

STAFF REPORT

To: **Municipality of the County of Inverness Council**
From: **Planning Staff (EDPC)**
Date: **March 15, 2018**
Reference: **Accessory Wind Turbines in the Port Hood Plan Area**



Summary:

A detailed analysis of the new Port Hood Land Use By-law has revealed that the provision on accessory wind turbines does not regulate wind turbine development in the way intended, as it creates inconsistencies in the administration of the by-law. The decisive stipulation concerning height is the general height limitation as defined in the zoning. The key recommendation of staff is to remove inconsistencies from the by-law. This can be achieved through several types of Land Use By-law amendments, which are presented in the conclusions of the report.

Background:

This report was prepared at the direction of Council following the Public Hearing on the Port Hood Secondary Planning Strategy and Land Use By-law on October 19, 2017. During the hearing a member of the public voiced opposition to a section of the Land Use By-law which allows for domestic scale wind turbines as accessory uses, provided they do not exceed 6 metres in height.

Box I - Disputed provision of the new Port Hood Land Use By-law

“One domestic scale wind turbine (as defined in the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development) shall be permitted on a lot as an accessory use within the plan area but shall not be taller than 6 metres (19.7 feet) in height and shall comply with all requirements of the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development.”

Part 6 General Provisions, Section 15

In the Council session immediately following the Public Hearing, Council voted to adopt the Secondary Planning Strategy and Land Use By-law as published before the hearing, but also addressed the public concern by directing Planning staff to report on options to alter the accessory use provisions of the newly adopted Land Use By-law.

Analysis:

Origin of Provision

The accessory use provision for wind turbines had been introduced in a Port Hood Area Advisory Committee (PHAAC) meeting during the public participation/plan preparation phase. During the May 04, 2017 PHAAC meeting, planning staff presented typical land use by-law provisions on wind turbines from other jurisdictions. Following a discussion, the committee recommended an approach whereas small scale wind turbines be permitted as an accessory use in any zone, provided that they do not exceed 6 metres in height and are limited to one turbine per property. This meeting outcome was documented in the PHAAC minutes of meeting (see Appendix D).

Regulations in Other Municipalities

There is a wide range of approaches on how to regulate wind turbines throughout municipalities in Nova Scotia, and terms defining sizes of wind turbines are not uniform. As can be seen in the **inter-municipal comparison of policies in Appendix E**, however, there is a common tendency to have more stringent regulation on wind turbines in urban areas. While County-wide regulations tend to be more permissive, municipalities impose rather stringent regulation on urban centres. For instance, the towns of Digby, Wolfville and Oxford only allow wind turbines (of any kind) by development agreement.

It is common to exclude or restrict wind turbine developments in urban centres, as they are often not compatible with the objectives of dense communities: turbines generate noise, shadow flicker, can be dangerous to surrounding properties if they malfunction and create a visual impact which can be regarded as undesirable for communities, especially if tourism plays a role. Even if properties are large enough to accommodate a wind turbine without any nuisance for the neighbouring properties, it may still contradict the growth targets of a community because the operation of a mid to large scale turbine likely precludes the intensification of the surrounding area through infill growth.

Many municipalities exempt wind turbines from the height restrictions defined in zones, so they can be regulated separately. In the Port Hood Plan area, the exemption from the zoning height limit has not been introduced to the Land Use By-law. This means that wind turbines – as any other structures – have to comply with the height restriction of the applicable zone. The six metre stipulation for accessory wind turbines is only secondary to that.

Inverness County Land Use By-law concerning the regulation of Wind Turbines

The height of six metres is also mentioned in the municipality-wide wind turbine by-law. Six meters is the maximum height of a wind turbine that can be mounted on or attached to other structures. When the height of the turbine from the bottom of its stand to the tallest point of the rotor in its vertical position does not exceed six metres, such a turbine could be e.g. placed on the roof of a building. Turbines greater than six metres have to be erected on a dedicated foundation and stand.

The municipality-wide by-law also limits the amount of domestic wind turbines to one turbine per property, sets a maximum height for domestic wind turbines at 60 metres, requires the setback distance from neighbouring properties to be at least equal to the turbine height and requires a minimum lot area of 0.4 hectares (1 acre) for all wind turbines above one Kilowatt.

