

# Wind Turbine Recommendations

Land Use Bylaw: 22-5  
Planning & Development Dept  
Date: May 10, 2021



## Background:

Following a second public engagement period including an open house and feedback from councilors, staff have prepared revised recommendations which will form the basis of amendments to the MPS and LUB.

## Recommendations

### Public Engagement

That Council require a minimum level of Public Engagement for large wind turbine projects requiring at a minimum:

- ~~• Notification to property owners within 2km of a proposed site prior to any meteorological testing.~~
- ~~• Notification to Planning staff and Council prior to any meteorological testing.~~
- Planning staff to notify Council and property owners near any permits issued for meteorological testing.

*Note: It is difficult for wind developers or Municipality to do direct mailings and the number of properties within 2-3 km may make the task prohibitive. Staff recommend placing a notice in the local paper. Development permit fee for Met towers should be increased from \$25 to \$350 to cover advertising cost. This would require an amendment to the fees policy.*

- ~~• Three public meetings with a list of concerns raised and actions/accommodations.~~
- Three public meetings with a list of concerns raised and actions/accommodations. This may run parallel with the Provincial EA process.

*Note: This was an ask from wind developers, there's no reason not to allow flexibility.*

### Shared Economic Benefits

- That Council be satisfied that wind projects provide an economic benefit to the local community as part of the approval process.
- That Council encourages community benefit funds and pooled leasing.

*Note: Several wind developers have suggested that contracts between the developer and landowners are beyond the purview of the Municipality. However, encouraging is not a requirement.*

### Regulatory Requirements

That Council review wind turbine regulations no less than every ten years.

That Council approve large and medium wind turbines by Development Agreement.

That domestic and small wind turbines continue to be approved by Development Permit.

That Council simplify the restrictive overlay by removing it from around individual dwellings as this duplicates separation distances making the overlay unnecessarily complex.

That Council adopt the following classifications and associated requirements.

That Council Amend Policy 4-53 (restrictive Overlay) to refer to medium and large turbines.

That Council Amend Policy 4-54: to clarify that such local tourism plan must be adopted by Council.

*Note: Several people have suggested more frequent review of wind regulations, staff feel it is unnecessary and would severely hamper the ability to work on other equally important planning activities.*

## Wind Turbine Recommendations

<b>Turbine Classification and Regulatory Requirements</b>				
	<b>Domestic</b>	<b>Small</b>	<b>Medium</b>	<b>Large</b>
Capacity	< 15 KW	15 KW <100KW	100KW <500Kw	500Kw or More
Max Ht	50m	75m	100m	NA
Min ground Clearance	3m	5m	5m	7.5
Approval Method	Dev Permit	Dev Permit	Dev Agreement	Dev Agreement
Permit Period	1 yr	1 yr	2 yr	3 yr
Zones Permitted	All	All	Ag/ RRsc/ Com/Ind	Ag/ RRsc/ Com/Ind
Restricted Overlay	NA	NA	Yes	Yes
<b>Minimum Separation Distances &amp; Setbacks</b>				
Habitable buildings external to the wind energy project	50m or 1.25x Ht	75m or 1.5 x ht	200m or 2x ht	750m or 3.5 x Ht
Habitable buildings internal to the wind energy project	1.1 x ht	1.25 x ht	1.25 x ht	1.25 x ht
Property lines external to the wind energy project	1.1 x ht	1.25 x ht	1.25 x ht	1.25 x ht
Property lines internal to the wind energy project/owner	NA	NA	NA	NA
Streets and railway rights-of-way	1.1 x ht	1.25 x ht	1.25 x ht	1.25 x ht
Natural gas pipeline rights-of-way	85m	85m	85m	85m
Small to large-scale wind turbines external to the wind energy project, including wind turbines that have a valid development permit but have not yet been constructed. Excluding turbines with the same owner.	1.25 x ht	2 x ht	2 x ht	4 x ht

Separation distance from habitable buildings or property lines may be reduced with the written consent of owners.

*Note: Numerous people have suggested larger separation distances ranging from 2km to 5km. This has predominately been as a means to minimize negative impacts of noise and shadow flicker. Staff feel this is unnecessary. As elaborated on in the Best Practices report, the standards in the provincial EA process are in line with World health Org. and adequate if followed and enforced. Separation distances of up to 1km or 4x height would also be reasonable but beyond this it quickly becomes punitive to future wind projects and would be based on subjective visual criterial and NIMBY attitudes. A separation distance of 2km from dwellings would essentially eliminate wind projects from Cumberland. Wind developers have suggested that lower setbacks from railways and streets would still be adequate.*

### Operations & Maintenance

- That Council require a reporting and monitoring system for large turbines.
- That large turbines provide a post-construction compliance report within two years of commissioning.
- That Council require a well-defined, transparent complaint process.

*More details are needed on these. Upland Design has been asked to flesh these out when they prepare the amendments. This was a common area of concern for residents who largely support a transparent complaint process with regulatory weight.*

#### **Decommissioning**

- That Council require a bond/surety, or other guarantee for 125 percent of the cost of turbine removal and site remediation determined at the time of the granting of the permit by a qualified engineer, less salvage value.
- That Council require a bond/surety, or other guarantee for the performance of large turbines with regards to noise and shadow flicker. ~~malfunction and/or ceasing to produce power for a period of six months or more.~~
- That Council require notice from the operator of a large turbine if the turbine has malfunctioned and/or ceases to produce power for a period of six continuous months. In such cases the operator shall be required to secure the turbine from vandalism, causing damage or noise and place the turbine in an idle state until repairs can be made. The operator shall complete repairs within 18 months of providing such notice or shall decommission the turbine unless an extension has been granted by Council. Council shall recognize the complications of repairing or replacing such turbines and shall not withhold approvals or extensions without due consideration.

