

Review of the Visual Impact Assessment Bulletin

If the Framework is allowed to stand, Visual Impact will be minimized and no future NSW wind farm application will be rejected on Visual Impact grounds.

At a time when other jurisdictions¹ are specifying minimum setback distances, NSW goes the other way and will judge all NSW wind farms, particularly the Visual Impact of individual turbines on a “merit based” approach. Communities have no faith that the Department of Planning is capable of a genuine merit based assessment as all previous wind farm applications and modifications have been meritoriously approved.

This VI Bulletin confirms that the approval culture for wind farms in the Department is unchanged.

The message these guidelines give to wind farm developers is clear:

Make the case that the area is of low scenic quality and don't put a turbine closer than one kilometre to a non-associated residence.

Approved but undeveloped wind farms with consent conditions that probably would not be imposed under these guidelines may well be challenged. eg Crudine Ridge voluntary acquisition. (the PAC determined that up to six properties should be offered acquisition rights due to high Visual Impacts. Under this Bulletin, for three of them CR18, CR24 and CR33, the suggested mitigation measure would be “**Consider Screening**”, the opposite end of the mitigation spectrum).

In summary, the VI Bulletin is just another attempt by “experts” commissioned by the Department to come up with an assessment matrix, which they have. Strangely, for this one, for any given wind farm, **the only variable in the assessment matrix is distance.** Only a few months ago, the Department was supporting the Refined Assessment Matrix (RAM) which was based on multiple variable factors.

Not surprisingly, even if unintentional, this assessment of Visual Impact (VI) on a non-associated rural residence has been written to strongly favour the developer.

Most developers should be pleased for VI to be assessed under the methods described in the Bulletin. (The Department will have great trouble excluding projects currently before them from being assessed under the new “guidelines”).

Have you wondered why, apart from a couple of initial knee-jerk reactions from the industry on day zero or before, overall there has been no criticism from the key players and their supporters. The message went round. Not a peep out of RenewEconomy. However, the Clean Energy Council (CEC) “will continue to work closely with the government on the framework during the public exhibition period.”² As they no doubt did before the exhibition period started.

¹ eg. Poland June 9, 2016. <https://www.wind-watch.org/alerts/2016/06/10/polish-parliament-adopts-mandatory-setback-10-times-turbine-height-for-industrial-wind-turbines/>

(Queensland tried to implement a minimum 1500 metre setback distance earlier this year, but the CEC and other industry players talked them out of it.)

² <https://www.cleanenergycouncil.org.au/news/2016/August/nsw-draft-wind-farm-guidelines-stokes.html>

A researched commentary dated August 1, 2016. The start date of the public exhibition period was August 3, 2016.

The Department has not provided VI Assessment guidelines, it has stipulated the methodology.

As the Department has now taken over responsibility for the measurement and assessment of Visual Impact, the attention of this community and others, whose expertise in this area grows by the day, will be directed towards the Department, its Secretary, our local parliamentary representatives, the Minister and the Premier instead of the developers, as is currently the case. In effect, the public comment period starts the day the PEA is released and never stops. We welcome the challenge.

The Minister said:

“We’ve consulted widely, including with key environmental groups, industry, other states and the Australian National Wind Farms Commissioner, to better understand the key issues in developing this framework,”³

All except the affected communities.⁴

This review and submission is from a rural residential perspective as, mostly, that is where the visual impact falls.

The Bulletin

In a document entitled Visual Impact Assessment, there is far too much concentration on Landscape and not enough on Visual Impact. We all know why.

- it keeps the landscape architects gainfully employed,
- it clouds the analysis and
- it allows the overall assessment of Visual Impact to be lowered.

This Bulletin, in addition to its application to Modifications to turbine configuration and size, should also apply to Modifications seeking an extension of time in which to commence construction. This will pick up dormant approved projects such as Capital 2 which if commenced today would be built on the shores of a rapidly filling Lake George with a landscape that should therefore be defined per the Bulletin as having :”high scenic quality”.

Of course, any developer of a wind farm currently in the planning process who uses any part of the new guidelines to their advantage pre-determination, immediately becomes open to assessment on all matters in the new guidelines, as well as the 2011 guidelines.

Stage 1 – the design phase

I welcome the attempt by the Department to require a more rigorous assessment at the scoping and design phase.

³ <http://www.planning.nsw.gov.au/~media/Files/DPE/Media-Releases/2016/August/01082016-new-wind-energy-framework-to-give-certainty.ashx>

⁴ I was present at a hastily convened meeting with Department management on July 24, 2016 when the VI Bulletin was already set in stone. No information on, or even the existence of, Stage 2, the Assessment phase, was shared. It was if someone in the Department had asked whether the Framework had been bounced off that noisy Jupiter group.

The major flaw in the wind farm planning process is still there though; the Department can only advise on unsuitability. That advice, of course, should be clearly, uniquely and strongly stated in the covering document to the EARs. If the Department's view is that the project site is unsuitable, then it should say so, even if the developer's lawyers accuse you of pre-judging the project, as they have and will. Otherwise the whole early assessment process is pointless.

