

**STATE OF VERMONT  
ENVIRONMENTAL COURT**

<b>Wright Quarry Site Plan Application</b>	}	<b>Docket No. 156-7-06 Vtec</b>
<b>(Appeal of McEnany, et. al. appeal)</b>	}	
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<b>Wright Quarry Conditional Use Application</b>	}	<b>Docket No. 190-8-06 Vtec</b>
<b>(Wright appeal; McEnany cross-appeal)</b>	}	
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**Decision on the Merits**

Roger and Brenda Wright intend to establish a new quarry on a portion of lands adjoining Vermont Route 105 in Sheldon. They chose first<sup>1</sup> to seek municipal site plan approval for their proposed quarry from the Town of Sheldon Planning Commission (“Planning Commission”) and conditional use approval from the Town of Sheldon Zoning Board of Adjustment (“ZBA”). Decisions from those two municipal panels were appealed to this Court. The two appeals were consolidated for trial, which was conducted over four days. The Court afforded the parties an opportunity to file post-trial memoranda. The Court and the parties previously conducted two site visits on the property.

Mr. & Mrs. Wright appealed the ZBA’s adverse determination on their conditional use application. In the course of these consolidated proceedings, Mr. & Mrs. Wright have been represented by Christopher D. Roy, Esq. David and Connie McEnany, the McEnany’s adult sons, Eric and Kalin McEnany, and Lenora Johnson appealed the Planning Commission’s site plan approval (in Docket No. 156-7-06 Vtec) and have been represented in these proceedings by Gerald R. Tarrant, Esq. Appellants have been joined in their cross-appeal of the ZBA’s conditional use approval (Docket No. 190-8-06 Vtec) by Michelle McEnany, Shawn McEnany, Melinda McEnany, Donald Reed, Henry Reynolds, James Roberts, Norma Roberts, Paul Roy, Betty Severance, John Severance, Matt Abbott, Priscella Abbott, Allen Beaulieu, Carolyn Bushey, Timothy Bushey, Sandy Bushey, Betty Clark, Bernard Clark, Lorraine Danyow, Betty

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<sup>1</sup> The Wrights acknowledge that their proposed quarry will also require state land use approval from the Act 250 District Environmental Commission, as well as several other state permits.

Domingue, Maurice Domingue, David Dragon and Robert Jettie (hereinafter referred to, together with Appellants in the site plan appeal proceeding, as “Cross-Appellants”).<sup>2</sup>

Appellants have leased the property upon which they intend to establish the rock quarry from Andrew and Susan Brouillette. While the Brouillettes signed the applications that are the subject of both pending appeals, they have chosen not to participate in these appeal proceedings. The Town of Sheldon (“Town”) entered its appearance through its attorney, Michael S. Gawne, Esq., who advised the Court prior to commencement of the trial that the Town did not wish to actively participate in the merits hearing.

Based upon the admissible evidence presented at trial, including that which was put into context by the two previously-conducted site visits, the Court makes the following Findings of Fact and Conclusions of Law.

### **Factual Findings**

#### **A. Background:**

1. The Brouillettes hold title to a large<sup>3</sup> parcel of land at the junction of Route 105 and Main Street in Sheldon. They have entered into a “Quarry Lease” (Exhibit 11) which authorizes WRB, LLC, a Vermont limited liability company wholly owned by Applicants Roger and Brenda Wright (hereinafter collectively referred to as the “Wrights”), to use a 25.08 acre portion of their land for the quarry which is proposed in the pending applications. The Quarry Lease runs for a term of 23 years, beginning on July 1, 2006.
2. The Wrights propose to construct and operate their quarry on a portion of the Brouillettes’ parcel, off of Vermont Route 105, near its intersection with Town Highway #4, which is commonly known as Main Street.
3. The quarry would be accessed by a to-be-constructed private access road from Route 105, west of Main Street.
4. The site that would become the quarry now contains open fields and wooded areas.
5. The surrounding area hosts a variety of uses. Several dairy farms operate in the area to the north of the Brouillettes’ property, across Route 105. There are a number of single family

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<sup>2</sup> We use this abbreviation for the site plan appellants and their fellow cross-appellants in the conditional use appeal for the sake of convenience; Applicants Mr. & Mrs. Wright were the first to appeal the ZBA’s conditional use determinations.

<sup>3</sup> The total acreage of the Brouillettes’ parcel was not detailed at trial.

residences in the area, particularly along Main Street. The surrounding landscape is picturesque, with its rolling fields, wooded areas and operating farms in the outlying areas.

6. The proposed quarry site generally rises from west to east; its easterly perimeter is about 300 feet from the closest residence, reported to be owned by one Lotowitz, who is not a party to these proceedings. The Lotowitz home is near several other residences along Main Street, including the property owned by Cross-Appellants David and Connie McEnany, who use their property both as a residence and as a display area for their pool and pool installation business.

7. The abutting lands to the south and west of the proposed quarry are heavily wooded and not occupied by residences or other development. To the northwest, along Route 105 and about a half mile or more from the proposed quarry access road, are several homes, a school and other developments.

8. Route 105 is a major east-west corridor for Sheldon and its surrounding communities. The quarry access road will be about 1,500 feet west of the Route 105 bridge that crosses over the Missisquoi River.

9. The area to the east of the Missisquoi River is known as Sheldon Junction. Route 105 intersects with Route 78 just to the east of the Missisquoi River, where there are several large commercial and industrial developments, along with residential structures and agricultural uses.

10. The Brouillettes' property in general and the proposed quarry site in particular is bisected by the zoning district line between the Rural Lands I (RL1) and Rural Lands II (RL2) zoning districts. The RL1 District encompasses all Brouillette lands within 800 feet of Route 105;<sup>4</sup> all remaining Brouillette lands lie within the RL2 District.

## **B. Quarry Construction and Operation:**

### ***i. general operation characteristics***

11. The Wrights propose to develop the quarry in six phases, beginning with the construction of the access road and excavation of an area of the quarry that is lowest in elevation, then moving in an easterly direction through the quarry as it rises in elevation. The Wrights plan to excavate one phase at a time, to the greatest extent possible, thereby minimizing the amount of exposed area at any one time.

