

February 8, 2021

Groton Planning Board

Groton Conservation Commission

Town Hall

Groton, MA 01450

RE: Village at Shepley Hill

Dear Takashi, Nik and Members of the Planning Board and Conservation Commission,

This letter, relative to the recently submitted Village at Shepley Hill Definitive Subdivision, supplements previous letters sent or copied to the Planning Board and Conservation Commission dated December 14, 2020, and January 4, 2021.

**Cut and Fill**

At the Planning Board Hearing on January 14th, the applicant stated that if the Planning Board granted a waiver to reduce the design requirements for vertical curves, a reduction I support, the amount of cut and fill would be "greatly reduced" and pointed to a number of locations where such reduction would take place. At the Planning Board hearing on January 28th, the applicant stated that all cuts greater than seven feet had been eliminated and the road length had been shortened.

Although these are positive steps, based on the revised plans submitted on February 5th, I estimate that the length of roadways with fills exceeding seven feet is still more than 1,000 feet; the length of roadways with fill exceeding 15 feet is more than 500 feet; exceeding 20 feet is more than 400 feet; exceeding 25 feet is more than 200 feet; and exceeding 30 feet is more than 60 feet. This level of exceedance is still extraordinary and unacceptable and further demonstrates that this development simply does not fit on this property.

**Wetland Crossings and Impacts**

The letters sent to the Conservation Commission by the Groton Conservation Trust and David Black describe wetland impacts and regulatory issues. I would like to reiterate those comments by focusing on the wetland crossing of the narrow isthmus in the vicinity of Stations 9 to 10 on the road from Longley Road on the plans.

At the Planning Board Hearing on January 14th, comments were made that seemed to be dismissing the wetland impacts at that crossing since "only a very small area of wetlands would be filled". Although the most recent plans show a cantilever supporting the sidewalk, in order to eliminate direct wetland filling, the impacts in this area are still enormous and cannot be dismissed. More than 100 feet of roadway along the isthmus requires walls on both sides 20 to more than 25 feet high plus extensions beyond the wetlands. Virtually no uplands will remain between the walls and the wetlands on each side. The walls will create barriers more than 200 feet long on each side. Combined with steeply sloping fills and other barriers that extend beyond the walls, any functional connection between the two wetland areas will be eliminated. While direct filling of wetlands may have been eliminated, the impacts from this crossing remain very large. Due to the segmenting of the two wetland areas, at a minimum, a wildlife survey is required to evaluate impacts.

**Major Residential Conventional Plan Analysis**

A reference at an early Planning Board Hearing indicated that the number of units in a Flexible Development Plan would be, I believe, more than 30. The number of lots must be based on a conventional plan that does not require significant waivers. Large cut and fill waivers are significant so a conventional plan for this property must be based on a different type of layout with much small cuts and fills. It appears that a yield plan meeting the regulations has not yet been submitted.

218-26.1 Major Residential Development

Procedures. Applicants for major residential development shall submit both of the following plans:

Section D.(1) A conventional plan in full conformance with all zoning, subdivision regulations, health regulations, wetlands regulations and other applicable federal, state and local requirements. This conventional plan shall be prepared in conformance with the requirements for a preliminary plan as set forth in the Subdivision Rules and Regulations of the Planning Board; provided, however, that in simple cases, such requirements may be waived by the Planning Board.

**Summary**

Although there are still many environmental issues associated with this Definitive Plan, I will focus again on the portion of the road from Longley Road that crosses the isthmus between wetland areas and ascends the side of the drumlin hill.

Only one wetland crossing for the road from Longley Road is needed on this property to provide access all of the uplands on the property. Even if a second access from Sand Hill Road were to be allowed with its associated major wetland impacts and excessive fill requirements, there is no justification for the wetland impacts and enormous fill requirements associated with crossing the isthmus and ascending the hill other than to gain additional lots that would otherwise not be allowed.

As referenced in my letter dated December 14, 2020, Section 381-10-D-(5) of the Planning Board Subdivision Regulations states "Proposed grades within the right-of-way, including the cul-de-sac, shall not be more than seven feet above or below existing grade ***unless specifically authorized by the Board in unusual topographic circumstances***." Emphasis added.

As noted in my December 14th letter, there is nothing "unusual" about the topography of this site in Groton. This property includes one of 39 drumlin hills in Groton. It is likely that every one of those drumlins has portions where the seven foot limitations on cuts and fills for roads cannot be met, especially if a road approaches a drumlin from the side. There are also literally hundreds of kame, kettle, esker and glacial lake edge landforms in Groton with portions where the limitations cannot be met.

Attached below is a topographic map of Groton showing GIS data. Although this is too small of a scale to be easily read, essentially all of the darker concentrations of lines are areas where there are steep slopes similar to the ones on this property. This does not mean that such locations cannot be developed, many have been. However, it does mean that roads must be laid out so they respect the topography. In some cases that may mean that maximum density of development cannot be achieved.

The facts that the Planning Board must specifically authorize the waiver and that topographic conditions must be 'unusual' and sets a high standard for granting this waiver. It also indicates that the Planning Board, not the applicant, must make the determination of unusual topography. Such a determination would not be accurate and should not be made for the degree of violation on this site. With respect to the access road from Longley Road, I believe that it cannot be made.

Respectfully,

Diagram

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Robert Pine, PE FASLA

cc. Shepley Hill Capital Partners, LLC

Groton Conservation Commission

Groton Conservation Trust

Map

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