Communities will welcome the early knowledge of turbine positioning and their impacts on surrounding residences. Our prospective developer fought till the last minute on the release of this information, only supplying turbine coordinates over 20 months after the issuance of SEARs and only then in the mistaken belief that EIS version one would be accepted by the Department. The Preliminary Environmental Assessment (PEA) phase will not be onerous for those planning wind farms in the right place and genuinely planning to develop the wind farm (as opposed to those opportunists planning to on-sell the approval). They have to do it anyway. Why not early?

Initial Community Consultation.

I don't anticipate strong opposition to the community consultation section of the PEA from the developers, apart from the moans about the expense because, as written, they know they can game it.

Re the "landscape survey", they choose and pay the "independent" consultant, they write the questions, they choose the sample, they will not publish the data and they will selectively analyse. It will be a survey of landscape physical features excluding our opinions of the living landscape. The history is there to see, as well as our demolition of some of the proffered surveys.⁵ The first survey done under this Bulletin will be no better. In a study of community perceptions of landscape, the survey participants should be confined to those in (or regular visitors to) the viewshed. Appreciating that is not a point on which I will gain universal agreement, at a minimum, the survey must include a representative sample of viewshed residents allowing for a valid statistical analysis of that segment, statistical comparison to other segments and publication of that portion of the overall sample.

Also, if the developer is going to the trouble of doing a survey, include a few questions on the local community's support for the project (not on climate change or renewables in general)

Additionally:

The questionnaire, methodology and all data must be published as part of the PEA.

The survey can only be done after the community being sampled is well informed about the project.

Having gone through this survey process, we know what the answer will be, regardless of community input, because you have told us in table 4 on page 20.⁶ Putting on my landscape architect's hat, the physical scenic quality attributes for a typical wind farm in our part of the South East Highlands will be:

- Rounded hills, ridges and peaks which are not visually dominant
- Broad shallow valleys

⁵ For example, see submission 110847, Liverpool Range wind farm "Fatal defects in Liverpool Range WF EA. http://majorprojects.planning.nsw.gov.au/?action=view_submission&job_id=6696&submission_id=110847

⁶ See Appendix B for Tables 4, 5, 6, 7 and 8

- Extensive areas of similar vegetation, such as grasslands with very limited variation in colour and texture
- Vegetative stands that exhibit a range of size, form, colour, texture and spacing
- Waterforms absent

Giving an overall rating for Scenic Quality from Table 4 of LOW/MODERATE.

This rating comes in handy for the developers when we later proceed to Table 7.

Having given the developer a suggested scenic quality classification, do you think they will come up with anything more onerous when they develop the equivalent for their wind farm location? The more creative will manage to come up quite easily with a scenic quality of **LOW**, which the Department will have great trouble disputing, given their guidance in the Bulletin. Of course, the Department has published some supportive gems:

“Based on its assessment, the Department is satisfied the project is unlikely to have significant visual impacts at a broad landscape level. This primarily because the scenic value of the landscape is not considered to be of State or regional significance.”⁷

Preliminary Screening

Don’t you love the hypocrisy of the wind industry? Having spent years trotting out their tame landscape architects with their various scientific matrices which prove that Visual Impact on rural residences is moderate or less, the minute the Department attempts to do something similar, we get with righteous indignation from Ed Mounsey, chief operating officer for CWP Renewables (Sapphire WF), that “the visual impact is subjective”⁸ or from someone who for some reason wanted to remain anonymous: That person said the visual assessment plan was “trying to quantify the un-quantifiable”⁹

Members of the Jupiter community in meetings with Department senior management responsible for this Visual Impact Assessment Bulletin advised that in their opinion, attempts to develop an agreed quantitative method for assessing Visual Impact would be futile.

The developers finally agree with us.

Some already did:

“Qualitative and subjective components of a visual assessment, such as determining the existing landscape character and degree of visual modification, cannot be measured against a standardized process.”¹⁰

If you can’t do it for a solar farm which soars 3.5 metres into the air, what chance have you got for a wind farm?

The Australian Institute of Landscape Architects, in a recent submission on the Queensland “Draft Guidelines” said:

“We consider that demonstrating full ‘compliance’ with visual amenity codes and policies is likely to be impossible in the case of wind farms, due to the nature of visual impacts which cannot be empirically ‘measured’ but need assessment by a qualified professional”¹¹

⁷ Crudine Ridge Assessment, Page 3

⁸ The Land. August 2, 2016. <http://www.theland.com.au/story/4070148/nsw-wind-farmer-developer-warns-over-visual-impact-rules/>

⁹ Sydney Morning Herald, July 28, 2016. <http://www.smh.com.au/environment/climate-change/tilting-against-windmills-industry-doubts-nsw-support-for-wind-farms-20160728-gqfhmp.html>

¹⁰ Riverina Solar Farm EIS. http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7482

It's a win/win for landscape architects. They try and measure quantitatively, but if that fails their expertise is required for a qualitative assessment.

It would be hard to argue with the concept of Preliminary screening tool 1.¹² Height is influential, distance more so, but:

- The developers will argue that the line must be much lower.
- Conversely, every local community will be able to show you real examples of why the line should be much higher (see later).
- Should it be a line or a curve? Is the slope correct? Should it be a line or a range?