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<sup>4</sup> The RL1 District "is comprised of all land, that is no more than 800 feet from the center of any and all Class I, Class II or Class III [Town] roads, which is not designated as village or industrial district . . . ." The RL2 District encompasses all lands beyond 800 feet of Class II and III roads, not otherwise designated. Sheldon Bylaws §§ 640 and 650.

12. The finished quarry floor will be approximately the same elevation as the end of the abutting access road. When mining is complete, the quarry will be open on its westerly side, with quarry walls rising on the northerly, easterly and southerly sides as the quarry cuts into the hillside.

13. During the course of initial construction, the outer edge of the quarry will be ringed with a six-foot high, Logan-style woven-wire fence, the purpose of which will be to deter both human and animal trespassers. This fence may also provide some small measure of visual screening.

14. For rock excavation and extraction to begin, topsoil and other “overburden” will need to be taken off the rock surface and stored. During the first phase of the quarry, some of the stored overburden material will be used to construct an earthen berm along the western edge of the quarry site. This berm would be ten feet high, with a top width of fifteen feet, upon which white pine trees would be planted, the trees having an initial height of four to five feet. The berm walls will have a 3:1 slope, thereby making the base width of the berm about seventy-five feet. It will extend about 270 feet along the western edge of the quarry site. Particularly at this base width,<sup>5</sup> some or all of this berm will extend beyond the lands leased by the Wrights from the Brouillettes.

15. While not shown on the site plans, the Wrights’ noise expert proposed that overburden also be used to construct a second earthen berm along the northern edge of the quarry. This second berm, as proposed, would encroach upon other lands of the Brouillettes, not covered by the parties’ Quarry Lease. It would be as wide and tall as the western berm (ten feet tall, with a top width of about fifteen feet and a bottom width of about seventy-five feet), but would parallel the northern quarry boundary by 530 to 550 feet. No calculations were made of the amount of overburden that would be needed to construct either of these berms, nor a calculation of the area within the quarry needed to store the additional overburden.

16. No exact estimates were provided at trial of the total amount of overburden that would need to be stored within the quarry site during each of the six phases of construction. Given the potential for a significant amount of overburden on site, the Court shares the Cross-Appellants’ concerns that there may not be sufficient storage space within the quarry site, even after the one or more screening berms are constructed. From the testimony offered at trial, we are left to

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<sup>5</sup> The Wrights’ engineer had originally estimated that the base of the westerly berm would be 45 feet in width, but upon cross-examination admitted that it would be 75 feet, or more.

wonder if there will be sufficient storage within the opened phases of the quarry site for the overburden. The most specific testimony offered at trial was that the existing overburden could be as much as five feet thick at the lower part of the quarry site, with overburden thickness decreasing as one travels up and into the quarry site.

17. The Wrights propose to remove only so much overburden at any one time as is needed to expose sufficient rock for extraction. Such a process would minimize the visual impact of the exposed surfaces, at least in the early phases of the quarry. They did not suggest a specific limitation on the area to be exposed at any one time, preferring to have that calculation left until after the quarry is in operation.

18. Blasting would occur on an infrequent basis, to break up the rock needed to supply quarry contracts. While the Wrights' blasting expert suggested that explosives would only be used a couple of times in the spring and again in the fall, a specific seasonal limit was not offered.

19. A portable rock crusher would be available on site to break up rock that is too big for marketing. Once the blasting dislodges rock from the quarry, several excavators and loaders would be used to load the larger rock into the crusher, stockpile the suitably-sized crushed rock within the quarry, and load crushed rock into trucks for delivery off site.

20. The Wrights estimate that once in regular operation, the quarry will generate sufficient commerce to require up to 75 round-trips by trucks per day to and from the quarry.

21. A portable toilet will be available for the estimated two to three workers that will regularly work in the quarry. Applicants suggested that their quarry operations will not produce other waste or hazardous materials.

22. The proposed quarry would also include an office trailer, truck scale and a twenty-foot-tall yard light, all located within the quarry. There would be a gate that blocks use of the access road. A small sign and second light would be installed at the gated entrance. Both lights would be of the inverted box variety, shielded so as not to expose abutting property to the direct light from the fixtures.

23. As with most rock quarries, the proposed Wright quarry would operate on a seasonal basis, closing down in the mid-fall and reopening in the spring. The Wrights did not offer specific dates of operation.

24. Once all six phases of excavation and extraction within the quarry are completed, the quarry site will take up nearly all of the leased lands. The edge of the quarry walls or excavated

areas will be within 50 feet of the north and southwesterly boundaries of the leased lands; within 100 feet of the southern lease boundary, within 5 feet of the northwest lease boundary, and within 150 to 325 feet of the southeast lease boundary. While no development other than the quarry is proposed for the Brouillettes' land lying outside of that leased to the Wrights, the parties' lease does not provide authority for the Wrights to use or restrict the use of the Brouillettes' lands lying outside of the leased land.

25. Once completed, the quarry floor will slope to a minor degree (i.e.: no more than twenty-five feet over a span of more than one thousand feet) from east to west, with the easterly edge of the finished quarry floor being about 400 feet elevation above sea level and the western edge of the finished quarry floor having an elevation of about 375 feet. Upon completion, the tallest quarry wall will be on its eastern side, with a height of about 80 feet.<sup>6</sup> The finished quarry walls, all with exposed rock, will decrease in height as they travel around the quarry to the north, south and west.

*ii. stormwater treatment*

26. During the first phase of the quarry, the Wrights propose to construct a stormwater detention pond and related infrastructure along the northwesterly boundary of the quarry site.

27. The testimony presented in support of the application offered conflicting evidence as to the relationship between this stormwater detention pond and the westerly berm. The preliminary site plans show the stormwater detention pond just inside the northwesterly edge of the leased lands, with the westerly berm just outside the westerly edge of the leased lands. Other plans offered and accepted into evidence in connection with the Wrights' noise expert's testimony show the westerly berm encompassing the area on the inside of the westerly edge of the leased land where the stormwater detention pond was first shown. This siting conflict was not resolved at trial to an acceptable fashion.

