2021 VT 22

No. 2020-174

In re JSCL, LLC CU Permit
(David Pierson, et al., Appellants)

Supreme Court

On Appeal from
Superior Court,
Environmental Division

December Term, 2020

Thomas S. Durkin, J.

Liam L. Murphy of MSK Attorneys, Burlington, for Appellants.

Anthony R. Duprey of Duprey Law, PLLC, Vergennes, for Appellee.

PRESENT: Reiber, C.J., Eaton, Carroll and Cohen, JJ., and Morris, Supr. J. (Ret.), Specially Assigned

¶ 1. **EATON, J.** Neighbors appeal the decision of the Environmental Division approving applicant JSCL, LLC's conditional-use application to construct a trucking facility in Ferrisburgh, Vermont. Neighbors argue that the court erred in its analysis of noise impacts and potential fire and safety hazards from the project and imposed a condition regarding nighttime traffic that is too vague to be enforceable. We affirm the court's decision, except for its analysis of nighttime traffic and noise impacts from the project and the condition that it imposed to address those impacts. We remand for the court to reconsider that portion of its analysis and the associated condition.

I. Facts and Procedural Background

¶ 2. In September 2016, applicant submitted a conditional-use application to the Town of Ferrisburgh Zoning Board of Adjustment (ZBA) proposing to build a trucking facility for its fuel-hauling business. The ZBA conducted a site visit and held seven hearings over an eleven-month period. Applicant made several revisions to its plans in response to concerns expressed by Town officials and neighbors. In September 2017, the ZBA approved the permit with certain conditions, including the limitation that applicant conduct its operations between 5:00 a.m. and 10:00 p.m. Both applicant and neighbors appealed to the Superior Court, Environmental Division.

¶ 3. Following a site visit and four-day trial, the environmental court made the following findings relevant to this appeal. John DeVos and his family have operated a fuel-hauling business from their family dairy farm in Ferrisburgh for nearly forty years. The DeVoses currently operate the business through their family corporation, J.A. DeVos & Sons, Inc. The fuel-hauling trucks and trailers are stored at the family farm. Early each morning, J.A. DeVos drivers arrive at the farm, confirm the truck they will be driving, and inspect the truck. They then leave the farm between 4:00 and 5:00 a.m. The drivers travel to wholesale fuel-storage facilities in Albany, New York, and Burlington, Vermont, where they fill up their tanker trailers. From there, they deliver fuel to various retail fueling stations in Vermont and New Hampshire. After completing their assigned deliveries, the drivers return to the farm, usually by 5:00 p.m. The trucks are typically empty of fuel when they return to the farm, although small amounts of fuel may remain in the tanks and fuel lines.

¶ 4. Several years ago, the DeVoses formed JSCL, LLC (applicant), to distinguish the fuel-hauling business from the dairy farm business. In 2015, applicant purchased a nine-acre undeveloped plot of land within the Ferrisburgh Industrial Zoning District on Tuppers Crossing with the intent of relocating the fuel-hauling operation away from the farm. Applicant proposed to build an 8000-square-foot maintenance and repair garage with offices, an outdoor truck-washing

area, an above-ground tank for refueling the trucks, and parking for nine trucks and eleven employee and visitor vehicles on the property. The facility would not be open to the public or have retail operations.

¶ 5. Applicant estimated that it would employ one full-time and up to six part-time employees in the office and garage, who would work from 8:00 a.m. to 5:00 p.m., Monday through Saturday. Applicant estimated that truck drivers would begin to arrive at or after 5:00 a.m. Most would return by 5:00 p.m., but some drivers with later shifts would not return until 10:00 p.m. Applicant estimated that it would begin operations with seven truck drivers and eventually would expand to have nine truck drivers. Applicant anticipated that drivers would occasionally need to travel to and from the facility in the middle of the night to make emergency fuel deliveries. It therefore requested to strike the condition imposed by the ZBA which limited its operations to the hours between 5:00 a.m. and 10:00 p.m.

¶ 6. Tuppers Crossing is a class 3 town highway that is approximately half a mile long and connects U.S. Route 7 to Botsford Road. There are five residential properties on the road. The closest residence is located 150 feet from the proposed project site on the opposite side of Tuppers Crossing. There are no existing commercial or industrial uses on Tuppers Crossing, but there are several commercial, retail, and industrial uses nearby on Route 7, which is a heavily traveled commercial highway. Traffic on Tuppers Crossing is relatively light and includes delivery and milk trucks, personal vehicles, farm vehicles, and area residents walking along the road.