The scales suggest a degree of precision that may not be supportable.

Of course, you will be asked to justify and support, with referenced research, your choices by both sides. Can you?

The Multiple Wind Turbine Tool (Preliminary Screening Tool 2) will also highlight to prospective developers the suitability or otherwise of their planned wind farm. We have argued previously that the definition of cumulative impact should be as proposed in the Bulletin and apply intra-wind farm. (The proposed Jupiter wind farm is, in effect 3 wind farms, with some clusters further away from each other as Woodlawn is from Capital)

A badly sited wind farm, of course, will “fail” under both preliminary screening tools, with many residences suffering a severe Visual Impact due to distance and horizontal extent, but if some Spanish property developer is paying your salary, why would you give up. The Department can't stop you at any stage.

Unfortunately, when it comes to Visual Impact Assessment in Stage 2, the impact implied in screening tool 2 gets watered down (Page 27). All the developer has to do is to “provide detailed justification” (undefined).

“Public Interest”, “helping to meet the RET or the Paris Accord or the immediate Federal target (20% by 2020)” or “reduce greenhouse gasses” are not acceptable detailed justifications any more.

GIS Analysis

What could we expect as part of the PEA out of this? We support the (hi-resolution) images showing all turbines and other infrastructure and every residence out to at least the far middleground (8 kms as intimated in Figure 4). The GPS coordinates for all turbines, residences, substation and site entrances must also be provided (UNSECURED) in the PEA. We appreciate that all this is preliminary. No doubt a developer truly interested in community consultation will keep the community updated as the project changes.

SEARs

Communities will welcome the emphasis the Department applies to community consultation as part of the Request for SEARs, particularly:

“the results of community consultation undertaken” (emphasis added)

¹¹ http://www.aila.org.au/imis_prod/documents/AILA/QLD/Windfarm%20response%20FINAL.pdf Page 3.

November 19, 2015

¹² Please see Appendix A

Communities and the Department are too often told how many uninformative newsletters were produced or equally unenlightening meetings the developer held. Now you will learn what the local community really thinks of the wind farm, positive or negative.

The Department inadvertently shows its biases by choosing photographs that minimize the Visual Impact of wind farms or hide behind vegetation.

Should a residential viewpoint be at those locations shown in the former (pages 1 and 5) it would not be triggered by primary preliminary screening tool 1 and probably not by the second preliminary screening tool.

The latter photograph (page 8) would fail the Department's description of a representative viewpoint (point 4, page 25) especially as there are clearly adjacent viewpoints free from this screening vegetation

Stage 2 – Assessment and Determination

(This whole stage was disappointingly not addressed by senior Department representatives at the Crookwell community meeting on September 1, 2016 nor at a private meeting I attended on July 24, 2016 when the exhibition version of the VI Bulletin was set in stone).

Having got to Stage 1, developers are unlikely to retire gracefully, despite what the Department says at that preliminary assessment stage.

Baseline study inputs

It is not clear what much of this has to do with Visual Impact Assessment other than to enrich the coffers of fellow VI consultants. Reviewing the Baseline study inputs, Table 1, page 10, it would appear that the only factor that flows through to the assessment phase is "Scenic Quality" (wind turbine locations and maximum turbine height being a given for a particular wind farm)

What is the connection between "Wind resource categories" and Visual Impact Assessment?

Surely a developer would not propose a site with inadequate wind resources?

Then again.

Visual Influence Zones

Table 7 is a key input to the assessment of Visual Impacts. It is unreasonable to therefore say: "This table is based on extensive research undertaken by the US Bureau of Land Management and others, and modified as suitable for practical application to the wind energy industry in NSW."

Surely you can be more specific.

Otherwise it just sounds like the usual subjective opinion of a different landscape architect.

We'll comment further on Tables 4, 5, 6 and 7 when we get to them.

Figure 3 doesn't contribute much to the Bulletin in my opinion. Figure 4 even less.

Visual Performance Evaluation

Visual Performance Evaluation would appear to be a new term thought up for this Bulletin. The creativity of VI specialists.

Objectives 1 (Visual Magnitude) and 2 (Landscape Scenic Integrity) will be addressed later.
Objective 3, Key Features Disruption.

What is a key feature to an urban based VI specialist is vastly different to that experienced by a rural residential viewer.

One man's Three Sisters is another man's canola crop as they say.

See later for further comments on Objective 4, Multiple wind turbine effects.

Objective 5, Shadow Flicker and Blade Glint. We have previously pointed out in detail¹³ that the NSW standard for Shadow Flicker is approximately 3 times as lenient as in other jurisdictions eg Germany, Denmark and Queensland. (and in the draft National guidelines)

Objective 6, Aviation hazard lighting.

"The lights should be fully shielded from the view of any dwelling within"
Within what?

Assessment methodology

Re:

"The Department will assess and confirm an overall acceptability of landscape and visual impacts by reviewing the visual processes outlined above, and balancing these matters along with other environmental, social and economic considerations, including the public interest"

NO! The VI is the VI is the VI

The above quotation belongs in the main part of the new Draft Guidelines instead of in the VI Bulletin. I can't find a similar paragraph in the Noise Bulletin.

