

STATEMENT OF CASE

FOR

**ARGYLL AND BUTE COUNCIL
LOCAL REVIEW BODY**

14/0007/LRB

**REFUSAL OF PLANNING PERMISSION FOR THE
ERECTION OF SINGLE WIND TURBINE (34.2M TO
BLADE TIP), ACCESS TRACK AND INSTALLATION
OF ELECTRICAL CABINET RELATIVE TO
PLANNING APPLICATION REFERENCE 13/02205/PP**

**TAIGH MHOR, CREAGANTERVE, KILMARTIN,
LOCHGILPHEAD**

10/10/2014

STATEMENT OF CASE

The Planning Authority is Argyll and Bute Council (“the Council”). The appellant is Mr Paul Stamper (“the appellant”) who has employed an agent Mr Colin Innes of Shepherd and Wedderburn LLP to act upon his behalf (“the agent”).

Planning application 13/02205/PP, which proposed the erection of a single wind turbine (34.2m to blade tip) with associated electrical cabinet and formation of access track (“the appeal site”), was refused under delegated powers on the 27th June 2014.

The planning decision has been challenged and is subject of review by the Local Review Body.

DESCRIPTION OF SITE

The site is located to the east of the A816 north of Kilmartin west of Creaganterve Mhor and is within the Rural Opportunity Area development control zone as per the adopted Argyll and Bute Local Plan 2009. The site is not designated for landscape or archaeological purposes but is in an area significant for archaeological and historic interests. The site forms part of an agricultural holding and lies within a small scale valley with some limited tree planting in the immediate vicinity. The site is up a significant slope from the main road and there is no house or other development visually associated with the proposal.

SITE HISTORY

13/01059/SCREEN - Negative screening opinion issued 12/06/2013

STATUTORY BASIS ON WHICH THE APPEAL SHOULD BE DECIDED

Section 25 of the Town & Country Planning (Scotland) Act 1997 provides that where, in making any determination under the planning Acts, regard is to be had to the development plan and determination shall be made in accordance with the development plan unless material considerations indicate otherwise. This is the test for this planning application.

STATEMENT OF CASE

Argyll and Bute Council considers the determining issues in relation to the case are as follows:-

- Whether the material planning considerations asserted by the appellant are sufficient to outweigh the fact that the planning application is contrary to the current adopted Argyll and Bute Development Plan; or whether in fact the Argyll and Bute Development Plan remains the primary determining factor.

The Report of Handling (please refer to Appendix 1) sets out Planning and Regulatory Services assessment of the planning application in terms of policy within the current adopted Argyll and Bute Development Plan and all other material planning considerations.

REQUIREMENT FOR ADDITIONAL INFORMATION AND A HEARING

The proposal constitutes a Local Development in accordance with the Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, has no complex or challenging issues and has only been the subject of 2 objections, it is not considered that a Hearing is required.

COMMENT ON APPELLANTS' SUBMISSION

The appellants' statement can be summarised under three key issues:

- The landscape and visual impacts are exaggerated in the report of handling
- The cultural heritage reason for refusal is contrary to those comments received from WoSAS and Historic Scotland
- The proposal would provide local benefits.

Issue 1

The applicant initially provided minimal visual information that was not consistent with SNH's Guidelines for Landscape and Visual Impact Assessment (GLVIA3). All applications that submit such supporting LVIA information should be consistent with this document otherwise it can only be assumed that the submitted details are misleading. This is detailed in SNH's consultation responses dated 31st May and 11th November.

The applicant was asked to provide additional viewpoints, beyond those originally submitted, to SNH's standard however despite a number of viewpoints being agreed they were not submitted with little evidence as to why. SNH were not further consulted on these visuals as they still raised significant concerns and did not address the issues previously raised, therefore there was no requirement to consult for an amended consultation response.

The proposal is clearly inconsistent with the provisions of the LWECS as commented by SNH in their consultation responses therefore it is not clear why the applicant contests this as they provide little detail as to why they consider both the planning authority and SNH are wrong in their assessments. The Report of Handling provides a detailed assessment of the landscape and visual impacts. It should be noted that the LWECS considers that small scale turbines could relate to less complex hill slopes at the transition with adjacent landscape character types. It further acknowledges that distinctive hills and archaeological features and settlement would still be sensitive to this typology. The site is in a series of complex hills in a glen that is considered small scale and not an area of transition.

SNH and the planning authority both agree that the proposal is not consistent with the findings of the LWECS and the appellant has submitted little evidence as to the contrary.

It is accepted that the proposal is fairly well contained however this is an important transport route for those travelling between Oban and Lochgilphead. It is also an important gateway location for those entering Kilmartin Glen therefore despite the limited visibility it will form a significant feature highly visible to all users of the public road therefore the impact is greater than if the site were adjacent a more remote transport route and less well used.

Issue 2

SNH and the planning authority consider the historic nature of the environment to be an added level of sensitivity to the landscape and visual concerns coupled with the impact on the landscape character type, the visual impacts experienced by users of the area and the APQ designation detailed in the Report of Handling. It is worth noting that Historic Scotland acknowledges that there is an adverse impact on Carnasserie Castle whilst WoSAS agree with this conclusion. Therefore despite the appellants comments both consultees consider that there will be a degree of adverse impact. The planning authority is the determining authority and we have considered that the proposal will have a significant adverse impact on, not just Carnasserie Castle, but on the historic setting of the glen in particular the gateway approach from the north.

The proposal will likely be visible from the Kilmartin Conservation Area and potentially the walking route through the Kilmartin Glen. Therefore the council's objection on the basis of impact on the historic environment is more than just the impacts on Carnasserie Castle.

Issue 3

It is contended that the application will result in significant local benefits. However, such benefits have not formed part of the planning submission to date and are considered new information in light of this review. It is considered that given this information has not been before the planning authority before and that such intended benefits are not material planning considerations this issue should not form part of Members determination.

It is also worth noting that the mentioned 'purpose built drying shed' would require the benefit of separate planning permission. It should also be noted that the planning system cannot guarantee contract works will be awarded to local contractors and therefore the final sentence under bullet point three should not form part of Members consideration.

The planning authority must determine planning applications in line with the development plan and all other material considerations. Financial benefit is not a material consideration and it is disappointing that the appellants' statement repeats this suggestion several times.

CONCLUSION

Section 25 of the Town and Country Planning (Scotland) Act 1997 requires that all decisions be made in accordance with the development plan unless material considerations indicate otherwise.

The reasons for refusal of planning application 13/02205/PP:

"The proposed development, by virtue of its location, scale and design, will appear as a prominent and incongruous element which is out of scale with that of the small scale and complex characteristics of its immediate landscape setting when viewed from the A816. The proposed wind turbine also has potential to give rise to significant detriment to the setting of Carnasserie Castle given the unpredictability of

intervening tree covering and at time of the year there will be no screening whatsoever. Development which has an adverse impact upon a scheduled monument, or its setting, is considered to be contrary to the provisions of policies STRAT DC 9 and LP ENV 16 in the absence of any exceptional circumstances, or appropriate means of mitigating against such impact.

The applicants' submission fails to provide a LVIA that is consistent with Guidelines for Landscape and Visual Impact Assessment and Guidance. They have failed to provide photomontages consistent with this guidance which has made it difficult to fully assess the visual impact. The lack of viewpoint locations has also made this difficult. The applicant should consider further how the proposal will affect the key characteristics and qualities and experiences of the landscape. Based upon the limited information provided, it is considered that the proposal will significantly impinge on a key view within the Knapdale/Melfort APQ of the reveal/entrance to Kilmartin Glen when travelling south on the A816.

The Councils' LWECS considers that Small turbines <35m high could relate to less complex hill slopes at the transition with the 'Craggy Upland' (7) and the 'Rocky Mosaic' (20) character types to the east, although distinctive hills and adjacent archaeological features and settlement would still be sensitive to this typology. In this instance the turbine is at the larger end of the small typology and is proposed for the top of an outcrop in a series of low lying, rolling and complex hills and will be skylined from views from the public road. Viewed from the public highway, the landscape is enclosed and features appear as fairly small scale and complex and by introducing such a large turbine into this area the scale of the landscape is diminished thus diminishing the scale of the wider area. The applicants' submission is of particular poor quality with a lack of discussion over photomontage viewpoints and reference to the LWECS. The LWECS clearly advises avoiding the low lying complex hills that characterise this landscape and those opportunities may exist on the less complex hill slopes at the transition with the Craggy Upland and Rocky Mosaic character types. The applicant has chosen to ignore this element of the LWECS.

The site lies within the Knapdale/Melfort APQ and as such requires specific assessment against LP ENV 10. This part of the APQ is well contained with a small scale landscape which the road cuts through. There is a point of transition as your travel south which goes from well contained landscape with an intimate feel with a reveal to an open expanse of Kilmartin Glen. This wind turbine will have an unfortunate scaling effect diminishing the sense of intimate scale within this contained landscape and will impinge and detract upon the reveal of the wider, panoramic landscape setting. With this in mind the proposal is not consistent with the provisions of policies STRAT DC 8 and LP ENV 10 on that it has a significant adverse effect on the character of the APQ.

Having regard to the above, the proposal is therefore inconsistent with the provisions of the Scottish Planning Policy and Scottish Government's Specific Advice Sheet on Onshore Wind Farms; Policies STRAT SI 1: Sustainable Development; Policy STRAT DC 8: Landscape & Development Control; STRAT DC 9: Historic Environment and Development Control; Policy STRAT RE 1: Wind Farm/Wind Turbine Development of the 'Argyll & Bute Structure Plan' (approved 2002), to Policy

LP ENV 1: Development Impact on the General Environment; LP ENV 10: Development Impact on Areas of Panoramic Quality; LP ENV 16: Development Impact on Scheduled Ancient Monuments; LP ENV 17: Development Impact on Archaeology; LP ENV 19 Development Setting, Layout and Design (including Appendix A Sustainable Siting and Design Principles) and LP REN 1 Wind Farms and Wind Turbines; of the 'Argyll & Bute Local Plan' (2009); and the 'Argyll & Bute Landscape Wind Energy Capacity Study' (2012)."

