation. It is on this basis that the MOD has no objection to the proposed variation to Condition 5." See Appendix 5: DIO Response 200515".

The important point here of note is that MOD are stating that, *"as there is will be no increase in the overall tip height or changes to their locations there will be no increase risk to radar"*.

They also state; ***regarding radar mitigation and it is understood that all parties are in agreement regarding the requirement for mitigation.***

Therefore, why would MOD have any grounds to object to a change in the wording of condition 5, as any ground works undertaken in fact are of absolutely no concern to MOD?

In Para 21 of their letter Ecotricity state:

*21. We believe that this is addressed in the same manner as the question immediately above concerning the potential for stranded kit to be left in situ. We have agreed with the appropriate organisation – **Ministry of Defence – who has no objection or concerns with amending the condition.***

In any case even if MOD did object, it highly probable that Ecotricity would challenge this objection, as this is only relevant to any ground works undertaken by Ecotricity, **at any time or any location, either at Heckington Fen or anywhere else in the whole of the UK. No ground works anywhere will affect any operational RAF bases, indeed this can be extrapolated across all locations where there is Aerial activity.**

We wish to make our point quite clear, the fact is just because MOD have not objected to the amendment of the wording of condition 5, can this in anyway be relied upon by Ecotricity to justify consent of their proposed amendment.

By making this assertion we contest, Ecotricity are misrepresenting MOD's position in order to favour consent. This is inappropriate and we also see this purely and simply as misrepresenting the facts to seek to gain a planning condition advantage and undermine the initial intention of the planning condition, i.e., to protect the local communities from adverse impacts from aborted works in the event that a tried and tested radar mitigation scheme is not forthcoming, nor can be agreed to the full satisfaction of all parties.

Furthermore, it is of note that North Kesteven District Council in considering this matter as part of the 3rd round of consultations, at their planning committee meeting held on 17th January 2017, have submitted the following statement in their response letter to you, dated 24th January 2017:

*"The comments in response by Ecotricity that only works to agricultural access tracks was anticipated did not reassure the Council; indeed, if the extent of the applicants intentions is as limited as suggested, **the variation they seek exceeds what is reasonably required.** Moreover the Council would remind the Secretary of State that in the event that the condition is varied to reduce the burden upon the developer to secure an approved RMS before any works commence, a lawful implementation of the consent through works to an agricultural access road will in effect secure the consent and will potentially leave residents with years of uncertainty over the development pending the approval of the RMS. **Such uncertainty could act to blight the amenity that local residents might reasonably expect to enjoy from their properties**".*

3. RESPONSE STATEMENT OF DR MATTHEW CAND TO THE APRAISAL REPORT OF DR JOHN YELLAND.

Before responding to Dr Cand's submission, we again refer you to our letter of the 15th March 2016, which raises wide ranging concerns with regards to adverse noise impacts and details the ongoing noise complaints at Cotton Farm wind farm. This wind farm was the subject of a meeting with the then Energy Minister Andrea Leadsom on the 9th March 2016 and also in the House of Commons during the Energy Debate, where adverse noise impacts particularly arising from Amplitude Modulation, were raised by both MP's Christopher Heaton Harris along with Heidi Allen MP. The Energy Minister responded:

*"I thank my hon. Friend the Member for Daventry, my hon. Friends the Members for Peterborough (Mr Jackson) and for South Cambridgeshire (Heidi Allen), and my right hon. Friend the Member for Haltemprice and Howden (Mr Davis) for raising with me the important issues around visual, amenity and noise impacts from onshore wind farms and the impact that they can have at local level. I can confirm that our manifesto commitment specifically called for a halt to the spread of onshore wind farms and a change in the law so that local people have the final say on wind farm applications. We are making sure that people's concerns are addressed. Specifically, the Government are considering measures related to noise and amplitude modulation. We touched on this matter in Committee. As I said then, we are determined to address this and find a solution to the problem. This is possibly taking longer than my hon. Friends would like, *but we are taking independent advice and will consider how best to act in the light of that advice, which I expect to receive shortly. At this stage, I cannot comment further, but I hope that my hon. Friend the Member for Daventry will continue to be patient with me in the knowledge that we are looking at this very closely".*

*In respect of the advice the Energy Minister was referring to, HECK OFF will submit a separate letter commenting specifically in response to the significant concerns arising from the report commissioned by DECC, and published in October 2016 by DBEIS, undertaken by WSP Parsons Brinkerhoff, (PB) authored by Richard Perkins and Michael Lotinger, to review and respond to your Department on the significant problems arising from Amplitude Modulation (AM) propagated by large industrial wind turbines'; especially those sited close to local communities.

This report is seen by our local communities as an extremely worrying development, especially in the light of the complimentary report, again submitted by an IoA Working Group and published by your Department, offering what appears to be an unfathomable '*black box matrix solution*' for the identification of the presence of AM as a means to assess whether or not, a wind farm is compliant. Our detailed submission to both the PB report and the IoA sponsored matrix, **will conclude that this solution will not protect our local communities** and the '*non-acoustic factors*' notion espoused in the PB report;

at Para 3.3.87 that:

à A range of non-acoustic factors have been identified as potentially contributing to or modifying the annoyance that some people feel and attribute specifically to noise from wind farms.

These include:

< Specific visual impacts (shadow flicker, lights, rotation);

< *General attitude to wind farm appearance in the landscape;*
< *Direct economic benefits from wind energy generation or specific wind turbine installations;*
< *General attitudes to wind energy generation;*
< *Type of area (urban / rural);*
< *Exposure to positive / negative media coverage of wind energy and wind farm noise, and the activities of campaign groups; and*

< ***Sensitivity to noise and possible sensitisation due to awareness of wind farm noise research***

It is frankly quite alarming, as this implies that our local communities genuine concerns expressed before the Heckington Fen wind farm is even constructed or operational, in the event of any legitimate complaints by affected residents, these could be merely swept aside by Ecotricity's appointed acoustician consultant's, as based on their, '*professional judgement*', as we all could be considered to have been, '*pre-loaded to complain*', based on these notional '*non-acoustic factors*', a charge that is already known to have been made by persons affiliated to the wind industry, (and is in fact on record) against the significant suffering of the resident's living in the vicinity of the operational Cotton Farm wind farm in Cambridgeshire. This matter is of such concern, it was brought to the attention of the Energy Minister in the '*House*', as mentioned above.