¶ 7. A few hundred feet to the west of applicant's parcel, a railroad line crosses Tuppers Crossing. A residential property lies between applicant's parcel and the railroad tracks. Approximately two to three freight trains pass by each day, and tourist trains use the tracks in the summer. Most of the train traffic occurs between 9:00 a.m. and 5:00 p.m., but at least one train passes by between 1:00 a.m. and 6:00 a.m. each day.

¶ 8. The court concluded that applicant's proposed project was a freight or trucking terminal, which was an allowed conditional use in the Ferrisburgh Industrial Zoning District and therefore could be permitted if it otherwise complied with the zoning bylaws. The court found that the project met the general and specific conditional use standards and the performance standards set forth in the bylaws. Relevant to this appeal, the court found that applicant's site and operational plans provided adequate protection against potential fires or hazardous material spills. Regarding noise, the court found that the neighborhood was presently characterized by noises emanating from heavy commercial traffic on Route 7 to the east, and occasional train traffic on the tracks to the west. It found that large delivery and agricultural trucks regularly used the road. It found that the proposed project would bring additional noise from the truck traffic entering and exiting the property, although the volume of additional trucks would be small. Based on expert testimony presented by applicant, the court found that the additional noises would not exceed the noise levels already experienced in the neighborhood. It further found that the project would not adversely affect the character of the area due to noise and would comply with the performance standard concerning noise impacts, provided that applicant abided by certain conditions it imposed as part of its order. Neighbors appealed the decision to this Court.

II. Issues on Appeal

¶ 9. On appeal, neighbors argue that the environmental court erred in concluding that the proposed project complies with the noise-performance standard and that it will not have an undue adverse impact on the character of the area due to noise. They further claim that the court erred in concluding that the project will not be a fire, explosive, or safety hazard, arguing that parking trucks containing any amount of gasoline constitutes a significant safety hazard in a residential neighborhood. Finally, they argue that Condition 8, which requires applicant to "minimize the frequency of truck drivers arriving at the project site" between 10:00 p.m. and 5:00 a.m. and prohibits applicant from operating on Sundays or holidays "except in the case of

emergencies," is impermissibly vague and unenforceable because it contains no definite standards for enforcement.

¶ 10. We will uphold the environmental court's factual findings unless they are "clearly erroneous," meaning that "there is no credible evidence to support them or . . . they are internally inconsistent." In re N. E. Materials Grp., LLC, 2019 VT 55, ¶ 6, 210 Vt. 525, 217 A.3d 541 (quotations omitted). We review its legal conclusions, including its interpretation of zoning ordinances, without deference. In re Confluence Behavioral Health, LLC, 2017 VT 112, ¶ 17, 206 Vt. 302, 180 A.3d 867.

A. Risk of Fire, Explosive, or Other Safety Hazards

¶ 11. We first address neighbors' argument that the court erred in its assessment of whether the project posed a fire, explosive, or safety hazard that significantly endangers nearby property owners. Section 8.3 of the Ferrisburgh zoning bylaws provides that "[n]o fire, explosive or safety hazard shall be permitted which significantly endangers other property owners or which results in a significantly increased burden on municipal facilities." Neighbors argue that the International Fire Code (IFC) states that fuel tankers shall not be left unattended within 500 feet of a residential area, and that three homes are located within 500 feet of the proposed project. Neighbors argue that the environmental court failed to consider this provision of the IFC, requiring reversal.

¶ 12. The court permitted neighbors to introduce evidence of the IFC at trial. In its decision, it acknowledged that the IFC provision cited by neighbors could be read to prohibit applicant's parking plans. It also noted that the town fire chief had testified that the IFC provision was intended to prohibit the parking of tankers on public highways and should not be read as a prohibition on parking fuel tankers within a fenced security setting. The court ultimately gave the provision no weight because Vermont has not adopted the IFC.

¶ 13. We see no error. The question before the environmental court was whether applicant's proposed project complied with § 8.3 of the town bylaws, not whether it complied with the IFC. The IFC has not been adopted in Vermont and was therefore not binding authority. Rather, in this context, the IFC was merely another piece of evidence, and the court was not required to give it controlling weight. See N. E. Materials Grp., LLC, 2019 VT 55, ¶ 6 (explaining that environmental court determines credibility of witnesses and weighs persuasive effect of evidence).