The proposed wind turbine is contrary to the adopted development plan policies with regard to landscape and visual impacts. There are no material considerations identified of sufficient weight that justify the proposal as a departure from the provisions of the development plan.

It is respectfully requested that the review be dismissed and the refusal be upheld.

Appendix 1

Argyll and Bute Council Planning and Regulatory Services

Delegated or Committee Planning Application Report and Report of handling as required by Schedule 2 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008 relative to applications for Planning Permission or Planning Permission in Principle

Reference No: 13/02205/PP

Planning Hierarchy: Local Development

Applicant: Mr Paul Stamper

Proposal: Erection of a single 60 kW wind turbine (34.2 metres high to blade tip)

Site Address: Taigh Mhor, Creaganterve, Lochgilphead

DECISION ROUTE

(i) **Sect 43 (A) of the Town and Country Planning (Scotland) Act 1997 (as amended)**

(A) THE APPLICATION

(i) Development Requiring Express Planning Permission

- Erection of 1 x 34.2m (blade tip) wind turbine
- Installation of electrical cabinet
- Formation of access track

(ii) Other specified operations

- Laying of cabling
 - Connection to national electricity grid
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(B) RECOMMENDATION:

It is recommended that the application is refused for the reasons attached below.

(C) HISTORY:

13/01059/SCREEN - Negative screening opinion issued 12/06/2013

(D) CONSULTATIONS:

Area Roads Manager

Report dated 24/10/2013

The necessary visibility splays cannot be achieved but there are no objections subject to conditions to mitigate for this.

Scottish Natural Heritage

Email sent 31/05/2013, 11/11/2013

SNH note that they do not routinely offer comment on single wind turbines of less than 50m; however in this instance the sensitive nature of the area raises concerns about the landscape and visual impact of a development at this site which merit involvement.

Concern is raised that the submitted LVIA does not provide adequate information to provide a full assessment of the proposal. The LVIA is not in accordance with the Guidelines for LVIA by SNH.

Concerns are raised regarding the impact of the development on landscape and visual amenity; it is further commented that this area is a gateway to the important and highly sensitive archaeologically rich landscapes of Kilmartin. It is also the approach to the Knapdale National Scenic Area beyond to the south. The turbine is located in an elevated location approximately 135-140mAOD. Visualisations and ZTV indicate that it will intrude on the containing skyline and will impinge on key views.

Concern is also expressed that the proposal is contrary to the LWECS and its approval could set a precedent for wind energy development in other parts of the Upland Parallel Ridges landscape character area.

Public Protection Unit

Memo dated 04/12/2013

The noise levels at properties Tibertich, Carnasserie Mill and Taigh Mhor would be below 35db however noise levels at Creagantairbh Mhor will be some 39.1db. The applicant has provided details of a financial agreement to the occupiers of this property to compensate for this impact.

With this in mind there are no objections subject to conditions.

RSPB

Email dated 19/12/2013

There is no requirement for bird survey work and therefore no objection from RSPB.

WoSAS

Letter dated 13/11/2013

Impact on Carnasserie Castle would not be enough, in WoSASs' opinion to refuse the application in its own. Therefore there is no objection subject to a condition covering the submission, agreement and implementation of a WSI.

MoD

Letter dated 06/11/2013

No objection.

NATS

Email dated 24/10/2013

No objection.

Historic Scotland

Email dated 22/05/2014

There will be an adverse impact on the castle in Historic Scotland's opinion however this is not sufficient in itself to warrant an objection. The impact can be mitigated to some extent through painting the turbine a dark grey.

(E) PUBLICITY:

The proposal has been advertised in terms of regulation 20, closing date 08/11/2013.

(F) REPRESENTATIONS:

There have been two letters on objection submitted as detailed below:

Mr Andrew Vivers, Arniefoul, Glamis, Forfar, DD8 1UD (19/10/2013)

Mr Steve Gontarek, Carnasserie Cottage, Kilmartin (31/10/2013)

(i) Summary of issues raised

- The UK 'National Renewable Energy Action Plan' has been found by the United Nations Economic Commission Europe to violate the Aarhus Convention in the absence of public access to environmental information and public participation in the preparation and adoption of that strategy, and that therefore there should be a moratorium on the approval of wind farms nationally. He also comments adversely on the principle of wind farms, and contends that 'wind farm' is a misnomer and that 'wind factory' would be a more appropriate term for this type of development. He contends that wind turbines are harmful to both wildlife and to human health, that they are inefficient, subsidised and require expensive back-up when turbines are not productive. As far as public opinion is concerned the silent majority are silent because they do not understand the financial, health and environmental harm associated with wind power. He also considers that proliferation of turbines will be harmful to the Scottish tourism economy.

Comment: The implications of the UN Aarhus ruling are for consideration at government level rather than at the level of individual development proposals. No national moratorium has been put in place in response to that ruling and it remains incumbent on planning authorities to continue to determine applications placed before them. The comments expressed by the objector relate primarily to the merits of wind farm development in Scotland generally, rather than to the particular circumstances of the application at hand.

- Landscape and visual impacts are unacceptable

Comment: This is assessed in detail in section P below.

- Adverse impact on tourism in the area

Comment: There has is no firm established link between a drop in tourism income to an area and the erection of wind turbines.

(G) SUPPORTING INFORMATION

Has the application been the subject of:

- | | | |
|-------|---|-----|
| (i) | Environmental Statement: | No |
| (ii) | An appropriate assessment under the Conservation (Natural Habitats) Regulations 1994: | No |
| (iii) | A design or design/access statement: | No |
| (iv) | A report on the impact of the proposed development e.g. retail impact, transport impact, noise impact, flood risk, drainage impact etc: | Yes |

Landscape and Visual Impact Assessment (LVIA)
Noise Impact Report
Shadow Flicker Assessment

(H) PLANNING OBLIGATIONS

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| (i) | Is a Section 75 agreement required: | No |
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| (I) | Has a Direction been issued by Scottish Ministers in terms of Regulation 30, 31 or 32: | No |
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(J) Section 25 of the Act; Development Plan and any other material considerations over and above those listed above which have been taken into account in the assessment of the application

- (i) List of all Development Plan Policy considerations taken into account in assessment of the application.

Argyll and Bute Structure Plan 2002

STRAT SI 1 – Sustainable Development
STRAT DC 4 – Development in the Rural Opportunity Areas
STRAT DC 8 – Landscape and Development Control
STRAT DC 9 – Historic Environment and Development Control
STRAT RE 1 – Wind Farm/Wind Turbine Development

Argyll and Bute Local Plan 2009

LP ENV 1 – Impact on the General Environment
LP ENV 2 – Impact on Biodiversity
LP ENV 10 – Impact on Areas of Panoramic Quality (APQs)
LP ENV 16 – Development Impact on Scheduled Ancient Monuments
LP ENV 17 – Development Impact on Archaeology
LP ENV 19 – Development Setting, Layout and Design
LP TRAN 4 – New and Existing Public Roads and Private Access Regimes Plan
LP REN 1 – Wind Farms and Wind Turbines

(ii) List of all other material planning considerations taken into account in the assessment of the application, having due regard to Annex A of Circular 4/2009.

The Town & Country Planning Act (Scotland) 1997
The Planning etc. (Scotland) Act, 2006
SPP, Scottish Planning Policy, 2010
Emerging Argyll and Bute Local Development Plan, 2013
Argyll and Bute Landscape Wind Energy Capacity Study, 2012 (LWECS)
Scottish Government Advice Note on Onshore Wind Turbines 2012
Argyll and Bute proposed Local Development Plan (Feb 2013)
Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3) 2013

(K)	Is the proposal a Schedule 2 Development not requiring an Environmental Impact Assessment:	Yes
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Negative screening opinion issued 12/06/2013

(L)	Has the application been the subject of statutory pre-application consultation (PAC):	No
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(M)	Has a sustainability check list been submitted:	No
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(N)	Does the Council have an interest in the site:	No
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(O)	Requirement for a hearing:	No
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(P) Assessment and summary of determining issues and material considerations

The proposal involves the erection of a single 34.2m (tip height) wind turbine as part of a submission by Capture Energy. The proposed turbine is small/small-medium scale and the number of turbines is small compared with mainstream commercial schemes. The site is north of Kilmartin and is within the rural opportunity area development control zone as per the adopted Argyll and Bute Local Plan 2009. The site forms part of the Knapdale/Melfort APQ. The site is not designated for archaeological purposes but is in an area known to be rich in archaeological deposits.

The proposal is subject to STRAT DC 4 of the approved Structure Plan given it falls within the rural opportunity area development control zone. However, given the nature of the application the appropriate policy assessment is under STRAT RE 1 of the Structure Plan and LP REN 1 of the adopted Local Plan 2009 as the proposal is significantly far from the main farm and will export all of its electricity to the grid. The DC zone policies make an allowance for renewable energy development and therefore the relevant principle policy assessment is under LP REN 1 they must also be consistent with all other relevant development plan policies.

