Chapter 16 – Property devaluation

Where ERM mostly[1] duplicates the flawed section on property prices from its Biala wind farm EIS and "improves" it by referencing the thoroughly discredited Urbis 2016.

It is recommended, therefore, that my submission on property devaluation for the Biala wind farm[2] (Appendix A attached), and my submission to the Department of Planning on the Urbis study (Appendix B) be read first.
It is significant that the Urbis study, included as part of the draft version of the new Wind Energy Guideline, was omitted from the final version (December 2016)

The lead Jupiter consultant ERM had an opportunity in the Biala Response to Submissions to rebut the arguments I made about the deficiencies of the section on property devaluation but didn't. To repeat the same incorrect or misleading statements in the Jupiter EIS having this prior knowledge surely requires departmental action.

In the Biala Response to Submissions, ERM did admit:

> "Some studies have considered 'lifestyle' properties, which have been flagged as being potentially more vulnerable to property value impacts, which is likely to be attributable to lifestyle and amenity components being of high value to such property owners."

We agree. Whoever wrote that cant look forward to an extended career in the industry. Of course, this was not repeated in the Jupiter EIS.

For the Jupiter wind farm, surrounded by hundreds of lifestyle properties, ERM can only conclude:

> "Based on the findings of the studies outlined above, it is not anticipated that the Project would have a significant negative impact on property values in the vicinity of the Project."

That conclusion is incorrect.

The comments in the Biala submission and the recommendations are relevant to the Jupiter property devaluation section, so I wont repeat them.

Assuming you have absorbed the trivial Urbis study and the equally flawed property devaluation section of the Biala EIS, let us touch on a few differences in the equivalent Jupiter EIS section.

The Urbis study

ERM appears to have thrown the paragraphs from Section 4 of the Urbis study, Findings, up in the air and rewrote them in the order they landed. The nonsense still remains, just reordered. The Urbis study adds nothing to their case. The key finding relating to lifestyle properties was this:

> "there is limited available sales data to make a conclusive finding relating to value impacts

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[1] In the Biala EIS, ERM, after feverishly telling us that wind farms have no impact on property prices, went on to say:

> "The proponent will consult with local and regional realtors periodically in order to identify trends or changes associated with wind farm impacted properties to determine a correlation between the project and property values in the region"

To which we asked the obvious. WHY?
In the Jupiter EIS, it has been omitted. To which we ask the obvious. WHY?

[2] Reading the Henderson and Horning study again, I was struck by this statement: "The marketing agents for the Lake Birubi property indicated the existing wind farm did not have an impact on the marketing although most buyers were aware of the proposed Crookwell 2 development"
Are they confirming that real estate agents don't tell prospective purchasers about a planned wind farm? We'd believe that.

on residential or lifestyle properties located close to wind farm turbines"

There was only limited available data because of the study methodology chosen by Urbis.
Also, if ERM had read further into the study, they would have found what I did – suspect data, as outlined in Appendix B.

The Planning Assessment Commission.

ERM added another quote in support of it case:

> "Further, in the NSW Planning Assessment Commission Determination Report for the Collector Wind Farm Project (December 2013), the Commission also acknowledged the results of the same study "*which suggested that a property's underlying land use may affect the property's sensitivity to price impacts rather than impacts from development of adjoining land or intrusions on the landscape*"
> and that "*the study found that properties in rural / agricultural areas appeared to be the least likely to be affected by a wind farm with no reductions in value for rural properties evident at of the wind farms investigated. The study also reported that residential properties in townships with distant views of a wind farm (more than 2-3 km away), also appeared to not have been negatively affected by a wind farm*."

The first paragraph could be describing lifestyle properties.
The second paragraph conveniently mentions rural properties (broad acre farms) and township properties but conveniently omits lifestyle properties.

I remind ERM that, more recently, the same Planning Assessment Commission recommended for the Crudine Ridge wind farm that the developer, if requested, acquire 6 properties within 1.9 kms to 2.9 kms of the nearest turbine. Why would they do that if they didn't believe those six properties have been or will be devalued?

Of course, their may well be 50 properties surrounding Jupiter turbines that qualify for similar acquisition rights.

Aside from that ticklish topic, another key issue of lifestyle property devaluation is the huge impact it has on any genuine assessment of the economic impacts of a wind farm, an issue developers in general and ERM in particular will not face.

In Chapter 5, we detailed the investment a typical lifestyler brings to the area. There is clear evidence available of non-associated property owners halting all investment, from new homes to sheds to agricultural improvements, whilst the threat of the Jupiter wind farm remains. Submissions to other wind farm DAs/enquiries reinforce that evidence.

Any economic study of the benefits and impacts of a wind farm that omits the impact on lifestyle property prices, both directly and through flow-on effects is totally misleading. ERM knows this but still goes ahead.

On past history, the Department will ignore the economic issues of property devaluation, thus continuing its pro-developer stance on this matter.

Then again they could surprise me.

Appendix A

A Review of the Property Devaluation section of the Biala EIS.

