

BREM - 150-01-13-2015

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TOWN CLERK-CARLISLE
CHARLENE M. HINTON

January 9, 2015

James Persky
MassDEP Drinking Water Program
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

RE: 100 Long Ridge Road, Carlisle – Public Water System Determination

Dear Mr. Persky:

Although I live in another part of Carlisle, several miles from Long Ridge Road, I have been following the 40B hearing on the above-referenced project. I have attended all but the first ZBA hearing session, attended other relevant meetings, and reviewed many letters and reports. In particular, I refer to the letters to your office by Town Counsel, Thomas J. Harrington, dated November 14, 2014 and by the abutters' attorney, Dan Hill, dated October 3, 2014. I am writing now because there are serious concerns about the ability of town boards to protect the public's interest in clean and ample drinking water – without a DEP determination that the system is a *public water supply*.

The technical complexities are compounded by at least three contextual burdens: (1) the project is being reviewed under MGL Chapter 40B, §§20-23, which reduces the power of town bylaws to protect public health and safety; (2) the shared septic fields and wells are to be owned and maintained under a condominium framework, which makes enforcement of health and safety conditions all but impossible, and (3) the appearance, at a minimum, of conflict of interest is created by the many hats worn by the Applicant's representative, Jeffrey Brem.¹

The land and groundwater system are already somewhat fragile. If you drive into the neighborhood, a glance to the right shows what seems to be a mound septic field, and the street reveals the orange coloration of iron in the water. Neighbors report manganese and iron, with the need for filtration systems. There is some worry about arsenic, found naturally in the local geology, which requires further treatment.

¹ Your attention is directed to page 2 of Attorney Hill's letter. Mr. Brem evidently resigned from the Carlisle Board of Health, where he was Chair, on December 3, 2013. Yet, within one year, on September 8, 2014, he appeared before the Board of Health to request approval of a Nitrogen Loading Restriction without sufficient basis for the request. Mr. Hill cited MGL c. 268A, §18(b) regarding the potential ethical violation in timing. The violation is even more disturbing because the request was not well-founded.

There are reports of failed septic systems, with the need to build a new leach field on the homeowner's property. There are water table issues and anxiety about contamination. From comments by neighbors, they take special care to minimize the stress on their wells and septic systems. Worries are stated out loud that the new occupants may not necessarily take the same steps, especially since the new neighbors may not have lived with a private well and septic system. (Of note, Carlisle doesn't have municipal trash collection. There is an attitude of self-sufficiency that may be inapplicable in the proposed development.)

The condominium framework amplifies these concerns. There is real danger of a "tragedy of the commons" situation in which the common ownership of septic systems and wells allows many owners to deflect maintenance responsibilities to the point where they are completely ignored. In addition, one-fourth of the units are to be owned by low income families. Fees necessary to assure upkeep may place too heavy a burden on their household budgets. In these circumstances it is possible that the homeowners association will overlook both maintenance needs and behavioral missteps (such as dumping coffee grounds into the system).

Significant risks to health and safety, especially of undetected drinking water contamination arise because the proposed development is so cramped. There are purportedly three septic fields, but two are side by side. The leach fields are at the perimeter of the single lot, and nine private wells are planned for the center of the lot. Because the road is characterized as a private driveway, wells may be right next to the road. This raises concerns. For example, winter road treatments may leach into adjacent wells. Or, for example, snow may be stored (unacceptably) on proposed stormwater "rain gardens" during early season snow storms, and when it rains later, there will likely be flooding.

There has not been adequate testing regarding the potential hydraulic connectivity of the bedrock well networks. Contamination in one area may spread to other wells. A public water supply determination, with the Zone 1 requirement, would help to address this otherwise unaddressed and substantial risk.

The nitrogen questions have not been answered. The proposal, as it stands, is in violation of the DEP's regulations regarding nitrogen loading and recharge. Sufficient testing has not been performed with respect to the potential for nitrogen concentrating in various parts of the single lot, where the load and recharge requirements could be subverted. Also, the proposal includes landscaping and, it seems, an irrigation well. This aspect will further tax the groundwater and nitrogen maintenance systems.

Several other technical issues pervade the proposal. Four of the units will have grinder pumps to move waste to the uphill septic system. The proposal appears to rely on the pumps for 100% of the waste removal, which is, I believe, another violation of state regulations. In the event of a power outage, will there be a backwash into these homes? Will all of the valves work smoothly? The proposal has no mention of drywells for the iron, manganese, and arsenic filtration systems in any of the units. (Will the new homeowners understand the effort it takes to replace salt and other tasks regarding the

water treatment systems?) The Applicant may be exercising wishful thinking that this lot is different from the surrounding land.

Simply put, there is no give. A large part of the 9.8 acres is wetland. In the event of septic failure, it is unclear what will happen. There is no back-up municipal water or sewage treatment. Wells are proposed to be placed right next to structures and impermeable surfaces where run off could easily cause *undetected* contamination. Normal zoning buffers, such as setbacks, are unavailable. There are issues about maintenance and monitoring. There is no contingency plan for emergency power outages or probable flooding. There is no responsible party to take legal and practical responsibility for contamination or other problems. The 40B permit process undermines the capability of local boards to protect us.

There is a palpable anxiety at the hearing when the interconnected, hard to completely comprehend, and growing complexity is discussed. There is a feeling that this project is, at best, unwise. The proposed development is made up of 20 houses, most of which will be approximately 2,500 square feet and have three bedrooms. All of the nervousness felt by those watching the hearing would be felt more intensely by the new homeowners if they were to be sitting in that meeting room. Grinder pumps... inadequate snow storage ... flooding ... need for generators to flush toilets ... potential *undetected* well contamination ... shared individual wells plus possible hydraulic connectivity ... condominium owned septic systems ... adjacent wetland ... insufficient setbacks ... unreliable monitoring ... haphazard maintenance and human nature regarding septic systems and wells ... condo fees and special assessments that can't be paid ... fragile systems already demonstrated ... high water table ... unknown permeability factors ... and an Applicant who contends that anything is okay so long as the state allows it.

The MassDEP is the one state agency that can put some brakes on this confusion and inject clarity into this incoherent process. I urge you in the strongest possible way to issue a determination that the proposed project will be designated a *public water system*.

Thank you very much for your consideration of these vital issues.

Sincerely,



Lynn Lemaire

cc: Zoning Board of Appeals
Board of Health
Board of Selectmen
Planning Board
Conservation Commission
Dan Hill