*Note: Developers have suggested that 100% bond is adequate and that there is no need to overshoot. Some have suggested that this doubles up guarantees provided to owners or requirements in Power Purchase Agreements. It has also been suggested by developers that the bonding not be put in place before the Commercial Operation date. Others have suggested that a bond be delayed for the first five years. This has purposely been left vague to account for such variables and options. Staff feel that ensuring that guaranteed funding be in place to cover decommissioning costs is more important than the timing or whether it is at 100% or 125%. Some examples examined allowed developers to build a dedicated reserve over time rather than buying bonds at the beginning. Council feedback is useful in this matter.*

*Developers have also suggested that malfunctions are inevitable and that imposing timelines on such is inappropriate and beyond the purview of the Municipality.*

#### **Adding Wentworth to Restricted Overlay**

*Note: This is unsurprisingly a contentious issue with many comments from developers and residents. The possibility of excluding Wentworth from turbines is popular with those who responded from the area and mostly supported from the few respondents from other areas. The developers that would be impacted by this have cautioned that this could have a detrimental impact on projects and have suggested that if Council looks to go this direction that any restricted overlay be based on comprehensive planning studies and not an ad hoc reaction to appease residents.*

*These concerns are valid. While staff feel that there is a reasonable policy path to include Wentworth in a restricted overlay based on it being a culturally significant area, such a designation could have a profound impact on wind energy and such a designation and delineating of such an area should be based on a defensible professional planning study. The local advocates in Wentworth have asked for a restricted overlay 10km wide centred on Highway 4 from the county border to the New Annan Rd., an area of about 90 square kilometres which would eliminate many potential turbines.*

*If Council wishes to pursue such a large, restricted overlay staff recommend that it be on an interim basis for two years only while council commits to a professional planning study to further investigate the appropriateness and delineation of such an area.*

## Wind Turbine Recommendations

Currently, there are two policies in the Municipal Planning Strategy related to the restricted overlay:

*Policy 4-53: Council shall, through the Land Use By-law, establish a Wind Turbine Restricted Overlay that identifies inappropriate areas for small- and large-scale wind turbines and includes lands such as, but not limited to, drinking water supplies, bird conservation areas, important cultural areas, historic sites, and ecologically significant lands.*

*Policy 4-54: Council may consider amending the Wind Turbine Restricted Overlay to add locations where a local tourism plan concludes that small- and large-scale wind turbines are not compatible with the goals of the tourism plan.*

To include Wentworth in the restricted overlay Council must be satisfied that such a change is reasonably consistent with Policy 4-53. Council may choose one of the stated justifications for exclusion or chose one not listed but reasonably consistent in a policy sense. Although a local tourism plan is not in place, concerns were raised during the public engagement process by many residents of Wentworth that large wind turbines are not compatible with the eco-tourism goals of the community. There were also calls to exclude turbines from Wentworth to protect core moose habitat which could be seen as “ecologically-significant lands” however most of Cumberland County has been identified as core habitat for mainland moose and excluding all of Cumberland would amount to a prohibition of turbines altogether which is not permitted. Additionally, if Council were to designate an area as ecologically significant, it may have unwarranted implications on future development in the area.

Council may determine that the Wentworth Valley is a culturally significant area and that as such, is an area inappropriate for large-scale wind turbines. While the Municipal Planning Strategy doesn't provide any guidance on the criteria for determining if an area is culturally significant, more general planning theory may be referenced. Recent planning activities in Europe, more specifically the BaltSpace group in Baltic region provide some guidance in identifying culturally significant areas. A very limited view of that work is listed below and adapted to fit the context.

In a very general sense, a culturally significant area may be interpreted as a place which means a great deal to people. That might be local residents living in the area or visitors or seasonal residents that come to enjoy the peace, scenery, and recreation opportunities. It is a place that can generate strong emotions and that contributes significantly to people's well-being, not only in terms of providing jobs and resources but also at a less tangible, non-material level. Culturally significant areas can be a place of imagination and adventure or a spiritual place. It can also be seen as the last remnants of wilderness, a place where human influence is less obvious and a place that still holds secrets.

When we think of areas as planners, these intangible aspects and values can sometimes be lost and that's because activities such as cottage development, housing, forestry, or wind energy are much more visible through the economic benefits they deliver.

Identifying places of cultural importance establishes what is valued by people, where these values are located, when in time they are relevant and to whom, and which places, features or areas are particularly significant compared to others. Identifying culturally significant areas can support community planning by making cultural values explicit, enabling them to be considered in decision-making.

There are essentially five criteria for determining whether an area is culturally significant. Not all criteria are necessary for an area to be considered significant.

Criteria for Culturally Significant Areas	Description
Uniqueness	Is the area/feature unique within a region
Broad Cultural/ Community Reliance	How many people or groups rely on the feature/area? How many functions does it fulfill?
Importance to resilience	How essential is the area or feature to the cultural integrity of the community or to the group of users? What would happen if it were lost, changed or degraded?
Degree of Tradition	How long have people valued the area/feature?
Dramatic Cultural Change	Does the unique context of the culture that values the feature give it special importance.

If Council wishes to consider whether the Wentworth Valley is a culturally significant area, Council must weigh this against the necessity of developing clean, renewable energy and support of the wind development industry in Cumberland. If Wentworth is excluded, it is advisable that such exclusion be limited geographically to as small an area as reasonable.