

**State of Vermont
Superior Court – Environmental Division**

Big Rock Gravel Act 250 Permit

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Docket No 45-3-12 Vtec

Decision on the Merits

Pending before the Court is Michael Bernhardt's (Appellant) appeal of a decision by the District 8 Environmental Commission (the District Commission) granting Big Rock Gravel Operations, Inc. (Applicant) a state land use permit (Act 250 permit) to operate an existing gravel pit in the Town of Londonderry, Vermont (the Town). The gravel pit is located off of Rowe Road (the Property) in the Town. In this appeal, Appellant opposes the application for an Act 250 permit and asserts that the noise from the proposed gravel pit will result in undue air pollution under Act 250 Criterion 1 and an undue adverse impact to aesthetics under Act 250 Criterion 8. (See Statement of Questions, filed Apr. 16, 2012.)

The Court conducted a site visit on August 7, 2012 to the Property, immediately followed by a single day merits hearing at the Vermont Superior Court, Windham Civil Division courthouse in Newfane, Vermont. Appearing at the site visit and trial were Big Rock Gravel Operations, Inc., represented by its President Jennifer C. Howe; and Michael Bernhardt, both appearing pro se.

Based upon the evidence presented at trial, including that which was put into context by the site visit, the Court renders the following Findings of Fact and Conclusions of Law.

Findings of Fact

1. The Property, located on the east side of Rowe Road in the Town of Londonderry, Vermont, is owned by Big Rock Gravel, LLC and is approximately 10 acres in size. Applicant proposes its gravel extraction operations to take place in the central 4.5 acres of the Property.
2. The West River runs along the west side of Rowe Road, and therefore, Rowe Road is located between the Property and the West River.
3. The Property is surrounded by forest to the north, east, and south.
4. The Property has been used for gravel pit operations since the late 1940's, although at times the pit has been inactive. When active, the level of activity has historically varied. The pit's existence is common knowledge.

5. The Property is located in the Town's Rural Residential-3 (R-3) zoning district and a Special Flood Hazard Area.
6. Applicant requests an Act 250 permit to commercially extract rock and crush it into gravel for sale to municipalities and on the private market.
7. The proposal would limit blasting to aid rock extraction to one blast event per calendar year.
8. The proposal would limit crushing and hammering activities to 10 working days per year.
9. Working days, as relating to blasting and crushing/hammering, are limited to non-holiday weekdays only with hours of operation restricted to 7:00 a.m. to 4:00 p.m.
10. The proposed rock extraction and crushing operations will generate noise from truck traffic, rock drilling, blasting, rock hammering, rock crushing, and general heavy equipment operations.
11. The equipment used in the rock extraction and crushing operations includes the following: a jaw crusher, a cone crusher, a bucket loader, an excavator, a second excavator with a hammer, a screener, and a track drilling machine.
12. During the merits hearing, literature was introduced into evidence relating to some of the equipment which Applicant will use in its operations. This literature provides the following noise data: a Model 1300 Maxtrak emits sound levels of 75 to 82 dBA at a distance of 65 feet; a Model 1100 x 650 Premtrak emits sound levels of 77 to 86 dBA at distance of 65 feet; a Stanley model MB50EXS hydraulic hammer with an output of 5000 pounds of impact energy emits 85 dBA at a distance of 52 to 72 feet.
13. Through the use of a retail consumer sound meter – more specifically a RadioShack sound level meter – Applicant measured sound levels on June 27, 2012 at different locations within and surrounding the active portions of the gravel pit with “all equipment running.” Applicant testified to average readings at each location as follows:
 - a. Approximately in the center of the Property with the equipment in sight: 72 dB;
 - b. At the point of intersection of a trail head with Rowe Road, south of the Property: 54 dB (the sound meter in exhibit Q.4. shows that the meter is set to the “fast” response mode and the weighting is “C.” Applicant did not provide information as to these details of the sound measuring);