- Communities, settlements and their settings

The proposal is some distance to the north of Kilmartin and is generally screened from view by existing topography. However, the applicants' zone of theoretical visibility demonstrates that the turbine could be seen depending on the situation of existing vegetation. The retention of vegetation is not a reliable indicator to screen turbines given their susceptibility to storm damage and the length of time taken for new/replacement planting to mature sufficiently to provide any form of barrier. Viewpoints 3 and 4 of the applicants' submission demonstrates that the turbine could be visible from key points in Kilmartin including the car park adjacent the church which is an important stopping point for visitors – given this it is possible that the turbine will be visible from the church and cafe. The photomontages are generally of poor quality and the applicant is given to trying to obscure the turbine by selecting locations that hide the turbine behind trees rather than selecting genuine viewpoint locations. The applicant has been advised that photomontages should represent the worst case scenario. However, if the applicant had taken their photomontages from a slightly different location then the turbine might well have been more visible in their submission. Such an approach is not conducive to positive discussions.

All in all the impact on Kilmartin will generally be small but it is difficult to fully assess from the poor submission. On balance it is probably acceptable but this has not been demonstrated by the application.

- Areas and interests of nature conservation significant including local biodiversity, ecology and the water environment.

There are no concerns over the impact on local biodiversity. Both SNH and RSPB have not raised concerns regarding this element of the proposal.

- Landscape and townscape character, scenic quality and visual and general amenity.

Landscape and visual impacts are two of the primary determining factors in this case – specifically the scale and siting of the proposed turbine is considered to be contrary to the recommendations of the LWECS and will result in an adverse impact upon landscape quality/visual amenity. The site lies within the Knapdale/Melfort Area of Panoramic Quality. This is assessed in further detail below. However, it should be noted that assessing the exact impact is difficult given that the applicant has not prepared the photomontages in line with the guidelines prepared by SNH. This is reflected in SNH's consultation comments.

- Core paths, rights of way, or other important access routes.

The proposal will not infringe on any existing rights of way or pathways. The council's Area Roads Engineer has conceded that the necessary visibility splays will not be required but does not object given the temporary nature of the construction period and subject to conditions requiring access improvements and the submission of a traffic management plan prior to the commencement of works.

- Sites of historic or archaeological interest and their setting.

The proposal has the potential to significantly impact on the views out from Carnasserie Castle. The applicants' submission details the visual impact of the turbine on the castle specifically via the most recent submission photomontage dated November 2013 which is taken from the information boards at the castle. This shows the hub being visible and should a couple of well placed trees be removed during the lifespan of the turbine then this would be significantly exacerbated. Furthermore viewport 1 of the original submission shows a well placed tree obscuring the turbine. The wireframe is a more accurate visualisation of the turbine in this instance. This demonstrates a poorly placed wind turbine in relation to the views from the top of the castle. Historic Scotland has commented that the impact is not so bad as to merit an objection but acknowledge the adverse impact. This can be mitigated to some extent through painting the turbine a dark grey.

WoSAS has not raised any objection to this element of the application advising that, in their opinion, the extent of the effect of the turbine upon the setting of castle is unlikely to be of sufficient magnitude to warrant a recommendation of refusal on archaeological grounds alone; it is however noted that the turbine will have a limited adverse setting impact which the Council may wish to take into account when considering the application as a whole, particularly in association with other policies relating to landscape and environmental considerations. WoSAS also note that, should planning permission be granted then development should be the subject of an archaeological watching brief.

Given the above the proposal is not considered consistent with this part of the policy nor with policies STRAT DC 9 and LP ENV 16 which presume against development which would have an adverse impact upon a scheduled monument or its setting unless there are exceptional circumstances..

- Telecommunications, transmitting and receiving systems.

There have been no concerns over this element of the proposal from consultees.

- Important tourist facilities, attractions or routes.

The proposal is located along the A816 which is an important tourist route for those travelling between Lochgilphead and Oban. The location is the northern gateway to Kilmartin Glen and an appreciation should be had to how this may impact on tourism and the impression gained by this development of the wider area. The turbine may also be visible, at distance, from within Kilmartin Conservation Area which is a focal point for tourist activity lying in the centre of one of the most important concentrations of Neolithic and Bronze Age remains in Scotland, many of which are also scheduled sites within the wider locality.

The impacts on Carnasserie Castle have already been assessed above and those impacts on the wider landscape are assessed below.

- Stability of peat deposits.

The proposal will not significantly impact on soils given the small area of ground disturbance for this single turbine.

Considering the above and the further assessment below, the proposal is not consistent with Policies STRAT RE 1 and LP REN1.

In light of the council's Wind Energy Capacity Study (LWECS) the site lies within the 'Upland Parallel Ridges' landscape character type (10). At 34.2m to tip, the wind turbine proposed is at the upper end of the 'small scale' typology just short of the 'small-medium scale' in terms of the study typologies. This landscape comprises a distinctive series of linear ridges aligned in parallel with the south-west/north-east grain of the coast. Craggy-topped hills and ridges have a rugged character accentuated by the mosaic of heather, grass and scrub across rocky hill slopes. The importance of this character type in forming the setting to the highly sensitive archaeologically rich landscapes within Moine Mhor and the glens of Kilmartin and Kilmichael, its context in relation to the wider seascape around Loch Craignish and the backdrop and setting it provides to the small scale 'Rocky Mosaic' (20) landscape around Loch Awe, increases sensitivity with a *High* sensitivity concluded in the assessment of the large typology. Sensitivity would be *High-medium* for the medium typology.

The LWECS considers that Small turbines <35m high could relate to less complex hill slopes at the transition with the 'Craggy Upland' (7) and the 'Rocky Mosaic' (20) character types to the east, although distinctive hills and adjacent archaeological features and settlement would still be sensitive to this typology.

In this instance the turbine is at the larger end of the small typology and is proposed for the top of a hill in a series of low lying, rolling and complex hills and will be skylined from views from the public road. The landscape is fairly small scale and complex and by introducing such a tall turbine into this area the scale of the landscape is diminished which has an adverse effect on the wider landform. The applicants' submission is of particular poor quality with a lack of discussion over photomontage viewpoints and reference to the LWECS. The LWECS clearly advises avoiding the low lying complex hills that characterise this landscape and those opportunities may exist on the less complex hill slopes at the transition with the Craggy Upland and Rocky Mosaic character types to the east. The applicant has chosen to ignore this element of the LWECS.

The site lies within the Knapdale/Melfort APQ and as such requires specific assessment against LP ENV 10. This part of the APQ is well contained with a small scale landscape which the road cuts through. There is a point of transition as you travel south which goes from well contained landscape with an intimate feel to an open expanse of Kilmartin Glen. This wind turbine will have an unfortunate scaling effect diminishing the sense of intimate scale within the landscape. With this in mind the proposal is not consistent with the provisions of policy LP ENV 10 on that it has an adverse effect on the character of the APQ.

SNH has provided comment advising that the submission is fundamentally flawed and not carried out in accordance with the Guidelines for Landscape and Visual Impact Assessment and Guidance. For example not only are the visualisations not completed to standard the landscape character assessment does not consider how the proposal will affect the key characteristics and qualities and experiences of the landscape. The proposal will potential impinges on the highly sensitive NSA in terms of setting and the Kilmartin area. The applicant has not assessed the impact on the NSA.

The planning authority has invited further discussion with regards to potential alternative sites and smaller wind turbines. However, the applicant has not shown an interest in pursuing alternatives. Furthermore the planning authority has given the applicant the opportunity to submit further photomontages to assist with the

determination process but despite agreeing viewpoints chose not to pursue them but submit alternatives.

The application is recommended for refusal given concerns over adverse impact on the setting of the wider Kilmartin area, Carnasserie Castle, which is a designated scheduled ancient monument, and a significant lack of information to allow for a more informed decision making process. The principle of such a tall turbine on this site is not consistent with the provisions set out with in the LWECS.

(Q) Is the proposal consistent with the Development Plan: No

(R) Reasons why planning permission or a Planning Permission in Principle should be refused

The proposed development, by virtue of its location, scale and design, will appear as a prominent and incongruous element which is out of scale with that of the small scale and complex characteristics of its immediate landscape setting when viewed from the A816. The proposed wind turbine also has potential to give rise to significant detriment to the setting of Carnasserie Castle given the unpredictability of intervening tree covering and at time of the year there will be no screening whatsoever. Development which has an adverse impact upon a scheduled monument, or its setting, is considered to be contrary to the provisions of policies STRAT DC 9 and LP ENV 16 in the absence of any exceptional circumstances, or appropriate means of mitigating against such impact.

The applicants' submission fails to provide a LVIA that is consistent with Guidelines for Landscape and Visual Impact Assessment and Guidance. They have failed to provide photomontages consistent with this guidance which has made it difficult to fully assess the visual impact. The lack of viewpoint locations has also made this difficult. The applicant should consider further how the proposal will affect the key characteristics and qualities and experiences of the landscape. Based upon the limited information provided, it is considered that the proposal will significantly impinge on a key view within the Knapdale/Melfort APQ of the reveal/entrance to Kilmartin Glen when travelling south on the A816.

The Councils' LWECS considers that Small turbines <35m high could relate to less complex hill slopes at the transition with the 'Craggy Upland' (7) and the 'Rocky Mosaic' (20) character types to the east, although distinctive hills and adjacent archaeological features and settlement would still be sensitive to this typology. In this instance the turbine is at the larger end of the small typology and is proposed for the top of an outcrop in a series of low lying, rolling and complex hills and will be skylined from views from the public road. Viewed from the public highway, the landscape is enclosed and features appear as fairly small scale and complex and by introducing such a large turbine into this area the scale of the landscape is diminished thus diminishing the scale of the wider area. The applicants' submission is of particular poor quality with a lack of discussion over photomontage viewpoints and reference to the LWECS. The LWECS clearly advises avoiding the low living complex hills that characterise this landscape and those opportunities may exist on the less complex hill slopes at the transition with the Craggy Upland and Rocky Mosaic character types. The applicant has chosen to ignore this element of the LWECS.