And the rest of the paragraph:

"This would include the extent of the impacts, for example, the number of people impacted and the severity of the impact is also a relevant consideration."

This whole paragraph reads as if it was an afterthought in case the real Visual Impact was too severe and a fallback strategy was needed for approval. It reads like a suggested modification from the Clean Energy Council. No doubt, every EIS produced under this Framework will have an extensive section based on this paragraph explaining how, on balance, the overall VI is Moderate or less.

We go round in circles.

Mitigation

We welcome the recognition, buried deep in Appendix 3, that vegetative screening, especially for recently built residences that take advantage of the view is neither reasonable nor acceptable (or effective). You are supported by many landscape professionals and the PAC that, for example, wrote:

¹³ See Rye Park Submission 150973

http://majorprojects.planning.nsw.gov.au/?action=view_submission&job_id=6693&submission_id=150973

“The proposed vegetation screening may in some instances be ultimately sufficient to reduce/block the view when it has achieved adequate height, but the vegetation screen itself will change the outlook and vista of the residence. In other cases, the screen will not be adequate to mitigate the imposing view of a close-by turbine”,¹⁴

Re turbine colour, surely it is now recognized how difficult it is to blend a turbine into a background that varies from dark to light and is in shadow or full sun. Just stipulate an acceptable range of turbine shades and let's move on. We appreciate that mitigation methods acceptable to developers are scarce and therefore understand why it remains on the list.

The VI Bulletin, however, misses out 2 key mitigation options.

Firstly, removal of not just individual or groups of turbines, but moving the whole wind farm
Secondly, under the generalization:

“In some circumstances, it may be appropriate for proponents and landholders to negotiate agreements regarding the management of visual impacts”,

you need, in my opinion, to be specific and include:

- Realistic Benefit Sharing arrangements, and
- Property acquisition rights (we welcome the inclusion of “voluntary acquisition” further on in the Determination section. However, it is not just a PAC responsibility as part of the determination process, it is a recommendation that should be utilized in the Department's Assessment)

These are mitigation options available to the Department today, and should be documented in the mitigation section.

Determination and conditions of consent

As well as considering the Department's recommendations and the developer's VIA, hopefully the PAC will also consider the input from the community, both at the PAC meeting and through written submissions to that meeting!

Also, I thought the PAC was an independent decision making body, so I am surprised to see in this section of the document what they **will** do and how they **will** do it.

Appendix 1

Landscape, landscape, landscape and more landscape, most of which nothing is done with, once analysed.

I note that Wind Energy is one of eight landscape character options but rural-residential is not. And a waterfall is a key landscape feature. Not where most of us come from.

Scenic quality class

We must look at Scenic Quality Class again as it is a key driver of Visual Impact under the proposed methodology.

As described earlier, Table 4 will come as a delight to developers who have to describe their broad area in terms of Landforms, Vegetation and Water Forms under three headings of scenic

¹⁴ NSW Planning Assessment Commission Determination Report, Gullen Range Wind Farm Project (MP07_0118), Upper Lachlan Shire LGA, 2 October 2014 p. 6

quality (High, Medium and Low). The Bulletin uses the south east highlands, where many NSW wind farms are located, as the guide.

What strikes you is the description of the landscape that attracts a HIGH scenic quality rating:

Isolated peaks, escarpments, large areas of distinct rock outcrops, steep sided valley gorges, eucalypt forest, visually prominent lakes, reservoirs, rivers, streams and swamps.

Not exactly NSW wind farm country is it? No wind farm will be built in areas remotely resembling the above and therefore a Scenic quality class of HIGH is unattainable.

Having stipulated in Stage 1, that the views of the local community on scenic quality are key and must be established, the Department ignores its own advice and take the views of a theoretician as a key part of the assessment matrix.

With a HIGH scenic quality rating unattainable, you are left with descriptors that will result in a scenic quality somewhere between MODERATE and LOW.

In the words of your average wind farm developer or their legal team. "I know it's only guidance Madam Secretary, but I can't improve on what you have written"

A creative landscaper could do a lot with the following sentence as well.

"Low Scenic Quality LSUs would generally be those that display a lack of terrain, vegetative or waterform diversity, along with being relatively lacking in visually outstanding/significant or notable features."

The problem is that the evaluation of Scenic Quality is the subjective judgement of an urban landscaper which is at odds with the subjective judgement of the person looking at it every day. To repeat, this Bulletin started off with the necessity to get the opinions of the local community, but you have documented in the Bulletin what you believe they will say, and in the hands of a consultant wishing to please their client, that outcome is highly likely.

Scenic Quality is one of four equally weighted factors used in this Bulletin to assess Visual Magnitude and its impact along with Sensitivity, Distance Zone and Distance (again).

Sensitivity

The authors of this Bulletin state in Table 5, without justification, that the sensitivity from Rural Residences is MODERATE.

They are at odds with many of their colleagues in the landscape industry. Green Bean Design, respected by developers and the Department, rates rural residences as HIGH without question. For example, see the recent Rye Park LVIA¹⁵ where residential properties are rated "HIGHEST SENSITIVITY", above all other viewpoint categories.