¶ 14. The court's determination that applicant's proposed project complied with § 8.3 was supported by its findings, which are supported by the evidence. The court credited the testimony of the fire chief, who opined that the likelihood of fires or explosions at applicant's site was actually lower than at surrounding residences due to the safety precautions taken by applicant. The chief further stated that the town fire department, and, if necessary, neighboring departments, were capable of responding to any fires or emergencies involving hazardous materials. The court found no evidence of previous fires or emergencies during the thirty-plus years that the DeVoses had operated their fuel-hauling business from the farm. The court gave little weight to the testimony of neighbors' expert, who opined that the local fire department would be quickly overwhelmed by a fire at applicant's site, because he admitted to having no familiarity with applicant's business and little knowledge of the capacity of local fire departments to handle emergencies. The court acted within its discretion in determining the credibility of the witnesses and weighing the persuasive effect of the evidence. Its findings are supported by the record and in turn support its conclusion that the proposed project complied with § 8.3.

B. Noise Analysis

¶ 15. We turn to the primary issue on appeal, which is the environmental court's analysis of the noise impacts from the project. To receive a conditional-use permit, applicant's project had to comply with the general and specific conditional-use standards set forth in Article IX of the

Town of Ferrisburgh zoning bylaws, as well as the performance standards set forth in Article VIII. Neighbors argue that due to its noise impacts, applicant's proposed project will violate general conditional-use standard § 9.5(A), which states that a proposed use must not "adversely affect . . . the character of [the] affected area." They claim that the project will also violate the noise-performance standard contained in § 8.1, which prohibits a use that represents a significant increase in noise that is incompatible with existing uses and sets a sound pressure limit of 70 decibels (dB or dBA) at the property line. Neighbors claim that the environmental court incorrectly determined that the 70-dB limit in § 8.1 did not apply to vehicles entering and exiting the property; failed to consider instantaneous noise measurements, or Lmax, as required by previous decisions of this Court; erroneously relied on sound projections that were based on measurements taken from one of applicant's trucks; and improperly relied on the monitoring data provided by applicant's sound engineer when considering existing sound levels in the area.

1. Applicability of § 8.1's 70-dB Limit to Vehicles Crossing the Property Line

¶ 16. We first address neighbors' argument that the environmental court erred in interpreting the noise-performance standard in § 8.1 of the bylaws. As explained above, we review the court's interpretation of a zoning ordinance de novo. Confluence Behavioral Health, LLC, 2017 VT 112, ¶ 17. "[W]e construe an ordinance's words according to their plain and ordinary meaning, giving effect to the whole and every part of the ordinance." In re Laberge Moto-Cross Track, 2011 VT 1, ¶ 8, 189 Vt. 578, 15 A.3d 590 (mem.) (quotation omitted). We are "bound by the plain meaning of the words in the ordinance, unless the express language leads to an irrational result." In re Pierce Subdivision Application, 2008 VT 100, ¶ 8, 184 Vt. 365, 965 A.2d 468 (citation omitted). "We adopt a construction that implements the ordinance's legislative purpose and, in any event, will apply common sense." Laberge Moto-Cross Track, 2011 VT 1, ¶ 8 (quotation omitted).

¶ 17. Section 8.1 of the Ferrisburgh zoning bylaws states:

> No noise which is excessive at the property line and represents a significant increase in noise levels in the vicinity of the development so as to be incompatible with the reasonable use of the surrounding area shall be permitted. Specifically, the sound pressure level should not exceed seventy decibels at the property line at any time, except for agricultural uses.

The environmental court found that sound pressure levels resulting from the project would be less than 70 dB at the property line, except at the instant when a truck entered or exited the property, at which point the maximum sound pressure level could reach 71 dB. The environmental court concluded, however, that the 70-dB limitation in § 8.1 was not intended to apply to vehicles crossing the property line, as such an interpretation could be used to deny all projects that would have vehicles entering or exiting a roadway. The court reasoned that § 8.1 was designed to exclude projects from approval when the sound pressure level at the lot line exceeded 70 dB due to the project's internal operations, and not when service vehicles crossing the lot line momentarily caused sound levels of 71 dB.

¶ 18. Neighbors argue that § 8.1 unambiguously prohibits sound levels exceeding 70 dB at the property line at any time, and does not contain an exception for vehicles entering or exiting a property. Thus, they argue, applicant's project is not a permitted use and the decision below must be reversed. We conclude that applying the second sentence of § 8.1 literally, as neighbors urge us to do, would lead to irrational results. We therefore affirm the reasonable interpretation of the environmental court.