28. The testimony at trial, particularly that put in context during the site visits, tended to show the presence of significant surface water in the area of the quarry. The existing soils are often wet, especially in the area of the open fields. By this evidence, the Court concludes that any quarry plan at this site must encompass sufficient new infrastructure to deal with stormwater and ground water that will enter and occupy the quarry site.

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<sup>6</sup> See site map sheet C-5, entitled "Plan And Profile-A, Wright Rock Crushing Quarry, Sheldon, Vermont."

29. The Wrights have not yet caused either the stormwater detention pond or its related infrastructure to be specifically designed and reviewed for adequacy as to this specific site. There was no specific stormwater treatment plan presented at trial; the Wrights acknowledged at trial that they have yet to commission a stormwater treatment plan.

30. The Wrights also propose to install swales, with stone check dams, along the two southern perimeter lines of the quarry, so that surface water would be diverted from flowing into the quarry. Presumably, the surface water would travel along these swales and into the stormwater detention pond, although the specifics on that detail were not provided on the site maps that accompanied the Wrights' submissions.

*iii. wetlands and deer habitat*

31. A small, pre-existing Class II wetland, which includes a small pond, straddles the northeasterly boundary of the leased lands. The area proposed to be disturbed by the quarry operations will respect a fifty-foot buffer around the southern portion of this wetland. The northern portion of this wetland is on the portion of the Brouillette lands outside of the lands leased to the Wrights.

32. The pond within this Class II wetland drains through a pipe or culvert at its northern edge, delivering runoff into the ditch that runs along the southern edge of Main Street. The undisputed evidence at trial was that this pond was man-made within the last twenty or more years, although that historical fact is not particularly relevant to our analysis of the proposed quarry's impact on the pond and wetland as a natural resource.

33. We conclude that contaminants produced by the quarry, if any, will not likely travel into this wetland and pond, due to the elevation of this wetland (particularly in relation to the proposed quarry floor), the adjoining quarry walls and the plan to construct swales on the opposite side of the quarry.

34. There was evidence of frequent deer and other wildlife visits, particularly to the wooded areas that will be stripped of vegetation excavated during the quarry operation. The quarry excavation will cause the deer and other wildlife to avoid this area. While the evidence suggested frequent wildlife visits, it was not of a sufficient level to lead to a conclusion that the proposed quarry is the site for current significant deer wintering or deer yard habitats. No state authority currently identifies the area as such.

*iv. quarry traffic impacts*

35. Route 105 is the major east–west corridor for the Town of Sheldon and neighboring communities. Route 105 is similar to many of the other major state highways in Vermont; while traffic is not as heavy as along Interstates 89 and 91, traffic is frequent and of a wide variety, including personal vehicles, school busses, commercial vehicles (including multi-axled trucks), industrial vehicles, and tractor trailers.

36. Mr. Wright proposes to use as much as eighty percent of the rock and other product produced in the proposed quarry for his own excavation business. While his business does not presently involve much work for local towns, he speculates that once this quarry is in operation, he will be a frequent vendor to area towns seeking quarry product. While the evidence at trial suggested that a quarry was needed in Sheldon to serve it and the surrounding towns, the evidence appeared speculative and not substantial enough to conclude that the proposed quarry would cause area towns to now use Mr. Wright and his excavation business for all their quarry supply needs.

37. There was no testimony offered on the specific location of existing area quarries and where Sheldon or other area towns presently go to receive their needed rock quarry supplies. It was offered that wherever those supplies come from, the trucks delivering the quarry products must use Route 105 as a delivery route. While such testimony was speculative, given the layout of area roads, it is reasonable to conclude that some existing quarry delivery trucks travel for some part of their trip along Route 105, in the vicinity of the Wrights’ proposed quarry. The evidence presented was insufficient, however, to conclude that Route 105 is the only route now traveled, nor was it sufficient to accept the Wrights’ suggestion that the trucks using their proposed quarry would only be replacing trucks delivering from other, already-existing quarries, thereby not resulting in an increase of truck trips along the portion of Route 105 in the area of the proposed quarry.

38. Web-based data from the Vermont Department of Transportation (“VTrans”) estimates that in the area of the proposed quarry, Route 105 experiences an annualized daily average of 6,000 vehicle trips (one way) per day.

39. The Wrights have not yet commissioned a traffic study to determine the actual traffic levels on Route 105 and the expected impacts on that traffic generated by the proposed quarry.



40. The Wrights represented that the trucks traveling to and from their proposed quarry would only use Route 105, except for specific deliveries to customers on other area roads. While not supported by a specific traffic study, we find this representation generally credible, given the character of Route 105 as the major east-west corridor for this area. Given that the proposed quarry is to be located on Route 105, its impact on area secondary roads will be significantly less than if it were located off of an area secondary road.

41. In addition to the estimated 75 daily round trips of rock- and gravel-carrying trucks, this quarry will generate a modest amount of additional traffic, including its employees, supervisors and owners. Mr. Wright estimated at trial that the quarry will be generally open to those wishing to view the rock product available for purchase, thereby resulting in the generation of additional visits by small cars and vehicles.

42. The suggestion at trial that the peak level of traffic in the vicinity of the proposed quarry could be estimated at 10% of the annualized daily average (commonly known as the “K factor”), while useful in initial planning stages, is not of a sufficient level of reliability to conform to the applicable provisions of the Town of Sheldon Zoning Bylaws (“Bylaws”).

43. A vehicle waiting on the access road, attempting to enter Route 105, will be able to see traffic on Route 105 coming from the west in excess of 800 feet. No party contested the Wrights’ assertion at trial that this represented an adequate sight distance of traffic approaching the proposed site from the west.

44. Sight distances of traffic approaching the site from the east are more problematic. The exact sight distance from the east was disputed at trial and could not be deduced by the evidence presented. From the junction of the proposed quarry access road intersection with Route 105, one can see approaching traffic from the east for up to about 600 feet.

45. The established practice for making an initial determination of whether a proposed intersection can be regarded as safe is to determine actual sight distances and compare them to sight distances recommended by state and federal authorities. VTrans has established such sight distance recommendations in its publication entitled “Standards for Residential and Commercial Drives,” otherwise known as the VTrans “B-71 Standards.”

