

**FALMOUTH ZONING BOARD OF APPEALS
FINDINGS AND DECISION**

FILE NUMBER: 62-15

APPLICANT: TOWN OF FALMOUTH

SUBJECT PROPERTY: 154 Blacksmith Shop Road, West Falmouth

Zoning District: Public Use

DEED/CERTIFICATE: Certificate 81906 - Lots 12 & 16 - Plan 31976-D (sheets 1 & 3)

Assessor's Map: Map 23, Section 03, Parcel 014, Lot 012

SUMMARY: SPECIAL PERMIT DENIED

PROCEDURAL HISTORY

1. This application for a special permit follows ruling of the Massachusetts Appeals Court in the case of *Drummev v. Falmouth*, 87 Mass. App. Ct. 127 (2015) ("*Drummev* "). The Appeals Court decided that the Town's construction, operation, and maintenance at its Waste Water Treatment Facility ("WWTF") of the wind turbine known as "Wind 1" required a special permit. The Town originally initiated construction, operation, and maintenance of Wind 1 with only a building permit. Consequently, the Appeals Court remanded the matter to the Superior Court. The Superior Court ordered both the Town and the Zoning Board of Appeals ("ZBA") to take action consistent with the Appeals Court's ruling in *Drummev*.
2. The Supreme Judicial Court denied the Town's Application for Further Appellate Review.
3. The Town of Falmouth ("Town") applied for a special permit for Wind 1 on July 8, 2015. Notice was duly given as required by G.L. c. 40A, s, 11, as well as notices sent to all persons deemed to be affected thereby as they appear on the tax list.
4. A duly advertised public hearing was opened on September 10, 2015.
5. The ZBA was represented by Special Town Counsel, Mark Bobrowski, of Blatman, Bobrowski, Mead & Talerman, LLC, of Concord, Massachusetts.
6. The Town was represented by Attorney Diane Tillotson, of Hemenway & Barnes, Boston, Massachusetts, and Town Counsel Frank K. Duffy, Jr.
7. Several neighbors were represented during the hearing by Attorneys Christopher Senie and J. Alexander Watt.

8. Pursuant to the ZBA's earlier decision regarding Wind 1 in case number # 54-15 (Drummey), the Zoning By-Law governing the special permit application was the by-law in effect in 2010 when the building permit for Wind 1 was granted.
9. Sessions of the public hearing were held on 9/10/15, 10/29/2015, 11/19/2015, 12/10/2015, 1/14/2016 and 1/28/2016. The public hearing was closed on February 1, 2016. Counsel for the Town and the neighbors stated on the record that they had no objection to the close of the public hearing.
10. The voting members of the ZBA consisted of Chairman Bielan, Vice Chairman Kenneth Foreman, Clerk Terrence Hurrie, and members Paul Murphy and Ed Van Keuren, all of whom were present for the entirety of the public hearing.
11. Minutes from the hearing are on file in the office of the ZBA.
12. After the close of the duly posted and advertised public hearing, and after deliberation on March 5, 2016, and April 14, 2016, the ZBA voted 4-1 to deny the application for a special permit for Wind 1. (Member Van Keuren voted in opposition to motion.)
13. The ZBA received documents and information prior to and during the public hearing that are on file in the office of the Board of Appeals at Town Hall.

FINDINGS

The ZBA, after carefully considering all of the facts and evidence submitted at the hearing, makes the following Findings with regard to the application for a special permit for Wind 1:

1. It is uncontroverted that Wind 1 constitutes a "windmill" as that term is defined in Section 240-13 of the Zoning By-Law.
2. It is uncontroverted that the ruling of the Massachusetts Appeals Court in *Drummey* established that the Town's construction, operation, and maintenance of Wind 1 required a special permit. The Supreme Judicial Court denied the Town's Application for Further Appellate Review.
3. Section 240-33.G (5) of the Zoning By-Law states that to be eligible for special permit consideration the "windmill" must be accessory. The Zoning By-Law defines "accessory building" and "accessory use" as follows:

ACCESSORY BUILDING: A building such as a garage or shed, located on the same lot with, and accommodating a use accessory to, the principal permitted use of the premises.

ACCESSORY USE: A use of land or building on the same lot with, and customarily incidental but secondary to, a permitted use except that if more than 30% of the floor area or 50% of the lot area is occupied by such use, it shall no longer be considered "accessory."
4. The ZBA finds that Wind 1 is not an accessory building, structure, or use. Wind 1 has a tower height of two

hundred sixty-two (262') feet, a rotor diameter of two hundred sixty-nine (269') feet and an overall height to the topmost blade extension of three hundred ninety-seven (397') feet. The size of Wind 1 dwarfs the Town's Waste Water Treatment facility ("WWTF") and it is neither "incidental" nor "secondary."