The PB report and concerns raised by the Energy Minister highlighting the prevalence of the effects and harm being caused to local residents by AM, is now finally being acknowledged by the wind industry and their '*closely affiliated acousticians*'. This significant development is seen against the assurances provided by Ecotricity's acoustician's, during both the planning application process and at the inquiry, now represented by Dr Cand of Hoare Lea, and as mentioned previously, was relied upon by the Inspector in his report to your predecessor Ed Davey, persuading him to grant consent.

We consider that our communities significant concerns still remain, as expressed within all of the letters that have been sent to your department from the local Parish Council's, following their review of Dr Yelland's Appraisal, dated 6th June 2016.

We find it strange that whilst Ecotricity have responded to Dr Yelland's Appraisal, sent after the 26th April 2016, which they say, was the cut off point for the receipt of any submissions by yourselves, there is no mention of the accompanying Appendices A & B, which provide important supporting information to Dr Yelland's forensic examination, in the first instance of the Variation Application noise Impact Assessment, (NIA) he then found to be a derivation of the original NIA on which consent was granted.

For your information we have included in Addendum 1, a copy of the covering email submitting both of these Appendices A & B, sent on Friday 24th June 2016 to Keith Welford, containing relevant supporting information.

APPENDIX A comprises of extensive supporting photographic evidence taken at each of the 6 Back Ground Noise Survey (BNS) locations selected on behalf of Ecotricity by Hoare Lea and as stated in Dr Cand's response:

"Representatives of both North Kesteven District Council and Boston Borough Council were contacted prior to the survey taking place and agreed the properties at which measurements would be undertaken; although they were invited to attend the installation of the monitoring equipment, both declined".

This was extremely unfortunate, as in effect these EHO's appear to be merely accepting the selection of the BNS locations as suggested by Hoare Lea, without fully appreciating any potential arising implications. In fact, why would these EHO's have any reason to question Hoare Lea, as they would be seen to be experienced professional consultants by NKDC's EHO's?

The more worrying aspect is that Hoare Lea have now admitted in Dr Cand's response that there was no in house checks undertaken by NKDC's EHOs, to ensure that the noise monitors were actually sited by Hoare Lea in a compliant manner, nor did NKDC as just Statutory consultees, commission any independent acousticians' to review any aspects of the submitted NIA in support of Ecotricity's planning application, which is now subject to justified scrutiny.

Of even greater concern is the Inspector's report and recommendation to the Secretary of State at Para 288, which confirms that he is persuaded that the NIA, entirely relied upon to inform all parties, was compliant with noise guidance and subsequently reached the conclusion that the Applicant had followed best practice.

*288. The predictions of noise immission to the receptors around the site are such that it is expected that the noise limits recommended in ETSU-R-97 would be comfortably met. I have no reason to doubt that. Despite criticisms made, ETSU-R-97 remains the required guidance to assess the impact of wind farms and the **Applicant has followed current best practice in the assessment.***

However the back ground noise monitoring photos contained in Appendix A, show in detail that there are serious issues arising from the siting of the noise monitors by Hoare Lea, during their BNS in March-April 2011, as do the 6 BNS location sets of photos contained in their data sheets, provided by Ecotricity in support of their 2011 planning application.

It is notable in the case of the BNS monitoring undertaken at Side Bar Lane to the rear of Derwent Cottage, (BNS location 4), that whilst at other locations all of the monitoring equipment is in view i.e., @ BNS locations 1,2,5 & 6, why then is only the microphone head visible at this location, in all of the 4 directional photo views submitted by Hoare Lea?

In reality there is **no** apparent reason why this is the case, as the photographic views towards this microphone, particularly facing to and from the view to the North, South and West were **not** restricted by any barriers or physical obstructions, as the monitor at this BNS location was sited on an open field margin.

Indeed, the only direction it would have been difficult to take a photo of all of the monitoring installation is when facing East, due the close proximity of the monitor to the rear of the garage wall at Derwent Cottage.

It is also of significant note, that in **none** of Hoare Lea's photos of BNS location 4 was this garage wall in view. It is now apparent that it must have taken considerable time and effort by Hoare Lea's operative, after placing the monitor to take the photos submitted in their data sheets to exclude any sight of the garage wall. The only possible way this can be done, is to take the photos of the monitor's microphone in close proximity to the monitor, as is actually revealed in Hoare Lea's submitted photos.

The BNS survey monitor photos at BNS location 3, No 2 The Council Houses again only partially shows the monitor, this BNS location is of particular concern to Dr Yelland.

Appendix A contains material evidence in support of Dr Yelland's Appraisal, as this also questions the compliance of the BNS undertaken by Ecotricity's noise consultants Hoare Lea.

It is not HECK OFF's intention to cover this evidence in detail at this juncture, but we will be presenting this in detail should the Secretary of State consider a Public Inquiry is required to hear full evidence at a future hearing.

APPENDIX B, collates evidence of all of the submissions by local residents who either hosted back ground noise monitors during the survey's between March -April 2011, or where involved in any way with this survey i.e., those who were either approached to host the equipment or were concerned that they were not approached.

We see no reference to these letters in Ecotricity's letter dated 18th October 2016.

These submissions from concerned residents, also include copies of letters requesting the raw data from both Hoare Lea and Ecotricity which have to date, not been dealt with adequately in compliance with the IOA Good Practice Guide. Indeed this is of considerable concern to Dr Yelland, who has also written to your department requesting that Ecotricity be encouraged to forward this data for open and transparent analysis.