46. The posted speed limit on Route 105 in the vicinity of the proposed quarry is 40 miles per hour (MPH). Trial testimony revealed that the actual speed at which many vehicles travel as they pass the proposed quarry site is about 50 MPH.

47. For traffic posted at 40 MPH, the B-71 Standard recommendation for sight distances of passenger vehicles is 445 feet; 555 feet at the actual average speed of 50 MPH.

48. Large trucks, including tractor trailers and rock quarry delivery trucks, require a greater distance than passenger vehicles to safely stop, exit or enter a highway. The VTrans B-71 Standards do not include recommendations for safe sight or stopping distances for large trucks. There was no evidence presented at trial that Federal guidelines are applicable to this project.

49. The American Association of State Highway and Transportation Officials (AASHTO) does not have jurisdiction to impose regulations upon large truck traffic on public highways, but has established recommendations for safe sight distance calculations at intersections and private road curb cuts used by large trucks.

50. The AASHTO recommendations are based upon sight distances calculated at an estimated driver's visual height of 7.6 feet above and 15 feet back from a highway intersection. No party to this appeal offered specific sight distance calculations that conformed to these AASHTO requirements.

51. AASHTO recommends an 11.5-second gap in the traffic stream to allow for the entry of large trucks, such as those that will be used in the operation of the proposed quarry. At the posted speed of 40 MPH, a truck on the proposed quarry access road, seeking to enter Route 105 to head west, would need to be able to look east to on-coming traffic for a distance of 675 feet to determine if it was safe to enter the Route 105 traffic, according to the AASHTO recommendations. The AASHTO recommended minimum sight distance increases to over 843 feet when computed for an actual traffic speed of 50 MPH. We conclude that the AASHTO recommendations for safe truck traffic intersections, particularly when using historical actual average speeds, are credible and reliable.

52. With an estimated sight distance of about 600 feet, the proposed quarry access road intersection with Route 105 will not offer sufficient sight distance to the east to allow quarry trucks to safely enter onto Route 105 to travel to the west. In light of this deficiency, the Wrights have offered to remove a natural earthen berm to the east of the access road which presently obscures the sight of on-coming traffic. This berm is located outside of the land the Wrights control under the Quarry Lease. The specifics of how the Wrights would remove this berm were not offered at trial.

53. VTrans officials visited the proposed quarry site for purposes of conducting their initial evaluation of the proposed access road intersection with Route 105. On July 8, 2005, VTrans officials issued their “letter of intent” (Exhibit 12), which indicates preliminary approval of the Wrights’ proposed access road intersection with Route 105. VTrans officials have yet to issue their final right-of-way permit for the access road intersection. Before constructing the proposed access road, the Wrights would need to present sufficient evidence to secure a final right-of-way permit from VTrans, confirming that the proposed access road intersection with Route 105 would be safe, given the nature of the existing traffic on Route 105 and the anticipated traffic to and from the proposed quarry.

*v. noise impacts of quarry*

54. The area surrounding the proposed quarry has diverse land uses. The site itself includes rolling hills of undeveloped land, including fields and forests. Evidence abounds that agricultural uses once predominated the area. Today, within a several mile radius of the site, current uses appear to incorporate all that are allowed within the scope of the zoning bylaws: there continues to be several farms in operation, as well as schools, residences and commercial and industrial uses. As noted above, the quarry site abuts Route 105, the main east/west traffic route in this section of northwestern Vermont. Traffic on Route 105 brings to the neighborhood the uses and noise of a major, consistently used state highway.

55. Area residences, including those owned or occupied by Cross-Appellants, enjoy relatively quiet settings, even in light of their close proximity to Route 105. David and Connie McEnany’s residence, located less than a half mile off of Route 105, along Main Street, evidences a quiet, rural setting, despite its close proximity to a state highway and partial use as a display setting for their family-owned business.

56. The quarry operation will include several activities that will generate noise: initial excavation and construction of the quarry site and access road, seasonal drilling and blasting, excavation of overburden and rock (including the use of large pieces of excavation equipment, some with audible back-up alarms), occasional use of a portable rock crusher, loading of large delivery trucks with rock product, and the coming and going of large trucks and excavation equipment during the work day.

57. The Wrights propose to conduct blasting to remove rock from the face or floor of the quarry, so that it may then be crushed (when needed) and stockpiled on the quarry floor. The

Wrights estimate that they will need only to conduct blasts several times in the spring and fall to maintain supplies of rock for their quarry operations and customers.

58. Blasting at the proposed quarry would follow the established practice of multiple shots of explosives, timed to go off within milliseconds, constituting a single blast event. These blasts will be planned and executed by a licensed blasting contractor.

59. Prior to the blasts, holes will be drilled into the bedrock so that the explosives may be loaded in the quarry rock.

60. During the initial construction and subsequent operation of the quarry, several loaders, excavators and trucks will be used to excavate the overburden and rock, stockpile it within the quarry, and load the rock into trucks for delivery off site. This equipment will generate noise, from the operation of engines, their movement within and out of the quarry, their back-up alarms and the loading of rock and overburden into and out of the their beds.

61. Appellants' noise expert presented sound modeling projections at trial of the noise that could be generated while the quarry was operating.<sup>7</sup> These sound modeling examples tended to show reliable predictions of the noise decibel (dBA) levels the on-going quarry activities would generate in the surrounding areas.

62. As noted below, the applicable provisions of the Sheldon Zoning Bylaws do not provide specific recommendations as to the permissible level of noise that a proposed development may generate before it is deemed to have an adverse or unduly adverse impact upon abutting or neighboring properties.

63. For purposes of determining the adverse noise impacts of a proposed development in an Act 250 context, the former Vermont Environmental Board established a specific maximum dBA level of 55 dBA, read either at the boundary line or at nearby residences.

64. These sound modeling projections were not based upon noise output of all proposed equipment running at their highest noise level. Nonetheless, these sound modeling projections appeared to be accurate estimates of the noise levels to be created by the quarry at area properties. Such projections are reflected in Exhibits 7A through 7G. We conclude from these Exhibits and the expert's testimony that activities in the proposed quarry<sup>8</sup> will generate noise in excess of 75 dBA along the northwest and southwest boundaries of the proposed quarry and are

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<sup>7</sup> This sound modeling did not include the anticipated drilling and blasting activities.