Overview

Newtricity's consultant, ERM, effectively acknowledges that lifestyle properties are devalued by wind farms in their vicinity and then proceeds to cite a small, selected group of mainly discredited studies in an attempt to claim there is no adverse effect.

Two of the studies cited by ERM (Hives, 2008; Dupont and Etherington, 2009, for NSW Valuer General) actually provide evidence of wind farms devaluing lifestyle properties, but that was totally ignored by ERM.

This surely is a case of providing misleading information to the Department. Either it was done intentionally or through incompetence. In either case it demonstrates that the Department cannot rely on **any** information provided by ERM, whether about property devaluation or any other matter.

The Department should reject the EIS and tell Newtricity not be come back until it has used a consultant the Department can rely upon to not present false or misleading claims

Detailed Analysis

This section (15.3.3) of the EIS was written by Environmental Resources Management (ERM).

ERM supports our contention in little over one page, specifically:

Lifestyle properties are devalued by the presence of Industrial Wind Farms.

In the Biala EIS, on numerous occasions, in similar terms, ERM tells us how:

> **"The remoteness of the WTGs has assisted in reducing the level of visual impact on residential dwellings in proximity to the PA"** (Project Area)

ERM therefore agrees that residential dwellings are impacted visually by WTGs which can only result in an impact on property prices and that's without considering the noise impacts.

With their inadvertent support, they join all those entities (the Department, the PAC etc) that contend that lifestyle properties are devalued in the presence of wind farms.

They start and finish the section 15.3.3 **"Decrease in Property Values"** with reference to the NSW Valuer General's study much beloved by pro-wind farm consultants as it has a few statements ideal for cherry picking.

To start,

Duponts and Etherington (2009) Preliminary Assessment of the Impact of Wind Farms on Surrounding Land Values in Australia: NSW Department of Lands, Prepared for NSW Valuer General, August 2009.	The study assessed eight wind farms across NSW and Victoria and based on the analysis, no quantifiable effect on property values was identified. Although a small number of rural residential properties (lifestyle properties) reported lower than expected property sales prices, uncertainty remains as to whether this was a reflection of the wind farm or other market factors. Furthermore, no evidence produced from the study suggested that the underlying land use of the property was affected (i.e. agriculture) and no decline in sale prices were evident for rural properties located in nearby townships with views of the wind farm.

To summarise:
The study is now 6 years old.
Capital wind farm was one of the eight, but no properties surrounding Capital were included in the study. Similarly for Cape Bridgewater.
In total, 45 properties comprising broad acre farms, properties in rural townships and lifestyle properties were chosen for their proximity to the remaining 6 wind farms.

Of the lifestyle properties, 4 showed value decreases of 6%, 24%, 25% and 27%.

The only reason that the study authors introduced uncertainty into the argument was that they were pitching (unsuccessfully) for a more in-depth study. After all, they are real estate agents.

Statements in this study were made that the data did not support. eg,

> **"However, in most locations there were other lifestyle properties which showed no reduction in value."**

This statement, which the data does not support, morphed within the document to:

> **"There were some possible reductions in sales prices identified in some locations alongside properties whose value appeared not to be affected"**

which was even more unsupported by the data.

ERM then finishes the one page review of property devaluation by quoting from the Yass Valley recommendation by the NSW Department of Planning.

> *"The Department acknowledges that, in relation to impacts on land values, the NSW Valuer-General commissioned a report on the impacts of wind farms on land values in Australia. The report states as its principal finding, based on analysis of previous studies and its own investigations, that the majority of wind farms erected in Australia appear to have had no quantifiable effect on land values."*

Firstly, the Department has no in-house specialists on the topic, but whoever wrote it knows how to use words in the best Departmental fashion. They didn't "agree" with the findings, they "acknowledged" them.

Also, notice the multiple uses of the term "land values". The NSW Valuer General is only interested in "land values" ie. the Unimproved Capital Value. Local lifestyle properties will normally have a recently constructed residence, built to take advantage of the terrain and the view, with no screen plantings to destroy that view.

Besides, that statement was certainly not the "principal finding". From page 3 of the report in the Executive Summary:

> **"The main finding was that the wind farms do not appear to have negatively affected property values in most cases. Forty (40) of the 45 sales investigated did not show any reductions in value. Five (5) properties were found to have lower than expected sale prices (based on a statistical analysis). While these small number of price reductions correlate with the construction of a wind farm further work is needed to confirm the extent to which these were due to the wind farm or if other factors may have been involved."**

As said previously, ignore the last sentence. Aside from the fact that the comment that "other factors might be involved" could be said about any of the 45 properties, including ones whose prices were said not to be reduced, Bob Dupont is a real estate salesman and can't resist a pitch.

