MASTER PLAN

RAPTOR LANE PROPERTY

TOWN OF DORSET

September 2020

Background:
In 2018, the Town of Dorset acquired 308 acres located on Raptor Lane off Route 30 in Dorset through a bargain sale. The property is made up of an 8 lot subdivision, lots 1-7 range from 11 acres to 30 acres in size and lot 8 is 140 acres in size. The recent appraisal of the property noted a value of $1,875,000 and the Town purchased the property for $100,000.

Upon completion of the purchase the Dorset Selectboard created the Raptor Lane Committee, a group of interested residents and business owners that embarked on a 12+ month study to review the property and outline short- and long-term options for uses that would benefit the community. The Committee worked with a consulting engineer to commission a first phase environmental assessment of the property to better understand existing conditions. In addition, the Committee structured a short survey for residents to give input on possible future uses for the property. This report culminates the work of the Committee and serves as a resource for the Selectboard and community with regard to this great asset.

Engineering Review:
Upon purchasing the property, the Town Manager worked with Greg Kepler of Kepler Consulting to read through all existing permits, memos, maps and any information related to the previous development of the property. During this process the following items were noted:

- Certain Municipal Uses on areas larger than 10 acres or part of a larger project involving more than 10 acres require Act 250 permitting.
- Upon development an updated stormwater operational permit would be needed
- Slope maps show that lots 1, 2, and 7 are largely not steep, they also show a few flat areas on the upper part of the property above 1,300’ elevation.
- A project(s) that disturbs 1 acre of earth will require construction stormwater discharge permits etc.
- Permits would be needed for potable water supply and wastewater disposal etc.
- The property is currently permitted as an 8-lot subdivision with water/wastewater permits in place for residential uses on lots 1-7.
As a next step the Town contracted with Kepler Consulting in association with engineering firm VHB to perform a more in-depth environmental review of the property. After review and discussion, the project scope was limited to the +/- 210 acres that were located below the 1,300’ elevation contour. The Committee felt that the upper lands were generally steep in nature, difficult to access, and abutted the Owls Head Town Forest, therefore not being an appropriate area for development.

The VHB report was completed in the fall/winter of 2019 and Kepler Consulting presented the report at a Committee meeting for review and discussion.

**Key Points of Interest from Environmental study:**

**Deer Wintering Area:**
VHB was able to determine that the State mapped Deer Wintering areas located on lots 1 & 2, 3 & 7 was not observed. Kepler Consulting suggests confirming this information with State Fish & Wildlife biologists and getting their concurrence of findings.

**Bear Habitat:**
VHB observed portions of Beech stands on the upper slopes of the property and noted bear scarred beech trees which is indicative of bear habitat. Kepler Consulting noted that these areas would likely be considered Necessary Wildlife Habitat and not be feasible for development and could require a buffer from nearby activities.

**Wetland & Streams:**
Multiple Class 3 and Class 2 wetlands were delineated on the site. Two possible vernal pools were located and then reviewed in spring 2020 and determined not to be vernal pools. Multiple seasonal and perennial streams were located and delineated on the property as well. Buffers from wetland and stream locations were noted on the natural resources map.

**Rare, Threatened or endangered (RTE) natural communities and species:** It was noted that the property is within 1.5 miles of the Aeolus bat hibernaculum and located within a zone where certain trees are protected as they offer important habitat to bats. Two on-site significant natural communities were also identified. Approximately 85 acres of the property covering much of lots 3,4,5 & 6 was identified as a Transition Hardwood Limestone Forest community that would likely be considered significant by the State and subject to FWD review and concurrence. There was also an area of approximately 2.1 acres on lots 4 & 5 that contained Rich Fenn plant communities that would likely be considered a Rare Irreplaceable Natural Area (RINA) by the State. Noteworthy is that strategically, the study did not contemplate a complete RTE plant survey meeting ACT250 requirement for the entire site and additional RTE field survey is recommended after concept/preliminary development plans are completed.

**Springs:**
There are multiple springs on the property, the most notable being the Owls Foot Spring which is located on the central portion of the property (researched by DeSimone & Gale 2009) with a yield of 10 to 100 gallons per minute.
Upon completion of the VHB report the Committee tasked Kepler Consulting with boiling much of the report down and creating a map that helps to provide a better understanding of the areas that are likely more appropriate for development than other areas based on the environmental resources and constraints identified in the VHB study, and Slope Analysis map. After careful review it appears that around 100 acres of the 200+ acre study area could be feasible for certain developments. It should be noted that these 100 acres are not contiguous, but spread out over portions of the property, as shown on the Areas of Consideration Map attached. In general, each delineated area has differing opportunities and constraints which will result in different development realities.