Actual effect of accessory use provision on wind turbines

Due to section 64 of the General Provisions (Part 6) of the Port Hood Plan all public or private utilities are allowed to be developed in all zones, as long as they comply with the zoning

Box II - Port Hood Land Use By-law on Utilities

“Public and private utilities shall be permitted in any zone provided that any building required for such use conforms to the applicable lot standards of that particular zone and the requirements of other municipal policy document or By-law that may apply.”

Part 6 General Provisions, Section 64

standards. Since all zones in Port Hood currently include a height limit of 10.7 metres, the compound of rules pertaining to wind turbines results in the following development scenarios:

1. On a vacant property in the Port Hood plan area, a land owner can receive a development permit for a wind turbine of up to 10.7 metres height
2. On a property that holds a building, the addition of a wind turbine would be deemed accessory and could be only built up to six metres height.
3. Since a turbine up to that height can be also mounted on other structures, it could be installed e.g. on the roof of the building, as long as it does not exceed the height limit of the zone. A roof at a height of 4.7 metres could accommodate a six metre wind turbine in compliance with the by-law.

If the provision on accessory wind turbines were not in place, there would be no distinction between the first and second case: stand-alone wind turbines could always be built up to a height of 10.7 metres, irrespective of whether they would be regarded accessory or not. This differentiation is the only effect of Part 6, Section 15 of the Land Use By-law.

Recommendation from Port Hood Area Advisory Committee

The Port Hood Area Advisory Committee convened on February 27, 2018 to revisit the issue. During the discussion it became apparent that the intention of the committee was in fact to allow for wind turbines but to restrict all development of wind turbines to a height limit of six metres. The committee was unaware that Section 64 generally allows private utilities to be placed in all zones and was under the impression that the document does not allow for wind turbines at all. The intent of the provision on accessory wind turbines was to open an opportunity for the installations of small turbines, but the committee never wanted to allow for turbines higher than six metres.

Consequently, the **Port Hood Plan Area Advisory Committee recommends** that the inconsistencies in the Land Use By-law be removed while **a consistent height limit of six metres** for wind turbines of any kind be introduced to the Port Hood Land Use By-law. The municipal **Planning Advisory Committee recommended to Council** on the March 05th meeting to follow the recommendation of the Area Advisory Committee.

Technical Background

Research by planning staff indicates that the minimum height to ensure efficiency of a wind turbine is equal to the height of surrounding obstacles for the wind flow. Since all zones in Port Hood allow for buildings up to 10.7 metres, this value is likely the minimum operational height to allow for economic viability of micro wind turbines and similarly small devices.

