

## **Research being conducted by the Waubra Foundation**

There are consistent references on the public record to research activities of the Waubra Foundation's Chief Executive Officer (formerly Medical Director), Sarah Laurie. Attached are a selection of quotes by Dr Laurie about her research methods and findings, together with relevant quotes from a range of media articles and quotes from two 'subjects' of Dr Laurie's research taken from submissions to the 2011 Federal Senate Inquiry into the Social and Economic Impact of Wind Farms. The attached references date from October 2010 through to January 2013.

Of particular note are 2 presentations given by Dr Laurie (references 12 and 16 on the attached list), which explicitly describe the following sources of data for her research:

- **Interviews with affected residents**  
(Interviews with affected residents are also listed in references 1, 8, 14, 15, 17, 18, 19, 20, 22, 24, 25 and 27). The most recent reference states that over 120 residents have been interviewed.
- **Medical records**  
(Medical records, clinical history, medical symptoms and personal health journals are also noted as sources of data in references 1, 6, 8, 9, 18, 20-22, 25, 26 and 27)
- **Treating physicians**  
(Obtaining information from, collaborating with, or providing advice/education to treating health practitioners is also noted in references 3, 5, 6, 8, 14, 18, 19, 24, 25, 26 and 27)
- **Personal health journals**
- **Acoustic monitoring inside homes**

In addition to the above, the following are noted:

- Discussion of blood pressure data collection being undertaken as part of Dr Laurie's research in references 2-6, 8 and 12. Reference 3 also contains an invitation by Dr Laurie to provide blood pressure results to her. These data appears to have been collected in conjunction with personal health journals, and used in public presentations and documents by Dr Laurie to suggest that exposure to wind turbines is correlated with high blood pressure. Some of the data collected by Dr Laurie was provided to the South Australian Environment, Resource & Development Court for a Jan 2011 hearing (see references 6 and 7). We note it was analysed by an independent expert from Adelaide University, who found no correlation between high blood pressure and wind turbine exposure.
- Explicit reference to 'research subjects' in references 6, 9, 10 and 11.
- Medical advice and/or clinical judgement by Dr Laurie contained in references 18 and 21.

As a former medical practitioner, Dr Laurie should be aware of the National Health & Medical Research Council National Statement on Ethical Conduct in Human Research. We note “the National Statement sets national standards for use by any individual, institution or organisation conducting human research. This includes human research undertaken by governments, industry, private individuals, organisations or networks of organisations” (page 7). The Statement also provides a definition of human research, which includes: taking part in surveys, interviews or focus groups; undergoing psychological, physiological or medical testing or treatment; being observed by researchers; or researchers having access to information (page 8).

Based on the National Statement, Dr Laurie’s activities appear to clearly meet the definition of research involving human subjects. Accordingly, the Waubra Foundation should be asked to answer the following questions:

- Has Dr Laurie’s research been subject to review by a Human Research Ethics Committee?
- If so, which committee approved the study protocol and is/was responsible for monitoring how the research is conducted?
- If the research was not reviewed by an Ethics Committee, on what basis were Dr Laurie’s activities exempted from this requirement?

With regard to collecting information from treating health practitioners:

- How many treating physicians has Dr Laurie gathered information from?
- Which treating physicians have provided information, and what protocol has been followed to obtain this information?
- What has this information consisted of?
- Is the data collection listed above ongoing? If not, when did it cease?

Regarding the data collected, in an interview with Wind Wise radio on 19 February 2012 (reference 19), Dr Laurie stated that she has been “sharing information, the clinical information that I’m gleaning from the residents and their doctors, and sharing it with people from other disciplines so that we can get a multidisciplinary dialogue going on.” Objective 3 of the Waubra Foundation is also listed as “build the existing and new data into a high quality database suitable as a start point for properly constructed studies and review by qualified others”.

- To whom is the database available?
- What information is included in the database?
- How is the information on the database being managed and shared in accordance with standards of ethical research?

Dr Laurie is not currently registered as a medical practitioner. The Medical Board of Australia in conjunction with the Australian Health Practitioner Regulation Agency advises that medical practitioners should be registered if they have any direct clinical contact with patients or provide treatment or opinion about individuals. It also provides advice for practitioners to be registered when they are directing, supervising or advising other health practitioners about the health care of an individual(s).

As noted in references 2, 3, 4, 5, 6, 8, 12 and 16, it appears that Dr Laurie has had direct clinical contact with individuals, particularly in relation to collecting blood pressure data, personal journals and clinical histories. The document ‘Suggested Health Assessment Guidelines’ prepared by Dr Laurie (reference 18) provides

advice intended for health professionals, and would also appear to be in breach of Medical Board of Australia guidelines. Dr Laurie should be asked to explain why she is undertaking these activities while not registered to practice medicine.

