

CULLERIN RANGE WIND FARM SURVEY

Follow-up survey

July – August 2013

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KEY FINDINGS OF THE CULLERIN RANGE WIND FARM SURVEY

68.5% of residents who lived between **0-10km** returned the survey with **83%** of respondents being impacted by noise and/or vibration. The **83%** impacted all have lodged complaints with various authorities and health care providers.

91% of those that responded out to **8km** are impacted by noise and/or vibration which is impacting on their sleep and health and those very same residents have all made complaints. In the **20** households there are **50** residents with a total of **49** being impacted by sleep deprivation and other health impacts.

20 respondents have lodged an estimated **322 complaints**, **3** respondents had complained to various departments but had not estimated how many complaints they had made. The bulk of the complaints were directed to the Wind Developer, the Department of Planning, the Local Council, their local MP and their health care provider, while other complaints were raised with the NSW Health Department, the EPA, other politicians, friends and council committees.

Introduction

Cullerin Range Wind Farm was developed by Epuron and transferred to Origin who completed construction and operation began in July 2009. The wind farm consists of 15 2MW REpower turbines, each tower reaching to around 80 metres with turbine blades of 46 metres.

Local residents have complained of noise and other disturbing impacts from the wind farm since operation began in July 2009.

Aim

The Cullerin Range Wind Farm Survey August 2012 which found a large percentage of residents out to 7.5km were being adversely impacted by the noise and vibration created by the industrial wind turbines of the Cullerin Range wind farm.

I have conducted this follow up survey to find out if affected residents had complained and if so what was the outcome.

Method

An anonymous self-reporting survey, map with distance bands indicated so households could establish how far they actually resided from the turbines and a letter of introduction explaining why the survey was being conducted, was hand delivered to all households within or near a 10km zone of the Cullerin Range wind farm. Each survey was individually numbered to avoid tampering.

Results Summary

Out of 100 surveys delivered out to 10+km 25 were completed.

A total of 35 surveys were delivered out to 10km with 24 (68.5% completed)

There were no residents past 8km impacted by noise and vibration.

Of the households affected:

20% were within 0-2 kilometres with a total of 8 people affected (100% of those within this distance)

30% were within 2-5 kilometres with a total of 18 people affected (90% of those within this distance)

50% were within 5-8 kilometres with a total of 23 people affected (92% of those within this distance)

87.7% of affected residents complained of day time noise

91.8% of affected residents complained of other disturbances during the day time

100% of affected residents complained of night time noise

87.7% of affected residents complained of other disturbances during the night time

100% of affected residents reported sleep disturbance

100% of sleep disturbed residents complained of disturbance between 3-7 nights a week

100% of affected residents have lodged complaints.

Conclusion:

This additional survey of the Cullerin Range wind farm has clearly identified that residents who are being seriously impacted by sleep disturbance and other health and well-being impacts and who have lodged a substantial number of complaints are clearly being neglected by the developer, and the responsible government authorities in health, planning and noise pollution regulation.

This survey in conjunction with the previous Cullerin Range Wind Farm Survey August 2012 clearly shows that noise, vibration and forces produced by the operation of the industrial wind turbines is clearly having a devastating impact on the sleep, health and wellbeing of a **large percentage** of the population surrounding Cullerin Range Wind Farm.

The NSW Minister for Planning and Infrastructure commissioned a Noise Audit and Community Survey due to the previous complaints from residents. This was completed last year and results were released to the developers in November 2012. To date this audit has not been released to the public and no action has been taken to rectify any of the existing problems at Cullerin Range Wind Farm.

This survey and the previous Cullerin Range Wind Farm Survey August 2012 clearly shows the need for urgent action by authorities.

Sleep is an essential part of healthy life and is recognized as a fundamental right by the World Health Organisation (European Court of Human Rights) (1)

Reference: (1) Official Journal of the European Communities, 18.7.2002 WHO, Noise Guidelines for Europe, pp 108,109

RESULTS

Question 1

Using the attached maps of the Cullerin Range Wind farm area which shows distance in km's from the turbines, please circle one letter below to indicate inside which line your residence is located.

Completed surveys

0-1km	0
1-2km	4
2-3km	2
3-4km	1
4-5km	4
5-6km	2
7-8km	9
8-9km	1
9-10km	1
10+km	1

Aggregated data: number of households (total of 25 who responded)

0 – 2km 4

2 – 5km 7

5 – 10km 13 (2 households are impacted visually and 1 of the 2 homes by property devaluation)

10+km – 1 (1 household is impacted visually and by property devaluation)

Question 2

How many people reside at your house?

In total there were 61 residents in 25 homes.

