



18/07/2023

Matthew Riley
Director – Energy and Resources Policy
Department of Planning and Environment
Via email: Matthew.Riley@planning.nsw.gov.au

Dear Mr Riley,

AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS (AILA)
SUBMISSION TO DRAFT WIND ENERGY GUIDELINES 2023

Thank you for the opportunity to provide a submission on the Draft Wind Energy Guidelines (the Guidelines) and for recent opportunities to be briefed and provide direct input on this work.

Our review has been undertaken by a working group of AILA registered Landscape Architects with extensive experience in the preparation of Landscape and Visual Impact Assessment (LVIA), particularly in the context of large-scale energy infrastructure works throughout Australia. The AILA working group has comprehensive knowledge and understanding of current global best practice for undertaking LVIA and of the technologies available and applied.

AILA NSW welcomes the preparation of a guideline as an important step in ensuring higher quality LVIA's are prepared. We support DPE's objective to provide a clear and concise methodology for assessment that results in clearly defined outcomes that assist with the assessment of proposals. We also understand the importance of consistency and clarity in assessment to enhance community confidence in the assessment and approval process.

On review of the draft information provided, it is the concern of the AILA working group that this guideline will not result in improved clarity around impacts nor achieve the objective of streamlining the assessment process for the department. The proposed methodology is likely to require substantially more fieldwork and analysis to be undertaken that would not be proportionate to the scale of the impacts. Our concern is that the proposed method relies heavily on a simple quantitative method that is likely to overstate the level of visual impact of wind



turbines upon private dwellings in a manner that is inconsistent with the assessment of visual impact for any other typology of development within NSW. It is our view that, due to the scale and state significance of these projects, the broader regional visual and landscape character change should be the key focus of these assessments with consideration of private receptors within a limited radius of the proposal.

In presenting the DPE guidelines, reference is made to national and international guidelines for Landscape Character and Visual Impact, however the proposed methodology does not appear to be consistent with the core principles of these guidelines. This has resulted in concern from our members that the approach for the landscape character and visual assessment of renewable energy projects in NSW is out of step with national and international standards and establishing unreasonable expectations for the community.

AILA's working group is very conscious of the importance of developing a workable guideline for landscape character and visual assessment of renewable energy projects in NSW and remain keen to work with the department in refining this approach with the aim of developing a methodology that meets the objectives of greater consistency and clarity around impacts. Ideally, an approach that protects landscape character and visual resources that are valued by the broader community and identifying areas of greatest potential impact in a way that can inform the layout and design of wind farm projects and achieve improved outcomes.

Generally, the key concerns of the working group are as follows.

1. It is our opinion that the NSW Land and Environment Court (NSWLEC) position that you do not own your view should be a fundamental principle of the guidelines and that this should be communicated in the introduction of the guidelines to assist in managing community expectations. This issue was also dealt with by the High Court in *Victoria Park Racing & Recreation Grounds Co Ltd v Taylor* [1937] HCA 45. The High Court also held that a property owner does not own the views (spectacles) from his or her land. Justice Dixon stated: "*I find difficulty in attaching any precise meaning to the phrase 'property in a spectacle'. A "spectacle" cannot be "owned" in any ordinary sense of that word.*"

It is our concern that if this is not a fundamental premise of the document then the Guidelines will be vulnerable to legal challenge and potentially rendered redundant if a challenge were to be successful.

The Guidelines should explain that it is unreasonable for a resident to expect that their view will not change. There are often questions surrounding the visual burden of energy projects on regional communities, particularly within the designated Renewable Energy Zones however in the broader context the burdens of change associated with infrastructure development, mining, population increase, and residential development are experienced in many communities.



It should be clearly stated in the Guidelines that visibility of a project alone does not constitute impact and that the purpose of the assessment methodology is not to rule out all impacts but to ensure that the design of a proposal endeavours to deliver an outcome that reduces visual impact whilst still achieving other key objectives surrounding broader public benefit and the transition to a renewable economy in line with the commitments of NSW State and the Federal Governments.