¶ 19. The 70-dB limitation contained in § 8.1 is likely based on decisions from the former Environmental Board and this Court that addressed whether noise from proposed projects would have unduly adverse aesthetic impacts in violation of Criterion 8 of Act 250. As we explained in In re Application of Lathrop Ltd. Partnership I, the Board "formulated a standard for determining at what point a noise event is adverse: where the noise exceeds 70 dBA (Lmax) at the property line and 55 dBA (Lmax) at surrounding residences and outside areas of frequent human use." 2015

VT 49, ¶ 80, 199 Vt. 19, 121 A.3d 630. This standard has guided Act 250 determinations by the former Board, the environmental court, and this Court for over two decades. Id.; see also In re Chaves A250 Permit, 2014 VT 5, ¶ 31 n.4, 195 Vt. 467, 93 A.3d 69 (recognizing standard); In re Barre Granite Quarries, LLC, No. 7C1079 (Revised)-EB, slip op. at 80 (Vt. Envtl. Bd. Dec. 8, 2000), https://nrb.vermont.gov/sites/nrb/files/documents/7c1079-rev-eb-fco.pdf [https://perma.cc/MQ82-LEJR] (applying standard). As both we and the environmental court have recognized, however, this standard "should not be applied rigidly." Lathrop, 2015 VT 49, ¶ 81. Rather, "the context and setting of a project should aid in dictating the appropriate noise levels." Id.; see also Chaves, 2014 VT 5, ¶ 33 (concluding that even though applicant's trucks would produce sounds of 69 dBA when accelerating past neighbors' inn, this was not adverse because existing truck traffic already emitted noise up to 68 dBA and average noise levels would remain under 55 dBA).

¶ 20. In this case, applicant's sound engineer determined that trucks entering and exiting the property would emit sound pressure levels up to 71 dB at the property line. However, he also testified that any vehicle driving from a public right-of-way onto a property, whether that property was a residence, a gas station, or an industrial use, would exceed 70 dB at the property line. He stated that this would be true whether the vehicle was a tractor-trailer or an automobile. Neighbors did not challenge this testimony.

¶ 21. If, as neighbors argue, the 70-dB limitation applies to vehicles crossing the property line, virtually any non-agricultural conditional use would be barred by § 8.1. We will not adopt an interpretation of a zoning ordinance that would require the denial of all conditional use permits. See In re Walker, 156 Vt. 639, 639, 588 A.2d 1058, 1059 (1991) (mem.) (rejecting appellant's claim that if any adverse effect from proposed conditional use is found, permit must be denied, because "[a]ny conditional use will have some adverse effect . . . . If appellant's approach were adopted, it would require the denial of all conditional use permits, an irrational result contrary to legislative intent."). Such a result would be absurd because it would prohibit many uses that are

otherwise expressly sanctioned by the bylaws. See Pierce Subdivision Application, 2008 VT 100, ¶ 8 (explaining that this Court will avoid interpretation of zoning ordinance "that would lead to an unjust, unreasonable and absurd consequence" (quotation omitted)). It would also create a severe and unfair restriction on the rights of property owners. See Laberge Moto-Cross Track, 2011 VT 1, ¶ 8 ("[Z]oning laws are to be strictly construed in favor of property owners.").

¶ 22. Section 8.1 must be interpreted in the context of the zoning ordinance as a whole. See In re Tyler Self-Storage Unit Permits, 2011 VT 66, ¶ 13, 190 Vt. 132, 27 A.3d 1071 ("We examine not only the plain language of a zoning ordinance, but also the whole of the ordinance in order to try to give effect to every part, and will adopt an interpretation that implements the legislative purpose." (alteration omitted) (quotations omitted)). The stated purpose of the industrial zoning district in which applicant's property is located is "to provide an area for limited growth of new light industry and the continuation of the present industrial uses." "Freight and trucking terminal[s]" are expressly listed as an allowed conditional use in the industrial district, and are defined as "buildings, facilities, and parking areas used for the loading, dispatching and storage of freight, freight vehicles, including but not limited to trains, buses and trucks." The bylaws further state that industrial uses shall "be located with easy access to highway and rail services," indicating that the town anticipated traffic into and out of these properties. It would make no sense for the town to specifically allow this area to be used for a trucking terminal while simultaneously imposing a sound-level requirement that effectively barred trucks from entering and exiting the property. See Tyler Self-Storage Unit Permits, 2011 VT 66, ¶ 13 (explaining that "[z]oning ordinances must establish standards which are general enough to avoid inflexible results" (quotation omitted)).