<sup>8</sup> Including along the proposed access road. The expert included in his sound modeling a large truck being operated along the access road, evidenced by the heightened noise level in Exhibits 7A through 7G along the access road.

expected to be in the range of 55 to 70 dBA along Route 105, particularly to the west of the access road. To the east and northeast of the Quarry Lease limits, the dBA levels are not expected to exceed 50 dBA and often fall below 35 dBA as one travels over the ridge line that separates the leased lands from the McEnanys' lands.

*vi. other aesthetic impacts of quarry*

65. The construction and operation of the quarry will have visual impacts on the area. At present, the proposed quarry site is partially wooded and partially open field; some of the area can be seen from Route 105, particularly by travelers from the west, heading east. As the quarry progresses through its phases, more rock face will be visible from off site, although there was no representation that more than a third or so, by the Court's estimate, of the exposed area would be visible from off site.

66. Direct views of most of the quarry while in operation will be screened by the topography of the surrounding lands, existing vegetation that will remain undisturbed, and the proposed berms along the northern and western edges of the quarry.

67. There was no credible evidence offered at trial to refute the representation the Wrights offered from the Vermont Division for Historic Preservation that the quarry would "have no undue adverse effect on any historic or archeological properties that are listed on or may be eligible for inclusion in the State or national Registers of Historic Places." Exhibit 20.

68. Cross-Appellants expressed concern that the deepening of the quarry would cause the surrounding underground water table to be lowered, thereby risking an unduly adverse impact upon area wells. While there was some testimony along these lines, the evidence submitted does not support a conclusion that the cone of depression in the underground water table that could be caused by the deepening of this quarry would be of a significant enough size to impact upon any neighboring wells. There also was no evidence that any of the nearby water wells or springs were served by underground water sources that were at a higher elevation than the lowest point of the proposed quarry floor. Thus, the quarry's impact, within any cone of depression it causes, would be well below the elevation of area water sources.

69. David and Connie McEnany fear that any impact upon their spring caused by the quarry will also cause them to suffer an additional injury: because they hope to employ heat pump technology with their water spring that they believe could provide sufficient heat for their home and swimming pool, any adverse impact upon their spring would jeopardize their future heat

pump plans. The McEnanys' spring is about 1,100 feet east of the closest area to be disturbed by the proposed quarry; the lowest point in this area of the quarry would be about 35 feet higher in elevation than the McEnanys' spring. While we conclude that the McEnanys' general concerns about this possible future impact are reasonable, we conclude that the evidence presented at trial<sup>9</sup> was insufficient to support a conclusion that the quarry would have such an impact on the McEnanys' spring.

70. The excavation in the proposed quarry and truck traffic along its gravel access road will cause dust. The Wrights' plan to employ dust suppression efforts common in the quarry industry along the access road, on the quarry floor and on its overburden stockpiles, including spraying of water and calcium carbonate, will be sufficient to limit any undue adverse impacts from such dust.

71. Concerns expressed about the proposed blasting activities were limited to the potential noise impacts. There was no testimony offered that the proposed blasting would cause ground and air vibrations or the risk of fly rock which would adversely impact neighboring properties.

72. Once the quarry operation reaches its lowest planned elevation depths (i.e. 375 to 400 feet above sea level), extraction operations will cease and the reclamation of the land will begin.

73. The Wrights' evidence on their planned reclamation for this site was brief. The quarry walls on the north, east and south sides will remain as exposed rock that gradually rise to the east. The western end of the quarry will remain open, although partially obscured by the proposed earthen berms. The open western end of the quarry will prevent the quarry from filling with water, a consequence of other quarry operations that has sometimes caused adverse impacts after a quarry has ceased operations. The fence surrounding the quarry and blocking vehicular traffic at its gate will remain in place.

74. Stockpiled soil and top soil will be spread across the quarry floor (twenty inches of soil and four inches of top soil), so that the area may support vegetation. The yet-to-be designed stormwater detention pond will remain on site.

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<sup>9</sup> We were not presented at trial with a single example of when an operating quarry, similar to that proposed by the Wrights, had this impact on abutting water wells.

## **Discussion**

### **A. Preliminary Issues:**

Before we begin our analysis of the proposed quarry's conformance with the applicable site plan and conditional use review provisions of the Bylaws, we are asked to consider the following preliminary issues.

#### ***i. crushing and screening as allowed uses***

Prior to trial, Cross-Appellants filed a motion for partial summary judgment, seeking a determination that the crushing, screening, and other processing of the quarry rock is more appropriately characterized as "manufacturing" under Bylaws § 710. We denied that motion, finding that Bylaws § 540 provides a reference to activities that more closely align with what is proposed for the Wrights' quarry. Cross-Appellants renewed their motion after trial by way of their Memorandum filed June 12, 2007.

Section 540 directs that "[n]o new earth resource extraction or processing operation . . . shall be permitted without a conditional use approval." (Emphasis added.) Accordingly, we conclude that the Bylaws direct a review of quarry activities, such as proposed here, to be conducted within a single proceeding, since both the extraction and processing of rock and gravel often occurs within a single operation. Were we to adopt Cross-Appellants' analysis here, the extraction of rock from a quarry would be regarded as a wholly separate activity from the "extraction or processing" of that same rock, including the crushing and screening of that same rock. Such an interpretation could lead to an odd bifurcation of the review process under the Sheldon Bylaws. For all the same reasons as announced in this Court's Entry Order of March 8, 2007, we decline to adopt Cross-Appellants' analysis of the quarry activities proposed here as "manufacturing," as that term is defined in Bylaws § 710.

#### ***ii. adequacy of the leased lands***

In their post-trial Memorandum, Cross-Appellants also challenge the proposed quarry on the basis that the revised plans discussed at trial include quarry activities that will occur outside the lands leased by the Wrights from the Brouillettes. The Wrights do not appear to contest this apparent shortcoming in their application, since one or both of their proposed earthen berms, stormwater detention pond and a portion of their swales may be located outside the confines of their leased lands or within the setbacks limits within the leased lands.