#### References to research activities of Dr Sarah Laurie

Reference	Date and source	Relevant information
1.	20 October 2010 Sarah Laurie open letter to John Brumby Available at: <a href="http://waubrafoundation.com.au/~waubra/Y2FpZD03JmNyYz0xMDc5MzU4NTc0">http://waubrafoundation.com.au/~waubra/Y2FpZD03JmNyYz0xMDc5MzU4NTc0</a>	Selected quotes:  “As part of my duties as Medical Director, I have recently spent 2 weeks in Victoria, and spoken with people from Toora, Waubra and Cape Bridgewater. I have listened to the stories of those people who claim their health has been adversely affected since the turbines in their area started operating, met with public health and local council officials, provided information to interested Medical Practitioners, given public presentations, and spoken with the media, and discussed possible areas for research with interested researchers.”  “I was shocked at the extent and severity of symptoms which have been experienced by some individuals which appear to be related to the turbines when they are operating. Some patients experience symptoms when they are five km away from the nearest turbines.”  “Five people have had a clinical history consistent with a very rare and serious condition known as an acute hypertensive crisis, where they develop a sudden acute severe headache, nausea, a sensation of their heart leaping out of their chest, and they feel extremely unwell. This pattern of symptoms is associated with a dangerously high blood pressure, and warrants immediate medical attention. The Director of the Emergency Department at Ballarat Base Hospital is now aware that patients who develop these symptoms will be coming to his department. I was also shocked at the extent of acute psychiatric distress which some of these patients have been experiencing. Both the episodes of apparent hypertensive crises and depth of psychiatric distress have also been noted by the Canadian researchers I am in contact with, although this has not yet been described in any formal published medical studies.”
2.	1/12/2010 Media report of Sarah Laurie’s research Available at: <a href="http://www.thecourier.com.au/story/552084/">http://www.thecourier.com.au/story/552084/</a>	Extract from the report: Self-testing by a small group of Waubra residents could reveal a link between wind turbines and health. South Australian doctor Sarah Laurie, director of the Waubra Foundation, says early indications suggest a possible link between turbine operation and early-morning blood pressure problems."It appears for some people that their blood pressure first thing in the morning is elevated if the turbines are going, and is not elevated if the turbines have been off overnight and early in the morning," Dr Laurie said. Dr Laurie said early-morning blood pressure elevation

	<a href="#">wind-farm-health-fears-grow/</a> (Ballarat news)	was a known risk factor for heart attacks. She said eight people were checking their blood pressure north of the Waubra wind farm, within four kilometres of the nearest turbine, and some in the group had no knowledge of when the turbines were operating. All test participants were between one and four kilometres from the nearest turbine. Dr Laurie said not all in the test group had been affected.
3.	28/12/2010 Article about claim of dangerously high blood pressure with night time wind turbine exposure Available at: <a href="http://www.windturbinesyndrome.com/2010/blood-pressures-elevating-dangerously-after-nighttime-wind-turbine-exposure-australia/">http://www.windturbinesyndrome.com/2010/blood-pressures-elevating-dangerously-after-nighttime-wind-turbine-exposure-australia/</a>	Quotes from the article (appear to be attributable to Sarah Laurie): “Clinical monitoring after a night of wind turbine noise exposure reveals dangerously high blood pressures, including in people with no prior history of hypertension – up to 4km.”  “Preliminary results of investigations (24 hour blood pressure Holter Monitor) are showing that some people living adjacent to turbine developments are getting episodes of hypertension at night, sometimes dangerously high, while they are asleep and while the turbines are operation. As this will mostly be asymptomatic, people generally will be unaware that it is happening to them unless this investigation is done on a night when the turbines are operating. ”  “We suspect that infrasound emissions from the turbines may be involved, or there may be another mechanism which we are unaware of yet.”  “This information is not yet out in the public domain, nor is it published in any peer reviewed journal. However, it is important information to share with your family physician and cardiologist, particularly if your blood pressure has been high or difficult to control since the turbines started operating – or even if your blood pressure is ‘normal’.”  “If you would like to share those results (deidentified), please scan and email to research groups in your area who start to look into this issue, or to Dr Sarah Laurie, email sarah@waubrafoundation.com.au.”
4.	Dec 2010 ABC article about Laurie and her research <a href="http://www.abc.net.au/local/stories/2010/12/17/3095855.htm">http://www.abc.net.au/local/stories/2010/12/17/3095855.htm</a>	Quote from the article: “This is consistent with Doctor Sarah Laurie's newest research into blood pressure and wind turbines. She has been asking people in Waubra to monitor their blood pressure and claims she claims to have found that for a number of people, their early morning blood pressure was higher than usual.”
5.	31/12/2010 <a href="http://www.thecourier.com.au/story/551598/waubra-resident-on-24-">http://www.thecourier.com.au/story/551598/waubra-resident-on-24-</a>	Extract from the article: A LOCAL GP has instructed a Waubra resident to undergo 24-hour blood pressure monitoring. The resident was requested to wear a portable Holter monitor following an episode of acute hypertension. Waubra Foundation director Dr Sarah Laurie said the resident’s blood pressure became “extremely elevated” overnight while sleeping,