The site lies within the Knapdale/Melfort APQ and as such requires specific assessment against LP ENV 10. This part of the APQ is well contained with a small

scale landscape which the road cuts through. There is a point of transition as your travel south which goes from well contained landscape with an intimate feel with a reveal to an open expanse of Kilmartin Glen. This wind turbine will have an unfortunate scaling effect diminishing the sense of intimate scale within this contained landscape and will impinge and detract upon the reveal of the wider, panoramic landscape setting. With this in mind the proposal is not consistent with the provisions of policies STRAT DC 8 and LP ENV 10 on that it has a significant adverse effect on the character of the APQ.

Having regard to the above, the proposal is therefore inconsistent with the provisions of the Scottish Planning Policy and Scottish Government's Specific Advice Sheet on Onshore Wind Farms; Policies STRAT SI 1: Sustainable Development; Policy STRAT DC 8: Landscape & Development Control; STRAT DC 9: Historic Environment and Development Control; Policy STRAT RE 1: Wind Farm/Wind Turbine Development of the 'Argyll & Bute Structure Plan' (approved 2002), to Policy LP ENV 1: Development Impact on the General Environment; LP ENV 10: Development Impact on Areas of Panoramic Quality; LP ENV 16: Development Impact on Scheduled Ancient Monuments; LP ENV 17: Development Impact on Archaeology; LP ENV 19 Development Setting, Layout and Design (including Appendix A Sustainable Siting and Design Principles) and LP REN 1 Wind Farms and Wind Turbines; of the 'Argyll & Bute Local Plan' (2009); and the 'Argyll & Bute Landscape Wind Energy Capacity Study' (2012).

(S) Reasoned justification for a departure to the provisions of the Development Plan

N/A

(T) Need for notification to Scottish Ministers or Historic Scotland: No

Author of Report: David Love

Date: 24th June 2014

Reviewing Officer:

Date: 24th June 2014

**Angus Gilmour
Head of Planning and Regulatory Services**

GROUNDINGS OF REFUSAL RELATIVE TO APPLICATION REFERENCE 13/02205/PP

- a. The applicants' submission does not provide adequate information to allow a full appraisal of the potential effects of the proposal. The LVIA is not fully in accordance with the Guidelines for Landscape and Visual Impact Assessment (GLVIA3). The submission does not adequately consider how the proposal will affect the key characteristics, qualities and experience of the landscape and does not include a sufficient selection of viewpoints to provide a fully representative indication of the "worst case scenario" which might arise from the proposed development.
- b. The proposal is to site a 34.2 metre high wind turbine within a relatively complex and intimate landscape type which the 'Argyll & Bute Landscape Wind Energy Capacity Study' considers to have only limited scope to accommodate smaller turbine development where this can relate to less complex hill slopes, noting however that distinctive hills, archaeological features and settlement would be particularly sensitive to this type of development. In this instance the turbine is at the larger end of the small typology and is proposed for the top of an outcrop in a series of low lying, rolling and complex hills and will be skylined from views from the public road. Viewed from the public highway, the landscape is enclosed and features appear as fairly small scale and complex and by introducing such a large turbine into this area the scale of the landscape is diminished thus diminishing the scale of the wider area. The scale of the turbine proposed is at the upper end of this typology and would produce a focal point disproportionate to the scale of the landscape by virtue of its height, its rotor diameter and the motion of the blades, furthermore, the proposed development will be visible against the skyline from key viewpoints and has potential to directly impact upon the visual amenity and settings of the settlement of Kilmartin and Carnassarie Castle, in addition to other sites of archaeological importance in the locality. Development on this scale would detract from the landscape character of its immediate surroundings and its presence would impact adversely on the scenic qualities of the wider landscape designated as 'Area of Panoramic Quality' and include the setting of archaeological sites as key features in the landscape. The foregoing environmental considerations are of such magnitude that they cannot be reasonably offset by the projected direct or indirect benefits which a development of this scale would make to the achievement of climate change related commitments. Having due regard to the above, it is considered that this proposal would have a significant adverse impact on landscape character, and would exert an unwelcome and inappropriate visual presence in the landscape as experienced by users of the A816, and would degrade designated scenic assets within the wider 'Area of Panoramic Quality'. It is therefore inconsistent with the provisions of the Scottish Planning Policy and Scottish Government's Specific Advice Sheet on Onshore Wind Farms; Policies STRAT SI 1: Sustainable Development; Policy STRAT DC 8: Landscape & Development Control; STRAT DC 9: Historic Environment and Development Control; Policy STRAT RE 1: Wind Farm/Wind Turbine Development of the 'Argyll & Bute Structure Plan' (approved 2002), to Policy LP ENV 1: Development Impact on the General Environment; LP ENV 10: Development Impact on Areas of Panoramic Quality; LP ENV 16: Development Impact on Scheduled Ancient Monuments; LP ENV 17: Development Impact on Archaeology; LP ENV 19 Development Setting, Layout and Design (including Appendix A Sustainable Siting and Design Principles) and LP REN 1 Wind Farms and Wind Turbines; of the 'Argyll & Bute Local Plan' (2009); and the 'Argyll & Bute Landscape Wind Energy Capacity Study' (2012).

APPENDIX TO DECISION REFUSAL NOTICE

Appendix relative to application **13/02205/PP**

- (A) Has the application been the subject of any “non-material” amendment in terms of Section 32A of the Town and Country Planning (Scotland) Act 1997 (as amended) to the initial submitted plans during its processing

No

- (B) The reason why planning permission has been refused.

1. The applicants' submission does not provide adequate information to allow a full appraisal of the potential effects of the proposal. The LVIA is not fully in accordance with the Guidelines for Landscape and Visual Impact Assessment (GLVIA3). The submission does not adequately consider how the proposal will affect the key characteristics, qualities and experience of the landscape and does not include a sufficient selection of viewpoints to provide a fully representative indication of the “worst case scenario” which might arise from the proposed development.
2. The proposal is to site a 34.2 metre high wind turbine within a relatively complex and intimate landscape type which the 'Argyll & Bute Landscape Wind Energy Capacity Study' considers to have only limited scope to accommodate smaller turbine development where this can relate to less complex hill slopes, noting however that distinctive hills, archaeological features and settlement would be particularly sensitive to this type of development. In this instance the turbine is at the larger end of the small typology and is proposed for the top of an outcrop in a series of low lying, rolling and complex hills and will be skylined from views from the public road. Viewed from the public highway, the landscape is enclosed and features appear as fairly small scale and complex and by introducing such a large turbine into this area the scale of the landscape is diminished thus diminishing the scale of the wider area. The scale of the turbine proposed is at the upper end of this typology and would produce a focal point disproportionate to the scale of the landscape by virtue of its height, its rotor diameter and the motion of the blades, furthermore, the proposed development will be visible against the skyline from key viewpoints and has potential to directly impact upon the visual amenity and settings of the settlement of Kilmartin and Carnassarie Castle, in addition to other sites of archaeological importance in the locality. Development on this scale would detract from the landscape character of its immediate surroundings and its presence would impact adversely on the scenic qualities of the wider landscape designated as 'Area of Panoramic Quality' and include the setting of archaeological sites as key features in the landscape. The foregoing environmental considerations are of such magnitude that they cannot be reasonably offset by the projected direct or indirect benefits which a development of this scale would make to the achievement of climate change related commitments. Having due regard to the above, it is considered that this proposal would have a significant adverse impact on landscape character, and would exert an unwelcome and inappropriate visual presence in the landscape as experienced by users of the A816, and would degrade designated scenic assets within the wider 'Area of Panoramic Quality'. It is therefore inconsistent

with the provisions of the Scottish Planning Policy and Scottish Government's Specific Advice Sheet on Onshore Wind Farms; Policies STRAT SI 1: Sustainable Development; Policy STRAT DC 8: Landscape & Development Control; STRAT DC 9: Historic Environment and Development Control; Policy STRAT RE 1: Wind Farm/Wind Turbine Development of the 'Argyll & Bute Structure Plan' (approved 2002), to Policy LP ENV 1: Development Impact on the General Environment; LP ENV 10: Development Impact on Areas of Panoramic Quality; LP ENV 16: Development Impact on Scheduled Ancient Monuments; LP ENV 17: Development Impact on Archaeology; LP ENV 19 Development Setting, Layout and Design (including Appendix A Sustainable Siting and Design Principles) and LP REN 1 Wind Farms and Wind Turbines; of the 'Argyll & Bute Local Plan' (2009); and the 'Argyll & Bute Landscape Wind Energy Capacity Study' (2012).

Note to the Applicant:

For the avoidance of doubt, this decision relates to the stamped refused plans numbered 1/3 – 3/3.



HISTORIC SCOTLAND
ALBA AOSMHOR

By Email localreviewprocess@argyll-bute.gov.uk

Ms Rebecca Hepburn
Governance and Law
Argyll & Bute Council
Kilmory
LOCHGILPHEAD
PA31 8RT

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131 668 8716
HS.Appeals@scotland.gsi.gov.uk

Our ref: AMH/90061/10
Our Case ID: 201404220
Your ref: 14/0007/LRB

08 October 2014

Dear Ms Hepburn

**Notification of Local Review Body Hearing on Wednesday 15 October.
Taigh Mhor Creaganterve, Kilmartin, Lochgilphead: Erection of a single 60kW
wind turbine (34.2 metres high to blade tip).**

We have been notified of the above review of the decision to refuse planning permission.

We have made previous comments in relation to this proposal and have nothing further to add. I attach a copy of our previous correspondence for ease of reference.

If the Review Body has specific questions where our expertise would be useful we will be happy to provide further submissions in response to these.