	People	Households
1-2km	8	4
2-3km	5	2
3-4km	4	1
4-5km	11	4
5-6km	6	2
7-8km	19	9
8-9km	3	1
9-10km	3	1
10+km	2	1

Aggregated data

0 – 2km 8 people

2 – 5km 20 people

5 – 10km 31 people

10+km 2 people

Question 3

- (i) Are any of your household affected/impacted by Cullerin Range Wind Farm?

	Households		Visually/Property Value
	Yes	No	
1-2km	4		
2-3km	2		
3-4km	1		
4-5km	3	1	
5-6km	2		
7-8km	8		1 visually impacted
8-9km			1 visually impacted/property devaluation
9-10km development of Collector Wind farm		1	concerned with affects that friends experience and future
10+ km			1 visually impacted/ property devaluation

(ii) How many people are affected?

Affected people

1-2km	8
2-3km	4
3-4km	4
4-5km	10
5-6km	6
7-8km	17

Aggregated data (total 49 people)

0 – 2km 8 people

2 – 5km 18 people

5 – 8 km 23 people

Question 4

(i) If your household is negatively impacted by the turbines has your household ever complained?

Households

1-2km	4	
2-3km	2	
3-4km	1	
4-5km	3	
5-6km	2	
7-8km	8	(+ 1 House affected visually/property devaluation)
10+		(+ 1 House affected visually/property devaluation)

(ii) Who have you complained to and how often (estimate)?

Number of households who lodged complaints (20) + (2 residences lodged complaints for visual and property devaluation, the results do not take into account their complaints)

Estimated number of complaints in total (322)

2 surveys had not estimated the amount of complaints they had lodged whilst having lodged complaints with their local council, the planning department, their local MP and their local health care providers.

	Number of residences who lodged complaints.	Estimated number of complaints in total.
The wind developer?	15	93
The local council?	17	44
The Health department?	2	3
The EPA?	1	5
The Planning department?	13	58
Your local MP?	17	78
Other politician?	1	Not estimated
Media?	1	Not estimated
Health Care Provider	15	41
Other?	2	Not estimated

Other complaints were to friends and local council committee.

(iii) What was the outcome of the complaint notification(s)?

- Little or no response at all.
- No Action
- Zero
- Nothing
- None
- Medication
- No Outcome
- Sympathy but no result
- Nothing at all
- Nil
- People listened but no action
- Nothing
- Very Poor
- Nothing
- Zero
- None
- Unfortunately no help at all
- Taken on board – no measurable outcomes
- Non-committal
- Nothing
- Hot air
- Nothing

(iv) Was the problem resolved, and if so, how and who by?

22 households all claimed that their problems had not been resolved.

There was a remark made that they were still waiting for a response from the NSW Department of Planning and Infrastructure's Noise Audit and Community Survey that was conducted in 2012.

Question 5 - RELATES TO DAY TIME DISTURBANCE

(i) Does AUDIBLE noise from the wind turbines disturb anyone in your household during the DAY?

Households

1-2km	4
2-3km	1
3-4km	1
4-5km	3
5-6km	2
7-8km	7

Residents were asked to describe the noise, below are some of the descriptions people used.

Very noisy, pulsing, train like, whoosh whoosh, boom, boom, boom nonstop, annoying repetition, resonating and grinding, like the noise from a cement mixer that varies in intensity depending on the weather, continual ambient noise, constant rumbling, thump thump, constant beating very upsetting, noise is continual and annoying causing tiredness and depression, constant horrible noise, banging, constant noise, constant flow and ebb, very annoying, can't describe noisy.

(ii) If so how many occupants are disturbed by AUDIBLE noise?

Affected People

1-2km	8
2-3km	2
3-4km	3
4-5km	10
5-6km	6
7-8km	14

Aggregated data (total 43 people)

0 – 2km 8 people

2 – 5km 15 people

5 – 8 km 20 people

(iii) Besides audible noise does the wind farm disturb your household in any OTHER way or does anyone feel anything different when the turbines are operating during the DAY?

Households

1-2km	4
2-3km	2
3-4km	1
4-5km	3
5-6km	2
7-8km	7

(iv) If so how many occupants are disturbed or feel anything different in your household?

Affected people

1-2km	8
2-3km	4
3-4km	3
4-5km	10
5-6km	6
7-8km	14

Aggregated data (total 45 people)

0 – 2km 8 people

2 – 5km 17 people

5 – 8 km 20 people

Residents were asked to describe how they were disturbed in any other way or did they feel anything different when the turbines were operating during the Day?

Disturbance as described by residents.

Dizzy, nausea, poor balance, dislike being indoors or in vehicle, tired all the time. Very bad headaches, anxiety, feel ill, very sick, sick sometimes, heart trouble and headaches on a continuous basis, prolonged torture from burning sensation in stomach and heart fluttering, a feeling of the presence of disturbed wind and turbulence, seasick, feel ill, very tense and not good, causes a sort of pressure which seems to persist which causes subdued feelings and tiredness, uneasy, dizzy, nausea and headaches, headaches and balance problems

Question 6 - RELATES TO NIGHT TIME DISTURBANCE.