¶ 23. Accordingly, we agree with the environmental court that the 70-dB limitation contained in § 8.1 applies to noises at the property line emanating from the proposed use itself,

and not to sounds created by vehicles passing into and out of the property.[1] This interpretation is consistent with the environmental court's previous interpretation of the same zoning performance standard in In re Champlain Oil Co., Inc. See No. 89-7-11 Vtec., 2012 WL 5474661 (Vt. Super. Ct. Envtl. Div. Oct. 10, 2012) (concluding that proposed gas station and restaurant project complied with § 8.1 of Ferrisburgh zoning bylaws where noise emanating from project, except for vehicles crossing over boundary line to enter and exit site, would not exceed 70 dB), affirmed by In re Champlain Oil Co. Conditional Use Application, 2014 VT 19, 196 Vt. 29, 93 A.3d 139.[2] We therefore affirm its conclusion that the fact that trucks entering and exiting the property could emit maximum sound pressure levels in excess of 70 dB at the property line does not mean that the project is out of compliance with § 8.1, where the noise levels at the property line emanating from the project will otherwise be less than 70 dB.

2. Whether Environmental Court's Analysis of Noise Levels Complied with Lathrop

¶ 24. We turn next to neighbors' argument that the environmental court improperly relied on Leq(n) noise measurements to determine both existing traffic and background noise levels and the additional noise that the project would generate. Neighbors argue that in Lathrop, we held that Lmax is the measurement that must be applied when considering noise impacts from a proposed project. See 2015 VT 49, ¶ 86.

[1] As noted above, in this case the evidence showed that the noise emitted by trucks entering and exiting the property will exceed the 70-dB limit by only one decibel, a difference that we have considered to be insignificant in a previous case involving similar noise levels. See Chaves, 2014 VT 5, ¶ 33 (affirming environmental court's determination that noise was not adverse, in part because 1-dBA difference between existing noise from passing trucks and projected noise from applicant's trucks was insignificant).

[2] In Champlain Oil Co., we also affirmed the environmental court's determination that the drive-up service window of the proposed restaurant/convenience store was a permissible component of a restaurant, which was a permitted use in the zoning district where the project was to be located, even though the zoning bylaws' definition of a retail store specifically excluded drive-in facilities. 2014 VT 19, ¶ 11. We concluded that the environmental court properly reached this conclusion by "reading the bylaws as a whole, and applying common sense." Id.

¶ 25. Leq(n) and Lmax are two different ways of measuring sound levels. Lmax "is the maximum noise level that will occur irrespective of its duration. Simply put, Lmax measures instantaneous noise." Lathrop, 2015 VT 49, ¶ 77 (citation omitted). By contrast, Leq(n) "is the maximum noise level that will occur as averaged over a period of time (n)." Id. Both Lmax and Leq(n) are measured in decibels. Id.

¶ 26. In Lathrop, we held that the environmental court erred in its analysis of the noise impacts from a proposed sand and gravel extraction project because it relied on one-hour average noise levels, Leq(1-hr), and did not consider Lmax measurements at all. Id. ¶ 88. We reasoned that "[w]hen evaluating the real effect on people from the noise of passing trucks, it is more appropriate to consider the instantaneous noise from the trucks as they pass because that is what people experience." Id. ¶ 86 (quotation omitted) (emphasis omitted). As we explained in a subsequent case, our concern in Lathrop "was ensuring that reviewers accounted for the disruption experienced by people in the area each time a truck passed along a route and did not ignore the negative impacts of such noise by considering only noise averages measured over time, effectively minimizing the high peaks in instantaneous noise levels." N. E. Materials Grp., LLC, 2019 VT 55, ¶ 18.

¶ 27. As applicant points out, in Lathrop we were considering whether the project complied with Criterion 8 of Act 250, rather than municipal zoning bylaws concerning noise. We find this to be a distinction that makes no difference in this case. Ferrisburgh's conditional-use standard required the environmental court to consider whether the noise impacts from applicant's proposed project would "adversely affect . . . [t]he character of area affected." This standard is very similar to Criterion 8 of Act 250. See 10 V.S.A. § 6086(a)(8) (requiring determination that project "[w]ill not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas"); see also In re Grp. Five Invs. CU Permit, 2014 VT 14, ¶ 14, 195 Vt. 625, 93 A.3d 111 (upholding environmental court's use of

definition of undue adverse impact from Act 250 cases as guidance for interpreting adverse-effect language of Ferrisburgh zoning bylaws), overruled on other grounds by Confluence Behavioral Health, LLC, 2017 VT 112, ¶ 17. Similarly, the town's noise performance standard involves considerations that are comparable to the Act 250 acoustic aesthetics analysis: the levels of existing noise, the increase in noise levels created by the project, and whether the increase in noise is significant and unreasonable for the area. In either context, it makes sense to use instantaneous noise measurements to evaluate the effect of additional noise created by a project, because "that is what people experience." Lathrop, 2015 VT 49, ¶ 86 (emphasis omitted).