Yours faithfully

William Kidd
Heritage Management Business Support Officer



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Direct Fax: 0131 668 8722
Switchboard: 0131 668 8600
Martin.Brann@scotland.gsi.gov.uk

Our ref: AMH/90061/10
Our Case ID: 201400332
Your ref: 13/02205/PP

22 April 2014

Dear Sirs

Town And Country Planning (Development Management Procedure) (Scotland) Regulations 2013
Erection of a single 60kW wind turbine (34.2 metres high to blade tip), Taigh Mhor, Creaganterve, Kilmartin, Lochgilphead

Thank you for your consultation dated 14 April regarding the above proposed development.

The wind turbine is located approximately 1.2km north-east of **Carnasserrie Castle** which is a scheduled monument in state care. We are concerned that in this location and at the height proposed the turbine could make a significant impact on views from the castle along the valley and the flanking hillsides, which form an important element in the setting of the scheduled monument.

One of the reasons why *Carnasserrie Castle* was placed where it is, was to dominate the routeway followed by the A816 today. The castle was located in an elevated position where it would both be highly visible within the surrounding landscape and command views along the valley and out to the hills beyond.

The visualisation supporting the application appears to be from a viewpoint on or near the site of the earlier castle at Carnasserrie, which occupied a rocky knoll close to the later tower house built by Bishop Carswell in the 16th century. In order to properly assess the impact of the turbine on the setting of the castle, we request that the planning authority obtains a wireframe or photomontage view towards the turbines taken from the public viewing platform at the level of the parapets of the tower house. Please re-consult us on receipt of this further information.

If you have any queries regarding the above, please do not hesitate to contact me.

Yours faithfully

MARTIN BRANN
Senior Heritage Management Officer (Ancient Monuments)

Created by N330003 on 22/05/2014 18:44:50

Title : email correspondence of 12 and 22 May

Type : File Note

Activity Date : 22/05/2014

Dear David

Thank you for forwarding the additional photomontage showing the proposed wind turbine in views from the parapets of Carnasserie Castle.

The visualisation appears to show that the turbine will not break the skyline and would be seen against a backdrop of the trees and other vegetation on the hillside behind. Whilst there will still be an impact on the setting of the castle, we do not consider that the impact will be sufficiently adverse to warrant an objection from Historic Scotland. However, given the backdrop and in order to minimise the visibility of the turbine and the impact on the setting of the scheduled castle, we recommend that the turbine is provided with a recessive dark grey finish.

Yours sincerely

Martin Brann

Martin Brann | Senior Heritage Management Officer (Ancient Monuments)

Historic Scotland | Alba Aosmhor

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From: Love, David [<mailto:david.love@argyll-bute.gsx.gov.uk>]

Sent: 12 May 2014 12:20

To: Brann M (Martin)

Cc: 'simon.stronach@cgms.co.uk'; 'Stamper, Paul (UK) (paul.stamper@mbda-systems.com)'; 'Nicola Davies'

Subject: RE: Erection of a single 60kW wind turbine at Taigh Mhor

Martin,

Thanks for your initial response. Do you have anything further to add to your original comments?

Kind Regards,

David

From: Nicola Davies [mailto:Nicola@capture-energy.co.uk]
Sent: 07 May 2014 09:21
To: martin.brann@scotland.gsi.gov.uk
Cc: simon.stronach@cgms.co.uk; Love, David; Stamper, Paul (UK) (paul.stamper@mbda-systems.com)
Subject: Erection of a single 60kW wind turbine at Taigh Mhor

Dear Martin Brann

Further to your letter of 22 April 2014 regarding the erection of a single 60kW wind turbine at Taigh Mhor, your ref: AMH/90061/10.

As you requested a photomontage has been produced from the viewing platform at Carnassarie Castle (attached). As can be seen, the turbine is well below the skyline and partially obscured by the height of the land and vegetation. Our heritage assessment also looks at the potential impact of the turbine on the Castle and its setting, I trust you have received a copy of this? If not I can send one on to you.

If you require anything further please do not hesitate to contact me.

Kind regards

Nicola

Nicola Davies
Planning Project Manager
Capture Energy Ltd

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Winner of Best Medium Scale Renewable Energy Award 2012

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Defence Infrastructure Organisation

Your Ref. 14/0007/LRB
DIO Ref. DE/C/SUT/43/10/1/19267

Ministry of Defence
Safeguarding
Kingston Road
Sutton Coldfield
West Midlands B75 7RL
United Kingdom

Telephone [MOD]: +44 (0)121 311 2443
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E-mail: DIOODC-IPSSG2@mod.uk

Via Email

Head of Governance and LAw
Argyll and Bute Council
Kilmory
Lochgilphead
Argyll
PA31 8RT

15 October 2014

Dear Sirs,

Local Review Body – 14/0007/LRB
Planning Application reference – 13/02205/PP
Taigh Mhor, Creagantervemhor, Kilmartin, PA31 8RQ

The Ministry of Defence (MOD) has received notification from Argyll and Bute Council that the above planning application will be reviewed by the Council's Local Review Body.

The MOD submitted a response dated 6th November 2013 to Argyll and Bute Council raising no objection to the proposal. The MOD has reviewed this response in light of the Review and I can confirm that the MOD raises no objection to the proposal.

If planning permission is granted, the MOD would like to be advised of the following information;

- The date construction starts and ends;
- The maximum height of construction equipment;
- The latitude and longitude of the turbine erected

I trust that the above will be taken into account during the Review consideration. Should you require any additional information, please do not hesitate to contact me.

Yours faithfully

Lucy Hodgetts
BSc (Hons) MA MRTPI
Senior Safeguarding Officer

From: Steve Gontarek <sjg@carnasserie.fsnet.co.uk>
Sent: 02 October 2014 18:26
To: localreviewprocess
Subject: Review 14/0007/LRB

Thank you for your letter ref 14/0007/LRB with respect to the Local Review request of Planning application 13/02205/PP for a wind turbine at Taigh Mhor, Creaganterve Mhor.

Our concern remains that this will have a high visual impact on this end of Kilmartin Glen and directly visible from our main windows facing North. I am surprised that this is even considered, given that Kilmartin Glen is not only a recognised scenic area, but also important historically and thus an important tourist destination: this turbine will also be seen clearly from Carnasserie Castle which is a very popular site. I would also be concerned about the impact on local birdlife: this glen has a variety of such, including raptors (we have seen Golden Eagles, Kestrels, Hen harriers, Sparrowhawks in the area, for example).

In our opinion this is an unnecessary development and purely for commercial\personal gain with no apparent benefit for the community or landscape. We have tolerated the mobile mast that is visible from our house, but only as a necessary evil as it provides important mobile coverage for this part of the glen, but adding yet another obviously visible structure, just for somebody else's personal gain, such as this 34m high turbine, will just totally detract from the area, particularly, as I am sure there are plenty of other areas where such a turbine would have a lesser visual impact.

If the review was to be successful for the applicant, we would ask to be notified and to understand what options are open to us to prevent this structure being placed.

One thing I am not clear about on the website: although the RSPB and Historic Scotland are listed under comments – I am not clear whether they have actually submitted input – can you clarify please.

Many Thanks

Steve & Joan Gontarek

Carnasserie Cottage, Kilmartin
Argyll, PA31 8RQ, Scotland

I write to object based on the detrimental health effects this application will probably have on its turbine neighbours, based on my own experiences and the 5 reasons listed below.

The effects of Infrasound and Low Frequency Noise (ILFN) are cumulative, and individuals are affected by ILFN in different timescales, but the bottom line is that if you have a life threatening ailment, or are susceptible to one, and live near a wind turbine, then your chances of recovery are greatly diminished.

Should this application be allowed, in the interests of public health, please ensure that ILFN monitoring before and after turbine erection is a required condition.

1. THE LINK BETWEEN VIBRO ACOUSTIC DISEASE (VAD) AND WIND FARM SYNDROME (WTS)

The peak frequencies emitted by wind turbines are below 5 Hz.

VAD is an acknowledged medical disease caused primarily by the frequencies of Infrasound (0 - 20Hz) and Low Frequency Noise (20 - 500Hz).

These frequencies are commonly grouped together as ILFN (0 - 500Hz). [1]

Respiratory pathology induced by ILFN is not a novel subject given that in the 1960's, within the context of U.S. and U.S.S.R. Space Programs, its existence was being reported. [2]

Central nervous system disorders in workers exposed to ILFN were first observed 25 years ago among aircraft technicians. Concurrently, respiratory pathology was identified in these workers, and later reproduced in ILFN-exposed animal models. [3]

In 1987, the first autopsy of a deceased VAD patient was performed. The extent of ILFN induced damage was overwhelming, and the information obtained is, guiding many of the associated and ongoing research projects. [4]

In both human and animal models, ILFN exposure causes thickening of cardiovascular structures.

Pericardial thickening with no inflammatory process, and in the absence of diastolic dysfunction, is the hallmark of VAD.

Depressions, increased irritability and aggressiveness, a tendency for isolation, and decreased cognitive skills are all part of the clinical picture of VAD.

In VAD, the end-product of collagen and elastin growth is reinforcement of structural integrity. This is seen in blood vessels, cardiac structures, trachea, lung, and kidney of both VAD patients and ILFN-exposed animals. This means that blood vessels can become thicker, thus impeding the normal blood flow. Within the cardiac structures, the parietal pericardium and the mitral and aortic valves also become thickened

When echocardiography, brain MRI or histological studies are performed, structural changes can be identified, all consistently show significant changes in VAD patients and ILFN-exposed animals.

Wind Turbines are known to emit a broad spectrum of ILFN frequencies, with peak frequencies at below 5Hz.

In Portugal ILFN has been extensively researched, and occupational VAD symptoms have been grouped according to length of exposure during work hours.

Those living and working near wind turbines are obviously exposed to Infrasound 24/7. Exposure at night can often result in considerably sleep deprivation.

The detrimental health effects of sleep deprivation are well recognised medically.

