

May 26, 2021

Mr. Richard Novak, Chair
Zoning Board of Appeals
19 Washington Street
Sherborn, MA 01770

RE: 31 Hunting Lane/41 N Main Street
Sherborn, MA

Dear Mr. Novak and Board Members,

I am writing as a private citizen to express a few primary concerns I have regarding the proposed Pine Residences (41 N. Main St.) and Apple Hill Estates (31 Hunting Lane) development project. I am a Massachusetts Licensed Site Professional (LSP) of 23 years, and I am a member of Sherborn's Groundwater Protection Committee. I attended the Site Walk of 31 Hunting Lane on April 22, 2021. Having seen the property and having reviewed the geologic maps of the area, my concerns relate to impacts to drinking water quantity and quality of the downtown and Hunting Lane areas, including the proposed project.

Drinking Water Supply

1. The peer reviewer Jim Vernon from Nobis Group has concerns about the adequacy of the new drinking water supply wells installed for this project, particularly water supply well #2. There have been water shortages and wells running dry in our downtown area, including near this development. A well adjacent to the 40B at 59 North Main St (which is only half occupied at this point), had to be re-installed deeper, as I understand it to 800 feet, and there have been several other water supply/quantity issues and wells requiring replacement nearby on North Main St. and Hunting Lane over the years. Droughts have been increasing, and our area was in the category "critical drought" last summer and into the fall. There should be serious concerns about whether there is sufficient water supply to support this project with 87 new households, and how it will impact the surrounding residences and businesses, all of whom rely on groundwater as the only water supply.

Geology

2. The proposed development property is bedrock controlled with numerous visible bedrock outcrops, overlain by a thin layer of glacial till which is a low permeability soil. Bedrock is shallow. Although the proponent plans horizontal drilling*, there will likely need to be bedrock blasting for building foundations and numerous trenches for underground utilities. Not only is blasting disruptive and can have consequences for abutters, but perchlorates are often used in this kind of blasting. MassDEP has identified that Perchlorates have contaminated several drinking water supplies in Massachusetts. Perchlorates are highly water soluble and can travel long distances in groundwater. Perchlorates affect the thyroid gland, and MassDEP has assigned a drinking water standard of 2 ppb for perchlorates, a very low concentration.

*Horizontal drilling also can have adverse effects on wetland areas and groundwater recharge. The drilling produces conduits in the ground, resulting in preferential flow pathways for precipitation and groundwater to flow away from the site, following the drilled trenches and piping, rather than recharging into the ground. This can change the local hydrology, drain wetlands, etc.

Infiltration Capacity of Septic Leach Field and Stormwater Management

3. Given the geology of the area (shallow bedrock and the low permeability thin overburden), and the shallow seasonal groundwater table (within two feet of the ground surface in some areas of the proposed septic leach field), there are concerns about the capacity of the soils at the property, including the proposed leach field and stormwater infiltration areas, to manage all the waste from 87 new households that are proposed at 41 N. Main St and 31 Hunting Lane and associated impervious surfaces. There are serious risks of impact to the drinking water quality of the existing nearby homes. The substantial mounding that could result at the sewerage infiltration area for all 87 new homes, and the nature of the thin glacial till overburden soils, can cause the discharged water to reach the existing water supply wells of the nearby residences via flow along the surface of the soil-bedrock interface and through bedrock fractures. It could also result in surficial break out as it flows downhill to the abutting properties. It is critical that the project does not degrade the drinking water quality of abutting and nearby properties.

Sincerely,



Andrea D. Stiller, LSP
205 Woodland Street
Sherborn, MA 01770