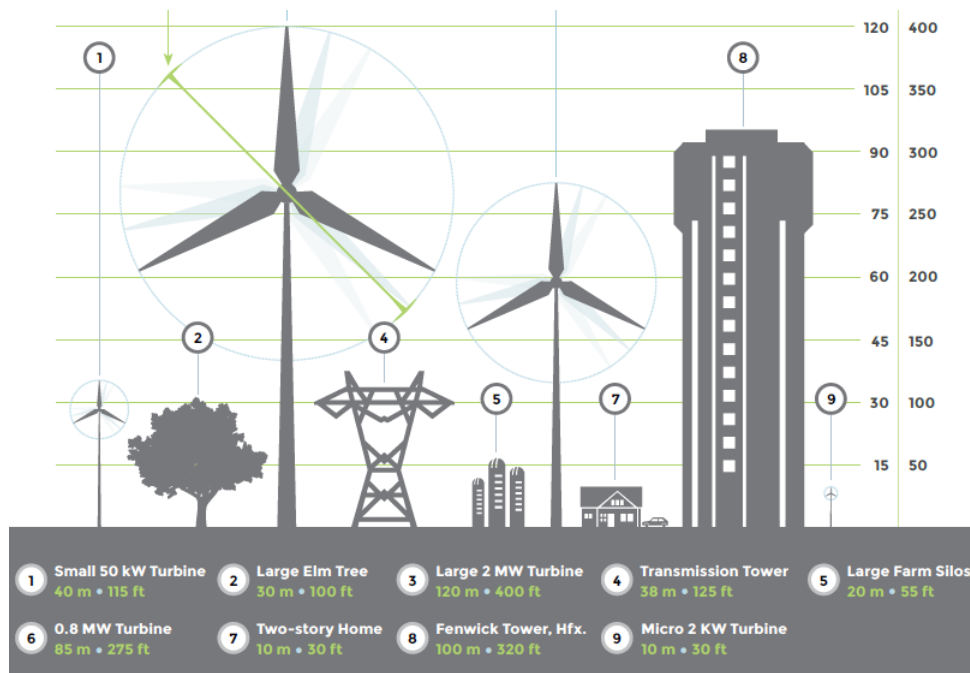


Figure 1: Presentation of wind turbine types by Union of Nova Scotia Municipalities

The Union of Nova Scotia Municipalities suggests in its 2015 publication ‘*Wind Energy Fact Sheets for Nova Scotian Municipalities*’ the value of 10 metres as a height for micro wind turbines (see above figure). The height restriction of six metres would likely constitute a de facto prohibition of wind turbines in the Port Hood Plan Area.

Conclusions:

Planning staff does not see any reasoning why wind turbines should be allowed to reach a total height of 10.7 meters if located on a separate lot or roof of a building, while stand-alone turbines on the same property as a building can only reach six metres. This inconsistency in the Land Use By-law should be corrected in any case. There are several ways to achieve that:

- a) In accordance with the recommendation of the Port Hood Area Advisory Committee, the provision on accessory wind turbines could be removed and replaced by a general requirement for wind turbines not to exceed six metres.**

Planning staff believes that this approach would render small and micro wind turbines in Port Hood inefficient and suggests that instead wind turbines shall be either:

- b) Completely prohibited in the Port Hood Plan area; or**
- c) Allowed up to a height of six metres but exempt from the general height restriction of the zones, so that they could be installed on top of roofs.**

The approach suggested in c) would mirror the regulations of the Inter-municipal Planning Strategy of the Towns of New Glasgow, Pictou, Stellarton, Trenton and Westville, which originally served as an example for the Port Hood Area Advisory Committee.

The complete removal of restrictions for wind turbines in the Port Hood plan and a mere reliance on the municipal *Inverness County Land Use By-law concerning Wind Turbines* is not recommended. Planning staff suggests that as in other municipalities in Nova Scotia, Council should retain provisions in the Land Use By-law to regulate wind turbine development in denser communities and avoid treating Port Hood with the same approach as the entire County.

Depending on the recommendation that Council chooses to proceed with, the Land Use By-law will be amended according to one of the following amending page appendices:

Amending Pages Index	
Recommendation a) – see above	Appendix A
Recommendation b) – see above	Appendix B
Recommendation c) – see above	Appendix C

Appendix A: Amending Page (option a)

A By-law to Amend the *Inverness Land Use By-law*

The *Land Use By-law of the Port Hood Planning Area of the Municipality of the County of Inverness* is hereby amended as follows:

1. By adding the following provision as section 65 immediately following section 64 in Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:

65. Wind turbines are limited to a height of six metres (19.7 feet).

and renumbering the remainder of the Sections in Part 6 accordingly, and

2. By deleting section 15 shown in strikethrough from Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:

~~15. One domestic scale wind turbine (as defined in the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development shall be permitted on a lot as an accessory use within the plan area but shall not be taller than 6 metres (19.7 feet) in height and shall comply with all requirements of the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development.~~

and renumbering the remainder of the Sections in Part 6 accordingly.