2. The draft guideline identifies specific tools (e.g. a grid overlay) for the assessment of views from receptors. These tools have been developed for the purpose of providing an approach that quantifies the magnitude of change on surrounding dwellings. AILA appreciates the need for a quantifiable component to the methodology for determining which residences may be impacted by identifying those that would experience a particular range of visibility. However, the proposed method should not be relied on to determine impact alone as there are other important factors that require consideration when determining visual impact. Views from a receptor may include influencing elements including vegetation, sheds, farm infrastructure and surrounding land use which should be considered when determining the extent of impact. Visual impact is fundamentally about the impact on the character of the view and the extent of influence an introduced element has in modifying that character. Simply being visible does not necessarily cause an adverse effect.

It is AILA's position that understanding and defining the unique landscape character of a proposed site and its surrounds is a critical step to ensure that the design of any proposal is considerate and sensitive to any specific character elements or values that may be sensitive to change. In determining the extent of impact the factors of compatibility (with existing and future intended character) as well as magnitude of change in a view should be given equal consideration in determining any impact ratings. This methodology should be consistent and be able to be applied to any type of development in any landscape.

3. It is the opinion of the working group that the current proposed application of the grid tool with a focus on vertical magnitude will overstate the extent of impact, particularly with the application of the multiplier tool. As stated previously, the presence of an element in a view does not necessarily constitute an adverse visual impact. The quantitative approach may be useful in identifying dwellings with the potential for impact however the outcomes of its application do not constitute the extent of actual visual impact.
4. It is AILA's opinion that the proposed grid system is not appropriate for the assessment of impact from public domain as impact on the public domain is related more to the broader landscape character, specific vistas, landscape values and on significant landscape features.
5. It is AILA's opinion that, due to the scale of current wind turbines, it is reasonable for the study area to be extended out to 16 kilometres as suggested in the draft. However, this



study area should only apply to significant public landscapes and viewpoints and should not include private receptors. It is AILA's opinion that, in line with the comments raised in Point 1, the impact upon receptors should only be considered within a limited radius (ie the proposed blue line).

6. It is AILA's opinion that the methodologies for determining character and the sensitivity of receptors should be consistent across all of the new guidelines (solar, wind, and transmission).

Our working group determined that there are nine key recommendations regarding the structure of the Draft Guidelines that AILA suggest that DPE adopt to assist with consistency of assessment, provide clarity in decision making and to ensure improved design outcomes for wind farms and their surrounding communities.

Recommendation One:

It is the AILA's recommendation that the above points be considered in further development of the Draft Wind Guidelines, in particular, setting expectations for communities in areas that are likely to experience change as a result of the designation of the NSW Renewable Energy Zones.

Recommendation Two:

It is the AILA's recommendation that the proposed grid system for determining the impact of magnitude not be applied to viewpoints in the public domain and that assessment of visual impact should rely on a qualitative approach based on clear justification and expert opinion in line with international best practice.

Recommendation Three:

It is the AILA's recommendation that a standard methodology for LVIA is adopted across all large-scale renewable energy infrastructure types for the assessment of landscape character and views as experienced from the public domain. AILA recommends that the methodologies and terminology incorporated into the Draft Wind Guidelines are consistent with the Large-Scale Solar Guidelines. Noting this may require updates to the Large-Scale Solar Guideline to ensure consistency with the latter developed guidelines.

Recommendation Four:

It is AILAs recommendation that if a standard LVIA methodology is adopted then supporting technical guidelines for each development type (solar, wind, transmission etc) should addresses the specific issues of each renewable energy technology/development type (e.g. shadow flicker, mitigation measures, screen planting and setbacks etc.) and provides design principles that lead to better design outcomes and reduced negative impact on visual amenity and landscape character.



Recommendation Five:

It is AILAs recommendation that an approach to the assessment of private dwellings be adopted, which aligns more closely with the principles that would be applied if a project was to go to appeal in the NSW Land and Environment Court. This approach would not assign a sensitivity level to private dwellings, but identify the magnitude of change, which part of the dwelling the view is from, and consider the reasonableness of the change (how it aligns with planning intentions, in this instance, the designation of the Renewable Energy Zones) to determine if there is a visual impact. The tools provided in the draft guidelines for assessing magnitude could be used, with some modification that reduces the focus on vertical magnitude, together with design principles that seek to improve design outcomes. This would both assist in providing some consistency across assessments, as well as ensuring the assessment of visual impact is not solely based on visibility, but also upon the compatibility of development with the view and landscape character of the area. This approach would clearly communicate to developers the expectations for assessment and, to the surrounding community, what the Department considers to be unacceptable or acceptable impacts upon private dwellings.