The Department's statement actually comes from the conclusion on Page 55 but as the rest of the conclusion is at variance with the data in the report, why should you believe any of it. The first part of the conclusion reads:

> **"From our analysis of previous studies and our own investigations, the majority of wind farms erected in Australia appear to have had no quantifiable effect on land values. A relatively small number of "lifestyle" type properties located very close (less than 500 metres) to wind farms in Victoria were found to have lower than expected sale prices (based on a statistical analysis), and it is possible that audio and visual aspects of wind farms contributed to this."**

From the data in the report, the 4 lifestyle properties were 400 metres, 2.1 kms, 5 kms and 6 kms from the nearest turbine. So 3 of the 4 affected lifestyle properties were much more than 500 metres from the relevant wind farm but the report published a statement factually, and drastically, contrary to its own data.

In a subsequent presentation to the CCC for the Coopers Gap Wind farm (June 20, 2013), Bob Dupont extended this to 1000 metres, but it is still wrong based on his data. The last part of that sentence gives a real estate agent's scientific opinion on visual and noise impacts.
I twice questioned parts of this report by email, including the "500 metres" statement, with Bob Dupont but he declined to rebut the issues raised.

Remember that the NSW Wind Farm Guidelines (draft) under the section headed **Property Values** require:

> **"Relevant considerations may include (but are not limited to):**
> **for the area including whether the area has been identified for future subdivision**
> **- relevant studies and credible research on wind farms and property values**
> **- whether other impacts such as noise and visual impacts are considered to be within acceptable limits"**
> (Page 22)

NOTE: In most research, the visual impact factor is studied eg. can you see them or not and how far away are they. ERM has provided references to studies below that do that. This is the preferred wind industry model. The other key issue that communities have with respect to property devaluation is the impact of noise and consequently health. ERM has provided little information on the noise/devaluation model, even though the NSW Guidelines require it as above, primarily because the wind industry avoids it like the plague. Hoen et al does investigate a "nuisance stigma" within which audible noise could be included.

ERM, in response, states (Page 15-8) what it has provided:

> *Table 15-1* provides a summary of studies undertaken for Australia and internationally on the effects of wind farms on property values.

No they haven't. They cherry picked 5 of the many available. In no way did they provide "a summary of studies undertaken for Australia and internationally…"

So, in between these two references to the Valuer General's study, ERM quoted the following 5 "relevant studies and credible research":

1. Henderson and Horning (2006)

Henderson and Horning (2006) *Land Value Impact of Wind Farm Development: Crookwell NSW.*	The study analysed 78 property sales spanning a 15 year period from 1990 to 2006 within a 6 km viewshed of the Crookwell Wind Farm. No reductions in properties were reported as part of the assessment.

Their inadvertent blooper "No reductions in properties were reported…", is prophetic. Very few broad acre farms in the district have been subdivided into lifestyle properties as a result of the wind farm activity in the Crookwell region.
ERM personnel did not read the report.
Nowhere in the report does it mention a sample of 78. Maybe someone has counted up the properties in the appendix and everyone has used it from then on. Unfortunately if so, the counter doubled up and still got it wrong. There were 58 property sales in the Crookwell area in the study period within 6km of the site. They did not **analyse** them all. From the 58, they extracted 16 for detailed study (on which they based their conclusions).
How did they choose them? The report does not tell us.
Additionally:
- Crookwell wind farm opened in 1998. It was the first in NSW. Little research had been done at that stage on health/sound issues. Wind farms were cute.
- The study was done in 2006 – it is now 9 years old.
- It is written by real estate agents for a renewable energy company (Taurus Energy - now Epuron)
- 8 turbines, 600 kW each, 67 metres tall (45 M tower plus 44 M diam blades.) Compare this to the Biala WTGs at 185 metres. Crookwell turbines at 67 metres are much smaller than the **towers** of Biala (110 metres). The swept area of the blades (the bit that visually impacts us the most) for Biala turbines is nearly 12 times those at Crookwell.
Dinky turbines in a dinky wind farm.
- The wind farm is on a single property with an absentee owner. The surrounding land is "used primarily for stock grazing", so this is a study about broad acre agricultural land. The wind farm was proposed before surrounding rural properties had a chance to be subdivided into lifestyle allotments
- There is nothing scientific about the study at all. The authors are exploiting their valuing skill using the "before and after" and "comparable sales" methods. They specifically excluded "Multiple Regression Analysis" due to sample size which poses the question:
What statistical method was used here:

> **"We then compare the affected and non affected sales over time to determine if a correlation exists between the Wind farm development and land value movements."**

Or was it wet finger in the air correlation.

There is nothing in the study that gives any detailed methodology on how they got from the detailed sales data to the conclusions. Only one sale in the detailed sample is to a "tree changer" Others were to locals.

NOTE: A real estate agent (who no doubt moonlights as an acoustic consultant) did a site look-see and decided noise wasn't a factor.

"Site investigations indicate that shadow effects and noise were not noticeable on adjoining properties except a concessional allotment in the north eastern corner of the subject." sic

2. Hives, A 2008.

Hives (2008) *Wind Farms: The Local Experience*, Presentation at the Australian Property Institute (API) Country Conference.	The study assessed the 12 individual property sales surrounding the Waubra Wind Farm near Ballarat, NSW. The study concluded that: • Landowners involved in the Project experienced an increase in land value; • rural property values were unaffected; and • lifestyle properties in the vicinity of the township were most vulnerable, however the reported decline in sale prices may have been driven by other market factors.