	<a href="#">hour-check/</a>	while turbines were operating. Self-testing of morning blood pressure by a small group of Waubra residents began recently .But Dr Laurie said 24-hour blood pressure tests were also being undertaken by people living close to turbines in both America and Canada. She said preliminary results showed “dangerously” high blood pressure levels while people slept and while turbines were operating. “These are patients who do not necessarily have previously diagnosed hypertension,” Dr Laurie said. “They and their family physician might think their blood pressure is normal, because it is normal when measured in the doctor’s surgery, during the day, well away from turbines.”
6.	12-13 Jan 2011, Transcript of Sarah Laurie testimony to SA Environment, Resources & Development Court for hearing regarding a proposed windfarm: <a href="http://theballaratindependent.com.au/media/news_item_attachments/Laurie_transcript-121170505-0001.pdf">http://theballaratindependent.com.au/media/news_item_attachments/Laurie_transcript-121170505-0001.pdf</a>	<p>Pg 2, line 7: Refers to Dr Jason Cruickshank (Ballarat Hospital): “Dr Cruickshank isn’t yet collecting data on the patients with stories of acute hypertensive crisis. That’s on hold for now, the only other date is that one of the sleep position (physician?) in Ballarat is collecting data and participating in the study”.</p> <p>Pg 2, line 32-38, pgs 3-4: refers to subjects; patient medical histories, obtaining medical records (with consent), patient having cardiac investigations, confirmation from GP and patient about halter monitor test (24 hour blood pressure monitor), verbal reports from patient and his GP, information about patient medication.</p> <p>Pg 28: “It was not my intention ever to purport to do a study. It was collecting field observations with which we would then inform our research direction.”</p> <p>Pg 101: Q: “You started off by giving some evidence about the subjects of your inquiries in Exhibit A21....it’s a document that sets out the transcripts taken by yourself of the individual subject details.” A: Yes Q: And in respect of subject 20 I think your evidence was that that person’s GP and the person him or herself was saying that there was elevated nocturnal blood pressure. Do you recall that A: Yes Q You may have said this, but I don’t recall it – is it the case that that person had, and has, normal blood pressure during the day. A: That’s correct, except that he has had some episodes of what his GP and I both think are an acute hypertensive crisis. He’s had five episodes of these, but the rest of the time his blood pressure has always been recorded as being less than 140 on 90 – well and truly less than 140 on 90. Q: And that’s during the time when the turbines have been in operation. A: Yes, that’s correct.</p>
7.	Jan 2011 Blood pressure data and analysis related to	Blood pressure data was supplied by Sarah Laurie for another witness in the case – Dr Gary Wittert - to analyse. His conclusion was that the data did not support the assertion that elevated nocturnal blood pressure was correlated with wind turbine exposure.

	<p>above transcript. Available at: <a href="http://vicmps.greens.org.au/system/files/Analysis%20of%20BP%20Data.pdf">http://vicmps.greens.org.au/system/files/Analysis%20of%20BP%20Data.pdf</a></p>	
8.	<p>10/2/2011 Sarah Laurie submission to federal Senate inquiry into social and economic impact of wind farms Available at: <a href="https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=08b9aa8d-1f0e-47b6-8449-06f0206b8afb">https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=08b9aa8d-1f0e-47b6-8449-06f0206b8afb</a></p>	<p>Note on page 7 re expenses: “My expenses in working on this issue have been funded by my husband, and some have been reimbursed by farmers and neighbours who have asked me to travel to help educate their communities.”</p> <p>Page 13: “My field observations in Australia The symptoms and health problems well described by the doctors mentioned above, are absolutely identical to the symptoms which have been described to me, in my interviews with over 60 affected residents from wind developments in NSW (Cullerin, Crookwell and Capital), Victoria (Toora, Cape Bridgewater and Waubra) and South Australia (Mt Bryan and Waterloo). Information from those interviews has been provided to this Senate Inquiry confidentially in a deidentified state, in order to further protect individual privacy.”</p> <p>“My first question was “Have you noticed any changes since the turbines started operating in your area?” Further clarification was sought as necessary. Some of these interviews have been conducted over the phone, and on multiple occasions. They are an ongoing working in progress, and are being used to determine future research priorities for independent researchers to pursue.”</p> <p>Pg 14: “I have now spoken directly with Rural Medical Practitioners from Portland, Ballarat, Clunes, Toora, and Bungendore, who are concerned about the symptoms being experienced and the deteriorating health and sleep of their patients.”</p> <p>Pg 15-16: detailed list of symptoms reported to Dr Laurie</p> <p>Pg 17: “Recent developments Most recently in Australia and in Canada I have heard multiple descriptions of angina, chest tightness and heart attacks occurring when the turbines are operating. These have occurred at a number of different wind developments, in all three states, and require urgent further thorough investigation and analysis....</p>

		<p>Some heart attacks are occurring in patients who do not appear to have any signs of arterial blockage from subsequent angiograms, performed by their treating cardiologists. There is a condition which is now described as Tako Tsubo, in which sudden shock is causing myocardial dysfunction....</p> <p>At Waubra particularly, a number of affected residents have started measuring their blood pressures at multiple times during the day and overnight, and some are finding that both their blood pressures and their heart rates are markedly elevated when the turbines are operating, but decrease when either they are away from home, or when the turbines are turned off for any length of time. Many of these patients did not have high blood pressure prior to the turbines operating, as measured by their GPs in their surgeries. Some of the blood pressure increases being reported to me include an increase in systolic blood pressure of up to 80mm Hg when the turbines are operating.”</p> <p>Pg 18:          “I have also been told of episodes of extremely high blood pressure in conjunction with severe headaches and nausea, a sensation of one’s heart leaping out of one’s chest, and a “sense of impending doom”. This clinical description is identical to that described by patients experiencing acute hypertensive crises.</p> <p>Such a clinical condition has been previously described in conjunction with the clinical use of excess adrenaline, and with a very rare adrenal tumour called a phaeochromocytoma. In some of the affected residents where this clinical situation has been described, both these explanations for their symptoms have been positively excluded....”</p> <p>Observed Mental Health Issues          Specific mention needs to be made of the extent and severity of psychiatric morbidity being described by affected residents. This is very noticeable, and is evident both in populations currently exposed to turbines, but also those who are the subject of proposed developments.”</p>
9.	Feb 2011 Maggie Reid, subject of Dr Laurie’s research Sub 666 to the above Senate inquiry Available at: <a href="https://senate.aph.gov">https://senate.aph.gov</a> .	“At present as a subject of Dr Sarah Laurie’s research my blood pressure is in the high to extremely high area for most of the day and I am now taking Micardis 80mg daily”