As a general premise, we note that an applicant must overcome an initial threshold in their burden of production: to show that they have the authority to conduct the development activities contemplated in their application. In re Appeal of van Nostrand, Docket No.s 209-11-04 Vtec & 101-5-05 Vtec at 9 (Vt. Envtl. Ct., Jan. 13, 2006)(appeal pending). An applicant can meet this threshold burden by showing that they own the property proposed for development, lease it, have a contract to purchase it, or have some other interest in or license over it.

The Wrights appear to concede the deficiency of their application in this regard, as they concede that they now propose to conduct activities outside of their leased lands. But we note that the Brouillettes are Co-Applicants in this proceeding and hold title to all lands upon which the quarry activities are proposed and appear to own sufficient additional lands to respect the applicable Bylaws setback requirements.

It is conceivable that a permit condition could be crafted to require the Applicants' Quarry Lease to be revised to incorporate all necessary lands. The Court is also mindful of the tremendous resources all parties to these proceedings have expended and the time all parties have waited since the initial filing of these applications for a determination on the merits. We therefore decline to dismiss the pending applications on the basis of the Quarry Lease shortcomings, especially since both parties to the Quarry Lease are Co-Applicants in these proceedings. In analyzing these applications in the context of the applicable Bylaws, we regard the Quarry Lease boundary limits as the "boundary lines" for this project, even though the quarry site doesn't represent a separately subdivided lot.

***iii. other shortcomings in the pending applications***

Cross-Appellants also note several apparent shortcomings in the Wrights' applications and site plans, including the lack of specificity as to boundary lines, location of berms and ponds, and the absence of meaningful data or specifications on traffic analysis, pond design or hydrogeologic studies.

We view Cross-Appellants' request on these issues as seeking dismissal of the pending applications, on the basis that they are incomplete. We decline to do so. Application completeness is not equivalent to the sufficiency of an applicants' evidentiary presentation at trial. The latter requires this Court to determine whether an applicant has put forth sufficient evidence to show that their proposed development conforms with the applicable Bylaws



provisions. The following sections of this Decision will address whether the Wrights have fulfilled their burdens of proof.

***iv. admissibility of demonstrative exhibits***

One preliminary issue remains from the trial. At trial, the Wrights offered into evidence Exhibits 5A through 5G, as well as a computer-generated depiction (Exhibit 4) of the views of the quarry from Route 105 that would be seen by a traveler approaching the quarry from the west. This computer generated depiction was created by the Wrights' noise expert, Ken Kaliski, P.E., based upon widely-used software generally accepted in his field. Exhibits 5A through 5G are photocopy reproductions of certain views within Mr. Kaliski's computer depiction.

While the data Mr. Kaliski used to generate his depictions was shared with Cross-Appellants during the discovery process, Exhibits 4 and 5A through 5G were not disclosed prior to trial. This delay in disclosure led to an objection and some portion of the trial being consumed by a discussion of the Exhibits' admissibility. This objection and the trial delay could have been avoided by a prior disclosure of the Exhibits. Nonetheless, the Court regards these Exhibits as demonstrative evidence, having a probative value in the course of this bench trial that outweighs its unfairly prejudicial effect. V.R.E. 403. The Court has considered the use of these Exhibits in the course of Mr. Kaliski's testimony, as well as Mr. Ruggiano's testimony concerning the expected visual impacts as the quarry operates through its multiple phases, and has accorded these Exhibits and the related testimony the appropriate weight and credibility.

**B. Site Plan Review:**

All development in Sheldon, with some minor exceptions not applicable here, must receive site plan approval from the Planning Commission, or from this Court on appeal. Bylaws § 350. When the proposed development involves a quarry, the Bylaws require compliance with both the general site plan review criteria (§§ 350(G), 430, 431 and 432) and the site plan review criteria specific for quarries (§ 540(E)). To gain site plan approval, the Wrights' proposed quarry must conform to both these general and specific site plan criteria. In applying these criteria to the factual findings announced above, we make the following conclusions.

***i. compliance with the access requirements of § 430***

While the Wrights' proposed quarry will not have frontage on a town or state highway, it will be served by an adequate access road and thus will conform with § 430(A). The design and specifications of the proposed quarry access road also comply with the grade, culvert, ditching

and location provisions of § 430(C), (D) and (F). Subsections (E) and (G) do not raise criteria requirements that are applicable to this development.

In considering the proposed quarry's compliance with the access requirements of § 430, we are directed to give "particular consideration . . . to visibility at intersections, to traffic flow and control, to pedestrian safety and convenience, and to access in case of emergency." Bylaws § 430(B). No credible evidence was offered at trial to suggest that pedestrian safety and convenience, nor access for emergency vehicles and personnel, would be jeopardized or adversely impacted by the siting of this quarry or use of its proposed access road.

Given the absence of a traffic study offered in support of the Wrights' application, as noted above, we are unable to make a determination that this proposed development provides the truck and other vehicle drivers visiting the quarry with adequate visibility at the intersection of Route 105 and the proposed access road, particularly for traffic turning left out of the access road into the westerly flowing traffic. We do not interpret § 430(B) in all instances to require traffic studies to be offered in support of all proposed developments. However, when neighbors of a proposed project offer evidence to support their stated concerns regarding traffic safety, the project proponents re-acquire the burden of persuading this Court that the proposed project will not create the potential for unsafe traffic intersections.

There was much speculation, but little specific evidence, on the estimated sight distances from the proposed access road of the westerly flowing traffic on Route 105. There was a suggestion, but no specifics offered, of how removal of a pre-existing earthen berm would increase those sight distances. In the absence of these specific additions to the Wrights proposal, we cannot conclude that their proposed quarry conforms with Bylaws § 430(B).

***ii. compliance with the circulation, parking & loading requirements of § 431***

We regard the Wrights' proposed quarry as in compliance with § 431, primarily because the vast majority of these general site plan review requirements are not applicable to this type of development. There was no evidence presented to contradict the Wrights' representations that the proposed access road was in compliance with the Sheldon Road Standards. Subsection (A) is therefore met. A search through the remaining provisions of § 431 (i.e.: subsections (B) through (M), inclusive) leads us to conclude that they are not applicable here, as they appear more directed towards residential subdivision or commercial development, where issues relating to parking, circulation, and snow and refuse removal could have an adverse impact on abutting

roads and neighborhoods. We therefore conclude that the proposed quarry meets the general site plan review standards of § 431, to the extent they are even applicable to this development.