- c. In the area of the Southeast corner of the Property: 64 dB;
 - d. In the area of the Southeast corner of the Property where the trail network is closest to the operating pit (estimated by Applicant to be 600 to 800 feet from the crusher): 57 dB; and
 - e. Within a field located to the north of the Bernhardt property, approximately 2,800 feet from the Property: LO indicating a sound level of less than 50 dB.
14. Applicant has not implemented or proposed any measures to reduce the level of noise emanating from the rock extraction and crushing operations while the equipment is running or in use.
15. Applicant's witnesses who conducted the sound measuring and who testified as to the sound measuring are not sound engineers nor do they have any training in sound measuring or sound data. When asked questions regarding the meaning of "dB" and "dBA" these witnesses could not explain the measurements or units of measurements.
16. The sound measurements in this matter were not accompanied with baseline or background noise measurements.
17. As the distance from the equipment increases sound levels decrease.
18. Rowe Road is a fairly flat roadway, truck traffic traveling on that road will generate less noise than trucks climbing hills.
19. Mr. Bernhardt resides to the east of the Property off of Under Mountain Road. The Bernhardt property is approximately 1,400 feet from the Property, while the Bernhardt house is approximately 2,800 feet from the Property.
20. Mr. Bernhardt can hear pit activities at his property, both outside on his land and within his house; specifically in his home office. The activity he hears is both general operating noise and crushing activities.
21. Mr. Bernhardt provided no data or evidence of sound measurement on his property or within his house.
22. Sandra and James Wilbur own much of the land surrounding the Property, including the land located between the Property and the Bernhardt property.
23. The increase in elevation between the Property, specifically the operating pit floor, and the Bernhardt house is estimated by Applicant to be approximately 300 feet.

24. Neighboring land uses include a car repair business and associated junk and scrap yard, a sporadically operating gravel pit (Rowe Pit) located within 3000 feet to the north on Rowe Road, and an inactive gravel pit (Cobb Pit) also located to the north on Rowe Road.
25. Rowe Road is a single lane dirt road which receives little traffic. As one travels south on Rowe Road, the gravel pits are visible to the east and the road itself narrows and is less traveled. Rowe Road dead-ends to the south of the Property.
26. On the west side of the West River in the area of the Property there are an inactive junkyard and some areas where trees have been cleared.
27. An old dump is located near the trail head of the Vermont Rail Trail, which is in the vicinity of the Property.
28. The Wilburs' property contains a network of trails which tend to surround the Property. The trail network can be used to travel to Brattleboro.
29. The trail network is frequently used. Mr. Bernhardt walks these trails every other day and snowshoes the trails in the winter. Some of Mr. Bernhardt's family members also use the trails. Mr. Bernhardt regularly sees others using the trails. Some horse riding takes place on the trails.

Conclusions of Law

The legal questions presented in this appeal are whether Applicant's proposed use of the Property will result in undue air pollution as it relates to noise under Act 250 Criterion 1 and result in an undue adverse impact to aesthetics relating to noise under Act 250 Criterion 8.

I. Burden of Proof

As discussed further below, the burden of proof in this matter has bearing on the Court's ultimate conclusions. Thus, at the outset of our legal analysis we review the burden of proof in Act 250 proceedings. Regardless of who has the burden of proof on a particular issue, the applicant always has the burden of producing evidence sufficient to enable the Court to make the requisite positive findings on all of the criteria. Re: EPE Realty Corp. and Fergessen Mgmt., Ltd., No. 3W0865-EB, Findings of Fact, Concl. of Law, and Order, at 18 (Vt. Env'tl. Bd. Nov. 24, 2004) (citing Re: Peter S. Tsimortos, No. 2W1127-EB, Findings of Fact, Concl. of Law, and Order, at 13 (Vt. Env'tl. Bd. Apr. 13, 2004); Re: McLean Enter. Corp., No. 2S1147-1-EB, Mem. of Decision, at 43 (Sept. 19, 2003)). Specifically with respect to Criterion 8, if an applicant satisfies the initial burden of production, then the ultimate burden of proving that a project does