This is to certify that the resolution of which this is a true copy, was passed at a duly called meeting of the Municipal Council of the Municipality of the County of Inverness held on the:

_____ day of _____ 2018.

Given under the hand of the Chief Administrative Officer and under the corporate seal of the Municipality this:

_____ day of _____ 2018.

Mr. Keith MacDonald, Chief Administrative Officer

Appendix B: Amending Page (option b)

A By-law to Amend the *Inverness Land Use By-law*

The *Land Use By-law of the Port Hood Planning Area of the Municipality of the County of Inverness* is hereby amended as follows:

1. By adding the following provision as section 65 immediately following section 64 in Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:

65. Notwithstanding Section 64, Wind turbines are prohibited in all zones.

and renumbering the remainder of the Sections in Part 6 accordingly, and

2. By deleting section 15 shown in strikethrough from Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:

~~15. One domestic scale wind turbine (as defined in the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development shall be permitted on a lot as an accessory use within the plan area but shall not be taller than 6 metres (19.7 feet) in height and shall comply with all requirements of the Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development.~~

and renumbering the remainder of the Sections in Part 6 accordingly.

This is to certify that the resolution of which this is a true copy, was passed at a duly called meeting of the Municipal Council of the Municipality of the County of Inverness held on the:

_____ day of _____ 2018.

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_____ day of _____ 2018.

Mr. Keith MacDonald, Chief Administrative Officer

Appendix C: Amending Page (option c)

A By-law to Amend the *Inverness Land Use By-law*

The *Land Use By-law of the Port Hood Planning Area of the Municipality of the County of Inverness* is hereby amended as follows:

1. By adding the following term in bold to section 27 “HEIGHT REGULATIONS” in Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:
 27. The height regulations of this By-law shall not apply to **accessory wind turbines**, church spires, water tanks, elevator enclosures, silos, flagpoles, television or radio antennae, skylights, barns, chimneys, clock towers, power transmissions, lookout towers, satellite discs, and solar collector devices.

2. By adding the following provision as section “65” immediately following section “64” in Part 6 “GENERAL PROVISIONS FOR ALL ZONES”:
 65. Wind turbines are limited to a height of six metres (19.7 feet).

and renumbering the remainder of the Sections in Part 6 accordingly.

This is to certify that the resolution of which this is a true copy, was passed at a duly called meeting of the Municipal Council of the Municipality of the County of Inverness held on the:

_____ day of _____ 2018.

Given under the hand of the Chief Administrative Officer and under the corporate seal of the Municipality this:

_____ day of _____ 2018.

Mr. Keith MacDonald, Chief Administrative Officer

Port Hood Area Planning Advisory Committee

Appendix D: Meeting Minutes for May 4, 2017

Call to Order

The meeting was called to order at 3:31pm by Betty Ann MacQuarrie, Chairperson.

Attendance

Present: Francis Gillis (left at 4:43pm), Donald MacEachen, Charles MacDonald, Kevin MacDonald, Patricia Van Zutphen (left at 4:30pm), Betty Ann MacQuarrie, Janice Langille (Harbourview Resident), Joe O'Connor (CAO), and Nathan MacLeod (Planner)

Regrets: John Campbell, Evan MacDonald.

Additions to / Approval of Agenda

The approval of the agenda was moved by Donald MacEachen and seconded by Patricia Van Zutphen.

Approval of Previous Minutes

The approval of the previous minutes was moved by Donald MacEachen and seconded by Patricia Van Zutphen.

Business Arising From Previous Minutes

- **Zoning of Chestico Museum Property** (old school property at the corner of Main Street and Wharf Road): In reviewing the previous minutes, discussion arose about this property and the history behind its present zoning as half Residential Urban (R-1) and half Harbourfront Development (C-3). After discussion regarding the lot boundaries, the zone boundaries, and potential development scenarios, the committee decided to leave the zoning as it is, pending information from Planning Staff regarding the history behind the dual zoning. **Action Item:** Planning staff will email the committee with any available information regarding the dual zoning of the property.
- **Accessory Buildings:** Kevin MacDonald noted that the planning documents do not permit dwelling units in accessory buildings and questioned why this was the case. After discussion, the committee requested that item 1. a) of the Accessory Building provisions of the LUB prohibiting human habitation of accessory buildings be removed. Planning Staff agreed to these changes under the condition of researching what the potential implications would be – including whether there should be restrictions placed on future dwelling units in accessory buildings (e.g. number of units, parking, civic addressing, etc.) **Action Item:** Planning staff will research the topic and email the committee with the proposed changes.

