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VIA E-MAIL AND HAND DELIVERY

December 16, 2024

Michael Main, Chair
Zoning Board of Appeals
Town of Plymouth
26 Court Street – 2nd Floor
Plymouth, MA 02360

**RE: Special Permit Application - Case No. 4142
Landers Farm LLC
Landers Farm Way
Map 61, Lots 33-2 and 33-3**

Dear Chair Main and Members of the Board of Appeals:

We represent Save The Pine Barrens, Inc. which opposes the application by Landers Farm, LLC (“Landers”) for a Special Permit to conduct earth removal at its property off Landers Farm Way (the “Project”) per Sections 205-9, 205-18(F), and 205-40(D) of the Town of Plymouth Zoning Bylaws (the “Application”). The Planning Board approved a Definitive Subdivision Plan for the subject property in 2018, so the Zoning Bylaws in effect at that time apply rather than the current Zoning Bylaws. For the reasons detailed below, the Board should deny this Application and not issue a Special Permit because this proposed massive sand and gravel operation fails to meet several of the significant requirements for a special permit under the Zoning Bylaws.

Save The Pine Barrens, Inc. (“STPB”) is a Massachusetts non-profit corporation organized exclusively for charitable, educational, and scientific purposes including, but not limited to research, outreach and dissemination of information about preserving, protecting and stewarding land and water resources in Massachusetts including the rare Pine Barrens ecosystem and its species and Southeastern Massachusetts’ sole source aquifer (the Plymouth Carver Sole Source Aquifer). STPB members live, work and recreate in the Town of Plymouth including adjacent to the Project.

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In support of its opposition to this Project, filed herewith is a letter from two traffic engineers, Tyler de Ruiter, P.E., PTOE and Kenneth P. Cram, P.E., of Fuss & O'Neill-Bayside Engineering.

Landers claims to own the approximately 129 acres of land off Landers Way¹ that was subdivided in 2018 into two residential lots identified by the Assessors as Lots 33-2 and 33-3 (the "Property"). The Property is located in the Rural Residential (R-R) zoning district. There are single-family residential neighborhoods abutting the eastern and northern sides of the Property as well as on the western side across Route 3. Quail Run, Great Woods Road, Buckskin Path, Pine Mountain Drive, Dyer Pass, and Treetop Way are just to the north and east. Mountain Hill Road, Fortune Drive, Speedwell Lane, and Hedges Pond Road lie just to the west.

The Property is located over the Plymouth-Carver Sole Source Aquifer which is the source of drinking water to not only neighboring residential properties, but for over 150,000 other people in Plymouth, Carver, Plympton, Bourne, Sandwich, Wareham, Kingston, Middleboro, Halifax, and part of Brockton. For all residential, commercial and business users in the approximately 199 square mile aquifer area, this is their sole source of water. The Aquifer was designated as a Sole Source Aquifer by the United States Environmental Protection Agency in 1990 under the federal Safe Drinking Water Act.² The legal designation states, in part:

Although the quality of the aquifer's ground water is rated as good to excellent, it is highly vulnerable to contamination due to its geological characteristics. Because of this, contaminants can be rapidly introduced into the aquifer system from a number of sources with minimal assimilation. This may include contamination from several sources such as the following: chemical spills; highway, urban and rural runoff; septic systems; leaking storage tanks, both above and underground; road salting operations; saltwater intrusion; and landfill leachate. Since nearly all residents are dependent upon the aquifer for their drinking water, a serious contamination incident could pose a significant public health hazard and place a severe financial burden on the service area's residents.

The Application states that Landers proposes to excavate approximately 2,007,086 Cubic yards of earth mater on portions of both lots over a period of 6 to 10 years to purportedly expand an existing bog by 3.38 acres, create a new 5.85-acre cranberry bog, and create a new 6.0-acre tailwater recovery pond. This work will result in lowering hills as high as 130 feet by as much as 80 feet or more for the proposed reservoir and over 30 feet for the new cranberry bog.

The actual acreage that will be cleared and excavated will be much greater than just the 15.23 acres of these proposed features due to the size, depths and resulting sides slopes. In fact, the Application specifies a total Project Area of approximately 70 acres.³ This means more than half of the Property would be excavated.

¹ Landers Way appears to have never been constructed, so is a paper street. See Application, Figure 1.

² 55 Federal Register 32117 (August 7, 1990).

³ Phase 1 area of 25.43 acres, Phase 2 area of 20.32 acres, and Phase 3 area of 24.30 acres.

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Much if not all of the Project Area presently is forested. See Application, Figure 1. This is part of the very rare Atlantic Pine Barren forest ecosystem of Southeastern Massachusetts which STPB seeks to preserve and protect.