Property Maps & Related Info:

Maps:
- Existing Conditions: May 22, 2019
- Lot Map with Slopes: May 23, 2019
- Natural Resources: Oct. 28, 2019
- Areas of Consideration: Jan. 27, 2020
- Final Concept: Sept. 2020
- General Engineering Info: 2019-2020

Survey Process & Results:
The Committee crafted a simple online survey that could be found on the Town website. Over the course of the study over 160 participants took the survey. Questions asked participants to rank options based on the following use categories: Municipal, Housing, Recreation/Conservation, Energy & Commercial. The following results were noted (Listing the top two most popular options for each)

- Municipal: 1. Community Center 2. Playground & Greenspace
- Housing: 1. Planned sustainable community 2. Single Unit Housing
- Recreation & Conservation: 1. Hiking & Mountain bike trails 2. Natural Area
- Energy & Commercial: 1. Small scale solar 2. Large scale solar

Comments were also received as part of the survey process. Comments were found to be very generalized and spanned a wide range of input and topics.

Summary/Conclusions:
The Town has been fortunate to receive valuable time and input from nine volunteers who worked hard to help determine a best path forward to better understand the property and this unique opportunity for Dorset. The general consensus of the group was that the property could be used for a wide array of options based on the preliminary engineering and environmental report. The environmental report does inform us that there is a limit to the location, scale, and scope of some of these options. It is the consensus of the Committee that the large upland track that was not included in the environmental review should become part of Owls Head Town Forest. Based on the past investment, including infrastructure such as roads and utility work, the lower portions of the property are more feasible for development. The Committee outlined the following appropriate uses for the property:
1. Municipal Offices/ Community Center
2. Green Space / Recreation
3. Housing
4. Energy/
5. Commercial

Each use has been given a priority ranking by the committee. They are numbered from 1 to 5, with 1 being highest priority and 5 being the lowest. Priority rankings were determined by: survey data, ease of accomplishment, and timeframe for doing so.

It is also worth noting that this property and the plans moving forward represent a very unique opportunity for our community and the Selectboard should be sure to include layers of public input during the pursuit of any of the options outlined above. In addition, it likely makes sense to reserve portions of the developable property for future community leaders to use as an asset for Dorset.
RAPTOR LANE PROPERTY CONCEPT PLAN
FOR AREAS #1 & #2 BASED ON
STEERING COMMITTEE INPUT

KEPLER CONSULTING, LLC.
Manchester Center, Vermont 05255
Tel. (802) 254-1454
157 Spruce Street; Suite C

RAPTOR LANE SUBDIVISION
RAPTOR LANE PROPERTY, CONCEPT PLAN
FOR AREAS #1 & #2 BASED ON
STEERING COMMITTEE INPUT

G.C. KEPLER
J.W. FOSTER
AS NOTED

OVERALL PROPERTY PLAN
AREA #1 AND #2 ENLARGEMENT

NOTE
1. ENVIRONMENTAL CONDITIONS DETERMINED FROM A PLAN TITLED "TOWN OF DORSET - RAPTOR LANE, WATER RESOURCES MAP" AS PREPARED BY VONERDERIUS REINHOLD VONERDERIUS, INC. (ORIG.)
2. DATED OCTOBER 28, 2019 (ORIG.)

LEGEND

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**Project Understanding and Background**

- Town of Dorset recently purchased 307 acre parcel from Dworkin & Shalan Partners, LLC (DSP) that is accessed via Raptor Lane off of RT 30
- DSP had invested significant time and money into the planning and permitting of proposed development of the Raptor Lane Lands (RLL) as an 8 lot subdivision
- DSP pursued and acquired Major Subdivision permit from Town of Dorset Planning Commission and several State permits
- The site is accessed via Raptor Lane on RT 30 as a private roadway
- Site improvements include internal roads (~1/2 mile) built to class 3 standards, Stormwater management infrastructure, buried electrical conduit, and transformer boxes
- The Town of Dorset is interested in assessing site limitations and regulatory constraints for other possible development options or scenarios associated with the ~141 acres (proposed lots 1-7) that has received Potable Water Supply and Wastewater Disposal permit from the State
- The Town of Dorset has expressed interest in a number possible development options that include housing (work force and/or senior), new municipal complex, emergency services and an education center