Again we see no reference to these letters in Ecotricity's letter dated 18th October 2016.

In addition, Appendix B includes a copy letter sent to your predecessor SoS Amber Rudd on the 14th June 2016 from our constituency MP's, Matt Warman & Stephen Philips QC, in the light of Dr Yelland's report calling for an independent compliant back ground noise survey to be conducted in a manner that is seen to be independent jointly by Dr Yelland and Ecotricity's chosen noise independent consultant along with access to the data from this survey.

Yet again we see no evidence that this letter has been sent to Ecotricity.

We are also aware that Amber Hill Parish Council have considerable concerns raised by a local resident at the Old Church, who agreed to host a BNS monitor on the basis of written assurances from Ecotricity during the 2011 monitoring period, that he would be provided with **all** of the collected data. In the event he was only provided with data included in the original application and not the full data requested. We understand that this resident has submitted a letter to yourselves,

Moving on to Dr Cand's response to Dr Yelland's Appraisal, having carefully reviewed this we wish to advise you, that unfortunately this inspires even less confidence in Hoare Lea's submitted NIA's, both the initial NIA and the variation NIA.

We are particularly perplexed to read Dr Cand's attempt seeking to undermine Dr Yelland's integrity, qualifications, experience and professionalism. It may be that as Dr Cand's secondary education and polytechnic course were in another country (France), he is not familiar with the status of Oxford University science degrees and doctorates in this country, but his misleading comments on Dr Yelland's experience and competence are nevertheless unprofessional and disappointing. In view of Dr Yelland's 100% success rate to date in legitimately challenging Hoare Lea noise impact assessments, such comments may also be considered unwise.

We are also assured by Dr Yelland that he is confident that none of the matters Dr Cand raises changes Dr Yelland's Appraisals' overall conclusions at Para 8.1.9 that:

*8.1.9 "More recently when **affected** residents and local Parish Council's discovered the true implications – and indeed the existence - of the variation application they did object, in large numbers and from a position of knowledge. The chosen site is simply too small for a 50 MW, let alone 66 MW, wind farm. It is **now apparent that the original consent was gained in spite of a defective noise impact assessment; if constructed the wind farm would have produced noise well in excess of government limits. If the variation application were to be consented the noise excess would be even greater**".*

We repeat our serious concerns expressed in our letter date 15th March 2016.

*"There is growing concern and a complete lack of confidence within our local communities that there will be **no protection** under any current planning conditions, that:*

a) if Ecotricity's application for the larger blade rotor diameter of 103m, is consented and when in operational mode causes wind turbine noise in excess of the parameters set within ETSU-R-97,

and,

*b) there is **no adequate noise condition** to mitigate against Amplitude Modulation either with the larger blades or the consented blade diameter.*

or

c) that even if the Variation Application is refused, that there is in place **no** adequate safeguards to protect local residents from intrusive noise with the turbines operating within the current consented turbine configuration.

We need reassurances based on sound peer reviewed evidence, which has been submitted by completely independent expert consultants with scientific expertise and real time practical experience in evaluating the full spectrum of wind turbine noise emissions, with no conflicting commercial connection or affiliations with the wind turbine industry. All evidence must have been tested rigorously through an external consultation process, before we and DECC can be confident that this wind farm will not create harmful EAM for our residents.

4. NORTH KESTEVEN'S 3RD ROUND CONSULTATION RESPONSE ON TURBINE NOISE:

In the light of all our above concerns regarding wind turbine noise issues, we wish to again refer to North Kesteven's 3rd round of consultation response letter dated 24th January 2017 sent by Andrew McDonough, Head of Development, Economic and Cultural Services you will be aware this states:

*"The Council remains concerned that there are two conflicting noise reports before the Secretary of State: one for the applicant, Ecotricity Group Ltd, and one for the campaign group, Heck Off. The Council would say, without prejudice to either party, there must still be a degree of doubt over the potential noise impacts of the development given the opposing expert opinions provided. Whilst there is no specific proposal before you as part of this variation request relating to the noise condition imposed, **in our view noise impact is nevertheless material to your decision owing to the fact that the amended turbines proposed in the variation request will each have a different noise profile due to their different design, engineering, height and sweep of the blades to those originally proposed**".*

HECK OFF concur with NKDC's position and even more so with the statement that:

*"The issue of the robustness of the noise assessment and associated mitigation becomes a critical factor for the District Council as part of its **statutory responsibility to enforce planning conditions**, should you be mindful to issue consent for the Variation".*

NKDC have reiterated our concern with regards to the enforcement of audible noise planning conditions in terms of compliance with ETSU and the IOAGPG, however there is still the outstanding issue of the increased propensity of adverse impacts arising from AM noise as identified in Dr Yelland's Appraisal especially with regards to the proposed increase in the length of the turbine blades.

However there is also emerging sound scientific evidence that Low Frequency Noise (LFN) and infrasound have been identified as being propagated by wind turbines, but yet again we see the wind industry is seeking to maintain their denial of this causal link, as they did for decades in the case of AM noise until recent events. It is now being recognised that a much wider spectrum of wind turbine noise is causing adverse health impacts, even leading to families having to abandon their homes. This is developing into a serious issue and whilst AM is now acknowledged as a known cause of harm to local residents, there needs to be an urgent recognition that research is needed into the harmful impacts that may be also directly linked to LFN along with infrasound noise pollution. It is critical that this research is

seen to be totally transparent and conducted by truly independent researchers, that local communities can have confidence in.

NKDC's letter of the 24th January 2017 also states:

"Therefore, in light of the conflicting technical noise reports that exist, the District Council would strongly advise that the Secretary of State commission his own fully independent Noise Impact Assessment in order to have full regard to the likely noise impacts that the proposed revised development will have upon the residential amenity of nearby residents."