Clouston Associates rate the sensitivity of a rural residential landscape character zone as HIGH¹⁶ The VI Bulletin rates rural villages as having a high sensitivity, even though the major view of the residents may be of the wall of the house next door or the pub across the road.

Perhaps the Department and its consultants would like to share the research that is behind Table 5.

¹⁵ http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6693 Page 51

¹⁶ Biala wind farm LVIA. Page 31

So far, two (Scenic quality and Sensitivity) of the four matrix categories are MODERATE or less.

You can see where this is going.

When I read the comments from Kane Thornton (CEO, Clean Energy Council), who, officially or unofficially, had the details of the Framework and specifically the VI Bulletin days earlier than we serfs, I knew the local communities were in trouble:

“He said that while the proposed guidelines placed "more rigour" around the visual amenity of projects, they seemed "quite workable"”¹⁷

Visibilty Distance Zones

“Table 6 indicates nine distance zones based on visibility research conducted by Sullivan et al (2012), Bishop (2002), Shang and Bishop (1999) and others.”

Table 6 did not come from the first cited Sullivan et al. I did not check the other two as wind farm papers or articles 14 and 17 years old are rarely as relevant. By saying that the table is “based” on the referenced papers and others, the implication is that the authors took the bits from a number of papers and articles and came up with something that is just an opinion of another consultant. For instance, the choice of the distance boundary between Far Foreground and Near Middleground is crucial to the final VI Assessment outcome. The consultants and the Department must justify Table 6.

From Page 4 in the Abstract of the first cited Sullivan et al paper comes:

“A conservative interpretation suggests that for such [wind] facilities, an appropriate radius for visual impact analyses would be 48 km (30 mi), that the facilities would be unlikely to be missed by casual observers at up to 32 km (20 mi), and that **the facilities could be major sources of visual contrast at up to 16 km (10 mi)**” (emphasis added)

Keep this in mind when we review Table 8.

Table 7 assigns a code (called a Visual Influence Zone – VIZ) to combinations of the foregoing three impact factors (Scenic quality, Sensitivity and Visibility Distance Zones). Once again it is the subjective judgement of a landscaper that reflects their preexisting biases, or the perceived needs of their client, whether they mean to or not. This judgement is also critical to the ultimate Visual Impact Assessment.

Most of the page it takes up is irrelevant to the most affected rural residential viewpoints. As discussed previously, a High Scenic quality class is unattainable, so column 1 is superfluous. The Department has decided (incorrectly in my and the broader landscape industry’s opinion) that rural residential viewpoints are Level 2, so all the rectangles in Levels 1 and 3 viewpoints can be eliminated. Under this Bulletin, developers will avoid proposing sites with non-associated residences at 1km or less. Table 8, as we shall see, advises that any non-associated residence

¹⁷ Australian Financial Review. Creation Date: Sunday July 31, 2016 (prior to public release, but Kane Thornton had the details, had absorbed them and had discussed them with the journalist).
<http://www.afr.com/business/energy/electricity/nsw-wind-farmer-developer-warns-over-visual-impact-rules-20160731-gqi01r>

further out than 4 km (for 200 metre turbines) can be ignored. That invalidates Rows 1,2,5,6,7 and 8 from Level 2 viewpoints.

So you are left with 4 rectangles out of the original 72 (please refer to Appendix B, Page 17), one coded VIZ1 and three coded VIZ2.

(the same 4 rectangles, one coded VIZ1, the rest VIZ2, remain even if you raise the sensitivity level of a rural residence to High. Can't be right can it? Explain that without admitting bias, inadvertent or otherwise, towards developers)

Whether a combination of factors is coded VIZ1 or VIZ2 is fundamentally important. Can the landscapers and the Department justify the logic behind their VIZ1-3 coding decisions in Table 7?

They need to.

(This is not a scientific evaluation, but in Table 7, ignoring the last row, there are 21 chances of landing on a High Impact VIZ1 rectangle and 33 chances of landing on a Moderate Impact VIZ2 rectangle.)

Finally, at the end we come to the:

Visual Impact Assessment

The preamble does contain some important explanations, eg, those defining a representative viewpoint (which would have invalidated most of the Biala representative photomontages), but developers will be drawn to Figure 5 in Table 8 which combines the previously described three impact factors together with distance.

Before we comment on Table 8, Figure 5, remember that at this stage the input into this figure is set in stone for a particular rural residence.

The Scenic Quality is moderate or less.

The Sensitivity is moderate

The Visual Influence Zone is decided, probably VIZ2 (there's that moderate descriptor again).

Note: As Scenic Quality and Sensitivity are set, the Visual Influence Zone is a proxy for distance.

Table 8, Figure 5.

What started off as a device to measure the potential visual impacts of a wind farm at PEA time (admirable) becomes the key determinant for VI measurement and assessment (brave).

As such the Department is **really** going to have to justify the placing of **the black line** and the **green line** to both sets of protagonists.

Having previously quoted from the Sullivan et al paper originally cited in the Bulletin by the Department, where turbines out to 16 kms "**could be major sources of visual contrast**", please justify how no Visual Impact of consequence will be experienced outside 2km for 150 metre turbines. Not long ago, Assessments and Determinations were made allowing residents out to 5 kms to request screening. In the absence of such justification, the green line is clearly in the wrong place.