The Hayes Mackenzie 2006 report which is often quoted by Government and Council officials gives a time to symptom chart for VAD. [5] The chart is shown below, and is based on occupational exposure to noise (ILFN).

VAD symptoms

Stage 1 (Mild) 1-4 yrs: Slight mood swings; Indigestion; Heart burn; Mouth/throat infections; Bronchitis.

Stage 2 (Moderate) 4-10 yrs: Chest pain; Definite mood swings; Back pain; Fatigue; Fungal, viral & parasitic infections; Inflammation of stomach lining; Pain and blood in urine; Conjunctivitis; Allergies.

Stage 3 Severe (10 + yrs): Psychiatric disturbances; Haemorrhages of nasal, digestive & conjunctive mucosa; Varicose veins & haemorrhoids (piles); Duodenal ulcers; spastic colitis; Decrease in visual acuity; Headaches; Severe joint pain; Intense muscular pain; Neurological disturbances.

Among the most serious consequences of untreated VAD are rage-reactions, epilepsy, and suicide.

As a rough calculation, without considering sleep deprivation, the time of symptom appearance for ILFN induced WTS should be the VAD time, reduced by a factor of around 4.2 (turbine neighbours who live and work near turbines, 24hrs x 7days x 48working weeks = 8064 hrs exposure per yr, assuming 4 weeks holiday away from turbines; occupational exposure, 8hrs x 5days x 48weeks = 1920 hrs exposure per yr. 8064 divided by 1920 = 4.2).

Thus a 4yr VAD symptom exposure would manifest in 1yr for a WTS exposure, and a 10 year VAD symptom in 2.5yrs for WTS, which indeed appears to be the case.

ILFN induced WTS

Less than 1 yr: Headaches; Dizziness; Sleep deprivation; Haemorrhoids; Umbilical hernia; High blood pressure; Fatigue; Tinnitus; Vertigo; Poor concentration & memory; Slight mood swings.

1-4 yrs: Nausea/“seasickness”; Panic attacks; Annoyance, anger & aggression; Increased agitation of those with Autistic Spectrum Disorder and ADD/ADHD; Increased blood sugar levels.

4-10 yrs: Thickening of pericardium and blood vessel walls plus other soft tissue damage.

Many other chronic health problems are thought to be created or accelerated, probably by infra-sound-induced increased levels of cortisol (which lowers our immune system).

On 5 Sept 2014, the Waubra Foundation wrote to NSW Planning Assessment Commission regarding the Gullen Range Wind Development [6]. This letter contains much important information regarding ILFN.

The facts are clear:

1. Wind turbines emit ILFN, and can do so even when the blades are not turning.
2. ILFN is harmful to humans and other life forms, and can kill.
3. In the interests of Public Health, the Scottish Government and local Councils should immediately impose a condition on turbine applications that ILFN is measured before and after turbine erection.
4. ILFN monitoring should be a mandatory tool that is used to assess any reported health effects from turbines.

References

1. <http://www.ncbi.nlm.nih.gov/pubmed/17014895>
2. <http://www.ncbi.nlm.nih.gov/pubmed/17315094>

3. <http://www.ncbi.nlm.nih.gov/pubmed/16969569>
4. <http://www.ncbi.nlm.nih.gov/pubmed/15273020>
5. <http://www.hayesmckenzie.co.uk/downloads/LF%20and%20Infrasound%20Noise%20Immission%20from%20Wind%20Farms%20and%20the%20Potential%20for%20Vibro%20Acoustic%20Disease%20-%20Malcolm%20D%20Hayes.pdf>
6. http://waubrafoundation.org.au/wp-content/uploads/2014/09/GRWF_WF_Submission_to_PAC_Final_Sept_2014.pdf

2. INFRASOUND BULLET POINTS

1. **People with a blocked or anatomically small helicotrema (a narrow pathway in the cochlea of the ear) have an increased sensitivity to Infrasound and Low Frequency Noise (ILFN), as are those who are susceptible to car/sea/motion sickness.**
2. **The main resonant frequencies of a person's internal organs are below 5 Hz. The peak frequencies emitted by turbines are below 5 Hz. Earth's resonance frequency is 7.83 hertz.**
3. **Some people are sensitive to ILFN out to 30km from a turbine(s).**
4. **ILFN frequencies between 3 and 12 Hz cause Rapid Eye Movement (REM) sleep disruption and general sleep deprivation. This in turn can: increase mood swings (happy/violent); inhibit or modify dreams; make people depressed and/or apathetic. The detrimental health effects of sleep deprivation are well documented.**
5. **ILFN exposure can cause the body to secrete cortisol which increases blood pressure and blood sugar levels, and has an immunosuppressive action. A suppressed immune system will allow existing health problems to accelerate and make it easier for new ones to be created. The effects are worse if exposed to ILFN during sleep hours.**
6. **Our bodies try to protect vital organs from ILFN bombardment by laying down extra collagen, causing a thickening of the pericardium and blood vessel walls for instance, which will also increase the likelihood life threatening health problems.**
7. **The wavelength of ILFN at 1Hz is 340mtrs. 5Hz is therefore 68mtrs. The basic calculation for room wall dimension resonance is half the wavelength, but remember: an attic could extend the whole length of a house, thus if a house is 14 mtrs long, wall resonance could be caused by ILFN at around 12Hz; internal walls can be very thin and not form part of the house foundations; diagonal room measurement is also important. All this may help explain why infrasound is often more noticeable in the smallest room – usually the cludgie (loo; often has an outside wall).**
8. **Temperature inversion (temperature rising with height before cooling – usually around dawn and dusk) can cause sound which would normally dissipate into higher atmosphere to be refracted down. The curve of this sound usually comes back to ground level at about 5km distance from the turbine. If ILFN follows this pattern, it will join the other 'ground hugging' infrasound, increasing the potential danger. ILFN does similarly bounce off cloud base etc.**
9. **Audible sound is emitted from turbines in a 'butterfly wing' shape, with minimal noise directly downwind, upwind, right or left. Larger forewings are downwind. Infrasound may do the same.**
10. **Turbines can emit ILFN even when the blades are not turning. A gentle breeze can cause the tower and/or blades to resonate.**
11. **Many people who believe they are suffering adverse health effects from wind turbines are hesitant to report their symptoms due to the manner in which their claims have often been discounted or ignored by the wind industry and government officials (Hansard, 2009, pp.G-**

516, G-547). Experts contend that the quantity, consistency, and ubiquity of the complaints constitute epidemiological evidence of a strong link between turbine noise, ill health, and disruption of sleep (BMJ2012; 344:e 1527).

12. Individuals should not have to prove the effect, only perceive it. Self reporting is an important tool in the process.
13. The World Health Organisation (WHO) considers a sleep journal as a valid tool for documenting sleep disturbance.
14. On 21 Jan 2013, the State of Wisconsin (USA) imposed a moratorium on industrial turbines until further health research is conducted.
15. On 7 Nov 2013, a Falmouth judge (USA) ordered local turbines to cease operating between 7pm and 7am and all day Sunday in order to avoid “irreparable physical and psychological harm” to local residents.

3. RECENT USES OF DIRECTED ILFN

The use of directed ILFN is a known weapon and interrogation aid. It is an untraceable murder weapon, as it leaves no evidence of its use on the victim.

ILFN becomes particularly deadly if it is used during the victim’s early morning sleep hours. This is when the body normally produces the lowest levels of Cortisol. Artificially stimulating Cortisol production during this time disrupts the body’s’ normal Cortisol production in the worst possible way. In effect, the sleeping body perceives infrasound as a threat and elevates Cortisol production to cope. Since the victim is asleep, the Cortisol is not used, and remains in the body, damaging life-essential body functions.

Prolonged Cortisol production in our bodies eventually causes death. [1]

I understand that some of the recent uses of directed ILFN are:

1. Greenham Common, UK. 1984 (mostly women).

In the summer of 1984, more than 2,000 British troops suddenly pulled back, leaving the fence unguarded.

Peace activist Kim Besley recalls that as curious women approached the gate, they “started experiencing odd health effects: swollen tongues, changed heartbeats, immobility, feelings of terror, pains in the upper body.”

Besley found her 30-year-old daughter too ill to stand. Other symptoms typical of electromagnetic exposure included skin burns, severe headaches, drowsiness, post-menopausal menstrual bleeding and menstruation at abnormal times. Besley’s daughter’s cycle changed to 14 days and took a year to return to normal.

Two late-term spontaneous miscarriages, impaired speech, and an apparent circulatory failure prompted the women to begin monitoring for a directed-energy beam, Using an EMR meter, they measured beams sweeping their camp at 100-times normal background levels. [2]

2. Iraq (2003 to present)

Very Low Frequency (VLF) weapons include the dozens of “poppers” and “domes” deployed in Iraq, which can be dialed to “long wave” frequencies capable of traveling great distances through the ground or intervening structures. As air force Lt Col. Peter L. Hays, Director of the Institute for National Security Studies reveals, “Transmission of long wavelength sound creates biophysical effects; nausea, loss of bowels, disorientation, vomiting, potential internal organ damage or death may occur.”

Lt Col Hays calls VLF weapons “superior” because their directed energy beams do not lose their hurtful properties when traveling through air to tissue. A French weapon radiating at 7 hertz “made the people in range sick for hours.”

Such variable effects have been known scientifically since 1963, when electromagnetics researchers Dr. Robert Beck found that exposure to certain frequencies sparks riotous behaviour, while other frequency beams can cause a sense of well-being—or deep depression.