This also accords with the calls by our MP's and Parish Council's in their submissions. HECK OFF likewise supports this course of action in the light of our earlier comments in this letter provided that as NKDC also state this survey is conducted in a verifiable manner;

'The Council are of the view that the verifiable independence of whoever is commissioned to conduct the Noise Impact Assessment',...

and HECK OFF also concur with NKDC position given the evidence we have presented above;

"and that all raw data is made available to all interested parties is essential. The independent review and the availability of the raw data to be publicly available is particularly important".

Again we agree with NKDC's concluding point on the matter of wind turbine noise that:

'The existence of competing technical noise impact reports suggests that that at this time, the Secretary of State is not in a position to make a robust planning decision on the merits of the revised proposal.'

5. WRITTEN MINISTERIAL STATEMENT (HCWS42).

NKDC's Planning Officer's dated report to the Planning Committee meeting 17th January 2017 referred to previously included reference to the WMS, we have included relevant extracts for this report which again are material planning matters for consideration during this round of consultation.

Written Ministerial Statement (HCWS42) was made by the Secretary of State for Communities and Local Government on 18th June 2015, regarding local planning and wind farm applications in particular.

NKDC conclusions in this Officers Report are wholly in line with HECK OFF's position and that of all of the affected Parish Councils in that there are outstanding objections to the proposal from the local community in relation to matters including noise impacts.

*The Ministerial Statement does have relevance to this application, although it should be noted that it falls within both the Electricity and Planning Acts. The development site, like the whole of the District, is not specifically identified within the Local Plan as an area suitable for wind energy development and therefore the second element that of demonstrating that the planning impacts identified by local communities have been fully addressed, and therefore the proposal has their backing, is applicable. **At present there are outstanding objections to the proposal from the local community in relation to matters including noise impact.***

6. CONCLUSION

HECK OFF confirms on behalf of the affected local communities that we do not back Ecotricity's Variation Applications on the following grounds:

6. 1. There remains considerable concerns that despite Ecotricity's assertions, they have not adequately consulted with all of the affected communities.

It is clear in their letter at Para 30 c, that they have limited their consultation merely to the North Kesteven District and not the affected communities in close proximity to the Heckington Fen Wind Farm site, within the neighbouring district of Boston Borough, thus effectively excluding vast swathes of the surrounding area within the Parishes of Amber Hill, Holland Fen & Brothertoft, Swineshead & Swineshead Bridge and Hubbert's Bridge.

It is totally unacceptable that these communities have been disregarded.

6. 2. There remains concerns that Ecotricity are also seeking to suggest that only 24 unsigned objection letters have been received during the 2nd round of consultations despite HECK OFF forwarding 509 letters direct to the Case Officer and that it is know that local residents have forwarded letters directly either DECC or latterly to DBEIS.

a) We are also concerned that many other letters sent to DECC from our local Parish Councils, residents and our local MP's Matt Warman & Stephen Philips QC may have not been considered at this stage by Ecotricity.

b) This is also relevant in regards to the letters sent by local residents who hosted back ground noise monitors on their properties who requested all of the raw data from both Hoare Lea and Ecotricity, to date this data has not been received.

6. 3. We wish to raise a holding objection in regards to the lack of means provided by Ecotricity to enable the local communities adequately assess the potential landscape and visual impacts arising from the proposed increase in the length of turbine blades.

a) We are also concerned that the photomontages are not compliant with updated Scottish & Natural Heritage Guidance, therefore under represent the potential adverse impacts. We consider that this could potentially adversely affect our local visual and landscape amenity and the area in which we live and enjoy. HECK OFF wish to advise the Secretary of State that we are intending to submit further LVIA evidence in due course and at a Public Inquiry if required to do so.

6. 4. Despite Dr Cand's response to Dr Yelland's Noise Impact Appraisal, we have no confidence Ecotricity's Variation Application NIA is compliant and that local residents will be protected from adverse and harmful noise, arising from both audible noise and Amplitude Modulation impacts, especially in view of the larger turbine rotor diameters proposed.

a) We have no reason to doubt Dr Yelland's Appraisal is substantive and is based on his extensive professional expertise, which has also latterly revealed that on 3 previous

occasions when commissioned by other local communities, he has found Hoare Lea's NIA's to be flawed to such an extent planning permission was subsequently refused.

b) We are concerned that the accompanying Appendix A & B appears to have not been considered by Ecotricity.

6. 5. The flaws identified by Dr Yelland raise serious ongoing concerns that in the event of Ecotricity's operation of either the consented wind farm scheme, or the variation scheme, will now not provide the local communities with confidence in the consented Noise Conditions and the Variation Noise Conditions proposed, are now open to challenge as both of these Conditions are effectively based on unsound and untested data.

This by definition, exposes the local communities to **unacceptable risks of adverse harm and disruption to their living conditions, especially during the quiet day time recreational hours and particularly at night time.**

NKDC's letter also raises this legitimate concern by stating:

*"The issue of the robustness of the noise assessment and associated mitigation becomes a critical factor for the District Council as part of its **statutory responsibility to enforce planning conditions**, should you be mindful to issue consent for the Variation".*

6. 6. We support NKDC's position that:

'The existence of competing technical noise impact reports suggests that that at this time, the Secretary of State is not in a position to make a robust planning decision on the merits of the revised proposal.'

And likewise support the call from Lincolnshire County Council, along with our local MP's that at the very least, a verifiable Independent Noise Impact Assessment is commissioned by the Secretary of State and that given Ecotricity's failure to provide the existing raw data on legitimate request, that all raw data is made available for open and transparent scrutiny.

6. 7. The local communities maintain our objection to any amendment of the MOD Radar Mitigation Scheme (RMS) on two substantive grounds.

a) That Ecotricity has sought to misrepresent MOD's position by suggesting that MOD had no objection to the wording of Condition 5, when in fact MOD's position was that for operational reasons, they did not object to the variation of the larger rotor diameters, as the overall height of the turbines was not increased beyond 125m.

b) Ecotricity then implied that as there was no objection from MOD, the amendment to the wording was acceptable to MOD, when in fact any ground works undertaken by Ecotricity would and could not affect any of MOD's operations. We have also pointed out that this is relevant to all Radar Mitigation Scheme Conditions irrespective of the type of Aerial operations.