5. Moreover, the Town's Energy Committee decided to install a larger turbine than one calculated to "match the load" (meet the electricity needs of the WWTF). This decision occurred when it looked like the Green Communities Act would be adopted by the Massachusetts Legislature making "net metering possible" (i.e. the Town could generate revenue by selling excess electricity to the grid at the same rates as it purchases electricity and by selling Renewable Energy Certificates on the open market. Wind 1 and Wind 2 combined, if not constrained, would generate about 4.5 times the amount of electricity needed to operate the WWTF. The Board finds that Wind 2, even while operating under the temporary injunction issued by the Superior Court, generates more than the amount of electricity needed for the WWTF. Therefore, Wind 1 cannot be considered "incidental" or "secondary."
6. Section 240-70.B of the Zoning By-Law states that, in Public Use Districts, the maximum building height for "permitted community service uses" is three stories, not to exceed 50 feet, except that "municipal purposes found in s. 240-30.B shall not be subject to the height provisions of this bylaw."
7. The Appeals Court, in *Drummey*, decided that Wind 1 is properly classified as a "windmill," not as a "permitted community service use" subject to Section 240-30.B.
8. The Appeals Court, in *Drummey*, decided that Wind 1 is properly classified as a "windmill," not as a "municipal purpose" subject to Section 240-30.B.
9. Section 240-166 does not limit the height of windmills. The ZBA therefore finds that Wind 1 does not exceed the height limitations set forth in Section 240-70.B of the Zoning By-Law.
10. Section 240-166 requires the grant of a special permit from the ZBA for the operation of a windmill, subject to consideration of the factors set forth therein.
11. Section 240-166.A requires "an area sufficient so that a circle, the center of which shall be located at the center point of the base of the tower, and the radius of which shall be no less than the height of the tower as measured from the base of the tower to the uppermost of the blade, whichever is greater plus 10 feet, may be drawn and be completely within the petitioner's land." The ZBA finds that this "circle requirement" has been met.
12. Section 240-166.B requires the ZBA to find that there shall be "no adverse impacts on the neighborhood in terms of television interference, ice throw, prop throw, noise, etc." Furthermore, "there shall be a rebuttable presumption that noise from the windmill in excess of 40 dba, as measured at the property line, shall not be excessive." The ZBA finds that the inclusion of the word "not" in this sentence is a typographical error and shall construe that sentence without the word "not." Thus, the ZBA shall consider noise in excess of 40 dba to be "excessive."
13. In making the assessments required by Section 240-166.B, the ZBA is mindful of its earlier decisions in cases #2-13 and #69-13. In these cases, the ZBA deemed Wind 1 a nuisance pursuant to Section 240-110, which states:

No use shall be permitted which would be offensive because of injurious or obnoxious noise, vibration, smoke, gas, fumes, odors, dust or other objectionable features, or be hazardous to the community on account of fire or explosion or any other cause. No permit shall be granted for any use which would prove injurious to the safety or welfare of the neighborhood into which it proposes to go, and destructive of property values, because of any excessive nuisance qualities.

14. The ZBA finds the testimony of residents who complain of distress from the operation of Wind 1 to be credible. Neighbors living in close proximity to Wind 1 who opposed the special permit application due to the adverse impacts caused by the wind turbine.
15. The ZBA finds that the Town has not provided “appropriate engineering data” as required by Section 240-166. B, to prove “no adverse impacts on the neighborhood.” There exists credible and appropriate data demonstrating that Wind 1 does, in fact, impose adverse impacts on a significant number of nearby residents and this evidence was provided at the public hearing via personal and professional testimony, and expert acoustical noise measurements. Some of this evidence was contained in the Town’s own testimony, including expert reports. In determining whether these were measurable adverse impacts on the neighborhood, the Board considered three noise standards: 1) limit of 40dba at property line, b) the MADEP standard of 10 dba over ambient and c) current 6dba over ambient.
16. The ZBA finds that noise levels produced by Wind 1 sometimes exceed Section 240-166.B’s limitation of 40 dB(A)¹, as measured at the property line, supported by the following information in the record:
 - a. Modeled average noise levels shown in HMMH’s report, Figure 16, indicate that Wind 1 exceeds 40 dB(A) at site LT-1 at wind speeds above 11 m/s at hub height (2010);
 - b. Actual measurements reported in the MADEP Nighttime Report (May 2012) Table 2 demonstrate that noise exceeds 40 dB(A) at multiple sites outside the property line of the WWTP.
 - c. Measurements reported in the MADEP Daytime Report (November 2012) Table 2 demonstrate that noise exceeds 40 dB(A) at multiple sites outside the property line of the WWTP.
 - d. Measurements reported by certified acoustical engineer Michael Bahtarian in his slide #15, 17, 18 demonstrate that noise exceeds 40 dB(A) at multiple sites outside the property line of the WWTP.
17. The ZBA also finds that noise levels produced by Wind 1 sometimes exceed the noise standards of the Massachusetts Department of Environmental Protection (DEP) set forth at 310 CMR 7.10. This standard is 10 dB(A) above ambient, as measured at the property line. This finding is supported by the following information in the record:

¹ The ZBA finds that there are occasions when the background noise level recorded by DEP exceeds the 40 dB(A) limit. The Board recognizes that the Canadian Province of Ontario has a similar 40 dB(A) limit for wind turbine noise. Section 2.4 of the Ontario “Technical Guide to Renewable Energy Approvals” provides an exception when ambient noise is greater than 40 dB(A). If ambient is greater than 40 dB(A), then the limit is raised to the level of the ambient noise plus zero. The ZBA finds this exception reasonable, and notes that when ambient levels measured by DEP were greater than 40 dB(A), impact noise from Wind 1 was greater than zero. Therefore exceedance of the limit still occurs as shown in Table 2 of the DEP reports.

- a. Table 2 of the MADEP Nighttime Report (May 2012) indicates noise levels produced by Wind 1 (alone; Wind 2 was not yet operational) exceeded the MADEP state standard of 10 dB(A) (which is a doubling of noise) above ambient at Site LT-1 at all wind speeds and on all nights tested.
18. In 2013, the Falmouth Town Meeting replaced the prior version (but effective in the instant matter) of Section 240-166, with a new version which incorporates a standard of 6 dB(A) above ambient. The ZBA has adhered to this limitation in several recent cases:
 - a. Case Number #87-10 - Scanlon Turbine Special Permit (a condition of SP approval);
 - b. Case Number # 2-13 - Appeal of Neil and Betsy Andersen (nuisance found);
 - c. Case Number #69-13 - Appeal of Barry and Diane Funfar (nuisance found);
 - d. Case Number #19-08 – Grant of special permit for Wind Turbine to Daniel Webb.
 19. The ZBA finds the report entered into the record entitled: “DNV Review of the Falmouth Wind 1 and Wind 2 Mitigation Report” dated March 15, 2012, to be credible. The DNV Study reviewed the report of Harris, Miller, Miller and Hanson (“HMMH”) dated September 2010 and entitled: “Falmouth Wind Turbine Noise Study.” The DNV Study opined that use of the 6 dB(A) limit is appropriate and recognized the unique character of wind turbine sound pressures, as discussed on page 15 of the DNV report.
 20. The ZBA finds that the HMMH Study reported noise levels above 40 dB(A) at property line and an average nighttime noise level (Leq) of 8 dB(A) above background for a single operating turbine. Modeled results for both Wind 1 and Wind 2 operating concurrently indicate noise levels in excess of 6 dB(A) for 8 of the 11 sites analyzed (page 32). The ZBA did not receive any actual noise data measurement(s) regarding the simultaneous operation of Wind 1 and Wind 2.
 21. The ZBA finds that noise levels produced by Wind 1 exceed the 6 dB(A) above ambient standard at multiple locations, under multiple weather conditions, during the day and night as shown in:
 - a. The Nighttime Study conducted by DEP demonstrated that 11 of the 12 field measurements exceeded 6 dB(A) above background and 4 of 12 exceeded 10 dB(A) above background. Further that relative to the Town’s 40 dB(A) limit, 7 of 12 field measurements demonstrated turbine sound pressures greater than 40 dB(A).
 - b. The Daytime Study performed by MADEP at the request of the Falmouth Selectmen demonstrated exceedances above the 6 dB(A) limit above background even when background levels were already elevated due to highway and other traffic noise.
 22. The ZBA finds that noise measurements provided by NCE provide evidence that the noise from Wind 1 contains significant levels of infrasonic noise. Infrasound pressure with harmonic peaks at multiples of the blade passage frequency were measured both outside and inside the homes of two neighboring houses (Andersen and Ohkagawa residences.) Testimony was provided by neighbors affirming that the repetitive infrasonic noise pulses from Wind 1 are sensed as rhythmic beating in their chests and heads, and is injurious, obnoxious and highly objectionable.