***iii. compliance with the landscaping and screening requirements of § 432***

Quarries are necessary for the viability of Vermont communities, but are often not welcome, particularly where, such as here, a new quarry is proposed. All types of development must search for a suitable site, but quarries are limited in this regard: a viable quarry can only be sited in an area where there is evidence of rock or gravel that the local market requires. Thus, specific landscaping and screening measures are critical to assure success in any permit review process for a quarry. In Sheldon, Bylaws § 432 sets some of the standards for adequate landscaping and screening for a proposed quarry.

The Wrights have taken several steps to adequately landscape and screen their proposed quarry. They have used the natural landscape to position their proposed quarry in such a way as to shield most of it from view by its neighbors. Portions of the proposed quarry will be visible off-site, particularly as the quarry moves through its latter phases. The view into this parcel will be changed by the quarry operations. But the view of the proposed quarry will also be shielded by the earthen berms the Wrights propose to create. And while picturesque, this area of Sheldon is not wholly devoid of commercial and industrial activity. Where nearby lands are occupied by residential developments, views into the quarry will be minimal or non-existent.

So, we conclude that the Wrights have presented adequate general plans for the landscaping and screening of their proposed quarry. But we decline to conclude that their plans are wholly in conformance with § 432, because their site plan lacks the necessary specificity to allow that conclusion. In particular, the siting conflict between the stormwater detention pond and the westerly berm, the conflict between the Quarry Lease limits and the siting of both berms outside its limits, and the lack of calculations as to how significant the overburden stockpiles would have to be on-site, prohibit us from making a final affirmative conclusion under § 432. Such affirmative conclusions could only be had after these conflicts are addressed.

***iv. compliance with the remaining requirements of § 350(G)***

The remaining general site plan review standards (i.e.: Bylaws §§ 350(G)(4), (5) and (6)) have been met by the applicants here. No suggestion was made that the proposed quarry would adversely impact on the utilization of renewable energy resources. As noted above, the project calls for only two lights to be installed, neither of which will cause the direct light sources to be

viewed off site. There is only a single, small directional sign proposed at the entrance of the access road, identifying the proposed quarry. Thus, we conclude that the proposed quarry conforms with these remaining general site review criteria of § 350(G).

*v. compliance with the Specific Use Standards of §540(E)*

Any proposed quarry must also conform with specific use standards to obtain site plan review approval. Bylaws § 540(E). These Bylaws provisions note that “[a]ctivities involving the extraction, exploration, or processing of earth resources disturb the natural landscape and utility of the site. The[refore, the] rehabilitation plan [must be] intended to ensure that the entire site, at the conclusion of such activities, is restored to a condition that is free of hazards to the public and is conducive to subsequent use for other activities.” Bylaws § 540(E)(1).

The Wrights have provided a brief review of their rehabilitation plan for the site, post-quarry activities. This quarry will not leave a large hole in the ground, as some quarries do. The Wrights have planned to store adequate soil and top soil on site to allow for the re-vegetation of the quarry floors. But the lack of a stormwater treatment plan and design for the stormwater detention pond prohibits us from concluding that their rehabilitation plan conforms with Bylaws § 540(E)(2)(e).

The Wrights’ plan to stage the phase work of their quarry conforms with the directives of Bylaws § 540(E)(2)(d). While some exposed rock surface will be visible from some neighboring properties, the Wrights’ rehabilitation and screening plans seek to minimize it, such that the quarry, once completed and rehabilitated, will be compatible with the neighboring landscapes of working farms and mixed commercial and industrial uses. The reclaimed site will not be visible from the neighboring residential properties identified at trial.

The Wrights’ rehabilitation plan is lacking, however, on the specific suitable uses for which the site would be available. While we do not read Bylaws § 540(E)(2)(a) to require a quarry applicant to put forth a specific application for zoning approval for the future use of the site, post reclamation, we regard subsection (2)(a) as requiring a quarry applicant, at a minimum, to identify the uses presently allowed under the Bylaws for which the reclaimed site would be suitable. For these reasons, we decline to conclude that the proposed quarry is in conformance with all the Specific Use Standards of Bylaws § 540(E).

### **C. Conditional Use Review:**

The proposed quarry lies within two zoning districts, the RL1 and RL2 districts. Bylaws §§ 640 and 650. For a quarry, under the terms “excavation” and “earth resource exploration” to be allowed in either district, it must obtain conditional use approval under a multiplicity of Bylaws provisions. We take them in turn.

#### ***i. compliance with the zoning district conditional use standards of §§ 640 and 650***

Each zoning district has a succinct conditional use requirement; each is similar in scope and goes to the heart of one deficiency in the Wrights’ proposed quarry as presented. In the RL1 district, “[w]here different types of land uses adjoin one another, larger lot sizes, increased setbacks, or landscaping may be required in order to buffer adverse impacts.” Bylaws § 640. The Wrights’ quarry abuts wooded areas, residential, agricultural and commercial developments, albeit across Route 105. It is proposed to disturb nearly all of the land within the Quarry Lease; some of the development activities, including screening and stormwater treatment, are planned for areas beyond the boundary limits of the Quarry Lease. Without modification to the Quarry Lease, such that the leased lands would include all development activities and adequate buffers, we cannot conclude that the proposed development is in conformance with the conditional use standards of § 640.

The proposed quarry does not impact upon Vermont Agency of Natural Resources identified wetlands, wildlife habitat or natural heritage sites. The proposed quarry has not been shown to adversely impact upon nearby existing agricultural or forestry operations, nor upon productive soils on lands presently cleared for farming. Thus, the Wrights’ proposed quarry is in conformance with the remaining conditional use standards of Bylaws §§ 640 and 650.

#### ***ii. compliance with general conditional use standards of § 330(F)***

The quarry must also comply with the general conditional use standards of Bylaws § 330(F), which includes the general standards of subsection (F)(1) and the performance standards of subsection (F)(2). We take these in turn as well.