The recovery rate from directed ILFN exposure among US troops (they tend to ‘lose the plot’, wander off and go AWOL) “seems to be about a day or so, whereas the locals are not getting over it in less than a week or more on average.” [2]

3. O2 plus the 2012 Olympics. London.

Long Range Acoustic Devices (LRAD) have been photographed at the O2, and were installed on the Thames during the 2012 Olympics. There is little doubt that these “communication devices” can also utilise ILFN for “crowd dispersement”. [3]

4. Gaza (ongoing)

There are several reports of ILFN weapons (LRADs) being used by the Israel against Palestinians in Gaza. “The combination of low frequencies at high intensities can create discrepancies in the inputs to the brain. Basically the brain receives a signal that your body has lost balance. You feel like you are tilting even when you are not. The discrepancies can cause headaches and nausea”...it “simulates seasickness”. [4]

5. Fukushima 2011

Directed ILFN at around 2.5 Hz can cause earthquakes. Watch the 7 min video here [5]. Since 2011 US military presence in Japan has increased considerably.

[1] <http://www.darkgovernment.com/news/infrasound-stress-inducing-weapons/>

[2] <http://www.jimstonefreelance.com/beammed.html>

[3] <http://motherboard.vice.com/read/a-history-of-using-sound-as-a-weapon>

[4] http://www.multistalkervictims.org/catchcanada/literature/brochure/CATCH/Scream_Article.pdf

[5] <http://www.geoengineeringwatch.org/was-haarp-a-factor-in-the-fukushima-earthquake/>

4. ARK HILL WIND TURBINES - ONE YEAR ON

(8 x 80m Enercon E48 turbines. Mar 2013 – 4 April 2014)

I live at Arniefoul which is 5km East of the Ark Hill wind turbines and 1.6km West of the proposed Govals wind turbines (6 x 87m turbines). The prevailing wind is from the West.

Ark Hill was commissioned on 5 March 2013 and at that time I started to have continuous headaches with some light-headedness and tinnitus. Further to this, I also started to suffer frequent sleep disturbance. When I awoke I could often hear the whooshing of the turbine blades. Assuming it was the

audible sound that was disturbing me, I moved my bed further away from the window and slept with the window closed. This made no difference to my sleep deprivation – usually being woken at around 3am until 5am. With the window closed I rarely hear the turbine noise, but I can sometimes feel their rhythm and therefore deduce that it is an inaudible noise (Low Frequency Noise and Infrasound) that is causing the lack of sleep.

In June 2013 I had two dizzy spells when out walking on the hills surrounding Arniefoul. It was at this time I noticed a correlation between the turbines, the wind direction and the above symptoms. My tinnitus became constant and on some nights extremely loud.

My symptoms appear to be worse when there is a Southerly wind. The Ark Hill turbines rotate clockwise and therefore it is probably an emission during the down stroke that creates the harmful effects. This suggests it may have little to do with the supporting structure and therefore an ‘upwind’ or ‘downwind’ design of turbine will make little difference.

Surprisingly, the prevailing Westerly wind seems to cause slightly less symptoms than a Southerly wind. Turbine noise, however, is most audible when there is little prevailing wind at ground level and at treetop level, but sufficient wind at turbine blade area to turn the blades at a critical speed. In similar conditions to these, when there is an Easterly wind we can easily hear traffic on the A90, 5km to our East, even though there is the huge bund of the Sidlaw Hills between us.

A North or East wind causes slightly less symptoms again, although should the Govals wind turbines be erected, I expect to suffer greatly from those turbines during these wind directions.

January and February 2014 were particularly bad months with predominately Southerly and Westerly winds causing much sleep deprivation, loud tinnitus, lack of concentration and irritability.

On 9 February 2014, I started recording my blood pressure morning and evening. It fluctuates considerably with a recorded high of 185/105. On 28 March for instance, after several days of Easterly wind, it was at a more ‘acceptable’ 140/83. There appear to be correlations between wind, atmospheric and weather conditions.

Whilst my body may be building some form of resistance to the turbine noises (audible and inaudible) I also believe it is getting more sensitive in certain ways. I sometimes get my “turbine headache” out to at least 10km from the turbines. Also, I have recently noticed I need to clear my ears more frequently, similar to going up in an airplane or scuba diving.

From 6 – 12 March we stayed near Tarfside, Glen Esk (currently no turbines near there). All my symptoms reduced noticeably, with my blood pressure reaching a low of 136/81.

An obvious option is to sell my property and move (where to?). My work is in the local area and therefore this is not really a business option. Nor is it an emotional option since my family has enjoyed being at Arniefoul for nearly a century.

I have heard of landowners with turbines who now regret having turbines on their land, yet are unable to speak out due to ‘non disclosure clauses’ in their contracts with developers. Also, I suspect that there are many people living near wind turbines who suffer similar conditions to mine but who remain silent for fear of property devaluation, tenancy or employment concerns, and the like.

I am sure that should the Govals and Frawney (5 x 80m, same make as Ark Hill and West Knock Farm, Buchan) wind turbines be erected, with Forfar and Letham being on the down-wind side, there will be people with similar sensitivity as myself who will suffer. Children are thought to be more sensitive to turbine noises than adults.

People sometimes say that I look well considering the symptoms I describe. I am reluctant to take drugs/medication, with their own potential side effects, when I do not believe they are treating the root cause. I have always made considerable efforts to maintain a high level of fitness.

I understand that:

- **Low frequency noise and Infrasound (such as emitted by wind turbines) are sound waves that are felt by the body rather than heard, probably by the utricle. Depending upon the amplitude or intensity, it produces feelings of extreme discomfort, a feeling that the body is vibrating. Depending upon the frequency and intensity, infrasound can keep you awake, or induce sleep. Therefore, it can cause sleep deprivation.**
- **Infrasound induces stress and causes the body to secrete the hormone Cortisol. This effect is a medically recognised danger of long-term infrasound exposure.**
- **Cortisol, plays a vital role in preparing our body for stressful “fight or flight” episodes. It increases blood pressure and blood sugar levels, and has an immunosuppressive action that provides needed alertness and energy during stressful experiences. However, during long term stress, or if Cortisol production is prolonged, its effects on the human body can become severe. A weakened or suppressed immune system will allow existing health problems to accelerate, and make it easier for new ones to be created.**
- **Exposure to infrasound during early sleep hours can be particularly harmful. This is when the body normally produces the lowest levels of Cortisol. This might explain my 3am awakening and subsequent wakefulness. Artificially stimulating Cortisol production during sleep means that the Cortisol is not used and remains in the body, potentially damaging essential body functions.**
- **A sound wave in air is a sequence of pressure changes. A sound wave in a liquid or solid is more like a vibration. This helps explain how Low Frequency Noise and Infrasound travel great distances and easily pass through solid walls, and can set up vibrations or resonances in rooms and body cavities.**

There is well-documented and peer-reviewed evidence of the detrimental health effects that turbine emissions have on humans. It is unethical to expose people to something already suspected of being harmful.

Where is the ‘Duty of Care’?

**Andrew Vivers
Arniefoul, Glamis, DD8 1UD
4 April 2014**

Email from a Glamis Community Councillor - Received 5 April 2014

Dear Andrew

I am very surprised you suffer thus from the wind farm as we live closer and never notice such symptoms. Perhaps your tinnitus is from your army career, as my tinnitus is from my many youthful days loading on the grouse moor. If I was that ill i would not publicise the fact - what do you hope to achieve by such a leaflet?

I am delighted Juliet is not mentioned in your catalogue of ailments, but you should have included a mention of your deteriorating mental state.

I suggest you should simply sell up and move, as the Govals wind farm will surely be much closer to you than Arkhill wind farm

Kind regards John

(note: John is a ‘renewables’ energy consultant, ex director of Ark Hill Wind Farm, ex factor of Strathmore Estates [25% ownership of Ark Hill], and a Glamis Community Councillor)

Addendum 14/4/14

A major achievement of distributing the above "Ark Hill - One Year On" leaflet, was that an acoustics engineer has come to stay for two nights.

I understand that:

1. There appears to be a correlation between my being woken and subsequent wakefulness, and peaks in low infrasound frequencies up to 3Hz.
2. The peak frequencies emitted by turbines are typically less than 5Hz. Our UK legislation on this matter, ETSU-R-97, is totally inadequate since it is only concerned with 'audible' noise, ie. above 20Hz (few people can hear sounds below 20Hz).
3. The fact that we can not hear a sound does not make it any less harmful.
4. Audible sound attenuates (decreases in energy/volume) at a rate of minus 6 decibels (dB) per doubling of distance from the source. Infrasound attenuates at minus 3dB per doubling of distance, out to about 50km (which is probably why our Ministry of Defense has opposed wind turbine applications within 50 km of the Eskdalemuir Seismic Array). Also, infrasound tends to have more of a ground hugging nature and does not readily dissipate into the high atmosphere. This helps explain why the effects of infrasound are noticed at much greater distances than audible sound.
5. For humans, the annoyance threshold for audible sound is around 2dB. Interestingly, the annoyance factor does not then increase with increasing volume/energy.
6. Turbines can emit infrasound even if the blade is not turning. A gently breeze can cause the tower and/or blades to resonate and emit infrasound.
7. Depending on various factors, a single turbine can emit as much infrasound as a large wind factory. Ark Hill (8 turbines) for instance, was at times comparable to a 100+ turbine wind factory.
 - The fact that 'industrial' sized turbines emit Infrasound/Low Frequency Noise (ILFN) can not be disputed.
 - The fact that ILFN is harmful to humans can not be disputed.
 - There is ample peer-reviewed evidence from around the world that "proves beyond reasonable doubt" that wind turbine neighbours experience detrimental health effects.
 - The logical conclusion is that the ILFN emissions from turbines are causing the ill health, however, even if it is not, turbines should be dismantled until the cause is found and rectified.
 - The wind industry make claims similar to: 'Turbines are not known to cause harm to humans'. The above information must cast considerable doubt on their claims. Also, their statements are certainly not the same as saying "Turbines are known not to cause harm to humans"

It is unethical to expose people to something already suspected of being harmful. I ask again, "Where is the 'Duty of Care'"?