Recommendation Six:

It is AILA's recommendation that dwellings to be assessed should only include legal dwellings and DA applications that have been lodged prior to the lodgement of the Scoping Report. Unoccupied and dilapidated dwellings and structures without approvals (such as caravans, weekender shed houses, private camping areas), dwellings in land zoned for industry, dwellings compensated for amenity exceedances due to other approved development, or that are hosting other similar energy infrastructure that would reduce the amenity expectations of the land holder, should not be considered. Guidance from DPE on this should be clearly stated in the Guideline for consistency and to minimise unnecessary assessment. Furthermore, unless a clear methodology for the assessment of dwelling entitlements is included in the guidelines, it should not be a consideration for assessment.

Recommendation Seven:

That the guideline should suggest that photomontages also be presented as single images at a 50mm focal length to highlight areas where there is the greatest visual change and more closely reflect what the human eye sees. These images can be cropped from the 180-degree images (photorealistic image or 3D wireframe). The specific scale of these images on an A3 sheet should be specified in the guideline so they are consistently presented and can be compared across projects.

Recommendation Eight:

AILA recommends that specific guidelines for shadow flicker assessment be adopted. AILA directs that Department to the current Queensland guidelines (QLD State Code 23 – Appendix B) as a reference for defining parameters for assessment.



Recommendation Nine:

That consideration be given to the assessment of off-shore wind farms viewed from the mainland of NSW in this or a separate guideline. Noting that there are certain factors and considerations that influence visibility of offshore infrastructure and that this approach would similarly apply to the assessment of ports and shipping, for example.

As part of the AILA review process a table of comments was prepared referring directly to the content of the guidelines. This is attached for your reference.

AILA appreciates the opportunity to engage with the Department on the preparation of the draft guidelines and the working group would be more than happy to contribute and provide comment in the future as the guidelines are progressed.

Yours sincerely,

Tanya Wood
AILA NSW President

David Moir
AILA NSW Vice-President



Summary Comments from AILA Working Group

Topic	#	Comment
Professional Assessment Skills		Landscape Architects are well placed to interpret the landscape and visual conditions, having both landscape analysis and design skills. These skills are necessary to both identify and mitigate landscape and visual impact. Professions such as geographers and environmental planners may not have the appropriate skills and training to understand and define landscape character and values. A qualification process may be required to ensure that professionals are suitably qualified.
Consultation		AILA recommends that a topic specific community consultation task be excluded from the visual assessment guidelines and that surrounding residences and broader community be engaged on landscape and visual issues as a part of the broader community engagement activities that are supported by specific community engagement guidelines.
Preliminary Assessment		<p>AILA recommends that the preliminary assessment include the identification of existing landscape character and the preparation of Zone of Visual Influence (ZVI) mapping to identify areas where there is the potential for impact. The preliminary assessment should also identify individual receptor locations and settlement areas surrounding the site with the potential for views to the proposal.</p> <p>Purpose of preliminary assessment is to understand those areas/receptors that are likely to experience moderate-high impacts. Thus, the identification of receptors within the blue line of visual magnitude, based on the height of the turbines, would seem reasonable rather than the broader 16 kilometres.</p> <p>The preliminary assessment is unclear about how the horizontal field of view is determined where there is a visible 'break' in the wind farm i.e. in the diagram (page 24 and 25 of the presentation) an area in the middle of the field of view has been excluded but it is not clear what the separation distance/FoV angle needs to be for this to read as a break and/or as a continuous wind farm development.</p>
Detailed Assessment		The visual magnitude and sector tools are a way of consistently identifying visibility for private residences but not in assessing impacts on the broader landscape character and views from the public domain. It is recommended that these tools are applied to private dwellings only and a separate and more generally accepted methodology of LVIA is applied when assessing the impact of the proposal on views from the public domain.