	<a href="https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=2e30b16d-01f8-4f3c-bc23-cdf028df7043">au/submissions/committees/viewdocument.aspx?id=2e30b16d-01f8-4f3c-bc23-cdf028df7043</a>	
10.	<p>Feb 2011 Andrew Reid, subject of Dr Laurie's research Sub 480 to the above inquiry Available at: <a href="https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=0fcf43f7-f1aa-49e7-ac2f-0bdd4fbbc2a2">https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=0fcf43f7-f1aa-49e7-ac2f-0bdd4fbbc2a2</a></p>	<p>"Since October 2010 I have been monitoring my blood pressure twice daily under the supervision of Dr Sarah Laurie".</p>
11.	<p>21/4/2011 ABC report: Wind farm development – boom or whisper <a href="http://www.abc.net.au/rural/content/2011/s3197605.htm">http://www.abc.net.au/rural/content/2011/s3197605.htm</a></p>	<p>Extract from the report: Waubra Foundation's medical director is Dr Sarah Laurie, who has practiced as a rural GP in South Australia. She has started gathering clinical evidence, of health effects she links to wind turbine syndrome.</p> <p>"The commonest one is chronic severe sleep deprivation. When I first started interviewing people, I thought it was the audible noise predominantly keeping people awake.</p> <p>"There's no doubt when the wind is blowing in a certain direction turbines can be noisy and often, interestingly they're noisy further away, they're not noisy standing right underneath them and they can sound like a jet engine.</p> <p>"The major problem for most people is waking up in the middle of the night in a panicked state, and it's only happening when the turbines are turning. So when they go away on holidays it doesn't happen, or when there's a night with no wind it doesn't happen, in some instances many nights a week, not just once or twice a night, it will happen frequently.</p> <p>"And so the end result is people are just exhausted."</p> <p>Dr Sarah Laurie describes other symptoms common to people who have problems with wind turbines, high blood</p>



12.	<p>14 June 2011 WF Cape Cod presentation by Sarah Laurie (for Wind Wise) Available at: <a href="http://www.windturbinesyndrome.com/2011/pierpont-and-laurie-discuss-wind-turbine-syndrome-cape-cod-mass/">http://www.windturbinesyndrome.com/2011/pierpont-and-laurie-discuss-wind-turbine-syndrome-cape-cod-mass/</a></p>	<p>pressure, tinnitus, heart attacks, dizziness, nausea and hyper sensitivity to noise.</p> <p>Presentation by Dr Laurie includes much of the same information as presented to the Clare local council in November 2011 (see reference 16), including methods of data collection, symptoms etc. In addition, provides speculative conclusions about causative mechanisms and data collected during acoustic monitoring of a named resident. Also notes Waubra Foundation strategies, which include:</p> <ul style="list-style-type: none"> <li>• <b>Educate treating medical practitioners</b></li> <li>• Publicise problems via community education sessions</li> <li>• <b>Data collection (local residents leading the way with personal health journals)</b></li> </ul> <p>Identifies mechanisms for harm to human health as known (audible noise); highly likely (infrasound &amp; low frequency noise – airborne pulsations, resonance within dwellings, seismic (ground borne) vibrations) and possible (electromagnetic radiation effects).</p> <p>As in Clare local government presentation (reference 16), lists research questions: (1) What is a ‘safe’ setback distance; (2) What are the mechanisms of causation?</p> <p>Identifies WF research priorities: <b>Concurrent audible noise &amp; ILFN monitoring inside people’s homes with symptoms reports, and</b></p> <ul style="list-style-type: none"> <li>• Sleep studies</li> <li>• Blood pressure studies (24 hour ambulatory blood pressure)</li> <li>• Biochemical indices (cortisol)</li> </ul> <p><b>Data collection from residents up to 10km away from turbines</b> <b>Replication</b> of Dr Michael Nissenbaum’s recent study of sleep, depression and quality of life <b>Case control study</b> – effect on children’s sleep, learning and cognition <b>Epidemiological studies</b> to investigate:</p> <ul style="list-style-type: none"> <li>• Range of medical and psychiatric health problems being experienced, and</li> <li>• Analysis of their severity</li> </ul> <p><b>Prospective case control study</b> of residents adjacent to two small wind developments (2-3 turbines) in Victoria <b>Monitoring of Worker’s Health</b></p> <ul style="list-style-type: none"> <li>• Partnership with key Occupational Health and Safety Stakeholder</li> <li>• Development of prospective audit program</li> </ul> <p><b>Retrospective analysis</b> of case reports of Tako Tsubo heart attacks from medical records <b>Prospective collection of clinical and biochemical data</b> from Tako Tsubo episodes and acute hypertensive crises from multiple sites</p>
-----	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		<b>EMF measurement</b>
13.	June 2011 <a href="http://www.nhmrc.gov.au/files/nhmrc/file/media/events/wind_farms_scientific_forum_speakers_june_2011.pdf">http://www.nhmrc.gov.au/files/nhmrc/file/media/events/wind_farms_scientific_forum_speakers_june_2011.pdf</a>	Sarah Laurie speaker bio for NHMRC scientific panel – describes her recognition of the need for research and meeting with researchers but does not mention her own research activities which appear to have been underway for approximately 7-8 months by June 2011, based on above references.
14.	25/7/2011 ABC Four Corners program 'Against the Wind' <a href="http://www.abc.net.au/4corners/content/2011/s3277568.htm">http://www.abc.net.au/4corners/content/2011/s3277568.htm</a>	<p>Extract from the program transcript:</p> <p>ANDREW FOWLER: What's your response to the assertion that many of the people that are ill have a problem that is psychosomatic, it's self-induced?</p> <p>DR SARAH LAURIE: Okay. Look I know that argument's there. However, <b>the interviews that I've had with affected residents and had with their treating doctors</b> suggest that there is in fact a very serious clinical problem, or problems, going on.</p> <p>ANDREW THOMSON, ACCIONA: Look I think the way Sarah Laurie has applied herself to this is deeply disturbing. I mean, it's deeply disturbing to us and the rest of the industry.</p> <p>She's a medical qualified person and she's travelling the country far and wide making all sorts of allegations about the sorts of health impacts that people should expect from wind farms, which includes nowadays things like diabetes, heart attacks.</p> <p>I mean, she's making claims that wind farms will cause these sorts of things in people and she's travelling around the country meeting with community groups spreading this message and in our view it's highly irresponsible. And in itself, it's causing mass hysteria.</p> <p>ANDREW FOWLER: Despite the criticism, Dr Laurie says she has seen enough anecdotal evidence to support her claims after talking to those affected.</p> <p>DR SARAH LAURIE: Some of the information that came out of those conversations really worried me in terms of not just the range of health problems that people were having, but also the severity of them.</p> <p>And a couple of things that were highlighted in those conversations were these episodes of acute hypertensive crisis, where people developed symptoms - often, you know suddenly...</p> <p>ANDREW FOWLER: That's blood pressure?</p> <p>DR SARAH LAURIE: Yes, blood pressure. So, remarkably elevated blood pressure -dangerously so. And the symptoms that one particular individual described - severe onset of sudden headache, accompanied by nausea, a sensation of his heart wanting to leap out of his chest, and just feeling as if he was going to- about to die</p>
15.	11/11/11	Extracts from the statement:

	<p>Statement to Scottish National Windfarm conference, Ayr Available from: <a href="http://www.epaw.org/events.php?lang=en&amp;article=uk3">http://www.epaw.org/events.php?lang=en&amp;article=uk3</a></p>	<p>“It quickly became clear to me that the health problems are real, serious and at times life threatening. “</p> <p>“I have interviewed over 90 people in Australia alone who have been seriously affected....”</p> <p>Refers to “...the burden of significant and at times life threatening psychiatric illness which these people have endured....”</p> <p>“As people’s symptoms always worsen with chronic cumulative exposure, it may be that even 10km is insufficient (sic) to protect health.”</p>
16.	<p>29 Nov 2011 Sarah Laurie presentation to Central Local Government Region of SA Available at: <a href="http://www.centralregion.sa.gov.au/literature_82343/Dr_Sarah_Laurie">www.centralregion.sa.gov.au/literature_82343/Dr_Sarah_Laurie</a> Link hosted at: <a href="http://www.centralregion.sa.gov.au/Default.aspx?SiteSearchID=1494&amp;PageID=6802793">http://www.centralregion.sa.gov.au/Default.aspx?SiteSearchID=1494&amp;PageID=6802793</a></p>	<p>Includes ‘research question’ and ‘recent field observations’ which includes information from following sources:</p> <ul style="list-style-type: none"> <li>• Interviews with affected residents</li> <li>• Medical records</li> <li>• Treating physicians</li> <li>• Personal health journals</li> <li>• Acoustic monitoring inside homes</li> </ul> <p>Summary of key findings</p> <ul style="list-style-type: none"> <li>• Over 90 people interviewed so far</li> <li>• Includes symptoms up to 10km away</li> <li>• Onset variable</li> <li>• Symptoms always worsen with increasing exposure over time</li> <li>• “Children, the elderly and some with disabilities appear more vulnerable”</li> </ul> <p>Pre-existing conditions which worsen with exposure:</p> <ul style="list-style-type: none"> <li>• Hypertension</li> <li>• Angina</li> <li>• Diabetes</li> <li>• Migraines</li> </ul> <p>List of other serious symptoms, including “at times life threatening”</p>
17.	<p>13 Dec 2011 Sarah Laurie/WF submissions to SA</p>	<p>Extracts from submission: Pg 3: “there have been a number of serious motor vehicle accidents in the Waterloo region since the wind development started, including fatalities, which the locals consider were contributed to by the serious cumulative</p>

	<p>statewide windfarms amendment list of submissions and PDFs of all submissions at: <a href="http://www.sa.gov.au/subject/Housing,+property+and+land/Building+and+development/Building+and+development+applications/Development+plans+and+their+use/Amendments+to+development+plans+proposed+by+the+minister/Statewide+wind+farms+amendment">http://www.sa.gov.au/subject/Housing,+property+and+land/Building+and+development/Building+and+development+applications/Development+plans+and+their+use/Amendments+to+development+plans+proposed+by+the+minister/Statewide+wind+farms+amendment</a></p> <p>P266A, Sarah Laurie: <a href="http://www.sa.gov.au/upload/franchise/Housing,%20property%20and%20land/PLG/StatewideWindFarmsDPA/Submissions/P266_Dr_Sarah_Laurie_A.pdf">http://www.sa.gov.au/upload/franchise/Housing,%20property%20and%20land/PLG/StatewideWindFarmsDPA/Submissions/P266_Dr_Sarah_Laurie_A.pdf</a></p>	<p>sleep deprivation which many people in that community are experiencing.”</p> <p>Pg 4: “To date I have had limited information about the specific observed effects on children in Australia, however what I have heard directly from the children, their parents and their teachers in Australia, their problems are identical to the problems which Dr Pierpont described in her study.”</p> <p>“On the basis of Dr Pierpont and Professor Bronzaft’s concerns, and <b>our field research</b> I am very concerned about the effects on the children’s health, cognition and learning, given that these proposed developments will be within 2km of the school premises.”</p> <p>Pg 5: “In my experience, having talked with over 90 people across Australia whose health has been seriously adversely impacted by wind turbine developments in South Australia, Victoria, New South Wales and Queensland, <b>the concerns about the visual impact of wind turbines is absolutely secondary to the noise pollution and the inaudible sound and vibration effects, which are directly causing their serious ill health, and in the worst circumstances is driving them out of their homes and off their farms.</b>”</p> <p>I have also been asked to and speak to many community groups around the country, who find out about a proposed wind development nearby, who learn of the adverse health effects, and of the work of the Waubra Foundation. The concerns of these groups are many, but very high on their list is the reported adverse health effects, and the issue of evidence based setback distances or noise guidelines and their enforcement.”</p>
18.	<p>March 2012 Waubra Foundation Health Assessment suggested guidelines <a href="http://www.windwise.org/uploads/6/1/2/5/6125822/healthassessment">http://www.windwise.org/uploads/6/1/2/5/6125822/healthassessment</a></p>	<p>Guidelines provided by the Waubra Foundation for information of treating medical practitioners. Extracts from the guidelines:</p> <p>Pg 1: “Information has been gleaned from relevant literature, together with field observations collected from affected residents, workers and visitors exposed to sound energy in the frequencies below 0-200Hz (including predominantly wind turbine sound and vibration energy), and from their medical records and treating doctors where that has been available”</p>