Plan Review

- **Discussion regarding potential regulation of smaller wind turbines:** The Committee reviewed the land use by-laws in place for the Towns of New Glasgow, Pictou, Stellarton, Trenton and Westville; the Municipality of the County of East Hants; the Municipality of the County of Guysborough; and the Municipality of the County Inverness with regard to mini

Port Hood Area Planning Advisory Committee

and small scale wind turbines. The Committee decided to adopt an approach where domestic scale wind turbines will be permitted as accessory uses in all zones provided:

- only one turbine per lot will be permitted;
- the maximum height of the turbine will be 6 metres; and,
- all other provisions of the *Land Use By-law for the County of Inverness Concerning the Regulation of Wind Turbine Development* shall apply.

Action Item: Planning staff will make the necessary changes to implement these provisions concerning wind turbines.

- **Discussion of any remaining concerns regarding the draft documents:** The Committee discussed the following issues:
 - The description of municipal servicing in the MPS currently says it extends north to Murphy's Pond Road when it actually extends north to Little Mabou Road.

Action Item: Planning staff will make the necessary changes to update the description of the extent of municipal servicing.

Other Business

- **Organizational Matters:** It was moved by Kevin MacDonald and seconded by Francis Gillis that the draft documents be forwarded to the Inverness Planning Advisory Committee with the changes discussed at this meeting.

Adjournment

It was moved by Charles MacDonald that the meeting be adjourned at 4:47pm.

Appendix E: Comparison of rural and urban policies on wind turbines across Counties of NS

County	Rural Land Use By-law	Urban Land Use By-law
Pictou	Municipality of the County of Pictou	Pictou, New Glasgow, Westville, Stellarton and Trenton inter-municipal LUB
	<ul style="list-style-type: none"> • Wind turbines under 200 KW are defined as domestic size and require a setback of 1 time the height, no further restrictions 	<ul style="list-style-type: none"> • Wind turbines under 6m are accessory structures and may be mounted on other structures • Mini wind turbines (only allowed in Commercial Parks, Industrial Areas, Resource Land and Water Supply zones) <ul style="list-style-type: none"> - maximum output 10 KW - height limit of 22.9 metres - setback: 1.25 x height
Kings	Municipality of the County of Kings	Town of Wolfville
	<ul style="list-style-type: none"> • Accessory Wind Turbines up to 7.62 metres (25 feet) allowed in all zones • Small scale wind turbines up to 51.8 metres (170 feet) allowed in all zones except growth centres • Setback 1.5 times the height in both cases; no output power specifications 	<ul style="list-style-type: none"> • Wind turbines only by development agreement and only in agricultural zone
Digby	Municipality of the District of Digby	Town of Digby
	<ul style="list-style-type: none"> • Wind Turbines under 100 KW need a setback that does not create more than 45 dBA of sound pressure on any lot line, no further restrictions 	<ul style="list-style-type: none"> • By development agreement only
Yarmouth	Municipality of the District of Yarmouth	Town of Yarmouth
	<ul style="list-style-type: none"> • Micro scale turbines up to 10 KW allowed in all zones subject to a height limit of 20 metres (66 ft) and a setback of 1.25 times the height • Small scale turbines between 10 and 100 KW are excluded from all residential and most commercial zones and require site plan approval 	<ul style="list-style-type: none"> • Only Small scale accessory wind turbines which are limited to 24.38m (80 ft) height and have a very stringent limitation of the blade diameter to only 1 meter (3.3 ft)
Cumberland	Municipality of the County of Cumberland	Town of Oxford
	<ul style="list-style-type: none"> • Domestic Wind Turbine up to 10 KW permitted as an accessory use in all zones, provided that lot is at least 0.4 ha and the turbine is does not exceed 27.4 metres (90 ft) in height. Up to 6 metres height, it can be mounted on other structures. • Small scale wind turbines from 10 KW to 100 KW may not be erected in restricted zones. Their height limit is 60 metres (197 ft) 	<ul style="list-style-type: none"> • Only in Rural Land Use Zone and only by development agreement