3. WIND TURBINE SYNDROME (Excerpts from letters to my MSP)

Letter dated 27 April 2014

Health concerns in Scotland are ignored because of a sentence, a mere aside in a bracket.

We are told by Angus Council that current Scottish Government guidance states ‘there is “NO EVIDENCE” of turbine health effects arising from infrasound or low frequency noise generated by the wind turbines that were tested.’ [1]. This quote is from a bracketed sentence in that link which gives no direct reference to the actual Hayes Mackenzie 2006 report from which it took the information; a report that is EIGHT years old and during which time turbines in Scotland have grown considerably in number, height and capacity.

Reports of ill-health associated with turbines are now prolific around the world.

The Hayes Mackenzie 2006 powerpoint presentation ‘Low Frequency and Infrasound Noise Immision (sic) from Wind Farms and the potential for Vibro-Acoustic disease’ [2] shows that Infrasound and Low Frequency Noise (ILFN) are emitted by turbines; it states that ILFN can be harmful to humans (known as Vibroacoustic Disease or VAD) and gives a time/symptom chart; it then concludes that it is “UNLIKELY” that symptoms will result through induced internal body vibration from incident wind farm noise.’

This is definitely not the same as the Scottish Government quote above. “UNLIKELY” is not “NO EVIDENCE”.

I ask : are measurements independently and continuously taken of ILFN emissions by turbines in Scotland. Are they correlated with reported health effects?

Are we to understand that turbines in Scotland do not affect the local population, yet they do elsewhere in the world?

This report also states: Dr Mariana Alves-Pereira, in discussion with Dr Amanda Harry in the UK and Dr Nina Pierpont in the US, is now looking into the low- frequency noise and infrasound produced by industrial wind turbines to determine whether they too can cause VAD. Dr Alves-Pereira's initial assessment, based on noise measurements taken inside and outside the homes of wind turbine neighbours, is that turbines are indeed a likely cause of VAD. Dr Pierpont named the effect as Wind Turbine Syndrome (WTS).

With regard to the VAD chart, the report makes a comparison between aircraft technicians, who may experience high levels of ILFN for short periods during their working day, and wind turbine neighbours who experience constant or intermittent and variable ILFN (the tower and/or blades can resonate and emit ILFN even when the blades are not turning). Added to this must be the additional factor for those who live and try to sleep near wind turbines, is that ILFN exposure, which disrupts sleep via repetitive physiological stress and wakening, will do damage to health via sleep deprivation and chronic stress (both of which are well-established in clinical medicine and in the research literature, as harmful).

The report did not produce a WTS chart which would have shown a reduced time of symptom appearance for turbine neighbours. See note 1.

WTS and peer-reviewed reports of the detrimental health effects of turbines have been ignored for up to 20 years, based on an inaccurate quote and an old document that was not directly considering industrial wind turbines.

In another 2006 report by Hayes Mackenzie for the DTI, titled ‘Measurement of Low

Frequency Noise at Three UK Wind Farms’ [3] from which the powerpoint presentation is taken, the only conclusions it makes (pages 2, 46 & 66), are based on one sentence from the World Health Organ-

isation (WHO) document 'Community Noise' (para 7.1.4 page 64) dated 1995, which itself is not directly concerning wind turbines. That WHO report is nearly TWENTY years old!!

The recommendations (page 68) do not appear to have been acted upon. Also see note 2.

I urge you to read this very informative article [4].

As I mentioned in my 4 April letter, ILFN causes the body to secrete cortisol which has an immunosuppressive action. A suppressed immune system will allow existing health problems to accelerate and make it easier for new ones to be created.!

I also understand that our bodies try to protect vital organs from ILFN bombardment by laying down extra collagen, causing a thickening of the pericardium and blood vessel walls for instance, which will also increase the likelihood of life threatening effects.

ILFN should be added to the list of 'Silent Killers'. Not everyone gets cancer - that doesn't make it any less real.

Scotland's wind energy policy is a slower, but no less effective version of the Highland Clearances of 1746 onwards. Properties are "sterilised" (Angus Council words) or banned from occupancy (Ark Hill); people are forced to relocate or possibly succumb to WTS and probable early death; and our turbine covered hills and glens are becoming desolate places where few people wish to visit or live.

May I refer you to the Kelley research from the 1980's which proved that wind turbine generated impulsive infrasound and low frequency noise from a single down bladed wind turbine directly caused 'annoyance' symptoms at levels of sound energy which could not be heard. Also, Professor Salt's research shows some of the neuropsychological pathways involved [5].

Thank you for your continued interest and action. It is greatly appreciated by many thousands of people in Scotland and around the world, who for various reasons are unable to sell their property or relocate and are therefore forced to succumb to the detrimental health effects of WTS as a result of our futile energy policies, inaccurate quotations and outdated documentation.

Note 1. As a rough calculation (without considering sleep deprivation), the time of symptom appearance for WTS should be the VAD time reduced by a factor of around 4.2 (turbine neighbours who live and work near turbines, 24hrs x 7days x 48working weeks = 8064 hrs exposure per yr, assuming 4 weeks holiday away from turbines; technicians, 8hrs x 5days x 48weeks = 1920 hrs exposure per yr. 8064 divided by 1920 = 4.2). Thus a 4yr VAD symptom exposure would manifest in 1yr for a WTS exposure, and a 10 year VAD symptom in 2.5yrs for WTS, which indeed appears to be the case!

Note 2. Similarly, one wonders why ETSU-R-97 (The Assessment and Rating of Noise from Wind Farms) uses 35dBA L90 for all turbine locations when it is commonly accepted that typical daytime background noise levels are around 18 to 20dBA L90 in remote rural areas, 30 to 40dBA L90 in 'typical' or 'quite' suburban areas, and 50 to 60dBA L90 for busy urban areas. Night time levels would be much lower.

1. [http:// www.scotland.gov.uk/Resource/0044/00440315.pdf](http://www.scotland.gov.uk/Resource/0044/00440315.pdf)
2. <http://www.hayesmckenzie.co.uk/downloads/LF%20and%20Infrasound%20Noise%20Immission%20from%20Wind%20Farms%20and%20the%20Potential%20for%20Vibro%20Acoustic%20Disease%20-%20Malcolm%20D%20Hayes.pdf>
3. [http://www.hayesmckenzie.co.uk/downloads/ Measure-ment%20of%20Low%20Frequency%20Noise%20at%20Three%20UK%20Wind%20Farms.pdf](http://www.hayesmckenzie.co.uk/downloads/Measure-ment%20of%20Low%20Frequency%20Noise%20at%20Three%20UK%20Wind%20Farms.pdf)
4. <http://blogs.telegraph.co.uk/news/jamesdelingpole/100248760/wind-farm-noise-a-government-cover-up/>

5. <http://waubrafoundation.org.au/2013/explicit-warning-notice/> and <http://www.windturbinesyndrome.com/2014/medical-school-research-team-confirms-wind-turbine-infrasound-can-produce-wind-turbine-syndrome-usa/?var=cna>

Letter dated 8 July 2014

Thank you for your letter of 29 May and for sight of Derek Mackay's letter.

He makes the assumption that a moratorium would lead to a resumption of this policy without any changes. I argue that the moratorium could lead to a cessation of this policy, or at least to a resumption with much tighter conditions and health protection which would include Infrasound (ILFN) monitoring.

Whilst the Scottish Government may chose to be unaware of "a peer reviewed, proven, widely experienced dose-response link between wind turbine operation and health impacts", may I refer him to: <http://waubrafoundation.org.au/resources/wind-turbine-noise-adverse-health-effects-june-2014/>.

He makes reference to my "particular situation". I can assure him that there are many people around Scotland and the world who are suffering similar symptoms as myself but he may not have heard of them because:

- they are too ill or already dead
- they have not been give access to all relevant information, or have not yet made the connection between their deteriorating health and turbine emissions
- if they have made the connection, they are unwilling to make a complaint due to employment, tenancy, property devaluation or other concerns, and indeed maybe their fear of being ridiculed
- if they have made the connection and voiced concerns and complaints, they have given up due to the manner in which their claims have often been discounted or ignored by the wind industry and government officials (Hansard, 2009, pp.G-516, G-547). Experts contend that the quantity, consistency, and ubiquity of the complaints constitute epidemiological evidence of a strong link between turbine noise, ill health, and disruption of sleep (BMJ2012; 344:e 1527)

As I have mentioned before, I am not complaining about the audible noise from the Ark Hill turbines.

I am seriously complaining about the effects of the infrasound (ILFN) emissions from these turbines - which is not audible. These effects are cumulative, and therefore any visiting officer is unlikely to notice any effects.

The only way for any type of assessment of ILFN is to use good quality ILFN measuring equipment. As you will read in the addendum to my 'Ark Hill - One Year On' (attached), an acoustics expert came here in early April with suitable monitoring equipment and showed a direct time correlation with my being woken and subsequent wakefulness, and infrasound peaks at 3 Hz.

A second monitoring box was placed much closer to the turbines and I am confident that the infrasound came from the turbines and not from some other anomaly that has only occurred since the turbines were erected. Please also see my 'Bullet Points' (attached).

The facts are clear:

1. Wind turbines emit ILFN, and can do so even when the blades are not turning.
2. ILFN is harmful to humans and other life forms, and can kill.

- 3. In the interests of Public Health, the Scottish Government and local Councils should impose a condition on turbine applications that ILFN is measured before and after turbine erection (for a period of a few weeks/months).**
- 4. ILFN measurement should be a mandatory tool that is used to assess any reported health effects from turbines. This could show a direct time correlation between symptom and ILFN peaks.**

I hope this is of interest and that the correct action will be taken to protect public health.