[suggestedguidelinesmar  
ch2012.pdf](#)

Pg 2: Includes background information for treating health practitioners about infrasound and low frequency noise which asserts that “the existence of a distinct pattern of symptoms known as ‘wind turbine syndrome’ occurring in some people correlating with acute exposure to low frequency noise sources, (including wind turbine noise), is not disputed by a key acoustics expert working for the wind industry” (Note: the expert quoted is Professor Geoffrey Leventhall, who has refuted Dr Laurie’s interpretation and use of his work to support her hypothesis as incorrect in the 2012 Federal Senate Inquiry into wind farms noise amendment bill).

Pg 3: “More recently, episodes of acute pathology related to adrenaline surges have been reported in both Ontario and Australia, and have included Tako Tsubo health attacks and Acute Hypertensive Crises (referenced to Feb 2011 Waubra Foundation submission to Senate Inquiry in to Wind Farms). The usual known causes have not been identified in these cases (eg phaeochromocytoma, sudden severe shock), but they have occurred when exposed to operating wind turbines.”

Page 4: “There are a range of pre-existing conditions, which are being reported by affected residents and some of their treating doctors to be exacerbated with chronic exposure to operating wind turbines. They follow the characteristic pattern of worsening with exposure, and returning back to “baseline” when away from home or when the wind turbines are turned off”.

Some of the conditions which have been reported in Australia to fit this pattern include exacerbations of pre-existing but stable:

- Angina and hypertension
- Diabetes
- Post traumatic stress disorder, depression and anxiety
- Inflammatory conditions such as arthritis, lupus and asthma

Some of these exacerbations have been sufficiently serious for their treating specialists (especially cardiologists) to strongly advise that these residents never go back home, unless the turbines are off.

Page 9: suggestions for pre construction health assessment – medical history and suggested physical and mental health assessments (blood pressure, cognitive, ECG, bloods – kidney and liver function, thyroid, blood glucose, cortisol)

Page 10: suggested advice for residents, including keeping health journals, self-monitoring of blood pressure, trial antioxidants. Also suggested post construction history, examination and investigations – includes blood pressure

		monitoring, sleep studies, blood testing, radiological testing including brain MRI.
19.	19/2/2012 Radio interview with Sarah Laurie on anti-wind energy website <a href="http://www.windwiseraudio.org/2012/02/the-word-from-waubra-a-conversation-with-dr-sarah-laurie-sun-feb-19-2012-0700pm/">http://www.windwiseraudio.org/2012/02/the-word-from-waubra-a-conversation-with-dr-sarah-laurie-sun-feb-19-2012-0700pm/</a>	12:57: "...that's really what I've been doing with acousticians in Australia and internationally what I've been doing, <b>sharing information, the clinical information that I'm gleaning from the residents and their doctors, and sharing it with people from other disciplines</b> so that we can get a multidisciplinary dialogue going on...."
20.	23/3/2012 Article 'Taking wind out of anti-wind argument' Available at: <a href="http://www.nowuc.com.au/2012/03/23/taking-wind-out-of-anti-turbine-argument/">http://www.nowuc.com.au/2012/03/23/taking-wind-out-of-anti-turbine-argument/</a>	Extracts from article: Dr. Laurie, who is not a non-practising doctor, says her research shows a pattern of symptoms which come from exposure to operating wind turbines.  "These symptoms go away when people leave their homes, or when the wind changes direction," she said "There is no doubt that chronic stress is playing a role in the symptoms of some people, but we suspect that it is in fact being directly caused by the sound energy itself."  During her work she interviewed 60 people living near wind turbines in South Australia who had experienced changes in their health since the establishment of the Waubra Wind Farm.
21.	7/9/12 Comments provided by Sarah Laurie to proposed Health Canada study on wind turbines Available at: <a href="http://www.windturbinesyndrome.com/wp-content/uploads/2012/09/Health-Canada-study-comments.pdf">http://www.windturbinesyndrome.com/wp-content/uploads/2012/09/Health-Canada-study-comments.pdf</a>	Sarah Laurie's submission contains the following statements:  Pg 1-2: "Our field research in the vicinity of wind developments and other facilities emitting infrasound and low frequency noise over the last 2 years has given us a good appreciation of the severity of the human health problems experienced, and of their relentless progress, unless sick people can remove themselves from that exposure".  The study references a number of other researchers and studies, then goes on to state:  Pg 3: "My own field research has confirmed Dr Pierpont's findings of susceptibility in these population groups. I have found that if people are chronically exposed, some pre-existing conditions worsen over time, such as hypertension, diabetes, angina, post traumatic stress disorder, to name a few. When these residents move away from their homes or have substantial periods of time away, their conditions start to normalise back to their baseline pre turbine