We reiterate our view that:

c) By making these assertions Ecotricity are in fact misrepresenting MOD's position to favour consent, this is inappropriate and we also see this purely and simply as misrepresenting the

facts in seeking to gain a planning condition advantage and undermine the initial intention of the planning condition.

e) We fully support NKDC's position stated in their letter that ***the variation they seek exceeds what is reasonably required.***

and by definition any consent to amend the wording of the RMS would create;

Such uncertainty could act to blight the amenity that local residents might reasonably expect to enjoy from their properties".

This objection has consistently been raised by local residents and particularly South Kyme Parish Council. Ecotricity in their letter dated 19th October 2016, we contest were totally dismissive of these concerns.

6. 8. We state that in line with the WMS, Ecotricity have failed to adequately address the concerns of the local communities as outlined in NKDC's Planning Officer's report that:

At present there are outstanding objections to the proposal from the local community in relation to matters including noise impact.

Therefore as such we cannot back the Variation Application.

Given that there remains outstanding material planning matters, unless or until the Secretary of State refuses consent for the applicant's Variation Application, we consider there exists substantive ground for a Public Inquiry for opposing evidence to be considered under cross examination by an Inspector appointed by the Secretary of State.

HECK OFF will as indicated in this letter, submit further evidence in support of our local communities as soon as practicable. We are also aware as previously stated, that Dr Yelland is preparing a rebuttal to Dr Cand's response to his Appraisal.

Thank you for your kind attention.

Yours Sincerely,

Mervyn Head
Chairman Heck Off
(Heckington Fen Wind Turbine Action Group)

cc. Dr Caroline Johnson MP
cc Matt Warman MP.

Attachments.

1. Addendum 1
 2. HECK OFF Letter dated 15th March 2016
 3. Statement of Case Secretary of State for Defence Baumber Appeal.
 4. NIA Appendix A
 5. NIA Appendix B
-

ADDENDUM 1

Copy Email to Keith Welford attaching HECK OFF Appendix A & APPENDIX B

Sent Friday 24 June 2016 @ 16.58.

Dear Mr Welford,

(Please forward this email and documentation to (The Secretary of State Amber Rudd.)

Following on from my conversation with your colleague yesterday, Gareth Leigh (Thursday 23 June 2016) on behalf of the local communities, please find attached Appendix A which comprises of additional pictorial evidence in support of Dr Yelland's NIA Appraisal dated 06 June 2016, with regards to each of the Background Noise Survey locations, along with the relevant BNS proxy's.

Appendix A collates all the photographic evidence at each of these BNS locations, some of which has already been submitted to yourselves by local residents, plus additional material which has not been included in DR Yelland's report, along with the relevant figures extracted from the NIA Appraisal, due to the length of this at over 50 pages.

Appendix A references the corresponding paragraphs and page numbers within the NIA Appraisal, along with the BNS locations marked on Figure 21 (Page 50) contained within the Appraisal.

The Appendix follows the same sequence of reference as Appendix 10C Noise Monitoring Information Sheets in the NIA submitted in support of the original planning application, along with the BNS location SLM positioning Figures C1- C24.

We draw your attention in particular to location 4 BNS Side Bar Lane, see pages 24 & 25.

We have already submitted evidence that the original Figure C15 provided by the applicant in support of and justifying the recording and positioning of their SLM location, omitted important details, particularly the missing westerly view detailed in Figure 12 within the appraisal see bottom of page 27 and see page 25 of Appendix A where we have replicated Figure 12.

Please note Appendix A figures 4.2 (page 24) & 4.3 (page 25) strongly suggest that Figure C15 is indeed highly misleading, as the view on the left side of the Figure in C15, clearly shows that the corner of the garage at the rear of Derwent Cottage very close to where the SLM was

positioned, was narrowly excluded from Figure C15 despite appearing in both of the views in Appendix A Fig 4.2 & 4.3.

Both Appendix A figures 4.2 & 4.3 have been obtained to ensure they are comparable with the actual location that C15 was recorded. This can be reference by the comparative positions of the telegraph poles within these photos and the position of the elevation of Fen Farm building, plus the conifer tree nest to the farm house in the north westerly aspect of the view further along Side Bar Lane.

Collectively the communities consider the close examination of this BNS 4 location alone, undermines the validity and integrity of the whole NIA submission on which the consent was based.

Dr Yelland's forensic examination likewise raises significant concern that endorse this position, as there are significant concerns arising from the other 5 BNS locations particularly alongside the accounts from residents already submitted to yourselves which are likewise collated in the attached Appendix B and other supporting letters including a letter from Stephen Phillips QC MP & Matt Warman MP.

We would advise you as a community we would be more than happy to make further representations in person to the Secretary of State with regards to the evidence that is now emerging that raises serious issues concerning the validity of not just the variation application but the original consent in this regards.

We await the Secretary of State's response to our concerns raised in our substantive representations.

Yours sincerely

Melvin Grosvenor
For and on behalf of the local
Heckington Fen Communities'.

CC to Stephen Phillips QC MP & Matt Warman MP

Welford Keith (Energy Development)

From: Heck Off Heckington Windfarm Action Group <reply.heckoff@outlook.com>
Sent: 10 February 2017 12:33
To: Welford Keith (Energy Development); Energy Infrastructure Planning
Cc: matt.warman.mp@parliament.uk
Subject: Re: 3rd Round Heckington Fen Variation Submission Dr J Yelland's NIA Rebuttal of Dr Cand's Response Statement on behalf of Ecotricity
Attachments: 100429_Baumber_MOD Statement of Case 29 April 2010 radar mitigation. (1).pdf; Dr Yelland REBUTTAL OF DR CAND Appendix 1. Enecon E101 Sound Power level data sheet Cover Note.pdf; Enercon E101 Data Sheet Dr Yelland Heck Fen Rebuttal 05-02-17.pdf

Dear Mr Welford

Thank you for your acknowledgement of both Dr Yelland's Rebuttal of Dr Cand's response dated 5th February along with Heck Off's previous submissions.