**Primary Goals of Initial Investigation**

- Primary focus of the services outlined below is to provide desk top conceptual level feasibility assessment(s) of the site’s opportunities and constraints for water supply and wastewater disposal with primary focus on the portion of lands associated with lots 1-7 of the proposed 8 lot subdivision

**Work Tasks Performed**

I. **Work Performed** - Kepler Consulting with assistance from VHB and Engineering Ventures performed the following tasks

  1. Reviewed and conducted desktop review of documents provided by Town of Dorset, which are listed in the References Cited section of this document
  2. Analyzed publicly-available Geographic Information Systems (“GIS”) information to assess site conditions that may affect the feasibility of obtaining permits and developing the site, including geology and soils; protected natural resources such as wetlands, streams, and wildlife habitat; hazardous sites; public water supplies; known springs; and Steep slopes.
  3. Researched status and site implications of various permits obtained, site planning conducted (e.g. wetlands assessment; deer yards; wildlife habitat etc.) and/or finding of studies
4. Contacted 3rd party surveyor/consultant previously involved with the Planning and permitting of the RLL lands to garner information pertinent to assessing site opportunities and limitations for development concepts of interest to Town of Dorset

5. Performed site inspections

6. Reviewed local Zoning regulations and assessed potential allowable housing density with assumption that wastewater disposal will be on-site and Water supply could be provided by on-site drilled well, on-site springs, and/or water line extension from the Dorset Fire District #1

II. Environmental Constraints

Desktop conceptual-level assessment of environmental constraints that may affect permitting is as follows. Refer to the Preliminary Environmental Constraints Map (Attachment #1) for the locations of the protected natural resources described below.

A. Protected Natural Resources

1. Deer Wintering Area & Bear Habitat: Deer wintering area, as mapped by the Vermont Fish & Wildlife Department, covers much of the site from approximately the 1,100-foot elevation contour and below. Tree-cutting and development within deer wintering areas and black bear habitat is regulated via Act 250, and development within these areas, plus a buffer, may be limited.

On-site delineations had been undertaken by Jeff Wallin (Wildlife biologist) in behalf of DSP as a requirement of the Dorset Planning Commission subdivision permitting process, which is depicted on the Gary Rapanaotti survey (Attachment #2). Noteworthy is that there are differences between the State’s delineation (GIS data) and Jeff Wallin’s on-site delineation of the deer wintering areas. Noteworthy- It appears a significant portion of the lands associated with lots 1,2,3 & 7 may be impacted by Deer wintering and/or Bear habitat. It may be possible to refine the currently-mapped (State GIS) and/or Jeff Wallin’s on-site delineations of the deer wintering area boundaries and to assess potential black bear habitat, which may be present.
2. **Bat Habitat**: Since the Dworkin & Shalam Partners project was permitted, protected habitat for endangered species of bats (northern long-eared bat and Indiana bat) has become significant in its implications for Act 250 permitting of projects involving tree clearing. Desktop research and a site reconnaissance to identify potential bat habitat and roost-trees may be needed to support permitting. If tree clearing is required, time of year restrictions may apply in order to avoid impacts to habitat for endangered bats. The level of effort involved in permitting for bat habitat impacts will be greater if federal permits are required for the project (i.e., if an Army Corps permit is needed for stream or wetland impacts), or if federal or certain state funding is used.

3. **Wetlands**: Some localized areas within the deer wintering area are mapped as significant (Class 2) wetlands by the Vermont Significant Wetlands Inventory (“VSWI”), which would require permitting for any activities within a wetlands or a 50-foot buffer.

   The prior wetlands Conditional Use Determination (# 2004-024, issued Sept 7, 2004) has expired (Attachment #3). The road crossing which this CUD approved has been constructed, but it is not known whether the construction complied with the CUD conditions because the required certification of construction was not provided by Client. Assuming it has was built in conformance with the CUD, the existing road crossing may remain as-is. The CUD also required a five year monitoring period for nuisance plant species, but it is not known whether this condition was met.