Viewer sensitivity	<p>Table 2 Viewer sensitivity – nominates a low sensitivity for state highways and tourist roads. Such viewpoints have a high number of users and should be rated as having at least a moderate sensitivity. For example, the United Kingdom's <i>Guidelines for Landscape and Visual Impact Assessment</i> (Landscape Institute, 2013 (3rd Ed)) (referred to hereafter as UK Guidelines) states 'Where travel involves recognised scenic routes awareness of views is likely to be particularly high' (p. 114).</p> <p>Similarly, the identification of Highways as Low sensitivity does not align with most local DCPs where these are associated with the entries to town and are important to the character of smaller towns not covered by the <i>Infrastructure SEPP amendment (Renewable energy and regional cities)</i> which protects the setting of regional cities.</p>
Scenic quality ratings	<p>The consideration of scenic quality is an important part of the assessment of visual impact. However, Scenic quality ratings, should be expanded or presented as an example so that further, location specific, detail can be added. The scenic quality ratings should reflect established scenic preferences and also incorporate the specific characteristics of the region. Ideally, these would be based on landscape character / scenic quality mapping prepared for the Renewable Energy Zones (based on broader community engagement and consultation) and that could be uniformly applied to projects. Noting, that landscape character values can be influenced by the threat of change and that the voice of individual property owners should not override broader community values.</p> <p>The scenic quality rankings do not appear to consider representativeness and rarity. These factors can influence the values associated with the landscape and assist with prioritising areas for protection.</p> <p>It is not clear how the 'scenic quality classification' are to be used in the methodology. Further detail would be required on how to apply the scenic quality class in the assessment to ensure consistency.</p>
Viewpoint Selection	<p>The zones should distinguish between tip of blade, hub, rotor diameter, etc. This could be evaluated at a desktop level and used to categorise impacts according to what is seen at what distance.</p> <p>Public viewpoints up to 10 km. '<i>Identify all public viewpoints from roads and rail lines within 10kms</i>'. Clarification is required on what public viewpoints are required to be assessed. Suggest locations such as rest areas, scenic routes, key road intersection, town centres (church, main street or town hall for example), cemetery etc.</p> <p>Theoretically, in the absence of screening vegetation/landform every location along a road could be considered a viewpoint. It would be more appropriate to request identification of key/representative public viewpoints. Significant public viewpoints should be considered to at least the same extent as private viewpoints</p>



	<p>AILA does not support the consideration of a single private viewpoint as more important and worthy of assessment than a key public scenic viewing area, particularly in a sensitive landscape.</p> <p>It is recommended that that only sensitive public locations (high number of receptors/sensitivity due to nature of the receptor or the receiving environment) should be considered for detailed assessment outside the blue line and within a 16km study area. It is recommended (as a maximum) that the application of the blue line of visual magnitude should dictate the extent of dwellings requiring assessment.</p>
Photography & Site Access	<p>Guidance is required on acceptable photograph locations for representative views from dwellings. Confirming that this is to be determined by the visual assessor, not the landowner. Noting, that we are often asked to take photographs from multiple locations, regardless of their usefulness in the assessment. We are then criticised for not assessing and presenting all views in the assessment. This needs to be clear for the assessor and the community.</p> <p>An acceptable process for desktop assessment where access to property is not granted should be included. Importantly, this should consider the safety of visual assessment specialists. AILA supports our members refusing to access private properties where there is a perceived (or real) risk to employee comfort and safety. The reasonable use of 3D modelling tools in lieu of private property visits should be supported in the guidelines to ensure the safety of our members is not unintentionally compromised.</p> <p>Photographic surveys are often undertaken without knowing the exact locations of turbines in the view, and indeed the locations may change following site photography. The complexity of bringing existing vegetation into the assessment leaves the assessor open to criticism over viewpoint selection. Some acknowledgement of this challenge would be useful in the guideline. Perhaps advising the assessor to note where such a situation has occurred for transparency.</p> <p>While we agree that ideally it is ideal to take photos with minimal cloud cover and between 9am and 3pm, it must be acknowledged that the logistics of planning a site visit so not usually make this possible (as the cloud cover in the guideline's example photographs make clear). The guidelines should be clear about what is not acceptable – i.e., where the photograph is such that the key features of the view cannot be discerned in the image and the visual.</p>
Landscape character effects	<p>Consideration of direct impacts on landscape character would add value to this methodology. The consideration of landscape character is part of most widely accepted methodologies (including the <i>Transport for NSW Landscape and Visual Assessment guidelines</i> and the <i>UK Landscape Institute Guidelines</i>).</p> <p>A series of matrices, as included for visual in the Solar Guideline, would be useful to ensure consistency for landscape character assessment.</p>