¶ 28. The environmental court's analysis in this case was consistent with Lathrop. Applicant's noise expert, a sound engineer, monitored existing noises by placing monitors on the western boundary line of the property and southeastern edge of the project site. These "long-term" monitors measured existing sound levels over several days. The expert also placed a "short-term" monitor on the northern boundary of Tuppers Crossing approximately 165 feet west of Route 7, which recorded sound levels for less than a day. The sounds recorded by all three monitors were reported in one-second intervals, a unit known as Leq(1-sec) or Lsmax. Sounds recorded on the short-term monitor were analyzed using Leq(1-sec), while sounds recorded on the long-term monitors were averaged over ten-minute periods (Leq(10-min)) and overall daytime and nighttime periods for analysis.

¶ 29. In assessing this data, the environmental court acknowledged the preference stated in previous decisions of this Court and the former Environmental Board for using the Lmax format. It concluded that the Leq(1-sec) measurement was effectively equivalent to Lmax, because a one-second period and a one-eighth-second period are perceived similarly as instantaneous noise by the human ear. This finding is supported by the unchallenged testimony of applicant's sound engineer, who described Leq(1-sec) as an "instantaneous measurement" and explained that some prior court decisions using the Lmax notation were actually referring to one-second sound

measurements. The finding is therefore not clearly erroneous. See N. E. Materials Grp., LLC, 2019 VT 55, ¶ 6; see also In re McLean Enters. Corp., No. 2S1147-1-EB, slip. op. at 65 (Vt. Envtl. Bd. Nov. 24, 2004), https://nrb.vermont.gov/sites/nrb/files/documents/2s1147-1-EB-fco.pdf [https://perma.cc/9W8V-CNZA] (acknowledging that "the time period of 1 second for an Leq theoretically would result in readings similar to a[n] Lmax").

¶ 30. The environmental court went on to consider both instantaneous and average noise levels in its analysis of existing background noise and the additional noise caused by the project. The court found that the short-term monitor measured existing instantaneous daytime sound levels from 55 to 75 dBA Leq(1-sec). It found that existing average daytime sound levels ranged from 47 to 55 dBA Leq(10-min) at the eastern monitor, and from 40 to 74 dBA Leq(10-min) at the western monitor, although this dropped to 40 to 50 dBA Leq(10-min) if train sounds were excluded.[3] Average nighttime sound levels ranged from 38 to 52 dBA Leq(10-min) at the eastern monitor, and from 35 to 49 dBA Leq(10-min) at the western monitor. The court noted that at least one train passed by each night, increasing existing nighttime sound levels. The court further noted that because the sound levels from the long-term monitors were reported as averages, the existing instantaneous maximum sound levels must be at least as high as the reported average.

¶ 31. The court then considered the noise impacts from the proposed project. Applicant's sound engineer modeled several different scenarios showing the sound pressure levels that would be experienced at the property line and neighboring properties. The first was a one-hour scenario modeling the impact of all nine trucks entering and exiting the property within the course of an

[3] The court noted that it did "not[] wholly agree with the practice of excluding train noises." We agree that both the level and frequency of train noises must be considered to provide an accurate picture of the existing soundscape. The court appropriately considered these factors.

hour, which the court found would be a rare occurrence. In this scenario, average sound levels at neighboring properties would range between 27 dBA and 39 dBA Leq(1-hr).[4]

¶ 32. The engineer also modeled maximum instantaneous sound pressure levels in three other scenarios, using, alternatively, Federal Highway Administration (FHWA) data and sound measurements of one of applicant's existing trucks. The court found that the estimated sound levels in the scenarios based on applicant's truck were consistently lower than those based on the FHWA data. The court found the truck-based data to be more accurate because it was based on current, real-life sound readings, as opposed to the FHWA data, which was an amalgamation of measurements collected in the early 1990s from older vehicles that were typically noisier than the vehicles in applicant's fleet. In the models based on applicant's truck, the estimated instantaneous maximum noise at neighboring properties in various scenarios was projected to be below 55 dBA.[5]

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[4] Neighbors argue that the American National Standards Institute (ANSI) standards for noise state that daytime noise of up to 55 dBA and nighttime noise of up to 45 dBA is compatible with single-family residences, and classify daytime noise levels of up to 60 dBA and nighttime noise of up to 50 dBA as "marginally compatible." Neighbors argue that this means that any noise level over 60 dBA during the daytime or 50 dBA during the nighttime is incompatible with residential use. Neighbors ignore the fact that the ANSI standard is referring to the day-night average sound level, which is an average over twenty-four hours. Applicant's sound engineer did not model the day-night average sound level, but testified that it could be effectively evaluated by looking at the one-hour average sound level. The modeled one-hour average daytime sound level ranged from 27 to 39 dBA, well under the ANSI limits, and was therefore considered compatible by that standard.