   **For any new development on site, under the current Vermont Wetland Rules, delineations expire after 5 years, hence new on-site delineations would be required to verify the mapped wetland boundaries and to determine whether additional non-mapped wetlands or vernal pools are present elsewhere on the site, and to determine classifications, functions, and values of any wetlands on site.** The regulatory definition of a wetland has changed since the CUD was issued, thus jurisdictional wetlands may be present on site in locations where they were not previously identified.

4. **Rare, threatened, or endangered species**: Aside from bats, no known rare, threatened, or endangered species communities are documented within the site boundaries. However, **Act 250 and Army Corps permitting will likely require on-site determinations of the presence or absence of rare plants or animals that have not been previously documented.**
5. **Surface Waters**: Streams are mapped running near the northern and southern site boundaries, extending only slightly onto the site property. In Act 250 permitting, a 50-foot stream buffer is required to be maintained, except where encroachment is necessary. **On-site delineations would likely be required to verify the mapped stream locations, to determine whether additional non-mapped jurisdictional streams are present elsewhere on the site, and to determine the flow regime and regulatory classification of any streams on-site.**

B. **Cultural Resources**

Historic sites are regulated by Act 250 (criterion 8). More rigorous cultural resources analysis would be involved if federal permits are required for the project (i.e., if an Army Corps permit is needed for stream or wetland impacts), or if federal or certain state funding is used. **On-site and desktop assessments of historic structures and archaeology would likely be needed to determine if sensitive features are present (e.g., old cellar holes, cemeteries, archaeological remains). Design of a development project would need to avoid impacting any cultural resources, or mitigation would be needed for unavoidable impacts.**

### III. Permitting: Water Infrastructure

Desktop conceptual-level assessment of construction feasibility and permitting for potable water supply, stormwater, and domestic wastewater disposal is as follows. Refer to the Bedrock Geology & Water Supply Map, and the Surficial Geology & Soils Map (Attachments #4 & #5) for the locations of the features described below.

A. **Potable Water Supply**

1. **On-site wells**: **Site geology appears favorable for drilling on-site wells.** Bedrock geologic mapping by the Vermont Geological Survey (Ratcliffe et al, 2011) indicates that the site is underlain by the Shelburne Marble formation, which is described as calcite marble and massive calcite marble that locally contains...
intermediate dolostone beds; this rock type typically supports high-yielding drilled wells. The site is located on the lower slopes of Owl’s Head Mountain, where the higher-elevation terrain likely provides ample recharge area to sustain use of water from wells.

No potential sources of contamination such as hazardous sites, RCRA hazardous waste generators, or underground storage tanks are known to exist at or up gradient of the project site; therefore on-site wells are not likely to be at risk of manmade contamination.

The adjacent JK Adams property has a permitted Non-Transient, Non-Community water system and an on-site well. The Wellhead Protection Area (“WHPA”) for this well extends very slightly onto the site, but not to such an extent that it would significantly limit site development.

Wells for each single family home, or shared wells for two units, would be permitted under the Wastewater System and Potable Water Supply Rules (2019). Wells regularly serving more than 25 year-round residents (typically, 10 homes based on 2.5 residents each) are classified as public community water system sources, and would require additional testing and permitting.

2. Springs: The Owl’s Foot spring has been identified by the Vermont Geological Survey (De Simone and Gale, 2009) as being located within the project site, and having a potential “moderate” yield in the range of 10 to 100 gallons per minute. This report describes the spring as follows:

   “at an elevation of 1320 +/- 40 ft within the proposed Owl’s Foot development. The spring flows from beneath a large boulder in thick lodgement till at the base of a steep 10-16 ft high slope in the till... The outflow has formed thin limy concretions atop the lodgement till and suggests a carbonate bedrock source for the groundwater.”

Further study and testing would be needed to determine the approvable safe yield of the spring as a community water source and to determine whether water quality is acceptable.

3. DFD #1 connection: If a connection to the existing Dorset Fire District #1 distribution system were desired, a water line extension 6,500 feet in length would need to be constructed to reach the base of the project road at Route 30. Currently, the DFD #1 system cannot support new connections, however
development and permitting of a new water source and investigation of leaky water lines are underway to resolve this situation.

The existing DFD#1 water main is only 4 inches in diameter and cannot support fire protection because mains must be at least 8 inches in diameter for fire flows. The DFD #1 system is pressurized by gravity from the existing storage tank located at elevation 1,210'; booster pumping may be needed to provide adequate pressure (not less than 35 psi normally and not less than 20 psi under fire flow conditions) to connections on the project site depending on the elevation and height of buildings to be built.