<p>Magnitude</p>	<p>The method for identifying magnitude (for both public domain and private dwelling impacts) appears to relate only to the visibility of the proposal. AILA recommends that the assessment of magnitude allows for further consideration of the characteristics of the visible elements of the proposal (shape, line, colour etc.) and their compatibility with the character of the view. This will encourage design changes to reduce visual impact by means other than visual screening. Such improvements (often at the expense of operational efficiency and project value) should be rewarded with a reduction in visual impact where that is the case.</p> <p>Thresholds and corresponding magnitude ratings need to be based on research including case studies and this information published. The definition of an "occupied cell" includes the space between WTGs. This may be deliberate but could over emphasise the actual visual impact at greater distances due to diminished visibility of thin elements resulting from atmospheric conditions. This is a hotly debated issue and may already have precedence in the courts.</p>
	<p>There would be a considerable amount of time required for each receptor assessment – application of the grid tool will be very time consuming particularly applying the 'overlapping penalties'. The associated cost for proponents may be considered to be disproportionate given the court's position on private views as discussed above.</p> <p>Grid overlay requires some adjustment – emphasis on the vertical scale of the turbines and having to calculate 25% of the horizontal extent of the grid + overlapping penalties is overly complicated process. The horizontal shape of the grid square appeared to be specifically intended for the horizontal nature of solar farm development. A vertical rectangle may be more appropriate for vertical infrastructure such as wind turbines.</p> <p>The visual magnitude tool should be less conservative to reduce the dwellings requiring further assessment on site, and reflect the nature of wind turbines, which are substantially taller by their nature, but have certain aesthetic qualities that reduce their visual prominence, such as the thin nature of the turbines, lighter colour finish etc.</p> <p>Outside of 3 kilometres the vertical magnitude is less of a concern as the visibility and prominence of the turbines is diminished in the context of vegetation sheds, fencelines etc in the fore and middle ground of views.</p> <p>Outside 3 kilometres, the extent of the occupation of the horizontal/horizon line of the project will have a greater influence on the character of the view.</p> <p>The visual magnitude rating seems to be very simplistic and it would be useful to understand how these thresholds have been determined. Large windfarms, which can have opportunities for more harmonious design than smaller wind farms, will be at a disadvantage as the number of cells triggered will inevitably be much higher. While this makes sense at the</p>



	<p>local level, at a more regional level, the impacts of fewer large wind farms may be a more desirable than numerous smaller wind farms, where greater coordination and flexibility is possible due to the scale and larger land holding size.</p> <p>The rationale for penalising occupied cells that have overlapping turbines is not wholly clear. From a mitigation perspective, having a smaller horizontal field of view affected, which would inevitably include overlapping turbines, would be easier to mitigate than a series of individual turbines that are spread across the view, for example. It may be better for the guidelines to say that overlapping turbines should be avoided from key sensitive public viewpoints (e.g. scenic lookouts), whereas from private dwellings, grouping towers together would be appropriate where it reduces the horizontal field of view and can be mitigated.</p> <p>Where simply reducing visibility of the turbines is not possible, it could be beneficial for projects to provide other amenity improvements, such as waterway restoration or revegetation of cleared ridgelines, for example, that provide improvements to visual amenity that can be enjoyed from private dwellings as well as by the wider community, rather than focusing on simply obstructing views to wind turbines.</p>
Design principles	<p>The guideline would preferably include a suite of design principles that seek to improve visual outcomes through siting and design considerations. This would support landscape and visual assessment experts in advocating for design and layout improvements and give greater guidance for proponents.</p>
Cumulative Impacts	<p>Greater clarity around the methodology for cumulative impact needs to be provided. In Renewable Energy Zones consideration should be given to the expectation that the character of these areas will change. These are issues of consultation and engagement that should not be part of individual LVIA's but should form part of broader consultation and engagement.</p>
Screening vegetation	<p>Consistent timescales for the consideration of screening vegetation and the assessment of residual impacts would increase consistency across assessments.</p>
Visualisations	<p>The guidelines indicate that ... 'visualisations must be provided in the EIS to demonstrate the visual impact at each viewpoint that has a visual impact rating of low or higher'. AILA suggest that photomontages are a tool to communicate impact levels and are not the assessment tool in themselves. It is considered reasonable that visualisations be provided to illustrate locations of higher visual impact, or to confirm where there is not a high visual impact on a higher sensitivity viewing location. It is suggested that not all locations would require a visualisation and that this requirement be reconsidered to focus on the most useful locations for visualisations only.</p>