not conform to Criterion 8 rests upon the project's opponents. 10 V.S.A. § 6088(b); In re Rivers Dev. Act 250 Appeal, No. 68-3-07 Vtec, slip op. at 33 (Vt. Env'tl. Ct. Mar. 25, 2010) (Durkin, J.) (citing In re Route 103 Quarry, No. 205-10-05 Vtec, slip op. at 8 (Vt. Env'tl. Ct. Nov. 22, 2006) (Durkin, J.), *aff'd*, 2008 VT 88, 184 Vt. 283).

II. Criterion 1

The noise a proposed project may generate can be of such an adverse level as to constitute air pollution. See Re: Bull's-Eye Sporting Center, No. 5W0743-EB, Findings of Fact, Concl. of Law, and Order, at 14 (Vt. Env'tl. Bd. Feb. 27, 1997) ("The test for undue air pollution caused by noise is whether the noise has 'impacts rising above annoyance and aggravation to cause adverse health effects such as hearing damage.'") (quoting Re: Talon Hill Gun Club' Inc. and John Swininem, No. 9AO192-2-EB, Findings of Fact, Concl. of Law, and Order, at 8 (Vt. Env'tl. Bd., Jun. 7, 1995)). Noise analysis under Criterion 1 focuses primarily on the health and safety impacts of noise, rather than on its welfare impacts, which are considered under Criterion 8. E.g., Re: City of Montpelier and Ellery E. & Jennifer D. Packard, No. 5W0840-6-WFP, Findings of Fact, Concl. of Law, and Order, at 21 (Vt. Env'tl. Bd. May 22, 2000); Casella Waste Mgmt., Inc., and E.C. Crosby & Sons, Inc., No. 8B0301-7-WFP, Findings of Fact, Concl. of Law, and Order, at 29 (May 16, 2000).

The former Environmental Board reviewed many Act 250 applications for land use permits where noise from a proposed project was at issue. Several of these matters were proposed rock and sand quarries similar to the proposal now before our Court. The prior decisions of the Environmental Board established thresholds or limits of noise levels evidencing compliance or non-compliance with Criterion 1. 10 V.S.A. § 8504(m) directs us to give these prior decisions of the Environmental Board the same weight and consideration as prior decisions of this Court.

When evaluating noise impacts under Criterion 1, the Environmental Board relied on the *United States Environmental Protection Agency (EPA) Report, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, EPA document No. 5 50/9-74-0004, dated March 1974, for guidance. See Re: Paul and Dale Percy, No. 5L0799-EB, Findings of Fact, Concl. of Law, and Order, at 7-8, 17 (Vt. Env'tl. Bd. Mar. 20, 1986). Specifically, the Environmental Board adopted EPA's established adverse health impact standard of 70 dBA for 24 hours each day, 365 days a year over a lifetime for noise to be

an unacceptable level of air pollution under Criterion 1. Re: Pike Indus., Inc. and Inez M. Lemieux, No. 5R1415-EB, Findings of Fact, Concl. of Law, and Order, at 32 (Vt. Env'tl. Bd. Jun. 7, 2005); Casella Waste Mgmt., No. 8B0301-7-WFP at 29-30. Furthermore, the Environmental Board determined in at least one case that maximum noise levels less than 90 decibels did not constitute air pollution under Criterion 1. Wildcat Constr. Co., No. 6F0283-1-EB, Findings of Fact, Concl. of Law, and Order (Vt. Env'tl. Bd. Oct. 4, 1991), *aff'd*, In re Wildcat Constr. Co., 160 Vt. 631 (1993).