(i) Does AUDIBLE noise from wind turbines disturb anyone in your household during the NIGHT?

	Households
1-2km	4
2-3km	2
3-4km	1
4-5km	3
5-6km	2
7-8km	8

Residents were asked to describe the noise, below are some of the descriptions people used.

Turbines are audible, whoosh, whoosh, constant noise, pulsations, continued constant noise, background noise annoys, like a dentist drill, low whooshing noise at 8-9km. As people describe noise in the earlier question about day time noise most went on to describe the inability to sleep which will be elaborated on in Question 7.

(ii) If so how many of the occupants are disturbed by AUDIBLE noise?

1-2km	8
2-3km	4
3-4km	4
4-5km	10
5-6km	6
7-8km	17

Aggregated data (total 49 people)

0 – 2km 8 people

2 – 5km 18 people

5 – 8 km 23 people

- (iii) Besides audible noise does the wind farm disturb your household in any OTHER way or does anyone feel anything different when the turbines are operating during the NIGHT?**

Households

1-2km	4
2-3km	1
3-4km	1
4-5km	3
5-6km	2
7-8km	7

- (iv) If so how many occupants are disturbed or feel anything different in your household in any OTHER way or does anyone feel anything different when the turbines are operating during the NIGHT?**

Affected people

1-2km	8
2-3km	2
3-4km	4
4-5km	9
5-6km	6
7-8km	14

Aggregated data (total 43 people)

0 – 2km 8 people

2 – 5km 15 people

5 – 8 km 20 people

Residents were asked to describe how they were disturbed or what they felt. Below are the descriptions people gave.

Horrible sensations, irritated feelings of being unable to escape, frequent trips to the bathroom, no peace/restless,
 Pressure, can't get warm, bad pressure, vibrations, strange, vibrations, very difficult to describe like pins and needles only worse, angry, afraid, using the bathroom a lot and headaches, feeling of pressure that seems to persist preventing relaxation, frequent trips to the toilet
 Don't know how to explain, tired, restless, cranky and itchy, ill, breathing difficulties, angry and tired, bad vibrations

Question 7

(i) Is your household's sleep disturbed?

	Households	
	Yes	No
1-2km	4	
2-3km	2	
3-4km	1	
4-5km	3	1
5-6km	2	
7-8km	8	1
8-9km		1
9-10km		1
10+km		1

20 households in total complained of sleep disturbance

(ii) If so how many nights a week?

1-2km	4-7, 6, 5, Most
2-3km	Several maybe 6
3-4km	4
4-5km	4, 3+, 4
5-6km	5-6, 5
7-8km	3,3-7,4,7,4,3, 7

(iii) What creates the sleep disturbance?

Noise, sensations and pressure, turbines, noise, noise and tingling feel, strange noises, noise from turbines, most definitely the wind farm, industrial wind turbines, continual background noise, turbines, wind turbines, damn turbines, noise and pressure, blasted turbines, wind farm, giant wind turbines that never stop, don't know but turbine may have effect – this resident complained on low whooshing noise from the turbines at night., turbines, vibrations from turbines, silent hum

The 20 households that complained of sleep disturbance made the following statements.

Can't sleep for long periods, bad sleeping, can't sleep, no sleep, it is impossible to sleep as we once did, we are all tired and irritable and usually depressed. If we could we would sell and move away, unable to sleep, hard to get to sleep, unable to sleep, unable to sleep comfortably as we were able to prior to the turbines working, sleeplessness, no deep sleep, not able to sleep or can only sleep lightly, sleep disturbance, interrupted sleep, no good sleep, simply can't sleep and when we do we do not awake refreshed.

Question 8

If you have further comments that you believe are relevant to this survey please feel free to write below:

Resident's comments 1-2km

Our lives have been ruined.

SO TIRED!

There is no doubt that wind turbines are damaging our lives and health. The Govt. must ACT

Resident's Comments 2-3km

Should not put turbines near people

2 members of the household have blood pressure problems and suffer from stress related problems. (It was not mentioned if this coincided with the operation of the turbines or not.

Resident's comments 4-5km

We hope our council and government start to listen to us as it is slowly driving us mad!!!

More research needed.

Non affected resident comments 4-5km

The wind farms are a great way of getting clean power which we need.

Resident's comments 5-6km

Unable to sleep comfortably as we were able to prior to the turbines working.

Turbines pollute country areas

Resident's comments 7-8km

Turbines ruined our community

Hopeless

Since the turbines started we have felt unwell.