B. **Stormwater**

1. **General permit:** The Dworkin & Shalam Partners, LLC development had received permit authorization (#3639-9015 issued January 26, 2005) under a statewide general permit to discharge stormwater runoff from impervious surfaces from the proposed development (Attachment #6). Approved infrastructure included grass channels, two dry detention ponds, and two outfalls discharging to the West Branch of the Battenkill River. **This permit authorization has expired.** If existing stormwater infrastructure was built to substantial completion in accordance with this permit authorization, it may be allowed to remain as-is, at the discretion of the VT DEC. However it is not clear (i.e. - has not been determined) how much of the approved stormwater infrastructure has already been built in conjunction with the internal roads that have been constructed.

   Review of the State’s database indicates those Annual inspections and reports, and the Re-statement of compliance certifications (Required every 3 yrs.) that are conditions of the original permit have not been done since 2005. It is not clear from the review of the State’s database if the original certification of construction was completed or not. **Recommend field review of constructed Stormwater infrastructure to determine if completed in accordance with the issued permit and contact State to discuss status of project and inquire about potential for renewal of existing permit.** Copy of existing permit status in the State’s database is included in attachment #6.

   New or substantially reconfigured site development with impervious surfaces (roads, driveways, rooftops, etc.) exceeding regulatory thresholds (currently 1 acre of total site impervious, which will change to 0.5 acres in 2022; or 5,000 sq.
ft. additional impervious) would require new stormwater infrastructure designed and permitted in accordance with the 2017 Vermont Stormwater Management Manual and the current Stormwater Permitting Rule (2019), which encourages stormwater runoff to be infiltrated into the soil rather than discharged at surface outfalls.

2. **Construction General Permit:** Regarding construction-phase stormwater management and erosion control, the Dworkin & Shalam Partners, LLC development had received permit authorization (#3639-9001, issued October 14, 2004) under a statewide general permit. *This general permit authorization has expired, and any new site construction that disturbs an acre or more of earth surface would need to be covered under a new permit* (VT DEC Construction General Permit 3-9020, or an Individual Permit, “INDC”), which may require site-specific erosion prevention and sediment control measures to be designed and implemented during construction.

C. **Wastewater Disposal– Existing Water Supply and Wastewater System permits:** Permits issued in 2004 (WW-8-0762 and WW-8-0762-1) approved 4 & 5 -bedroom homes on lots 1 through 7 with on-site wells and septic systems (Attachment #7). The approved plans (Bruno Associates, 2004 and Jeremy M. Brodney, 2004) designed a mix of in-ground and mound disposal systems.

- Lots 1,2, 4-7, 4 Bdrms with Design flow of 490gpd
- Lot 3- 5 Bdrms with Design flow of 560gpd
- Private well on each lot
- Lots 4-6 – with in-ground disposal systems
- Lots 1,2,3, &7 –with Mound disposal systems
- Replacement areas required for Lots 1-7
- Lot 3 includes an Ecoflo bio filter allowing higher loading rate to the mound
- Lot 8 was permitted with a waiver of development rights
- Total disposal design flow for lots 1-7 is 3010gpd

Wastewater System and Water Supply Rules (WW Rules) permitting implications and potential opportunities:

- WW Rules were revised in April 2019
• Replacement areas are not required for Mound designed systems, thus Lots 1,2,3,& 7 potentially have double the permitted disposal capacity

• Table 8-1 (Attachment #8) of the 2019 WW Rules allows for reduced design flows for Residential use of buildings or structures with 5 or more living units (Residents). Potential example: If the primary and replacement mound systems were combined into one disposal system for Lot 1 & Lot 2, the disposal capacity would be large enough to serve 6 residential living units according to Table 8-1.

• Tables 8-2 & 8-3 (Attachment #8) provide design flows for most typical land uses that would be associated with the various redevelopment scenarios envisioned for this property

Indirect Discharge Rules:

Regulatory Threshold: For a potential larger development than what the existing WW permits have approved, the regulatory threshold for needing an Indirect Discharge Permit is 6,500 gallons per day of design wastewater flow, equivalent to approximately 26, 3-bedroom homes (per Table 8-1 of the 2019 WW Rules).