Neighbors further argue that the former Public Service Board has adopted a more stringent standard in its decisions regarding wind projects, concluding that average nighttime noise levels above 45 dBA Leq(1-hr) outside a residence are adverse. See In Re Green Mountain Power Corp., No. 7628, 2011 WL 3210820 (Vt. Pub. Serv. Bd. May 31, 2011). Although applicant's sound engineer did not apply this standard in his report, it appears that the modeled one-hour average sound level would comply with this standard as well.

[5] Neighbors incorrectly assert in their brief that the noise levels presented in the models are stated in Leq(10-min) averages and therefore "the perceived, instantaneous noise impacts are likely much higher than what applicant has presented." However, applicant's report makes clear that the models show "maximum" scenarios, meaning the Lmax or Lsmax that would be perceived at various locations near the project.

¶ 33. Based on this information, the court concluded that the additional noise levels from the project would be comparable to or less than existing sound levels. The court also found that the frequency of additional truck traffic would be minimal, as there would be a maximum of eighteen one-way truck trips each day. The court therefore concluded that the noise impacts from the project would be neither adverse nor incompatible with the surrounding area, provided that nighttime truck traffic was appropriately limited. The court properly considered average and instantaneous noise and its analysis therefore is generally consistent with Lathrop. See N. E. Materials Grp., LLC, 2019 VT 55, ¶ 22 (concluding that environmental court's analysis of Lmax and Leq(n) data complied with Lathrop where court found that both instantaneous and average noise levels were helpful to determine whether increase in noise due to off-site truck traffic would create unduly adverse impact under Criterion 8 of Act 250).

3. Use of Data from Applicant's Truck

¶ 34. Neighbors argue that the models based on the actual truck measurements were less accurate than the FHWA models because the sample truck used was newer than others in the fleet and therefore was not representative of the impacts of the proposed project. They claim that the court should instead have relied on the FHWA models, which show that maximum sound-pressure levels would exceed 55 dBA at some neighboring homes in each of the scenarios, and therefore are adverse under Lathrop. See 2015 VT 49, ¶ 80 (stating that in general, noise becomes adverse when it "exceeds 70 dBA (Lmax) at the property line and 55 dBA (Lmax) at surrounding residences and outside areas of frequent human use").

¶ 35. The trial court's finding that the models based on measurements taken from applicant's truck were more accurate than those based on the FHWA data is not clearly erroneous. Applicant's owner John DeVos testified that the model years of the trucks in applicant's fleet currently ranged from 2003 to 2016. Both he and applicant's sound engineer testified that newer trucks are much quieter than trucks from the early 1990s, which is when the FHWA noise emission

data were collected. Neighbors did not challenge this testimony, which supports the court's finding and its decision to rely upon the maximum models that were based on applicant's truck.

4. Reliability of Data Produced by Monitors

¶ 36. Neighbors further argue that the court erred in relying on the data from the short-term monitor to establish background noise because it was placed 165 feet west of Route 7 and therefore is not representative of the Tuppers Crossing area. We disagree. The environmental court found based on the evidence presented that the neighborhood's soundscape is primarily characterized by noises emanating from Route 7, occasional passing trains, and natural sounds such as wind and birdsong. Indeed, most of the neighbors testified that noise from Route 7 is noticeable from their residences at all times of day. The site map in applicant's expert report shows that the monitor was placed close to two of the nearest neighboring residences, one of which is owned by appellants Choquette and Villeneuve. Since trucks would be traveling from the project east along Tuppers Crossing to Route 7, by the location of the monitor, this was a reasonable place to measure existing sound levels. The court did not err in relying on this data.

¶ 37. Neighbors also suggest that it was improper for the court to consider the "projections" produced by the eastern and western monitors to assess existing noise levels. However, this is a mischaracterization of the evidence. The eastern and western monitors recorded ambient noise every second, day and night, for a period of four days. This information was then combined for analysis into 10-minute periods and overall day- and nighttime periods. The information from these monitors was not a projection of existing noise, but in fact a measurement of actual existing noise, and the court did not err in considering it.