As all other VI assessment factors are decided and for any particular wind farm the maximum turbine height is decided, the only variable is distance.

So what you are saying is that, apart from distance, all residences suffer the same Visual Impact (assuming the turbines, 1 or more, can be seen of course)

Being the author of the previously proffered Gardner VI matrix (can you see the bloody things and how close are they), I'm not arguing, but I'm not sure you meant to agree with me.

I will not attempt to give my detailed views in this summary. The key flaw is that you give the developer the equally weighted options of avoiding the positioning of turbines **OR** justifying that positioning. We know which choice the developer will take first up. Why would they not? Removing a few turbines in a later compromise is always a fallback strategy. We have no faith that the Department will take the correct merit based stance and even if they do, whether the arbitrary nature of most of this Bulletin allows them to defend it under pressure.

Let me assign some arbitrary descriptors to the three zones (below the black line, between the lines and above the green line), for arguments sake; HIGH VI, MODERATE VI and LOW VI. (If you prefer, we could use the Department's implied descriptors Justify, Screen or Ignore) Are you really saying that, for a 170 metre turbine (Jupiter), that the VI for a residence with panoramic views of the wind farm situated 3.5 kms from the nearest turbine in the cluster will suffer low VI, and is to be ignored as far as mitigation is concerned?

Table 8, Figure 5 evaluates VIZ (which is a proxy for distance) with distance. Interesting. The worst matrix so far and the Department owns it.

How many non-associated residences below the black line will it take before the Department finds a way to reject a DA? 30? 40? 50? 100?

What justification arguments would you accept for turbines below the black line to remain in the project?

What justification arguments would you accept for turbines 1000 metres from non-associated residences?

The Clean Energy Council in successfully watering down the proposed 1500 metre minimum setback in the Draft Queensland Guidelines argued that:

“Separation distances based on amenity and impacts should be assessed in a scientific manner.....”¹⁸

If the Department persists with a policy with no minimum setbacks, then it must agree with the peak industry body that justifications should be scientifically based.

Let us face it. This Bulletin has just postulated another Refined Assessment Matrix (RAM), albeit somewhat simpler. It suffers from all the issues previously highlighted with RAM Version 1 and all other variants thought up by landscape architects and similar consultants.

- matrix factors carry equal weight
 - matrix factors range from 3 to 9 options
 - It is subjective and unquantifiable
- etc etc. We've documented it all before to the Department.

¹⁸ <https://www.cleanenergycouncil.org.au/dam/cec/policy-and-advocacy/submissions/wind/submission-qld-draft-wind-farm-state-code.pdf>

Let me offer another crumb of “ground truthing” (how I hate that phrase), a residence in Roseview Rd, Tarago

I choose this residence as Department senior management have been there, some on more than one occasion, but it equally applies to the other residences along the Roseview escarpment and elsewhere.

At the time of writing, the residence is 2549 metres from the nearest planned turbine. For turbines 170 metres tall as proposed, that is above the line on screening tool 1. There are no other wind farms visible. Woodlawn is on the other side of the range over 6 kms away, so screening tool 2 is not in play. So the first issue is that you won’t hear about this residence at PEA time as developers don’t volunteer information that is not requested.

Then we come to VI assessment.

Let us assume that the Scenic Quality Class is Low/Moderate as previously suggested. Let’s call it Moderate (the developer will give that latitude most reluctantly)

The Sensitivity Level from Table 5 is 2

The Distance of view from Table 6 is Near Middleground

Therefore the Visual Influence Zone from Table 7 is VIZ2

From Table 8, Figure 5, the recommended Objective for this residence is:

Consider screening between the green line and the black line.

Please ask those departmental staff who have been to this residence if they agree with the suitability of this assessment.

Please do not come back and say “It’s only a guide”. Developers don’t read that sentence.

The rest of Table 8 consists of “Objectives”, “shoulds”, “coulds”, “minimizes” and “ors” that creative developers will relish. Equally, the Department has the flexibility in all of Table 8 to come up with a merit assessment of any persuasion.

I’m sorry, but from the viewpoint of a community faced with a wind farm that should never have been proposed, this section of the new draft guidelines is, overall, much worse than the original one, and in defining what you have, you are backing the Department into a corner. The Minister and our local representatives will not like that. The developers and their legal advisors will.

The first issuance of SEARs for a wind farm will be the supreme test of the new process.

The key project going forward for some in the affected communities will be a review of all submissions and a comparison of the final VI Bulletin to this draft. What changed and why? What was strengthened, what was watered down or eliminated?

Thank you for the opportunity to comment on the VI Bulletin. As you know we were willing to comment in detail much earlier but were denied that opportunity.

UPDATE

To try and understand the evolution of Tables 4, 5, 6, 7 and 8, I submitted an informal request for information under GIPAA for the original versions of these tables. That request was denied.