Thresholds for treatment requirements: Design requirements under the Indirect Discharge Rules become progressively more complex as design flows increase. The current (2019) Indirect Discharge Rules set the following requirements:

• Leach fields, 6,500 to 30,000 gpd: at a minimum, septic tank treatment is required (higher treatment may be needed to meet other permitting requirements).

• Leach fields, 30,001 to 50,000 gpd: at a minimum, “secondary plus” treatment (recirculating sand or textile filter, max 15 mg/L BOD and TSS) is required - higher treatment may be needed to meet other permitting requirements).

• Leach fields, 50,001 gpd and up: tertiary treatment (max 10 mg/L BOD and TSS) is required (higher treatment may be needed to meet other permitting requirements).

• Spray disposal, 6,500 gpd and up: at a minimum, secondary treatment (max 30 mg/L BOD and TSS) is required (higher treatment may be needed to meet other permitting requirements).

Thresholds for permitting requirements: Permitting requirements under the Indirect Discharge Rules become progressively more complex as design flows increase. The current (2019) Indirect Discharge Rules set the following requirements:
6,500 to 20,000 gpd: simplified desktop methods (Dilution and Treatment Index methods) may be used to demonstrate compliance with the aquatic permitting criteria (in-stream water quality requirements for the surface water receiving the indirect discharge) for subsurface disposal (not spray) systems with septic tank treatment. Permitting time line is estimated at 6-12 months for the simplified desktop methods (6,500 – 20,000 gpd)

6,500 to 30,000 gpd: a simplified site-specific method (Modified Site Specific Method) may be used to demonstrate compliance with the aquatic permitting criteria for leach field disposal systems with septic tank treatment. The method requires site-specific testing of water quality in the receiving stream, but allows a desktop assessment of default effluent chemistry. Permitting time line is estimated at 6-12 months for the simplified site-specific methods (6,500 – 30,000 gpd) with the caveat that the water quality testing needs to happen from June through October, so the timeline depends on what month work starts. If biomonitoring is needed (>20,000 gpd), add 4-8 months depending on when the work starts (fieldwork needed in August-September, reporting done around March).

6,500 gpd and up: the Site Specific Method of demonstrating compliance with the aquatic permitting criteria is required for systems of any capacity that use spray disposal, and for leach field systems over 30,000 gpd. This method entails site-specific testing and characterization of the effluent as it flows through the soil, as well as site-specific testing of water quality in the receiving stream. Permitting time line for is estimated at 12-24 months for the Site Specific methods (6,500 and up, any size spray system)

Over 20,000 gpd: regardless of the treatment and disposal technologies, or the method of demonstrating compliance with the aquatic permitting criteria, biological monitoring of the receiving stream must be conducted for discharges over 20,000 gpd prior to applying for a permit.

Timelines often get extended when an applicant starts with a simplified method, and then has to change to a more rigorous Site Specific method. This can happen because the simplified methods have built-in safety factors and are more conservative, so sometimes it becomes necessary to change to the more time-consuming and expensive methods in order to get more accurate results to qualify for a permit.

Site Conditions: soils and percolation test data from the permitted septic system design plans (Bruno Associates, 2004 and Jeremy M. Brodney, 2004) indicate fine sandy loam soils with no ledge encountered in most test pits, seasonal high water tables generally in the range of 1.5 to more than 4 feet below grade, and percolation rates generally
between 4 and 22 min/inch. These results suggest that in-ground or mound leach field systems and spray disposal systems meeting the Indirect Discharge Rules’ design requirements may be feasible on the site. Further soil and site characterization would be needed to assess the siting requirements of the Indirect Discharge Rules fully. Spray disposal systems are allowed on slopes up to 30%. The slope analysis included assessment of slopes > 30%. **In general there appears to be significant amount of area in the upper elevations of Lot #8 which may be suitable for spray disposal and/or centralized in-ground disposal systems.**

**Zoning Bylaws and related implications**—Excerpts of the Town of Dorset Zoning Bylaws that are likely applicable to development of the property are included as Attachment #9

a. **Zoning District-** primarily Agricultural and Rural Residential zoning district (A&RR) with upper portion of property located in Forest II, which has not been considered in the review of this project
   i. A&RR min developable lot area for single family or two family dwelling is 120,000SF (~3 acre)
   ii. A&RR Planned Residential development (PRD) cluster development minimum developable lot area is 10 Acres and allows for 60,000SF per dwelling unit density (~1.5 acre)
   iii. Developable lot area exclusions include Wetlands and slopes greater than 20%

b. Lands above elevation 1,100 feet mean sea level are subject to the Ridgeline and Mountainside Overlay zone bylaws, which indicates that new land subdivisions in this overlay zone can be reviewed to Protect Dorset's scenic resources while allowing for carefully planned development. Careful consideration to scenic impacts is implied.