	<p>Link to document hosted at:  <a href="http://quixoteslaststand.com/2012/09/07/dr-sarah-lauries-submission-to-the-health-canada-study/">http://quixoteslaststand.com/2012/09/07/dr-sarah-lauries-submission-to-the-health-canada-study/</a></p>	<p>exposure.”</p> <p>Pg 7: “For too long, trained skilled experienced general physicians have not been involved in collecting the front line clinical data – and the results of those who have done so on their own initiative eg Dr Amanda Harry (UK), Dr David Iser, (Australia), Dr Nina Pierpont (USA), Dr Robert McMurtry, (Canada) and myself (Australia) have been universally ignored by the health authorities...</p> <p>All of us as trained clinicians have found that what engineers and medical sociologists have referred to as ‘annoyance’ is actually hiding a myriad of clinical pathology, much of it increasingly serious as exposure continues.”</p> <p>Pg 8: “Dr McMurtry and myself are both of the opinion that PTSD symptomatology is overrepresented in this population who have been chronically exposed to operating IWD”.</p> <p>Pg 17, Appendix 2 (SL qualifications):  “Dr Laurie’s work has included: recommendations about setback distances for new wind projects based upon her gathering of health impacts at multiple projects; encouraging acoustic measurements by independent acousticians, assisting researchers to connect with sick residents; making submissions to relevant authorities and politicians; <b>educating other medical practitioners; and where invited, educating concerned community groups and affected individuals.</b>”</p>
22.	<p>24/9/12  Letter from Sarah Laurie to NSW Dept of Planning dated 24 Sep 2012 with comments re planned Collector Wind Farm  Available at:  <a href="http://docs.wind-watch.org/Laurie-Collector.pdf">http://docs.wind-watch.org/Laurie-Collector.pdf</a></p> <p>Also</p>	<p>Page 3: “There are legitimate clinical concerns that large industrial wind turbines, such as those proposed by RATCH Australia for the Collector Wind Development, will directly cause this serious cardiac pathology with long term exposure to the infrasound and low frequency noise these turbines are emitting. “</p> <p>“Short term exposure to ILFN can result in serious ill health for those population subgroups who are susceptible, including the elderly, the young, and people with a history of motion sickness, migraines and inner ear pathology....”</p> <p>Pg 4: “I have found, both in Australia and in some locations internationally, that over time, people are being so adversely impacted by these wind developments out to distances of at least 10km, that in some instances they are forced to abandon their homes temporarily or permanently, or leave their homes to sleep in cars or elsewhere when their homes are downwind of turbines.”</p> <p>Pg 8: “Other rare supporting evidence of a primary physiological stress response is the histories of Tako Tsubo heart</p>

	<p><a href="http://docs.wind-watch.org/Laurie-Mt-Bodangora-WF-submission.pdf">http://docs.wind-watch.org/Laurie-Mt-Bodangora-WF-submission.pdf</a></p> <p>Laurie submission to NSW Health re Mt Bodangora wind farm dated 6 August 2012</p> <p>Second doc is shorter, but contains similar information to the Collector doc</p>	<p>attacks (Capital Wind development in NSW, Waubra wind development in Victoria, and a cluster in the Cumbo Valley in the Upper Hunter region of NSW) and acute hypertensive crises (Victoria and Ontario) which have occurred in the presence of known ILFN, but without the usual known clinical precipitants of a sudden emotional shock (death of a close relative) or an underlying pheochromocytoma respectively.”</p> <p>Pg 11: “...Dr Pierpont identified in her work that certain groups in the community were at increased risk of developing these vestibular dysfunction symptoms so well known to Professor Leventhall and they included people with a history of motion sickness, migraines, damage to the inner and...the very young, and the elderly....The Waubra Foundation’s field work has confirmed Dr Pierpont’s findings of these susceptibilities, with over 100 residents having provided information to us.”</p> <p>Pg 12: “...verbal reports from parents and teachers at the Waubra Primary school which they have requested me to keep confidential, and from parents elsewhere in Australia and internationally make me extremely concerned about the consequences for children with respect to both their health and learning.”</p> <p>“Daytime problems reported to me by parents and staff from Waubra School, and parents from Pacific Hydro’s Cape Bridgewater development, include irritable cranky behaviour which is noticeably absent when the turbines have been off for a few days, tired sleepy children, and exhausted parents, in addition to some of the problems listed above by Dr Pierpont”.</p>
23.	<p>25/7/2012</p> <p>Report regarding protest to Mitchell Shire Council about proposed Cherry Tree wind farm (Victoria).</p> <p>Available at:</p> <p><a href="http://www.newspaperhouse.com.au/index.php/news/item/237-wind-health-risks-refuted">http://www.newspaperhouse.com.au/index.php/news/item/237-wind-health-risks-refuted</a></p>	<p>“While most health professionals in the Mitchell Shire area refuse to comment on how wind turbines might impact on health, former South Australian GP Dr Sarah Laurie has been carrying out her own research.”</p>
24.	<p>28 October 2012</p> <p>Letter from Sarah Laurie to Simon Chapman</p>	<p>“...my knowledge of the problems, obtained directly from sick residents including turbine hosts and some of their treating doctors, rather than indirect sources, is in stark contrast.”</p>