Appendix A – Screening Tools

Figure 1 - Preliminary Screening Tool Part 1 indicating potential visual impacts for further detailed consideration

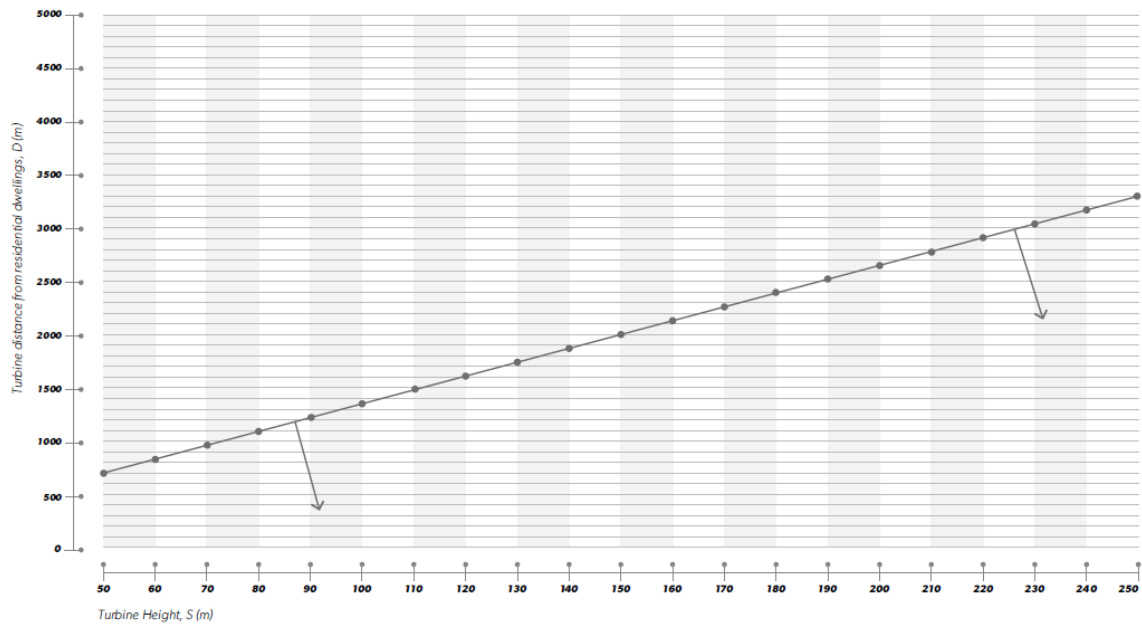
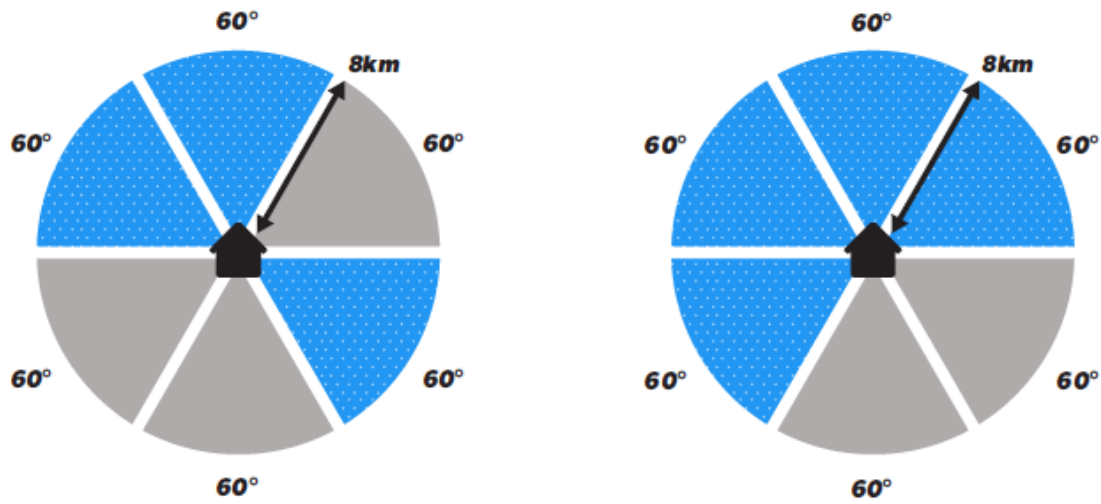


Figure 2: Preliminary Screening Tool Part 2 indicating multiple wind turbines



Appendix B – Tables

Table 4: Suggested scenic quality classification south east highlands

Description	High scenic quality	Moderate scenic quality	Low scenic quality
Landforms	<p>Isolated peaks, tabletop hills, cones or escarpments with distinctive form and/or colour contrast that become focal points</p> <p>Larger areas of distinctive rock outcrops or boulders</p> <p>Well defined, steep sided valley gorges</p>	<p>Rounded hills, ridges and peaks which are not visually dominant</p> <p>Broad shallow valleys</p> <p>Moderately deep gorges or moderately steep valley walls</p> <p>Minor rock outcrops</p>	<p>Large expanses of indistinctly dissected or unbroken landforms that provide little illusion of spatial definition or landmarks with which to orient</p>
Vegetation	<p>Strongly defined patterns with combinations of eucalypt forest, naturally appearing openings, streamside vegetation and/or scattered exotics</p> <p>Distinctive stands of vegetation that may create unusual forms, colours or textures in comparison to surrounding vegetation</p>	<p>Predominantly open forest or woodland combined with some natural openings in patterns that offer some visual relief;</p> <p>Vegetative stands that exhibit a range of size, form, colour, texture and spacing</p>	<p>Extensive areas of similar vegetation, such as grasslands with very limited variation in colour and texture</p>
Water forms	<p>Visually prominent lakes, reservoirs, rivers, streams and swamps</p>	<p>Intermittent streams, lakes, rivers, swamps and reservoirs</p>	<p>Waterforms absent</p>