Both Heck Off and Dr Yelland unwittingly omitted to attach the following 2 documents:

- 1. Attachment 3. Statement of Case Secretary of State for Defence Baumber Appeal (Ref Heck Off Submission Dated 31-01-2017)
- 2. ENERCON E101 Sound Power Level Data Sheet referred to at foot note 9, as per attached accompanying cover note. (Ref Dr Yelland's Rebuttal Dated 05-02-2017)

We would be grateful if you could include these submissions as they are referenced within the respective evidence provided.

We apologise for any inconvenience this may cause.

Best wishes,

Clare Stephenson

Heckington Fen Wind Turbine Action Group



From: Welford Keith (Energy Development) <Keith.Welford@beis.gov.uk>
Sent: 07 February 2017 07:18
To: Heck Off Heckington Windfarm Action Group; Energy Infrastructure Planning

Cc: matt.warman.mp@parliament.uk

Subject: RE: 3rd Round Heckington Fen Variation Submission Dr J Yelland's NIA Rebuttal of Dr Cand's Response Statement on behalf of Ecotricity

Dear Ms Stephenson

Thank you for your e-mail and the attached Report from Dr Yelland. We will consider Dr Yelland's Report in the decision-making process for the Heckington Fen consent variation application.

Kind regards,

Keith Welford



Department for
Business, Energy
& Industrial Strategy

Keith Welford
Case Manager, Energy Infrastructure Planning
Tel: 0300 068 5686
E: keith.welford@beis.gov.uk
3 Whitehall Place
London SW1A 2AW
www.gov.uk/beis <https://twitter.com/beisgovuk>

From: Heck Off Heckington Windfarm Action Group [<mailto:reply.heckoff@outlook.com>]

Sent: 07 February 2017 14:44

To: Welford Keith (Energy Development); Energy Infrastructure Planning

Cc: matt.warman.mp@parliament.uk

Subject: 3rd Round Heckington Fen Variation Submission Dr J Yelland's NIA Rebuttal of Dr Cand's Response Statement on behalf of Ecotricity

Dear Mr Welford,
cc Matt Warman MP.

Thank you for your confirmation email today acknowledging receipt of the local communities Heck Off submissions and also Mr M Whytcross's at Old Church.

We would be grateful if you also could acknowledge receipt of Dr J Yelland's Rebuttal Response (dated 5th February 2017) to Dr Cand's response comments in respect of Dr Yelland's Wind Turbine Noise Impact Assessment Appraisal dated 6th June 2016.

Dr Yelland draws the following conclusions at Para 113;

I have carefully considered all of Dr Cand's comments on my Appraisal.

I find nothing in his rebuttal that causes me to change my position as expounded in my Appraisal.

Thank you for your kind attention to this latest submission on behalf of the local communities.

Best wishes,

Clare Stephenson

Heckington Fen Wind Turbine Action Group

Statement of Case

For and on behalf of:

The Secretary of State for Defence

Town and Country Planning Act 1990

Appeal by Enertrag UK Ltd
Site at Land at Chase Farm, Baumber, Horncastle

The Planning Inspectorate reference: APP/D2510/A/10/2121089/NWF

Treasury Solicitor reference: ANW/Q100410A/5C

**The Treasury Solicitor
One Kemble Street
London WC2B 4TS**

Ref: ANW/Q100410A/5C

29 April 2010

Summary

1. The Secretary of State for Defence ("MOD") objects to the construction of eight 125m wind turbines at Land at Chase Farm, Baumber, Horncastle ("Baumber") because:
 - a. The proposed turbines will be in line of sight of, and cause unacceptable interference, to the Watchman Air Traffic Control Primary Surveillance Radars ("ATC") radars located at RAF Waddington, Cranwell and Coningsby;
 - b. Any interference with these radars will have unacceptable consequences for the MOD's operational capabilities.

Impact on the Watchman Radars at RAF Waddington, Cranwell and Coningsby

Background

2. In 2002, the then Parliamentary Under Secretary of State for Defence and Minister for Veterans, stated in the Wind Energy and Aviation Interests Interim Guidelines (the "Interim Guidelines") that the Ministry of Defence ("MOD") fully supports, and makes every effort to assist in achieving, the Government's renewable energy targets. However, he also stated that the MOD has concerns about the effects of wind turbines on a number of MOD activities including radar and low flying and that whilst efforts must continue to ensure flight safety and optimum radar coverage throughout the United Kingdom the MoD awaited the results of a number of studies into these problems.
3. Within the forewords to the Interim Guidelines the then Minister for Energy and Construction ("DTI") stated that wind turbine developments must take place in a way which takes full account of national defence and air safety. In particular the Interim Guidelines explain the potential impact of wind turbines on radar systems and the process of ensuring that wind farms are located where they do not give rise to insuperable difficulties. The Chairman of the then British Wind Energy Association ("BWEA") (now RenewableUK) considers in his foreword that safety is of the utmost importance during the development and operation of wind farms and that BWEA work in partnership with Government and the aviation communities to ensure that the delivery of clean, green electricity does not cause any adverse effects to air safety.
4. In May 2005 the report into a trial by the MOD to determine the effects of wind turbine farms on ATC was published which demonstrated that wherever there was radar line of sight between wind turbines and an ATC radar the radar would be affected regardless of distance.