The Proposed Project is Not Incidental to Agricultural Use

By applying for a special permit, the Applicant admits that the proposed Project is not incidental to agricultural use. The Application does not argue that it is. This is consistent with several Massachusetts court decisions ruling that such large-scale earth removal operations that last for many years are not incidental and reasonably related to agricultural operations. Old Colony Council-Boy Scouts of America v. Plymouth Zoning Board of Appeals, 31 Mass App Ct 46 (1991); Henry v. Board of Appeals of Dunstable, 418 Mass. 841 (1994); Indianhead Realty, Inc. v. Zoning Board of Appeals of Plymouth, 97 Mass. App. Ct. 1108 (2020) (Rule 1:28 decision). These decisions also remind boards of appeals to evaluate these projects as stand-alone uses, rather than as uses incidental to or part of any existing agricultural or other pre-existing allowed use. Boards are told not to rely on or factor in the applicant's stated purpose for the earth removal.

Therefore, the Board should disregard the Application's argument that this is a "proposed construction of additional cranberry bog acreage and the reservoir/tailwater pond is an appropriate use on this specific site." While the 6- to 10-year-long earth removal Project might result in those features and uses, it does not in any way make the proposed work anything other than an earth removal project requiring a special permit.

In Indianhead Realty, the Appeals Court was clear that the term "incidental and required" as used in the Plymouth Zoning Bylaw "does not mean that an unlimited amount of material may be removed so long as the excavation can be connected to creation of an approved use." Relying on the Supreme Judicial Court's Henry decision, the Appeals Court in Indianhead Realty also rejected the landowner's contention "that any amount of earth removal necessary to create an allowed use is permissible, [as being] entirely inconsistent with the stated purpose of the bylaw's 'Natural features conservation requirements'."

The Project Fails to Meet the Standards for a Special Permit under the Plymouth Zoning Bylaws

Section 205-9 of the Zoning Bylaw says that the Board shall not grant any Special Permit unless necessary standards are satisfied; here, the relevant standards include the following:

- (a) The proposed use is appropriate in the zone and specific site in question, . . .
- (b) [Not applicable] . . . ;
- (c) There will be no hazard to pedestrians or vehicles;

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(d) There will be no nuisance or adverse effect upon the neighborhood;

The Applicant has not satisfied these standards, so the Board should deny the Application.

1. The Project is Not Appropriate in The Rural Residential Zoning District

The intent of the Rural Residential zoning district is not only to discourage development in areas remote from public utilities, but also “to preserve the natural, rural character of presently rural areas of the Town”. Zoning Bylaw, § 205-40.⁴ Eviscerating over 70 acres of forested land and other vegetation, leveling a hill and trucking away the land, and significantly altering the topography by eliminating naturally rolling hills is not preserving the “natural, rural character” of this presently rural nature. While cranberry agriculture might be a part of Plymouth’s “rural character”, earth mining certainly is not. The Application should be denied on this factor alone.

2. The Applicant Has Not Shown That There Will Be No Hazard to Pedestrians or Vehicles

As the letter from Tyler de Ruiter, P.E., PTOE and Kenneth P. Cram, P.E. from Fuss & O’Neill-Bayside Engineering explains, the Application lacks the basic information needed to assess the impact of the traffic from the earth mining operation. The Project proposes 55 round trips per day during construction (110 trips in total, each way), with the majority of the trips being trucks of unspecified size and weight hauling material out of the site and traveling to State Road (Route 3A). No information is provided on whether that intersection can handle such traffic, and, more importantly, what are the expected truck routes after reaching State Road. This information needs to be provided along with a traffic study. Without such information, the Applicant has not met its burden to show there will be no hazard to pedestrians or vehicles.

3. The Project Will Be a Nuisance and Have Adverse Effect Upon the Neighborhood

A. *Noise and Dust*

The estimated 55 vehicle round trips (or 110 trips each way) per day to and from the site will create additional noise as well as dust for the neighboring residential homes. Back-up signals from trucks and construction equipment on site will create additional noise and thus create adverse effects on the use and enjoyment of nearby residential properties.

⁴ The current Zoning Bylaw says that the R-R district’s purposes include to discourage sprawl and to preserve the natural, rural character of presently rural areas of the Town and discourage development in areas with characteristics making such areas generally less suitable for development than land in other Districts, such as land containing valuable wildlife habitat, having distinctive soil and slope characteristics. Zoning Bylaw, § 205-2 (2023).

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The Application narrative notes that the nearest residential dwelling to any clearing or grading activity is just 330 feet away, yet the proposed dust mitigation plan admits that fine soil particle dust will be experienced within a half-mile radius of any excavation operation, high-use vehicle routes within the site, as well as the resulting excavated site. The sand to be mined is “Carver complex”, a predominantly sandy soil (see Application, Appendix 3) which STPB has learned is a quartz-like silica with Respirable Crystalline Silica dust that is harmful to human health and is regulated by the U.S. Department of Labor, Mine Safety and Health Administration (“MSHA”). MSHA recently lowered the exposure level for sand mine workers. See [msha.gov/regulations/rulemaking/silica](https://www.msha.gov/regulations/rulemaking/silica). The Applicant has provided no testing of the materials to be mined to confirm the silica components of dust that may become airborne. Exposure to respirable crystalline silica can cause adverse health effects including acute silicosis, accelerated silicosis, simple chronic silicosis, nonmalignant respiratory diseases, lung cancer, and kidney disease; each of these effects is chronic, irreversible, and potentially disabling or fatal. Id.