	<p>(University of Sydney) Available at: <a href="http://docs.wind-watch.org/Laurie-to-Chapman.pdf">http://docs.wind-watch.org/Laurie-to-Chapman.pdf</a></p>	
25.	<p>14/11/12 Sarah Laurie evidence to Senate Inquiry into wind farm excessive noise amendment bill Available at: <a href="http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=committees%2Fcommsen%2Fc400af4f-682e-4745-a5c7-a550b12826a2%2F0003;query=Id%3A%22committees%2Fcommsen%2Fc400af4f-682e-4745-a5c7-a550b12826a2%2F0000%22">http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=committees%2Fcommsen%2Fc400af4f-682e-4745-a5c7-a550b12826a2%2F0003;query=Id%3A%22committees%2Fcommsen%2Fc400af4f-682e-4745-a5c7-a550b12826a2%2F0000%22</a></p>	<p>Extracts from testimony: Pg 22, Dr Laurie: (regarding work to assist residents affected by coal seam gas and gas fired generators): “I respond to requests for information and help predominantly from the residents but sometimes from treating health professionals – country GPs – who are desperate to try to help these sick people. I have provided information to those people...” Regarding wind farms: Pg 23, Dr Laurie: “I never go out and contact people. I always wait to be contacted”. Pg 23-24, Dr Laurie: “...I do not diagnose conditions because I am currently unregistered and you just do not do that as an unregistered practitioner. What I have done is listened to their stories. I have then talked to the treating doctors, where I have had permission from the sick people to do that. We have shared information. I have been focused on trying to understand what it is about the symptoms that these people are experiencing that could be related to whatever physical force is that might be causing it. Noise was something that we were very interested in early on, but there are other issues that have been raised. The perception of vibration through the ground is something that some residents report. Where that is reported the deterioration of symptoms is quite marked.”</p>
26.	<p>22 Nov 2012 List of symptoms provided to Senator Doug Cameron (questions on notice from Nov 2011 Senate Inquiry into excessive noise of wind farms amendment bill)</p>	<p>Quotes: Pg 1: “...I have provided details of the range of symptoms and health problems which have been reported to me by residents living near industrial wind turbines, which the residents and in some instances their treating doctors have told me are new since the wind development commenced operating, and which correlate with exposure to the operating wind development. I have also provided details of those conditions which the residents or their treating doctors have told me worsen with such exposure to operating wind turbines – ie the health conditions or symptoms were preexisting prior to the wind development commencing, but they consistently worsen with exposure and IMPROVE back to baseline when the resident is away from the turbines.”</p>

	<p>Available at:  <a href="https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=d79a3afa-f602-4dac-a270-69d1228b3463">https://senate.aph.gov.au/submissions/committees/viewdocument.aspx?id=d79a3afa-f602-4dac-a270-69d1228b3463</a></p>	<p>Pg 2: “Only the pathology and symptoms reported directly to me is included on this list. Most of my information has come from residents in Australia. It is included only when I have been satisfied that it appears to be correlating with the operating wind turbines (or other sources of ILFN &amp; V), ie there is a clear and consistent pattern in the resident’s account of the symptoms or observations which consistently varies with exposure, or is unmistakably linked to it if it was a discrete episode of illness, or where there is relevant research which supports the linking of the symptom or described problem with ILFN &amp; V.</p> <p>Pg 6-7: List of symptoms including: sleep disturbance, headache including migraine, tinnitus, ear pressure, balance problems, dizziness vertigo, nausea, visual blurring, irritability, panic episodes, tachycardia, arrhythmias, hypertension (reported by some to be considered unstable by treating doctors), Tako Tsubo heart attack in absence of usual emotional stressor, acute hypertensive crises, crescendo angina, intense anger, bleeding from ear, menstrual irregularities, disorders of thyroid metabolism, sleep disturbance, increased nocturnal urination.</p> <p>Pg 8: “There are residents who have reported to me that symptoms of their pre-existing PTSD (eg resulting from Vietnam War experiences or childhood sexual abuse) is triggered with exposure to operating wind turbines.”</p> <p>Pg 9: “...it is clear that some of the conditions being reported are potentially life threatening, in particular the acute cardiovascular pathology, and the serious mental health problems...”</p> <p>“I have had phone calls and emails from desperately sick people, who are being ignored by all the relevant responsible health and noise regulatory authorities, and who are have been acutely suicidal or who tell me they have made suicide pacts if things do not change for them, particularly if they cannot “get away from the noise and vibration and get a decent night’s sleep.”</p>
27.	<p>14/1/2013  Statement of Sarah Laurie to Victorian Civil and Administrative Appeals Tribunal  Planning &amp; Environment list for Cherry Tree Wind Farm  Available at:  <a href="http://docs.wind-">http://docs.wind-</a></p>	<p>Pg 16, para 64: “I have now listened to detailed symptom reports from over one hundred and twenty rural residents in Australia affected by operating wind turbines, and have a good understanding of the range of pathology, the individual variability in expression of symptoms, and the pattern of inevitable deterioration with ongoing exposure once people become sensitised.”</p> <p>Pg 16, para 65: My knowledge has also been informed by discussions with some of the treating health practitioners, being general practitioners, sleep physicians, psychologists, occupational physicians, and researchers and acoustic colleagues working in this area internationally in both clinical practice and research,...”</p> <p>Pg 29, para 115: “...Dr Pierpont’s findings are consistent with the clinical reports I have been given my Australian</p>

[watch.org/Cherry-Tree-VCAT-Sarah-Laurie.pdf](http://www.vcat.vic.gov.au/watch.org/Cherry-Tree-VCAT-Sarah-Laurie.pdf)

residents...”

Pg 32, para 124: “...in my experience from staying and visiting these people...”