c. **Slope Analysis:** A slope analysis was performed (Attachment #10) to assess what portions of each lot are above 20% slope and cannot be used in density calculations and/or determining minimum lot size if further subdivision was pursued. The table below provides a summary of this preliminary analysis.

d. A slope analysis (>20%) was performed as part of the local permitting process by Gary Rapanotti L.S. (Attachment #11)
Vermont Transportation Permit #28971 (Attachment #12)

Permit issued on July 27, 2004 for RT 30 curb cut of Raptor Lane access drive included a number of conditions, including, “This access will serve as the only access to this property and to any future subdivisions of this property unless approved otherwise by VT AOT”. Permit indicates that all work within highway ROW shall be subject to inspection and approval by VT AOT and upon final completion, a final inspection was required. It is not known if a final inspection was performed and/or if VT AOT received any final “as-builts” that were also referenced in the permit conditions. DSP retained the fee ownership of roadway and proposed easements to the lot owners (i.e.-Private road).
IV. Conclusions, Recommendations, and Comments

i) The permitted 8 lot subdivision was not subject to Vermont’s ACT250 Land Use and Development laws. ACT250 jurisdiction is likely to be triggered for many of the Development options that may be considered by the Town of Dorset.

ii) Development of the site is affected by protected natural resources including deer wintering area, potential black bear habitat, wetlands, and streams. As an initial next step in assessing the site’s development potential, on-site delineations are recommended for these resources and for bat habitat.

iii) It appears a significant portion of the lands associated with lots 1, 2, 3 & 7 may be impacted by deer wintering and/or Bear habitat.

iv) As a second step in the process, developing concept sketches and/or conducting a planning charrette is recommended to better establish the Town’s desired development program (and priorities) for the property. Sketches would be based upon input from the Town and/or other stakeholders and consider the usable land after the protected natural resources have been delineated and mapped.

v) The site appears favorable for on-site water supply wells or use of Owl’s Foot Spring as a potable source. Further study is needed to determine approvable long-term yield of spring or to site productive drilled wells.

vi) On-Site wastewater disposal designs have been approved for 7 in-ground and mound leach fields for 4-bedroom homes with a total disposal capacity of 3010gpd. Based on some of the Rule changes since this project was permitted, it may be possible to combine two or more mound disposal areas (primary and/or replacement areas) and increase the number permitted residential dwelling units. It may also be possible to permit 2 residential units on a number of the lots by modify the septic designs from standard septic tanks to effluent filters and double the hydraulic loading rate to the permitted disposal areas.

vii) Additional wastewater disposal capacity may be feasible to develop via additional small-scale systems. If approximately 26 (or more) 3-bedroom homes are desired (i.e. - greater than 6500gpd capacity), an Indirect Discharge Permit would likely be needed. Review of existing WW permit information suggests that in-ground or mound leach field systems and spray disposal systems meeting the Indirect Discharge Rules’ design requirements may be feasible on the site. In general, there appears to be significant amount of area in the upper elevations of Lot #8 which may be suitable for spray disposal and/or centralized in-ground disposal systems. Additional site characterization would be needed to determine if, and where, soil, groundwater, and receiving stream conditions would support additional...
wastewater disposal capacity. If wastewater disposal capacity above 6500gpd is desired, conducting a wastewater site characterization study is recommended. A portion of this work could be done in conjunction with the natural resources reconnaissance, so that the areas of environmental constraints can be ruled out to narrow-down the study area.

viii) If existing storm water infrastructure was built per the now-expired general permit authorization, it may be possible to re-permit such infrastructure without significant modifications, to manage storm water from previously-approved roads and development. New development beyond what was previously permitted will likely need new storm water infrastructure designed and permitted in accordance with current rules, which favor infiltrating into soil rather than detention ponds and surface outfalls.

ix) The construction general permit authorizing storm water discharges has expired, and any new site construction that disturbs an acre or more of earth surface would need to be covered under a new permit.

References Cited


Vermont DEC, 2019. Environmental Protection Rule Chapter 22: Stormwater Permitting Rule. Effective Date: March 15, 2019