You shouldn't quote studies that can't be found online at the time of writing.
So, ERM make the case with three conclusions above:

1. Obvious but irrelevant
2. The comment relates to **town, rural-residential and lifestyle blocks and farming land.** (12 in total -see below).
3. We agree, but there we go again with the "decline could be due to other factors" fallback strategy.

However, from an unpublished study "A Tale of Two Windy Cities: Public Attitudes Towards Wind Farm Development" Bond 2009:

> **"A property valuer in Victoria has been studying the impact of wind farms on property values. Hives (2008) states that the more intrusive the wind turbines in "lifestyle" terms, the bigger the impact on price. In some costal** (sic) **areas of Gippsland with high lifestyle value, property values had fallen by as much as a third.**
> **However, in other areas where farming was the focus the impact on land value had been insignificant and in cases where there was an income stream from towers, the land price actually increased. At Waubra near Ballarat, where a third of the proposed 128 wind turbines have now been built, Hives said that the impact on land values of town, rural-residential and lifestyle blocks and farming land had been mixed. But this analysis was based on only twelve properties. He does point out that with the market being os** (sic) **strong in recent years that the effect may be masked."**

And from the Valuer General's study, much favoured by ERM:

> **"Hives (2008) concluded that lifestyle values had the greatest potential to be affected as a large part of their value is typically derived from the aesthetic qualities of the surrounding environment."**

3. Hoen et al 2009

Hoen, B; Wiser, R; Cappers, P; Thayer, M & Sethi, G (2009) *The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis*, Ernest Orlando Lawrence Berkeley Laboratory, December 2009.	The assessment involved 7,500 sales of family homes within 16 km of 24 wind farms across nine states within the United States of America (USA). No evidence of widespread property value impacts in communities surrounding wind energy facilities was reported.

What ERM didn't tell us.
From the study:

> ***"3.2.1. Tabular Data***

> **Berkeley Lab obtained tabular transaction data from participating counties containing 7,459 "valid" transactions of single family residential homes, on less than 25 acres…"**

Footnote 28 says:

> **"Single family residences on more than 25 acres were considered to be likely candidates for alternative uses, such as agricultural and recreational, which could have an influence on sales price that was outside of the capabilities of the model to estimate. Because all records were for parcels that contained a residence, the model did not contain any "land-only" transactions. Further, none of the transactions provided for this research were for parcels on which a turbine was located."**

So, the study specifically excludes the type of lifestyle property near the Biala wind farm

This was further reduced to 15 acres (6 hectares) in the follow-on study. Hoen et al 2013

> **"The 15 acre screen was used because of a desire to exclude from the sample any transaction of property that might be hosting a wind turbine, and therefore directly benefitting from the turbine's presence (which might then increase property values)."**

A very readable critique of this study is available at
http://www.bpwtag.ca/hoen-critique.pdf
This critique also provides links to a number of other negative reviews. For instance,
Lisa Linowes of the Industrial Wind Action Group – better known as windaction.org. She had this to say about her critique:

> **"We worked closely with an appraiser experienced in regression analysis and hedonics in developing our comments. Given the flaws in Hoen's approach, we are confident that a qualified appraiser with experience in regression techniques and the problems of hedonic analysis will effectively counter Hoen's conclusion. You may be interested to know that neither Hoen or the others who were part of his research team have any experience in real estate appraisals or the correct application of regression techniques for determining house value."**

4. Canning, G & Simmons, L (2010)

Canning, G & Simmons, L (2010) *Wind Energy Study - Effect on Real Estate Values in the Municipality of Chatham-Kent, Ontario,* Report prepared for the Canadian Wind Energy Association, February 2010.	The study in Ontario, Canada reported that where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties reported lower sale prices than similar residential properties within the same area that were outside of the viewshed of a wind turbine.

This study has not to our knowledge been used before in a NSW EIS. The first thing to find out is who commissioned the study. You guessed it, the wind industry, namely CanWEA (the Canadian Wind Energy Association, Canada's equivalent of our very own Clean Energy Council). That in itself does not indicate bias, but let us be aware of who pays the bills.
This study has fatal flaws, among them being:
- it only considers the impact of visibility
- even then this is narrowed to "can you see one or more turbines" Yes or No.
- distance from a turbine was not considered to be a studiable factor. In fact some properties in the control group were closer to the turbines than the study group properties.
- the extraordinary small sample (83, of which the study group numbered 20) makes regression analysis very suspect.
- sales were only considered which happened after the wind farm was constructed
- at the time of the study another 165 turbines had been approved over a number of projects (but not built). Maybe the control group's values had already been impacted by these wind farms.