Since early operation of the Cullerin turbines sleeplessness, interrupted sleep, hypotension, stomach ulcer, and vision reduction, general loss of fitness and feeling of well being.

Bad for people

No point

We wish you every success with this survey and thank you for doing it. Everyone has given up in our locality and some of our neighbours are not going to bother filling out the survey as people laugh at them when they complain about the turbines when they are 8 and 10 and sometimes 12 kms away. No one believes they can sense the turbines.

Future industrial grave yards.

Bush fire threat

Uneconomical – makes electricity dearer

Lies by Nick Valentine (RATCH)

Kills eagles Threat to small planes and helicopters

Visual

Lights will disturb if place on top of turbines.

Resident's comments 8-9km: (affected visually)

Wind developers have consciously divided our community which will be irreversible.

They are insincere and manipulative.

Targeted communities less likely to change their bully ways.

Shame on you. And will not be forgotten for many generations.

I now have NO respect for corporates like "Origin Energy" and they will be remembered.

Your time will come – ORIGIN ENERGY make a note of this.

It has reduced our area to an industrial zone on prime agricultural land.

Land values and superannuation for most farmers reduced as a result.

Bullies yet again

All of the three residents are impacted by this development plus 2 share farmers.

Non affected Resident comments 9-10km:

I accept that neighbours who are physically close to Cullerin wind farm are seriously affected by the noise and sleep deprivation. I have had personal contact with a number of them. We are concerned by the prospect of infrasound noise but are unable to pinpoint direct affects. It alarms us that a much larger wind farm is proposed just over 2 kilometres from our house, and we are fighting to stop its approval. We support the survey you are doing and suggest a community-wide benchmark health study should be undertaken now in Cullerin/Collector region.

Resident comments 10+ km (affected visually)

This residence is visually impacted and also mentioned the property value has affected them.

They also state:

We are very concerned about the possible impacts from the proposed Collector wind farm development and as such we are interested in the findings from this survey particularly from those respondents living with 5kms of the Cullerin Range wind farm.

Community Consultation for the proposed Collector wind farm has not been adequate and the proposed investment in the community is insufficient to provide compensation to residents for the health, visual and financial implications.

CULLERIN RANGE WIND FARM SURVEY

July 2013

1. Using the attached maps of the Cullerin Range wind farm area which shows distance in km's from the turbines, please circle one letter below to indicate inside which line your residence is located. If outside line I please circle J

A	B	C	D	E	F	G	H	I	J
0-1km	1-2km	2-3km	3-4km	4-5km	5-6km	7-8km	8-9km	9-10km	outside 10km

2. How many people reside at your house?

3. (i) Are any of your household affected/impacted by Cullerin Range Wind Farm?

Yes No (IF NOT AFFECTED please go to questions 7)

(ii) How many people are affected?.....

4. (i) If your household is negatively impacted by the turbines has your household ever complained?

Yes No

(ii) Who have you complained to and how often (estimate)?

The wind developer? Yes No

The local council? Yes No

The Health Department? Yes NO

The EPA? Yes No

The Planning department? Yes No

Your local MP? Yes No

Other Politicians? Yes No

The media? Yes No

Your health care provider(s)? Yes No

Other? Please provide details Yes No

(ii) What was the outcome of the complaint notification(s)?

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(iii) Was the problem resolved, and if so, how and who by?

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5. Question 5 relates to **DAY TIME** disturbance.

(i) Does AUDIBLE noise from wind turbines disturb anyone in your household during the **DAY**?

If yes please describe.

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(ii) If so how many occupants are disturbed by AUDIBLE noise?.....

(iii) Besides audible noise does the wind farm disturb your household in any OTHER way or does anyone feel anything different when the turbines are operating during the **DAY**?
If yes please describe.

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(iv) If so how many occupants are disturbed or feel anything different in your household?

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6. Question 6 relates to NIGHT TIME disturbance.

(i) Does AUDIBLE noise from wind turbines disturb anyone in your household during the **NIGHT**? **If yes please describe.**

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(ii) If so how many occupants are disturbed by AUDIBLE noise?.....

(iii) Besides audible noise does the wind farm disturb your household in any OTHER way or does anyone feel anything different when the turbines are operating during the **NIGHT**?
If yes please describe.

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(iv) If so how many occupants are disturbed or feel anything different in your household?

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7. (i) Is your household's sleep disturbed? Yes No (if No go to question 8 if you would like to add further comment)

(ii) If so how many nights a week?

(iii) What creates the sleep disturbance?

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8. If you have any further comments that you believe are relevant to this survey please feel free to write below.

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Thank you for taking the time to complete this additional survey information. It is appreciated.

If you are affected by the wind farm and would like to take part in a further confidential comprehensive phone survey please register by phoning 0405 127 189 or by emailing patinaschneider@hotmail.com to arrange a time that is suitable.