



142 Littleton Road  
Westford, MA 01886  
978.692.1313

August 23, 2016

Travis Snell, Chair  
Carlisle Board of Appeals  
Town Hall  
66 Westford Street  
Carlisle, MA 01741

Re: "The Birches"  
Application for Comprehensive Permit  
Remand from HAC

Dear Mr. Snell and the members of the Board of Appeals:

This correspondence is intended to outline the changes proposed in Plan P – Public Water Supply – Utility for “The Birches” at 100 Long Ridge Road, Carlisle, MA as originally submitted and per Revision 1 dated 8-18-2016 and pursuant to the remand back to the Board of Appeals as directed by the Housing Appeals Committee.

On several occasions during the public hearings for “The Birches” the Board of Health commented that a public water supply was preferred over the proposed individual private shared wells. In fact, the final Decision of the Board of Appeals, dated August 12, 2015, certain findings were included which relate to the water supply including, but not limited to items 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 69. In addition, the Board approved a multitude of conditions for the private water supply wells including, but not limited to: 84, 85, 86, 87, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, and 99. All of these would either be completely eliminated, be inapplicable, or, at the very least, be extremely reduced with a public water supply.

The Proposed Plan P intends to use a public water supply with 7 separate wells to provide domestic water to the units. The proposed system is explained in the report by Northeast Geoscience, dated August 8, 2016. Seven wells are proposed in order to reduce the Zone 1 well radius to 100 feet each. Each well is separated to other wells by at least 50 feet, which is the policy of MassDEP to be considered as separate well points. The design flow rate from each well is only 0.63 gallons per minute (which is a fraction of what a garden hose would produce). The wells will be pumped to a separate storage tank equal to at least 2 day flow and from there the domestic water will be pumped to the homes.

In order to accommodate the appropriate Zone 1 area with limited encroachment, changes to the plan were required. The roadway access to each home – which, in Carlisle, we call the “private driveway” (to equate to Carlisle regulations) - was altered and the separation of the homes was reduced. Other changes were made as described in the following narrative and bullet points.

The following changes were a direct result of providing a public water supply and providing the appropriate Zone 1 area.

1. Public Water Supply wells, gravel access roads for well construction and maintenance including a small wetland crossing and additional work in the Buffer Zone, a storage tank, a pumphouse, and related piping.
2. The Private Driveway (roadway) to the project was reduced in length with the cul-de-sac turnaround relocated approximately 300 feet shorter at Sta 5+50 and with 6 homes off a dead end driveway for the final 200 feet  $\pm$ . The drive up to and including the cul-de-sac is still 24 feet paved width and the last 200 feet is 20 feet in paved width, in which both widths comply with Carlisle Subdivision regulations which require a minimum of 20 feet paved width. The cul-de-sac geometry remains the same and meets the guidelines outlined in NFPA 1141. The driveway was moved slightly to the west but the general layout is similar with a gentle horizontal curve to the cul-de-sac and then easterly to the end. The impervious area for the private driveway was reduced by 9.6% to 25,430 SF which increases the mass balance nitrogen equivalency computations per Attachment A from 9.19 acres to 9.26 acres.
3. The residential homes were all adjusted and relocated within the same general developed area of the site. A total of 15 buildings in 12 instances are closer than 30 feet, wall to wall with a new minimum distance of 20 feet. This meets Massachusetts Building Code. No waiver was or is requested for building to building setback.
4. Unit 1 is now proposed to be 20 feet from the right-of-way line of Long Ridge Road and requires waiver relief from the 40 feet setback in the underlying zoning in addition to the side yard setback and rear yard setback relief provided in Waiver #2 on page 25 of the Decision. Thus, a waiver is hereby requested from Section 4.2.1 of the Carlisle Zoning By-Law.
5. The adjustment of the buildings affected individual style relocations per the previously submitted table but results in the same number of overall bedrooms (1-4BR, 16-3BR, 3-2BR = 58 BR). All three submitted building styles remain unchanged.
6. Due to the layout change, the plan includes some stormwater management changes. These include the re-located and larger Bio-Retention facility east of units 1-3 and a new Extended Detention east of unit 16. The various Rain Gardens and Infiltration Trench were removed. Infiltration is not allowed within the Zone 1 and is generally considered as not preferable in the immediate contributory area to public water supplies. The overall site grading was adjusted to accommodate these new facilities and adjusted horizontal layout. All stormwater will comply with the MassDEP Stormwater Handbook for all applicable standards.

The following changes were a not a result of providing a public water supply.

7. The septic system 2 was moved approximately 300 feet southerly as part of the horizontal layout revisions and in response to comments received to separate the two septic fields. The sewer piping is adjusted accordingly. Septic System 1 will serve units 1-6, Septic System 2 will serve units 7-12 and 19 with Unit 12 via E-One pump, and Septic System 3 will serve units 13-18, all via E-One pump. All three new septic systems will be designed at 18 bedrooms which equates to 1980 GPD per system per Title 5, the State Sanitation Code.
8. The separate Fire Cistern previously proposed at Long Ridge Road and conditioned to be no less than 45,000 gallons (see condition 47) is eliminated as it was not a waiver request nor is it required by any local or state regulation or code including Carlisle Zoning By-Laws, Carlisle Subdivision Regulations, Carlisle Supplemental Board of Health Regulations, or by the state Building Code. Additionally, the applicant appealed Condition #47 to HAC.

Pursuant to the request of various commenters, Plan P was revised, dated 08-18-2016, with the following information added to Plan P or adjusted as noted:

- a) Legend
- b) Roof infiltrators
- c) Propane tanks
- d) Water supply feed lines from wells
- e) Septic system clarification
- f) Snow Storage Areas
- g) Tree line adjacent to graveled well access roads
- h) Well access roads reference notation by letter
- i) Irrigation well notation
- j) Phase line
- k) Roadway slope denotations
- l) Slight building adjustments (ie 7, 16)

Sincerely,  
LIFETIME GREEN HOMES, LLC



Jeffrey A. Brem

Enclosures

Cc: Mark Bobrowski  
Joel Frisch