5. The trial's findings confirmed that a shadow region existed behind the wind turbines within which primary radar responses would be masked. The trial also proved that clutter was displayed to the radar operator as a result of the motion of the wind turbines. This displayed clutter was assessed as highly detrimental to the provision of a safe Air Traffic Service ("ATS").
6. The report also showed that an ATC operator would not be able to distinguish between radar returns from turbine blades and those from real aircraft. Therefore, for the purposes of achieving separation, the ATC operator would be obliged to treat turbine-induced returns as though they were aircraft. Finally, the Probability of Detection ("PD") of aircraft by ATC radar was considerably reduced when aircraft were above or close to wind turbines.
7. The trial's conclusions stated that the presence of a wind turbine farm in line of sight of an ATC radar has a significant impact on its ability to support ATC. This takes two main forms, obscuration and displayed clutter, which are a result of strong radar reflections received from high Radar Cross Section moving targets, like wind turbines. Due to the nature of the ATC task, it will always be necessary for controllers to honour the presence of a displayed radar return on their screen and treat it as though it was a real aircraft.
8. Based on the trial's findings a new, more informed process of assessing the effects of proposed wind turbines against ATC radar supported operations at MOD establishments has been in operation.
9. The evidence produced on behalf of the Secretary of State will refer to and, where necessary, expand upon the background outline above as part of the framework within which, it will be submitted, the Baumber proposals should be assessed.

Application to the Appeal Proposals

10. RAF Waddington is the main operating base for the UK's Intelligence Surveillance Target Acquisition and Reconnaissance (ISTAR) capability. As such, it is home to 3 operational flying squadrons which operate the Sentry, Nimrod and Astor aircraft and an operational conversion unit which train new crews to operate the three aircraft types. The capability provided is central to the defence of UK and NATO airspace with elements currently deployed in support of Op HERRICK in Afghanistan. The training and delivery of the ISTAR capability is all conducted at RAF Waddington, and maintaining safe operations in the local airspace is crucial in meeting this requirement. RAF Waddington also provides ATC radar services to aircraft operating from RAF Scampton which is currently home to the RAF aerobatic team The Red Arrows; RAF Waddington is planned to be

the new home to the Red Arrows who are planned to relocate in 2011. ATC RAF Waddington also contribute to the national Lower Airspace Radar Service (LARS) network, by providing air traffic services to civil and military aircraft transiting through neighbouring airspace. This network enables controllers to provide the situational awareness necessary to operate aircraft as safely as possible in Class G (i.e. uncontrolled) airspace.

11. RAF Cranwell is home to Nos 1 and 3 Flying Training Schools and is regarded as the RAF's busiest flying training airfield. The aircraft types operated from this airbase include Tutor, Kingair and Dominie. The intensity of ATC operations is compounded by large numbers of aircraft movements, student crews, and the proximity of neighbouring airfields and traffic patterns. Flying training conducted from RAF Cranwell ranges from elementary flying training and multi-engine aircraft training to basic Weapon Systems Operator training. This wide variety of tasks means that large areas of local airspace need to be available in order for training objectives to be met efficiently. Furthermore, Air Traffic Control at RAF Cranwell also provides radar services to aircraft operating into and out of RAF Barkston Heath which is a satellite elementary flying training unit.
12. RAF Coningsby is the main operating base for Typhoon aircraft. This busy fast-jet airfield is home to 4 squadrons of Typhoons, including the Operational Conversion Unit which trains pilots new to the Typhoon. The Operational Evaluation Unit (a squadron of mixed type aircraft) is also based at RAF Coningsby, as is the Battle of Britain Memorial Flight. Not only is Coningsby the training base for all Typhoon crews, it is pivotal in delivering the UK's air defence capability. Provision of effective ATC services is essential in supporting military flying from this base. Coningsby also holds Southern Quick Reaction Alert (QRA) consisting of a number of armed aircraft held on short readiness states to react to air policing incidents. Furthermore, the station is responsible for the training and maintenance of crews, and aircraft, deployed to the Falkland Islands in support of the UK's Defence Policy. ATC RAF Coningsby also contribute to the national Lower Airspace Radar Service (LARS) network, by providing air traffic services to civil and military aircraft transiting through neighbouring airspace. This network enables controllers to provide the situational awareness necessary to operate aircraft as safely as possible in Class G (i.e. uncontrolled) airspace.
13. The Secretary of State will produce evidence to demonstrate the particular impacts of the appeal proposals on the Watchman Radars at RAF Waddington, Cranwell and Coningsby, and the implications of this for the ATC services provided by the RAF to all aircraft in this area.
14. This evidence will include and, where necessary, expand upon the following points:

- a. The eight 125m wind turbines proposed at Baumber are in line of sight of, and will be visible to, the Watchman Radars at RAF Waddington, Cranwell and Coningsby.
- b. It is accepted that wind turbines in line of sight of a radar will cause responses on the radar display and can mask the presence of genuine aircraft returns regardless of distance from the radar head. Military Air Traffic Service Regulations state that the provision of accurate traffic information to pilots is fundamental to an effective ATC service. They go on to state that ATC services are to be provided to the maximum extent practicable subject only to workload, communications, or equipment capability and applied in accordance with the status of the airspace within which the participating aircraft are flying.
- c. There are different levels of radar service provided by controllers when providing Air Traffic Services Outside Controlled Air Space ("ATSOCAS") and they are Traffic Service ("TS") and Deconfliction Service ("DS"). Effectively TS requires the controller to provide information on conflicting traffic and it is up to the pilot to decide what action he/she wishes to take which may include asking the controller for a vector away from the conflicting track. However, DS is a service provided to a pilot who is flying under Instrument Flying Rules ("IFR") and, as the title suggests, means that the pilot is flying with reference to instruments within the aircraft and is not looking outside. This may occur in, but is not limited to bad weather, since pilots may still operate in accordance with these criteria when training/practising for bad weather or heavy cockpit workload flight.
- d. During flights in IFR the pilot relies on the ATC controller providing the advice necessary to avoid conflicting tracks. JSP552 (the Manual for Military Air Traffic Regulations) states that when operating under DS " , the controller provides specific surveillance derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima against all observed aircraft in Class F/G airspace, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility". These radar services are also in accordance with Civil Aviation Publication 774.
- e. This therefore requires that a controller providing a DS to an aircraft would need to aim to avoid the radar returns presented by the turbines by 5nm as they would appear as moving solid returns with no height indication for the controller to assess. They would appear on the controllers display as intermittent (varying levels of intermittence depending on the turbines

rotation speed and aspect to the ATC radar) returns which would present themselves in a manner similar to a slow moving or manoeuvring aircraft. As this site is adjacent to a heavily utilised area of general aviation operations the controller would not be able to determine whether it is a turbine or a flying craft so, when providing a DS, would have no choice but to avoid the returns by 5mn.