Table 5: Viewer sensitivity level classification of travel routes and use areas

Level 1 SENSITIVITY (High)	<ul style="list-style-type: none"> Urban residential areas and rural villages (defined as land zoned R1, R2, R3, R4, R5 and RU5 in the Standard Instrument Local Environmental Plan) Recreation, cultural or scenic sites and viewpoints of national or state significance. Navigable Waterways of National or State Recreation Significance Any buildings, historic rural homesteads/residences on the State or Local Government Heritage List Tourist and Visitor Accommodation (definition in Standard Instrument Local Environmental Plan)
Level 2 SENSITIVITY (Moderate)	<ul style="list-style-type: none"> Rural Residences Recreation, Cultural or Scenic Sites and Viewpoints of Regional Significance
Level 3 SENSITIVITY (Low)	<ul style="list-style-type: none"> Interstate and State Passenger Rail Lines with Daily Daylight Service State Highways, Freeways and Classified Main Roads, Classified Tourist Roads Land Management Roads with Occasional Recreation Traffic Walking Tracks of Moderate Local Significance or Infrequent Recreation Usage Other Low use and Low Concern Viewpoints and Travel Routes

Table 6: Visibility Distance Zones


Distance of view	Distance zone	Relative visual magnitude and influence
0 - 500 m	Near Foreground (NF)	
500 m – 1 km	Mid Foreground (MF)	
1 - 2 km	Far Foreground (FF)	
2- 4 km	Near Middleground (NM)	
4- 8 km	Far Middleground (FM)	
8 - 12 km	Near Background (NB)	
12 – 20km	Mid Background (MB)	Zone of Least Visual Influence
20-32+km	Far Background (FB)	

Table 7: Visual Influence Zones based on view sensitivity level – distance zones and scenic quality class combinations

Viewer sensitivity level - distance zone	Scenic quality class		
	High	Moderate	Low
Level 1 Viewpoints			
Near Foreground 0 – 500m	VIZ1	VIZ1	VIZ1
Mid Foreground 500m – 1km	VIZ1	VIZ1	VIZ1
Far Foreground 1 – 2km	VIZ1	VIZ1	VIZ2
Near Middleground 2 – 4km	VIZ1	VIZ2	VIZ2
Far Middleground 4 – 8 km	VIZ1	VIZ2	VIZ2
Near Background 8 – 12km	VIZ2	VIZ2	VIZ2
Mid Background 12 – 20km	VIZ2	VIZ2	VIZ3
Far Background 20 – 32+km	VIZ2	VIZ2	VIZ3
Level 2 Viewpoints			
Near Foreground 0 – 500m	VIZ1	VIZ1	VIZ1
Mid Foreground 500m – 1km	VIZ1	VIZ1	VIZ1
Far Foreground 1 – 2km	VIZ1	VIZ1	VIZ2
Near Middleground 2 – 4km	VIZ1	VIZ2	VIZ2
Far Middleground 4 – 8 km	VIZ2	VIZ2	VIZ3
Near Background 8 – 12km	VIZ2	VIZ2	VIZ3
Mid Background 12 – 20km	VIZ2	VIZ3	VIZ3
Far Background 20 – 32+km	VIZ2	VIZ3	VIZ3
Level 3 Viewpoints			
Near Foreground 0 – 500m	VIZ1	VIZ1	VIZ2
Mid Foreground 500m – 1km	VIZ2	VIZ2	VIZ2
Far Foreground 1 – 2km	VIZ2	VIZ2	VIZ3
Near Middleground 2 – 4km	VIZ2	VIZ3	VIZ3
Far Middleground 4 – 8 km	VIZ2	VIZ3	VIZ3
Near Background 8 – 12km	VIZ2	VIZ3	VIZ3
Mid Background 12 – 20km	VIZ2	VIZ3	VIZ3
Far Background 20 – 32+km	VIZ2	VIZ3	VIZ3
Areas Not Visible	VIZ2	VIZ3	VIZ3

Note:

- Column 1 codes represent a combination of the Viewer Sensitivity Level (1-High, 2-Moderate, 3-Low) and the Distance Zones
- Columns 2 – 4 indicate Visual Influence Zones varying by row according to the combination of Viewer Sensitivity Level-Distance Zone and Scenic Quality Class.

Table 8: Visual Performance Objectives

FVIA Factor	Visual Influence Zone 1 (High Significance)	Visual Influence Zone 2 (Moderate Significance)	Visual Influence Zone 3 (Low Significance)
1. Visual Magnitude	Objective: Avoid turbines or provide detailed justification of turbines below the green line.	Objective: Apply impact mitigation and / or provide detailed justification of turbines below the black line. Consider screening between the green line and the black line.	Objective: Consider screening below the black line.

Figure 5: Visual magnitude levels for VIA