- properties could meet the yes/no criteria for the control group if **"the view was sheltered either by bush lots or tree rows"**
- "All of the comparable sales were inspected from the roadway"

From table 1, where "lotac" is the "lot size in acres", you can see that these rural residential properties were not as we are used to (typically 100 acres). The study excluded properties in hamlets or towns.

id	sp	bsmntfin	gar	loc	cond	watinf	age	lotac	hsesf.00s	viewshed3
1	96000	none	garage	3	3	1	30	0.373	17.85	avg viz
3	124000	none	garage	1	3	1	49	0.744	10.73	avg viz
4	79000	none	garage	1	3	1	44	0.625	7.92	no viz
5	174000	none	garage	1	5	1	97	0.920	23.26	no viz
6	99500	none	garage	1	3	1	98	0.497	12.70	no viz
7	120000	none	none	1	3	1	82	1.311	15.14	no viz

5. Renewable Energy Project (2003)

Renewable Energy Project (REPP) (2003) *The Effect of Wind Development on Local Property Values,* Renewable Energy Policy Project, May 2003 (US Government).	More than 25,000 records of property sales across the USA in the vicinity of wind farms were analysed. The study concluded that there was no statistical evidence that property values within the viewshed of a wind farm, were affected by wind farm developments.

Things are getting desperate if you have to use a 12 year old study.
This is the landmark (and unique) study that concluded that property prices went **UP** around wind farms. The paper has been widely discredited especially on its statistical methods. Tellingly, from the review by Hugh Kemper, June 1, 2004:
"It is noteworthy that this study does not answer the basic question of how wind turbines affect property values. George Sterzinger (primary author), executive director of Renewable Energy Policy Project (REPP), admitted as much in response to critics who stressed that the study contains no proof that wind farms were the reason for the changes in property values: 'We have no idea'…noting REPP did not have enough time or money to answer that question. (Cape Cod Times 20/06/03)".

That's it. They led with their best 6. It would be hard to pick a weaker group of studies to support their case. Then ERM had the gall to say:

> **"A review of <u>available</u> literature did not find a correlation between declining property values in proximity to wind farm developments" (my underlining)**

<u>Conclusion</u>

An appalling piece of scholarship by ERM which does not attempt to answer the requirements of the Guidelines through the DGRs.
As most entities know, eg
- The Department (why would they recommend purchase of unsaleable properties)
- Developers (why would they purchase unsaleable properties)
- The Valuer General (why would they lower rateable valuations)
- Some members of the PAC (why would they implore the Department to resolve the issue)
- The real estate industry
- The current owners and potential buyers

and so on,

properties, especially lifestyle properties, are devalued by the presence of wind farms and more particularly through visual and noise pollution.

Inadvertantly, ERM has proved that, despite the quality of the submission.

And finally, having feverishly told us that wind farms have no impact on property prices, ERM states (Page 15.12):

> the Proponent will consult with local and regional realtors periodically in order to identify trends or changes associated with wind farm impacted properties to determine a correlation between the Project and property values in the region.

Why?

Recommendations:

The Department should reject the EIS and tell Newtricity not be come back until it has used a consultant the Department can rely upon to not present false or misleading claims

If the Jupiter EIS, currently being reviewed by the Department, contains a property devaluation section as poor as this one it should be deemed not ready for public review.

That the Department accepts the proponents offer (should a resubmitted section on property devaluation still contain it) to do an ongoing study of the impact of wind farms on property values in the region (including Gullen Range, Capital etc) and builds the requirement into the conditions of approval including:

- to make it easy on the proponent, that only lifestyle properties need be studied.
- that the Department, not Newtricity, commission the researcher to do the work, which must cover all sales **and** attempted sales.
- that all data and results are published.
- that the vendors of any residences shown to be devalued by the Biala wind farm be compensated.

Appendix B

A submission relating to the document:
Review of the Impact of Wind Farms on Property Values, July 2016, Urbis

My first ever communication with the Department of Planning was on the subject of devaluation of lifestyle properties in the presence of wind farms.
My first ever question to a wind farm developer elicited the answer: "I don't believe that wind farms impact property prices"
My interest was captured.
Over the years it has been a major research interest but has declined recently as the Department of Planning continues to hide behind an 8 year old judgement of Preston CJ of the Land and Environment Court instead of advising their Minister of required legislative changes.
In the Department's recent determination for the Sapphire wind farm, modification 1, they sum up their attitude succinctly:

> "The Department notes that the proposed project is a permissible land use under the relevant statutory instruments and is able to be undertaken generally in accordance with the applicable guidelines. Consequently, the Department does not believe that potential impacts on property values and potential future development of surrounding land is a determinative issue for the application."

I rarely comment on the subject nowadays unless someone writes some nonsense. Urbis Pty Ltd, the Department of Planning (DPE) who has published this document and the NSW Office of Environment and Heritage (OEH) who commissioned it have collectively obliged.

In summary, the Urbis study is the worst one I have ever seen on the topic both from Australia and overseas.

You cannot make any judgements on the impact on NSW property values from six sales in NSW (nor from any in Victoria), at least **two** of which are related party transactions and are therefore worthless as a data source to start with.