23. The record contained credible evidence that the 40 dB(A) standard was exceeded at the property line during operation in high wind speeds. The record also contained credible evidence that the 6 dB(A) and 10 dB(A) standards were exceeded during operation at low wind speeds. Therefore, the ZBA finds that mitigation based on curtailment of operation using wind speeds or wind direction is difficult if not impossible. In any event, The ZBA was not presented with credible evidence that mitigation would be successful.
24. For the reasons stated in paragraphs 14 - 23, above, the ZBA finds that it cannot “ensure” that there “shall be no adverse impact on the neighborhood.”
25. Section 240-166.C requires all wires running from the windmill to any structure to be underground. The ZBA finds that this requirement has been met.
26. Section 240-166.D requires the windmill to have a “use permit” to be in operation, and also requires biennial inspections. The ZBA finds that the building permit was erroneously issued in 2011, as per the holding in *Drumme*y, and that this requirement, therefore, has not been satisfied.
27. Section 240-166.E requires a finding that the windmill is protected from unlawful access. The ZBA finds that this requirement has been met.
28. The grant of any special permit for a windmill must also take into account the criteria listed in section 240-216. See Section 240-166.
29. Section 240-216 states that the special permit granting authority shall grant a special permit only upon its written determination that the proposed use will not have adverse effects which overbalance its beneficial effects on either the neighborhood or the town, in view of the particular characteristics of the site ... and shall include consideration of each of the following” criteria.
30. For the reasons set forth in paragraphs 14 - 23, above, the ZBA finds that the proposed windmill will “have adverse effects which overbalance its beneficial effects on the neighborhood, in view of the particular characteristics of the site.” The ZBA also finds that the effects of the proposed windmill “on the Town” will be negligible.
31. Section 240-216.A requires consideration of the “adequacy of the site in terms of size for the proposed use.” The ZBA finds that the subject property is adequate in size for the intended use; however, the actual location chosen for Wind 1 was not appropriate, as set forth above.
32. Section 240-216.B requires consideration of the “suitability of the site for the proposed use.” The ZBA finds that the subject property is suitable for the proposed use; however, the actual location chosen for Wind 1 was not appropriate, as set forth above.
33. Section 240-216.C requires consideration of the “impact on traffic flow and safety.” The ZBA finds that the windmill will have negligible impacts on traffic flow and safety.

34. Section 240-216.D requires consideration of the "impact on neighborhood visual character, including views and vista." The ZBA finds that the proposed windmill will not adversely impact neighborhood visual character, views, or vista.
35. Section 240-216.E requires consideration of the "adequacy of method of sewage disposal, source of water and drainage." The ZBA finds this criterion to be inapplicable.
36. Section 240-216.F requires consideration of the "adequacy of utilities and other public services." The ZBA finds this criterion to be inapplicable.
37. Section 240-216.G requires consideration of the "effect ... on the adequacy of supply of affordable housing." The ZBA finds this criterion to be inapplicable.
38. Section 240-216.I requires "compliance with all applicable sections of the zoning bylaws." For the reasons set forth above, the ZBA finds that the proposed windmill does not comply with Sections 240-33.G (5) and 240-166.

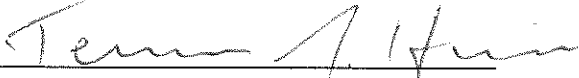
NOW, THEREFORE

Member Foreman made a motion to deny the Town's application for a special permit for Wind 1. Member Hurrie seconded the motion.

The ZBA thereafter voted 4-1 to deny the special permit for the reasons set forth above.

Action: The Board of Appeals, by the signature below, being present, certifies the vote of the Board as follows for the above referenced:


Vote: ZBA voted 4-1 to deny the special permit for the reasons set forth above.


Terrence J. Hurrie, Clerk, Board of Appeals

RECEIVED

APR 15 2016

FALMOUTH TOWN CLERK *8:10 AM*

Date Filed With Town Clerk 

Notice is hereby given that any appeal from this Decision shall be made pursuant to Section 17 of Massachusetts General Laws, Chapter 40A, and shall be filed within twenty (20) days after the date of filing of this Decision in the office of the Falmouth Town Clerk.