As detailed in the Findings of Fact section above, during the trial Applicant provided literature from manufacturers concerning estimated noise produced by certain pieces of equipment. This equipment emits sound levels ranging from 75 to 85 dBA at distances ranging from 52 to 72 feet. Applicant also introduced sound measurements from its operating quarry. By using a retail consumer sound meter, Applicant measured sound levels at different locations within and surrounding the active gravel pit. The average readings measured sound levels ranging from 54 to 72 dB within or close to the operating pit, while sound levels measured approximately 2,800 feet from the Property were less than 50 dB.

The credibility of Applicant's sound measurements is suspect. First, the sound meter pictured in Applicant's Exhibit Q.4 shows that the meter is set to the "fast" response mode and the weighting is "C," but Applicant did not provide information as to these details of the sound measuring or explain how these settings relate to the measuring of noise levels. Furthermore, Applicant's witnesses could not answer specific questions relating to its sound measurement or the units of measurements. Appellant, however, did not provide any noise data or measurements of his own to contradict Applicant's evidence. Appellant did testify as to Applicant's lack of evidence concerning background noise and suggested that Applicant's noise data was insufficient.

Based upon the totality of evidence before the Court, we find that Applicant has produced evidence sufficient to enable the Court to make positive findings on Criterion 1. We conclude that while noise from the proposed project operations might be apparent to Appellant and other adjoining property owners and neighbors, the noise will be less than the EPA-established adverse health impact standard of 70 dBA or higher for 24 hours each day, 365 days a year over a lifetime. While the equipment used within the pit may generate noise in excess of 70 dBA, there are several aspects of the proposed operations which eliminate the potential for

adverse health effects. First, the operations are limited to non-holiday weekdays only and hours of operation are restricted to 7:00 a.m. to 4:00 p.m.; only one blast event is allowed per calendar year; and crushing and hammering activities are limited to 10 working days per year. Furthermore, the noise levels at or in excess of the EPA's 70 dBA limit occur in close proximity to the equipment itself. As the distance from the equipment increases, sound levels decrease. Appellant's property is 1,400 feet from the Property, and Appellant's house is 2,800 feet from the pit Property. Thus, the proposed project noise will not cause adverse health effects and is, therefore, not air pollution in violation of Criterion 1.

III. Criterion 8

To receive an Act 250 land use permit, an applicant must provide evidence sufficient to enable the Court to find that the proposed project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites, or rare and irreplaceable natural areas. 10 V.S.A. § 6086(a)(8). If an applicant satisfies the initial burden of production, then the ultimate burden of proving that a project does not conform to Criterion 8 rests upon the project's opponents. 10 V.S.A. § 6088(b); In re Rivers, No. 68-3-07 Vtec, slip op. at 33 (citing In re Route 103 Quarry, No. 205-10-05 Vtec, slip op. at 8 (Vt. Env'tl. Ct. Nov. 22, 2006) (Durkin, J.), *aff'd*, 2008 VT 88, 184 Vt. 283).

The cornerstone of an analysis under Criterion 8 is the question: "[w]ill the proposed project be in harmony with its surroundings—will it 'fit' the context within which it will be located?" Quechee Lakes Corp., Nos. 3W0411-EB and 3W0439-EB, Findings of Fact, Concl. of Law, and Order, at 18 (Vt. Env'tl. Bd. Nov. 4, 1985). The question of whether noise produced by a proposed project is out of character with its setting is a qualitative determination, involving an examination of both the type of noise that the project will generate, particularly when compared to neighboring land uses. Hannaford Bros. Co. and Southland Enterprises, Inc., No. 4C0238-5-EB, Findings of Fact, Concl. of Law, and Order, at 16 (Vt. Env'tl. Bd. Apr. 9, 2002); Re: Barre Granite Quarries, LLC and William and Margaret Dyott, No. 7C1079(Revised)-EB, Findings of Fact, Concl. of Law, and Order, at 79-80 (Vt. Env'tl. Bd. Dec. 8, 2000) (internal citations omitted).