Grid connection infrastructure and Battery Storage	Further guidance as to how to incorporate the assessment of transmission lines, batteries and other grid connection infrastructure into the assessment method would be useful.
Consistency between Energy development types	Greater consistency across guidelines (Solar, Wind and Transmission) would assist with the assessment of projects that include a combination of these elements, as well as batteries, connection infrastructure, substations etc.
Useful references	<p>https://www.nature.scot/doc/visual-representation-wind-farms-guidance</p> <p>https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments</p> <p>Assessment of Seascape, Landscape, and Visual Impacts of Offshore Wind Energy Developments on the Outer Continental Shelf of the United States https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/BOEM-2021-032.pdf</p>

About the Australian Institute of Landscape Architects



Australian Institute of
Landscape Architects

The Australian Institute of Landscape Architects (AILA) leads a dynamic and respected profession: creating great places to support healthy communities and a sustainable planet.

Who we are and what we do

AILA is the peak national body for Landscape Architecture. AILA champions quality design for public open spaces, stronger communities, and greater environmental stewardship.

We provide our members with training, recognition, and a community of practice to share knowledge, ideas, and action.

With our members, we anticipate and develop a leading position on issues of concern in Landscape Architecture. Alongside government and allied professions, we work to improve the design, planning, and management of the natural and built environment.

In operation since 1966, AILA represents ~3,000 members Australia-wide and promotes excellence in planning and designing for life outdoors. Committed to designing better places, Australian landscape architects have the skills and expertise to improve the nation's liveability through integrated nature-based solutions delivering better environmental, social, and economic outcomes for all Australians.

AILA's national position statements on Green Infrastructure, Climate Positive Design, Child Friendly Cities, Healthy Communities, and Active Travel; examine how an integrated approach can be used to shape the health and wellbeing of communities. Landscape architects play a central role in developing and implementing these strategies.

Our members are distributed across Australia and range from sole traders to large internationally recognised practices and are embedded within local and state government, creating significant and profound community impacts at a variety of scales.

AILA's values focus on the design, delivery, and management of:

1. Quality Public Places

Examples include:

- Southbank Parklands, QLD
- Sydney Park and Darling Quarter, NSW
- Royal Botanical Gardens Victoria – Cranbourne Gardens, VIC
- Pelzer Park/ Pityarilla (Park 19) Activity Hub, SA
- Elizabeth Quay and Scarborough Foreshore, WA
- and many more Australia-wide.

2. Stronger Communities

Through public open space networks, parks, and sporting complexes.

3. Environmental Stewardship

Through ecological restoration (flood, fire, weeds and contaminated waterways).

As landscape architects:

- We resolve to protect and sustain our landscapes.
- We affirm that self-sustaining landscapes are essential to our planet by placing a high value on the protection of living landscapes and taking a thoughtful approach to their change.
- We resolve to restore damaged landscapes to health.
- We recognise each landscape is best cared for by the community as a whole.
- We work to reveal the value of each landscape to all parties so that they can work in its best interests.
- We work collaboratively with the community and with other professionals to ensure the best outcome for each place.