I don't plan to repeat most of what I have written before. You can start with the Rye Park wind farm submission 150819 and work backwards. I will respond in detail to the first EIS that references Urbis 2016, or heaven forbid should the Department of Planning be tempted to do so.

If the

> "Department does not believe that potential impacts on property values and potential future development of surrounding land is a determinative issue for the application.",

why was this study commissioned and why is it published as part of the new Wind Energy Framework?
The only documents on exhibition that reference property devaluation are the Urbis study itself and the deceptive and misleading section of the Frequently Asked Questions.(see further) All other references in the key departmental documents have been excised. What was a key determinant in the 2011 guidelines has been expunged. I do recall some 2011 wind industry submissions recommending this course of action.
I understand (but do not accept) the reasons for this but, as devaluation of their properties is a major issue with residents surrounding wind farms, and as every exhibition will attract multiple submissions on the subject, the Department needs to address it, even if it is to look us in the eye and tell us our concerns are immaterial and irrelevant. Community concern was once again strongly reinforced in the DPE community meetings discussing the Wind Energy Framework.

The Study - Overview

Why was the sample restricted to properties less than 2 kilometres from a wind farm?
Not only does it reduce your sample size to the point of statistical irrelevance, it makes all the overseas and local studies referenced for comparison (more) irrelevant as well. The "Valuer General's Study" did not have this restriction.
The sample was further reduced by the choice of methodology, "same property resale analysis". The authors of the "Valuer General's Study" 2009 (regularly referenced by Urbis) ran into the same problem and expanded their study to include a "matched pairs" analysis which enabled them to evaluate more sales in the period they chose (after the wind farm was commissioned). Matched pairs analysis requires a strong valuing skill and extensive field experience, which the authors, Duponts, had. The advantage of the Urbis approach is that it can be done at a desk. The skill required to analyse data on a PC is widely available.
The last paragraph of the Urbis approach (page 32) gives the game away:

> **"The variation in sales price growth is then discussed, combined with the specific factors of the property that may have resulted in a negative impact."**

Translation: If we find a negative impact, we rationalize it away. We don't examine further if the result shows no impact as that was what we expected when we started the study.

(The Department of Planning, if specifying this study under the same parameters, would probably indicate that the **residence** should be within 2kms of a **turbine**. OE&H specifies (we assume), 2kms between the **property** and the **wind farm.** Inconsistencies don't make for realistic comparisons.)

Literature Review.

Urbis firstly advises:

> "The study has included a literature review of available studies and papers which consider the impact of wind farms on property values. For completeness we have also included the literature review undertaken as part of the 2009 NSW Valuer-General's assessment of the impact of wind farms on property values in Section B.1. This is a direct transcription of the literature review as it appeared in that study."

The Urbis study does **not** include a review of available studies. It reviews a small selection of the available studies and papers.
Also, a direct transcription of the studies from the "2009 NSW Valuer-General's assessment" repeats the errors and irrelevancies contained in the original report. Once again, much of this has been documented and is available on the Major Project Register. Start with submission 128542 for the Biala wind farm.
Reminds me of "stocking fillers"

Urbis then offers a selection (six) of more recent studies that would appear to be more representative in that some of them do report findings of property devaluation. Conveniently though, Urbis manages to find limitations with some that did find devaluation (Gibbons, 2014, Heintzelman et al, 2014) or unjustified explanations such as for Sunak, Y and Madlener, 2014.

> "The impact of visual amenity is complex however, with the angle, distance and size of the wind farm playing into the potential negative impact on a residential amenity."

.
A complete analysis of the relevance of all six studies to the impact on property values in NSW (especially lifestyle properties) is beyond the scope of this submission. Once again I will wait for a developer to reference one or more in an EIS.

The "Case Studies"

(of specific local properties, not to be confused with the six studies of property devaluation mentioned above)

Ignoring Victorian properties, in total for NSW, given the sampling and methodology restrictions mentioned above, Urbis managed to find 6 properties across 3 wind farms to study. (Capital and Woodlawn wind farms were counted as one)

Capital/Woodlawn – 2 properties
Gullen Range – 3 properties
Taralga – 1 property

Every other operating NSW wind farm was excluded due to "insufficient local sales", which we can only assume means zero qualifying sales around these wind farms.
That surely confirms the parameters set for the study were invalid and/or the methodology was unsuitable.

Taralga can immediately be discarded, and should not have been included in the report, as the one property near the Taralga wind farm was sold to a related party as Urbis advises.

> "Upon further investigation, it appears that the 2013 sale was to Taralga Wind Farm Nominees No. 1 Pty Ltd, the owner of the adjoining wind farm."