##### ***a. compliance with the general conditional use standards of subsection (F)(1)***

A conditional use is deemed appropriate when it “will not have an undue adverse effect” on five stated criteria listed in subsection (F)(1). Unfortunately, the term “undue adverse impact” is not defined in the Bylaws, except for the general interpretative guide of § 700 that words within the Bylaws should be afforded “their customary meaning.” We attempt to apply

this Court's understanding of the customary meaning of that term in our evaluation, without reference to more detailed definitions.<sup>10</sup>

No evidence was submitted at trial tending to show that the proposed quarry would have any impact upon the existing or planned community facilities, whether that impact be adverse, undue or otherwise. We therefore conclude that the proposed quarry conforms with subsection (F)(1)(a).

Similarly, for the reasons already stated, the character of the area neighboring the proposed quarry, with its multiplicity of uses and as that area is defined in both the zoning district regulations and the Town Plan, will not be unduly effected in an adverse manner by the proposed quarry; nor will the Town Bylaws or ordinances now in effect; nor will the utilization of renewable resources. Thus, the proposed quarry has achieved conformance with subsections (F)(1)(b), (d) and (e).

We cannot conclude, however, that the proposed quarry is in conformance with subsection (F)(1)(c), relating to the potential for an undue adverse impact on area roads and highways, due to the absence of a traffic study or other evidence from the Co –Applicants that would diffuse the traffic concerns expressed at trial and adopted in this Decision.

***B. compliance with the performance standards of subsection (F)(2) & § 402(B)***

Subsection (F)(2) repeats and incorporates by reference into our review the specific performance standards applied to all development under Bylaws § 402(B). In applying these standards to the factual findings announced above, we conclude that the evidence presented shows that the proposed quarry is unlikely to emit offensive odors, dust, dirt, gases, glare, sewage, septage or other harmful waste. Thus, the project is in conformance with the specific performance standards of subsections (B)(1), (3), (4) and (6). There also was no showing of a risk as to fire, explosion or other events that would endanger public safety or increase a burden upon municipal facilities and is therefore in conformance with subsection (B)(5).

We decline, however, to conclude that the Wrights have made an adequate showing on conformance with subsection (B)(2), which requires a determination as to whether the proposed project will “[e]mit any level of noise which is excessive at the property line and represents a

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<sup>10</sup> Our Supreme Court and the former Vermont Environmental Board have gone to great lengths in defining the term “undue adverse impact” in the context of reviewing state land use applications in the Act 250 context. See In re Stowe Club Highlands, 166 Vt. 33 (1996). We decline to incorporate that definition of the term in the context of our review of the proposed quarry’s compliance with the municipal regulations in this proceeding, since we conclude that a more abbreviated definition of the term is sufficient in these proceedings.

significant increase in noise levels in the vicinity of the development so as to be incompatible with the surrounding area . . .” We reach this conclusion for several reasons. First, we note that the Wrights’ noise sound modeling projections did not include renderings of the drilling and blasting noise impacts, which could create significant impacts at the boundary lines, even though these activities will only occur at the quarry on an occasional basis in the spring and fall. Second, for purposes of analyzing these applications, we consider the leased lands limits to be the “boundary lines,” as that term is used in subsection (B)(2). While the estimated noise at these boundary lines can be inferred from the sound modeling projections (Exhibits 7A through 7G), there was no specific testimony or other evidence offered on the specific estimates of all noise levels at the lease boundary lines. We decline to rely on inference to render a conclusion on this performance standard. Third, any determination of whether noise levels would be expected to “significant[ly] increase” would need a base determination of the noise levels that presently exist. While there was some general testimony on the observed noise levels and multiplicity of activities along Route 105, we find the evidence presented to be insufficient to render a positive finding on this performance standard.

***iii. compliance with additional conditional use standards for quarries in § 540(D)***

As noted above, the Wrights’ present plan incorporates use of nearly all the area within the leased lands. Some of the actual quarry activities appear to abut the Quarry Lease limits, thereby leaving a small area available for setback. Some other quarry development, including the berms and pond, are proposed for land that the Wrights do not yet have authority to develop under the Quarry Lease. Thus, the minimum setback of 200 feet from adjoining properties contained in Bylaws § 540(D)(1) cannot be met.

The Wrights may argue that the abutting properties are well in excess of 200 feet, when the remaining lands of their Co-Applicants are included. But none of that land is presently included in the Quarry Lease and none of that remaining land is authorized for development. Thus, for purposes of the pending application, setbacks should be calculated from the limits of the lands covered by the Quarry Lease. For these same reasons, we cannot render a determination that the quarry as proposed conforms with the requirement of maintaining natural vegetation within the setback areas under subsection (D)(2).

Similarly, the absence of a specific erosion control plan and specifications for the stormwater detention pond prohibit us from rendering positive findings under subsection (D)(3).

The evidence presented in support of the Wrights' development plans show that they have taken adequate protections against the quarry polluting surface or ground water through byproducts of its operation; have provided for suitable fencing, screening and other safety precautions around the planned excavation site; and have provided a specific explosives plan to protect against an undue adverse impact upon adjoining properties. Thus, the Wrights' proposed quarry conforms with subsections (D)(4), (5) and (7).

Due to the absence of a specific traffic study, sufficient to overcome the evidence presented that suggests that the easterly sight distances at the access road are insufficient, as currently planned, we conclude that the proposed quarry could create unusual or unreasonable traffic hazards on Route 105, thereby prohibiting a positive finding under subsection (D)(6).

### **Conclusions**

For all the specific reasons articulated in this Decision, we conclude that the Wrights have not provided sufficient evidence nor made all the necessary modifications to allow this Court to conclude that their site plan and conditional use review applications are in conformance with all applicable provisions of the Town of Sheldon Zoning Bylaws. Those applications are therefore **DENIED**.

This completes the proceedings pending before this Court in both appeals. A Judgment Order accompanies this Decision.

Done at Berlin, Vermont this 13<sup>th</sup> day of December, 2007.

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Thomas S. Durkin, Environmental Judge