- f. Aircrew may also elect to fly under Basic Service (BS) which is a non-radar ATS provided either separately or in conjunction with other services for the purpose of supplying information useful for safe and efficient conduct of flight. Under this service where a controller suspects that a flight is in dangerous proximity to another aircraft, a warning is to be issued to the pilot. Clearly, under all Services mentioned here, the controller is reliant on the accurate and clear presentation of data on the radar display.
15. The evidence produced on behalf of the Secretary of State will consider, as necessary, whether it would be possible to mitigate against these impacts.

**Dr J Yelland REBUTTAL OF DR CAND'S RESPONSE
DATED 05-02-2017**

Appendix 1

**ENERCON E101 SOUND POWER LEVEL OPERATIONAL MODE 1
DATA SHEET**

Attached sent by email 10-02-2017:

This data sheet is referred to as "appended" in a footnote 9:

¹ SIAS-04-SPL E101 OM I 3050 Kw Rev1_3-eng-eng.doc, revision 1.3 dated 04/2013.

In respect of Para's 45- 48 page 10 of Dr Yelland's rebuttal.

END

Sound Power Level of the ENERCON E-101 Operational Mode I (Data Sheet)

Imprint

Editor: ENERCON GmbH • Dreekamp 5 • 26605 Aurich • Germany

Telephone: 04941-927-0

Fax: 04941-927-109

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Revision

Revision: 1.3

Department: ENERCON GmbH / Site Assessment

Glossary

WEC means an ENERCON wind energy converter.

WECs means more than one ENERCON wind energy converter.

Document information:	© Copyright ENERCON GmbH. All rights reserved.		
Author/Revisor/ date:	Sr/ 04-2013	Documentname	SIAS-04-SPL E-101 OM I 3050 kW Rev1_3-eng-eng.doc
Approved / date:	RWo/ 04-2013	Revision /date:	1.3
Translation / date			

Sound Power Level for the E-101 with 3050 kW rated power

in relation to standardized wind speed v_s at 10 m height					
hub height v_s in 10 m height		99 m	135 m	149 m	
5 m/s		99,0 dB(A)	99,8 dB(A)	100,1 dB(A)	
6 m/s		102,9 dB(A)	103,8 dB(A)	104,0 dB(A)	
7 m/s		105,4 dB(A)	105,8 dB(A)	105,9 dB(A)	
8 m/s		106,0 dB(A)	106,0 dB(A)	106,0 dB(A)	
9 m/s		106,0 dB(A)	106,0 dB(A)	106,0 dB(A)	
10 m/s		106,0 dB(A)	106,0 dB(A)	106,0 dB(A)	
95% rated power		106,0 dB(A)	106,0 dB(A)	106,0 dB(A)	

in relation to wind speed at hub height									
wind speed at hub height [m/s]	7	8	9	10	11	12	13	14	15
Sound Power Level [dB(A)]	98.5	101.4	103.8	105.4	106.0	106.0	106.0	106.0	106.0

1. The relation between the sound power level and the standardized wind speed v_s in 10 m height as shown above is valid on the premise of a logarithmic wind profile with a roughness length of 0.05 m. The relation between the sound power level and the wind speed at hub height applies for all hub heights. During the sound measurements the wind speeds are derived from the power output and the power curve of the WEC.
2. A tonal audibility of $\Delta L_{a,k} < 2$ dB can be expected over the whole operational range (valid in the near vicinity of the turbine according to IEC 61 400 -11 ed. 2).
3. The sound power level values given in the table are valid for the **Operational Mode I**. The respective power curve is the calculated power curve E-101 dated October 2009 (Rev. 2.0).
4. Due to the typical measurement uncertainties, if the sound power level is measured according to one of the accepted methods the measured values can differ from the values shown in this document in the range of +/- 1 dB.

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Author/Revisor/ date:	Sr/ 04-2013	Documentname	SIAS-04-SPL E-101 OM I 3050 kW Rev1_3-eng-eng.doc
Approved / date:	RWo/ 04-2013	Revision /date:	1.3
Translation / date			

Accepted measurement methods are:

- a) IEC 61400-11 ed. 2 („Wind turbine generator systems – Part 11: Acoustic noise measurement techniques; Second edition, 2002-12“), and
- b) the FGW-Guidelines („Technische Richtlinie für Windenergieanlagen – Teil 1: Bestimmung der Schallemissionswerte“, published by the association “Fördergesellschaft für Windenergie e.V.“, 18th revision).

If the difference between total noise and background noise during a measurement is less than 6 dB a higher uncertainty must be considered.

5. For noise-sensitive sites it is possible to operate the E-101 with reduced rotational speed and reduced rated power during night time. The sound power levels resulting from such operational mode can be provided in a separate document upon request.
6. The sound power level of a wind turbine depends on several factors such as but not limited to regular maintenance and day-to-day operation in compliance with the manufacturer's operating instructions. Therefore, this data sheet can not, and is not intended to, constitute an express or implied warranty towards the customer that the E-101 WEC will meet the exact sound power level values as shown in this document at any project specific site.

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Author/Revisor/ date:	Sr/ 04-2013	Documentname	SIAS-04-SPL E-101 OM I 3050 kW Rev1_3-eng-eng.doc
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