With respect to Gullen Range – Property 1 – 131 Storriers Lane, Bannister.
Didn't it occur to Urbis or anyone in DPE or OEH that $644,721 was a strange property sale price?
Hint - Google *644721 Storrier*
Scroll past the property sales sites and you come to:
http://www.jrpp.nsw.gov.au/DevelopmentRegister/tabid/62/ctl/view/mid/424/JRPP_ID/2584/language/en-AU/Default.aspx
What does your fellow department tell you?
131 Storriers Lane, Bannister is the site of the Gullen Range Solar Farm. Doesn't that tell you that the June, 2015 sale price (and most likely the May, 2014 sale price), on which Urbis partially concludes that wind farms may not impact property values might be compromised.
It also must be discarded.

Property 3 near Gullen Range (123 Prices Lane) is outside the parameters Urbis had set previously.

> "The second sale occurred after planning approval was granted and before the start of construction"

Is the Department sure it is a rural residence? The 2001 sale is described as "vacant land". The 2010 sale photographs show considerable industrial improvements, but no house.[3]
I'd discard this one as well.

With respect to property 1, Capital/Woodlawn, 311 Taylors Creek Rd .
I wonder how a 16 hectare vacant block is categorized. Hardly residential or lifestyle or grazing.
As part of the approval, Taylors Creek Rd was upgraded. It is now the best road in the shire. That might have also influenced the price.

Cant comment on property 2, 145 Taylors Creek Rd except to say I was amused by:

> "View of wind farm potentially shielded by trees" Check it out on Google Maps

[3] http://www.allhomes.com.au/ah/nsw/sale-residential/123-prices-lane-bannister-southern-tablelands/14139311230911?lid=167437920&pid=1393112309

What is the point of the "agent interviews". Real Estate Agents rank slightly lower than wind farm developers when it comes to expressing self interest. Duponts, when preparing the "Valuer General's Study" also asked local agents. One agent near the Capital/Woodlawn complex, when asked why lifestyle properties on Taylors Creek Road had not sold, having been on the market for an extended period said:

> "the reason these properties had not sold was primarily optimistic pricing."

That is normally the copout of the unsuccessful salesman.
Maybe the real reasons were (and remain) the diminished pool of potential purchasers and no buyers prepared to pay an unaffected market price for lifestyle properties close to wind farms.

Misleading and deceptive conclusions by the Department of Planning

The Urbis report concluded:[4]

> "Based on the outcome of these research techniques, it is our expert opinion that windfarms may not significantly impact rural properties used for agricultural purposes."
>
> "There is limited available sales data to make a conclusive finding relating to value impacts on residential or lifestyle properties located close to wind farm turbines, noting that wind farms in NSW have been constructed in predominantly rural areas."

What an insipid and uninspiring finding by Urbis, but their data did not allow anything stronger

The Department of Planning, in its only published response to the Urbis study said in the FAQs: [5]

What about property values?

- The NSW Government acknowledges that potential impacts on property values from wind energy development are a concern to some members of the community.
- An independent report commissioned by the NSW Office of Environment and Heritage entitled Review of the Impact of Wind Farms on Property Values (Urbis 2016), concludes that the available data does not demonstrate that wind farms significantly impact the property values of rural properties used for agricultural purposes.
- The report is available on the Department's website along with the other Framework documents, or the Office of Environment and Heritage's website.
- The findings of this latest report are consistent with those of a 2009 study, *Preliminary Assessment of the Impact of Wind Farms on Surrounding Land Values in Australia*, undertaken by the NSW Valuer General.

The Department's FAQs heading flippantly summarises the community concerns. I look forward to the FAQ that asks "What about the Department of Planning?"
After receiving hundreds of submissions over the years on the topic of property devaluation, all the Department, having no view of its own, is prepared to say is that "the NSW Government acknowledges" some members of the community have a concern. Departmental senior management heard once again in the recent Framework community meetings the first hand experiences of property owners. The Urbis study documents and places value on the sweeping anecdotal evidence from real estate agents, but not specific anecdotal evidence from the impacted owners.

Then the FAQs state that the Urbis study "concludes that the available data does not demonstrate that wind farms significantly impact the property values of rural properties used for agricultural purposes."
- Firstly, there is a major difference between "does not" and "may not". A deception.

[4] Executive Summary Page (i)
[5] Wind Energy Framework FAQs, Page 3

- Secondly, you omit the second part of the Urbis conclusion relating to residential and lifestyle properties. Deception by omission.
- Thirdly, this has never been about the devaluation of broad acre farmland, or indeed residential properties in rural villages, towns and cities. In the main, the owners of the devalued properties are lifestylers. Messrs Kitto and Young have heard them first hand. eg the Gullen Range Mod 1 PAC meeting and are aware, for that wind farm and others, how and why they mysteriously become associated properties.
Written as above, an inexperienced reader might conclude that the Department is saying that wind farms do not devalue all types of surrounding properties. Misleading.

You do not need to be a Licensed Valuer to conclude the obvious. Once again I ask Secretary McNally and Departmental management who have stood on the terrace of a property in Roseview Rd to swear on a stack of Assessments that the value of that property has not already been devalued by overlooking the wind measurement tower even before the Jupiter EIS has been submitted, with more devaluation to come.

Please advise how you conclude that the findings of the Urbis report are consistent with the 2009 "Valuer General's" study, especially as they relate to lifestyle properties. Invalid conclusion.