Whether a proposed project will cause an undue adverse noise impact is assessed by conducting a two step evaluation. First, the Court reviews whether a project would have an "adverse impact" by reviewing the nature of the project's surroundings, the compatibility of the project's design with those surroundings, and the locations from which the project can be

viewed or heard. See Hannaford Bros., No. 4C0238-5-EB, at 15-18 (analyzing a project under Criterion 8 for potential adverse effect of noise and signage on aesthetics); Barre Granite Quarries, No. #7C1079(Revised)-EB, at 79-80. These factors must be weighed collectively in deciding whether the proposed project is in harmony with—i.e., “fits”—its surroundings. The land uses which surround a project are, therefore, crucial to the analysis.

The project’s surroundings include neighboring land uses such as a car repair business and associated junk and scrap yard; a sporadically operating gravel pit (Rowe Pit) located within 3000 feet to the north on Rowe Road; and an inactive gravel pit (Cobb Pit) also located to the north on Rowe Road. Rowe Road itself is a single lane dirt road which receives little traffic. As one travels south on Rowe Road, the gravel pits are visible to the east, and the road narrows and is less traveled. Rowe Road dead-ends to the south of the Property. On the west side of the West River in the area of the Property there is an inactive junkyard and some areas where trees have been cleared. An old dump is located in the area of the trail head of the Vermont Rail Trail, which is in the vicinity of the Property. The adjoining Wilbur property contains a network of trails which partially surround the Property. The trail network can be used to travel to Brattleboro and portions of it are frequently used by Appellant, his family, and others. Some horse riding takes place on the trails. Appellant’s property is approximately 1,400 feet east of the Property, while Appellant’s house is approximately 2,800 feet to the east. The Property is surrounded to the north, east, and south by uniformly dense forest.

The question of whether noise is adverse focuses on whether the noise is out of character with the setting. See Barre Granite Quarries, No. 7C1079(Revised)-EB, at 79-80. Applicant’s proposed rock extraction and crushing operations will generate noise from truck traffic, rock drilling, blasting, rock hammering, rock crushing, and general heavy equipment operations. These sounds will be impulsive, harsh, and intermittent. The area around the quarry includes residences, wooded areas, and hiking trails. Even though the area also includes intermittent noise from nearby gravel operations, on the whole we conclude that adding more sporadic gravel pit noise would produce an adverse effect. See John and Joyce Belter, No. 4C0643-6R-EB, Findings of Fact, Concl. of Law, and Order, at 14 (Vt. Env’tl. Bd May 28, 1991) (concluding that drilling and blasting would be more than the neighborhood was used to on a regular basis, thus, the noise would have an adverse effect on aesthetics).

Having concluded that the proposed project's noise is adverse, the Court conducts the second evaluative step by reviewing whether the adverse effect is undue. Hannaford Bros., No. 4C0238-5-EB, at 15.

To determine whether an adverse effect is undue, the Court reviews the following factors:

- 1) Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area?
- 2) Does the project offend the sensibilities of the average person? Is the project offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?
- 3) Has the Applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings?

See Quechee Lakes Corp., Nos. 3W0411-EB and 3W0439-EB, Findings of Fact, Concl. of Law, and Order, at 19-20 (Vt. Env'tl. Bd. Nov. 4, 1985).

The parties did not provide any evidence of the existence of community standards intended to preserve the aesthetics or scenic, natural beauty of the area. As Appellant has the burden to show that a project does not conform to Criterion 8, we conclude that the proposed project does not violate any community standard.

We next consider whether the noise will be so out of character with its surroundings or so significantly diminish the scenic qualities of the area as to be offensive or shocking to the average person. Re: Pike Indus., Inc. and William E. Dailey, Inc., No. 1R0807-EB, Findings of Fact, Concl. of Law, and Order, at 18-19 (Vt. Env'tl. Bd. June 25, 1998). As discussed above, adding more sporadic noise to an area that already experiences such noise would produce an adverse effect. We cannot, however, say that the adverse effect is "shocking or offensive to the average person." Residents in the area are used to hearing sporadic quarry operation noise from three properties in the area, including the subject Property, so the additional noise – although adverse – is not unduly so.