C. Nighttime Traffic and Condition 8

¶ 38. Finally, neighbors argue that the court inadequately assessed the impact on the area caused by additional nighttime traffic and, as a result, imposed a condition regarding nighttime

traffic that is too vague to be enforceable. We agree that the evidence was insufficient to support the court's analysis and that the resulting condition is invalid.

¶ 39. The court found that there would be no more than nine trucks making round trips to the property, for a total of eighteen one-way truck trips each day. The court concluded that this additional traffic was minimal when compared to existing daytime traffic on Tuppers Crossing. However, it recognized that there was some uncertainty regarding the volume of nighttime traffic from the project. The court found based on John DeVos's testimony that most of the trucks would enter or exit the property between 5:00 a.m. and 10:00 p.m. But DeVos also testified that a truck was occasionally dispatched in the middle of the night to deliver fuel to a retail station that had run out of fuel. He further indicated that some drivers preferred to arrive earlier than 5:00 a.m. to start their shift, but did not offer any estimate regarding how frequently this occurred. He sought to have no nighttime restrictions on operation or to shift the permitted hours to 2:00 a.m. to 7:00 p.m.

¶ 40. The court found that because existing noise levels in the neighborhood were at least 5 to 10 dBA lower at night, and vehicle and train traffic was also much less frequent at night, conditions were necessary to reduce the noise impacts created by nighttime truck traffic from the project. Accordingly, the court imposed Condition 8, which states:

> JSCL shall minimize the frequency of truck drivers arriving at the project site before 5:00 am or after 10:00 pm. No trucks shall operate on Sundays or state or federal holidays, except in the case of emergencies. JSCL shall maintain a log on the arrival and departure times for its trucks and drivers and will make that log available to this Court and the parties to this appeal, for use during any hearing on a post-judgment motion to reopen these proceedings to determine whether the nighttime truck traffic has been "excessive at the property line and represents a significant increase in noise levels in the vicinity of the development so as to be incompatible with the reasonable use of the surrounding area," pursuant to Bylaw § 8.1.

¶ 41. Neighbors argue that Condition 8 is impermissibly vague because it does not define "minimize" or "emergencies," making it impossible for the zoning administrator or interested

persons to enforce it. They argue that the condition essentially gives applicant free reign to legally operate all nine trucks at night, and the court failed to adequately assess the impacts from the additional noise that this would create.

¶ 42. The court's analysis of the nighttime noise impacts from the project was necessarily limited by the minimal evidence presented regarding applicant's anticipated nighttime operations. As the court recognized, existing noise levels and traffic in the Tuppers Crossing area are significantly lower at night. Applicant's sound engineer estimated that a single truck exiting the property at night could result in instantaneous maximum sound pressure levels of 39-62 dBA at neighboring properties. Whether this amount of noise is adverse or unreasonable for the area depends on how frequently it occurs. We agree with neighbors that in the absence of some quantitative estimate of the frequency of nighttime traffic, the court's analysis of the noise and other impacts caused by such traffic was inadequate to support a conclusion that the project would not have an adverse effect at night. See N. E. Materials Grp., LLC, 2019 VT 55, ¶ 18 (explaining that to comply with Lathrop, environmental court had to consider both frequency and level of noise caused by project).

¶ 43. This lack of evidence and, in turn, analysis is reflected in Condition 8. To be valid, a permit condition must contain sufficiently definite standards for the applicant to follow. See Chaves, 2014 VT 5, ¶ 46. Condition 8 does not provide a qualitative or quantitative measure of the term "minimize" or define what constitutes an "emergency." See id. (reversing and remanding Act 250 permit condition imposed by environmental court because there were "no definite, qualitative or quantitative standards attached to the condition"); cf. In re Robinson, 156 Vt. 199, 202, 591 A.2d 61, 62 (1991) (affirming zoning permit conditions imposed by trial court that were "unqualified and definite"). Without more specific standards to judge these terms, applicant, neighbors, and zoning officials are left to guess how much nighttime truck traffic is allowed, which will undoubtedly lead to further disputes. We therefore conclude that the matter must be remanded

for the environmental court to reconsider the nighttime impacts of the project and revise Condition 8 so that it contains definite standards.

¶ 44. In sum, we affirm the environmental court's determinations that the project complies with § 8.3 and that the daytime noise impacts from the project comply with §§ 8.1 and 9.5(A) of the bylaws. We remand for further analysis of the nighttime impacts and the associated Condition 8.

The decision below is affirmed, except that the portion of the decision regarding nighttime noise impacts and Condition 8 are reversed and remanded for further proceedings in accordance with this opinion.

FOR THE COURT:

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Associate Justice