By saying the 2009 study was "undertaken by the NSW Valuer General" instead of "undertaken for", you are implying an air of authority that it does not deserve. Misleading.

(The versions of the Urbis study on the two departmental web sites differ in authorship, creation and modification dates, size and pages. Probably incidental.)

More stocking fillers.

I'm surprised that anyone would quote the CSIRO study, seeing that it has been so thoroughly debunked.[6]

Urbis, in a study on property values, tells us that research (Community Attitudes to Renewable Energy in NSW) conducted by Newspoll in 2014 on behalf of OEH found broad support for the use of renewable energy across NSW.
This research was carried out over the telephone. Most of the lifestylers I know do not have a landline which excludes them from the survey. Rural landlines tend to be in rural cities and towns which skews the survey population. The questionnaire was not included in the published study, but it would appear that no question was asked whether the respondent lived on a farm or in a rural city or something in between.
When asked to name types of renewable energy, only 64% of NSW adults in the survey mentioned wind.
No comment.
Urbis, in a study on property values, **didn't** tell us that in answer to:

> "Question J1b/J2. What impact would a wind farm 1 to 2 kilometres from where you live have on the property values .....of your local area?"

54% said the wind farm would have a negative impact on property values.

The "Valuer General's Study"

The Urbis review references the "Valuer General's Study" quite often.
As they note the data in that study showed value decreases for four lifestyle properties, actually 6%, 24%, 25% and 27%.

[6] Fatal defects in the Liverpool Range EA. Submission by Dr Michael Crawford

It is easy to be critical of the conclusions of the "Valuer General's Study" as many are not based on the data. Urbis, like many others, falls into the trap of repeating a conclusion that hugely impacts the "Valuer General's Study" study and seriously misleads readers of the Urbis study:

> "The only properties where a possible effect was observed were lifestyle properties in Victoria within 500 metres of a wind farm, some of which were found to have lower than expected land values"[7]

From the data in the report, the 4 lifestyle properties that showed clear devaluations were 400 metres, 2.1 kms, 5 kms and 6 kms from the nearest turbine. So 3 of the 4 affected lifestyle properties were much more than 500 metres from the relevant wind farm but the "Valuer General's Study" published a statement factually, and drastically, contrary to its own data which Urbis has dutifully repeated.

In a subsequent presentation to the CCC for the Coopers Gap Wind farm (June 20, 2013), Bob Dupont, the study author, extended this to one kilometre[8], but it is still wrong based on his data. I twice questioned some of the conclusions of the "Valuer General's Study" report by email, including the "500 metres" statement, with Mr Dupont but he declined to rebut the issues raised.

Finally, Urbis misleadingly takes the following from the "Valuer General's Study":

> "further work is needed to confirm the extent to which these [price reductions] were due to the wind farm or if other factors may have been involved."

and converts it to:

> "For the minority of transactions that showed a fall in value, other factors may have been involved."

Equally Urbis could have said that other factors may have been involved for transactions that <u>didn't</u> show a fall in value, but they didn't. (By the way, a "fall in value" is not what you are studying, but an increase or decrease in value different to what was expected.)

Despite the conclusions Urbis conjured up, there is widespread anecdotal evidence that lifestyle properties are devalued in the presence of wind farms in NSW and bodies from the Valuer General's Department, the Planning Assessment Commission and the Department of Planning on down know it.

The PAC in its recent decision approving the Crudine Ridge wind farm, where up to six highly impacted residents were offered acquisition rights, said:

> "Within 3 months of receiving a written request from a landowner with acquisition rights, the Applicant shall make a binding written offer to the landowner based on:
> (a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the development [9]

The PAC is therefore of the belief that the current market value is affected by the development.

Urbis, 2016 is a totally unconvincing study commissioned by a department (OEH) that does not understand the issues and supported and published by a department (DPE) whose management does. The Urbis study adds nothing to the knowledge base.

One can only assume that was the intent. Despite many requests, noone is prepared to do a study on the impact of wind farms on lifestyle property values. The obvious results of that study would be highly inconvenient.

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[7] The actual sentence in the "Valuer General's Study" , Page 55, reads:
"A relatively small number of "lifestyle" type properties located very close (less than 500 metres) to wind farms in Victoria were found to have lower than expected sale prices…."

[8] https://www.agl.com.au/-/media/AGL/About-AGL/Documents/How-We-Source-Energy/Wind-Community/Coopers-Gap-Wind-Farm/Community-Updates/2013/June/Presentation-about-Property-Values-and-Wind-Farms---20-June-2013.pdf?la=en

[9] Clause 2, Schedule 4, Crudine Ridge Conditions of Consent.

Once again, we would have been most willing to review this section of the “new wind farm guidelines” in detail before publication.

Update

Under an informal request to OEH for information, I was given the “Consultancy Services Brief”. If followed, it may have produced a worthwhile study. The brief did not stipulate the methodology to be used or the definition of a “surrounding property”.