With respect to mitigating steps to reduce the level or impact of noise from the proposed activities, we note the following facts. The quarry will be shielded by trees and vegetation to the north, east, and south. Appellant's property is 1,400 feet from the Property, and Appellant's house is 2,800 feet from the Property. Limitations placed on the proposed activities serve to mitigate the impact of noise. Limitations include restricting the proposed operations to non-holiday weekdays only and restricting hours of operation to 7:00 a.m. to 4:00 p.m., permitting

only one blast event per calendar year, and limiting crushing and hammering activities to 10 working days per year. Taken as a whole, these factors adequately mitigate noise impacts and improve the harmony of the proposed project with its surroundings.

Considering the evidence before the Court as a whole, including both an examination of the type and frequency of noise that the project will generate and the neighboring land uses, we conclude that the proposed project, as conditioned, “fits” within this area. As noted above, Appellant has not provided evidence of noise levels or other data demonstrating that noise levels from the proposed project create an undue adverse aesthetic impact. See 10 V.S.A. § 6088(b) (placing ultimate burden of showing a project’s nonconformance to Criterion 8 on the project’s opponents). Thus, we conclude that the proposed project complies with Criterion 8.

Applicant’s evidence regarding the noise measurements and noise levels in this matter is of limited credibility. Thus, in reaching our positive finding under Criterion 8, we rely on prior Act 250 approvals which concluded that noise from a proposed quarry does not have undue adverse impacts on aesthetics where the noise is limited to no more than 55 dB(A) Lmax at surrounding residences and no more than 70 dB(A) Lmax at the quarry property line. Barre Granite Quarries, No. 7C1079(Revised)-EB, at 81–82; see also Re: Alpine Stone Corporation, ADA Chester Corp. and Ugo Quazzo, No. 2S1103-EB, Findings of Fact, Concl. of Law, and Order, at 32 (Vt. Env’tl. Bd., Feb. 4, 2002) (noise from a proposed quarry does not have undue adverse impacts on aesthetics where the noise is limited to 55 dB(A) Lmax at areas of frequent human use). Thus, to ensure that the proposed project does not result in an undue adverse impact from noise, we condition this approval under Criterion 8 as follows:

Any noise generated by Applicant’s quarry shall not exceed 55 dB(A) Lmax at surrounding residences and shall not exceed 70 dB(A) Lmax at the quarry property line.

The Court establishes this condition and leaves Applicant to determine how those levels will be met. See Re: George and Diana Davis, No. 2S1129-EB, Findings of Fact, Concl. of Law, and Order, at 11 (Vt. Env’tl. Bd. Dec. 15, 2004); Hannaford Bros., No. 4C0238-5-EB, at 23. Should Appellant or other interested parties experience noise impacts exceeding these levels, they may come forward with evidence of non-compliance with the maximum noise level. Such evidence may be used in consideration of enforcement against Applicant for violating this approval or lead to revocation of the land use permit.

Conclusion

For the reasons discussed above, we conclude that Applicant's proposed project does not result in undue air pollution relating to noise under Act 250 Criterion 1 and that the proposed project does not result in an undue adverse impact to aesthetics relating to noise under Act 250 Criterion 8. We condition our positive findings under Criteria 1 and 8 on the following maximum noise levels:

Any noise generated by Applicant's quarry shall not exceed 55 dB(A) Lmax at surrounding residences and shall not exceed 70 dB(A) Lmax at the quarry property line.

A Judgment Order accompanies this Decision. This completes the current proceedings before this Court.

Done at Berlin, Vermont, this 28th day of November, 2012.

Thomas G. Walsh, Environmental Judge