While wetting by on-site water trucks of high use vehicle routes as proposed in the Dust Mitigation Plan might prevent some dust emissions, other proposed dust mitigation measures are vague and thus inadequate, such as phasing construction and loading materials in a southerly-to-northerly direction or limited land clearing – essentially, using the forest that will be eventually destroyed to function as a temporary dust reduction measure. Even the contingency plan is vague, as it does not define what are “excessive” wind conditions or what is “intermittent” operation of temporary surface-mounted irrigation systems. This Dust Mitigation Plan fails to meet the requirement of Section 205-18(G)(1) that “Provision shall be made for complete control of wind ... which might affect adjacent properties.”

We understand from our client that the past sand mining activities by Landers at this site has impacted residents. Exposure to fine particle dust, including respirable crystalline silica, is unhealthy to breathe so poses a threat to public health and thus a violation of the general intent of the Zoning Bylaw to protect public health and safety.

B. Impact on the Sole Source Aquifer used for Water Supply

Even though no work is proposed within the portion of the Property within the Zone II of a drinking water supply well, the Project will impact groundwater utilized by Plymouth residents for water supply because the Property is over the Plymouth Carver Sole Source Aquifer. This aquifer was designated in the 1990’s by the U.S. EPA under the Safe Drinking Water Act. The Aquifer is vulnerable to contamination due to its sand, soils and high permeability.

Figure 5 in the Application shows the water table elevation at approximately 35 to 40 feet, yet this information likely is outdated as it is from 1984 (by Hansen and Lapham). Even if it were accurate, the Project plans specify the bottom of the proposed pond at elevation 29 feet, meaning the pond will be dug right 6 to 11 feet into the Aquifer, removing the earthen material

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that filters and cleans water as it percolates down into and replenishes the Aquifer.⁵ The Application refers to determining the water table also by irrigation-well development but does not provide any data. The construction of the pond will remove a portion of the Aquifer's protective layer and expose it to pollution. Furthermore, as an unlined tail water recovery pond, it will be used to collect and concentrate water containing the pesticides, fertilizers and fungicides used in cranberry operations. This includes nitrogen fertilizers.⁶ Those will be directly discharged into the Aquifer that is used for public and private drinking water wells.

Due to these likely adverse effects on the neighborhood, the special permit Application should be denied.

The Application's argument that there will be no nuisance or adverse effect on the neighborhood because the Property has been used for agricultural activities for almost 100 years is not logical. This portion of the Property is mostly forested and has been for millennia. Moreover, such an argument fails to even address the actual Project, which is excavation of earth materials.

The Project Fails to Meet Natural Features Conservation and Environmental Design Requirements

Because the proposed use is sand and gravel extraction, pursuant to Bylaw, § 205-40, it is subject to environmental design criteria/conditions in § 205-9(C) and also subject to the Natural Features Conservation Requirements of Bylaw, § 205-18, because it is proposing removal of more than 10 cubic yards and removal of more than 3,000 square feet of trees.

This Project fails to meet several of those requirements or conditions for excavation so therefore cannot be approved.

1. The Project's Duration Exceeds the 2 Year Limit,

Bylaw, § 205-18(G)(8) limits under a single permit any excavation to up to two years from the start of excavation. The Application here proposes three phases that total 6 – 10 years so fails this requirement.

2. The Project Seeks to Disturb More Than 5 Acres at Any One Time.

Bylaw, § 205-18(G)(9) says no area of site disturbance shall be larger than five acres of earth removal, storage, and/or processing at one time. Each of the three phases

⁵ A memorandum dated November 18, 2024 from the Plymouth Department of Public Works submitted to the ZBA 2 addresses the earth removal operation in relation to groundwater; see General Comment # 2.

⁶ The "Environmental Impact Statement" included in the Application incorrectly indicates, under I.B., that the Project will not affect the water table or cause pollution of ground water.

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listed in the Application alone and cumulatively far exceed this limit: 25.43 acres for Phase I; 20.32 acres for Phase II; and 24.30 acres for Phase III.

3. The Project Fails to Conserve Natural Features

Bylaw, § 205-9(C)(4)(a) requires that that disruption shall be kept to a minimum; finished site contours shall approximate the character of the natural site and surrounding properties. By excavating and removing about 70 acres of forests and earth material to depths of at least 70 feet, this Project fails to conserve natural features and instead consumes them.

4. The Project is Not in Harmony with its Surroundings

Bylaw, § 205-9(C)(4)(a) requires that the location, scale, and other characteristics of the proposed use be in harmony with surrounding properties and land uses. As explained above, this proposed large earth excavation would not be similar to the predominantly single-family neighborhood in character. It is an incompatible use.

Conclusion

For the foregoing reasons, the Application for this massive earth excavation Project should be denied. The Application fails to provide sufficient information for several criteria, such as traffic, while demonstrating that the Project fails to meet other conditions in the Zoning Bylaw. Therefore, the Board should deny the Application for a special permit.

Please contact me should you have questions. Thank you.

Respectfully submitted,



Nathaniel Stevens