

Dear Planning Commissioners,

In as much as the charge of the Conservation Commission includes conserving cultural and historical features of Charlotte some comments below will go beyond the biological and a ecological. First we wish to point out a general principle in interpreting the Significant Wildlife Habitat Map which is pertinent to the Four Meadows subdivision in the extreme. *This principle is that all wetland areas are also wildlife corridors.* Additional designations are made on the SWH Maps because not all wildlife corridors are wetlands. It is to be remembered that all wetland areas function as links between various habitats through which they flow.

The concerns of the Charlotte Conservation Commission are primarily but not limited to the following: aquatic habitat, wildlife corridors, viewscapes ,continuity with surrounding properties, and agribusiness operations.

### **Aquatic Habitat**

The Four Meadows project has been proposed within the headwaters of the Kimball Brook watershed. *Stream headwaters are uniquely vulnerable habitats that suffer water quality degradation in response to upland human impacts faster and at greater intensities than other aquatic habitats.* Within this headwater context, the CCC is concerned about three inter-related issues associated with the proposed project:

- 1) increase in impervious surface
- 2) potential deposition and/or mobilization of sediments and nutrients
- 3) potential flow constrictions/obstacles within Kimball Brook and tributary wetlands

The addition of significant amounts of impervious or near-impervious roofing, driveways/ roads, and parking areas as well as engineered changes to slope and hydrology (drainage) will decrease natural stormwater infiltration and lead to increased volumes and flashiness of runoff. This increased runoff can mobilize sediments, nutrients, pathogens (such as fecal bacteria and viruses), oils and other contaminants and carry them into the surrounding wetlands and Kimball Brook. This is a particular concern for the area proposed as a horse farm--the proportion of hard surface relative to the total developable land (outside of wetlands and associated buffers) is extremely high, suggesting that management of animal waste could be problematic. Although a stormwater retention system has been proposed, it has been placed adjacent to Kimball Brook, leaving no room for error should the system fail to perform or be maintained to perform as designed or the design prove incapable of handling extreme storm events. Both storm water and waste management plans must have a periodic maintenance component to be effective.

Finally, the construction of a driveway over Kimball Brook and multiple wetland crossings elsewhere are likely to change flow within this part of the Kimball Brook watershed. Accidental blockage or slowing of flow in these areas would result in deposition of contaminants that would later be mobilized in a stormwater runoff event. Replacing the undersized culvert on Kimball Brook could improve flow and aquatic organism movements if it is installed so as not to be perched above the stream bed, but

the effects of activating a driveway at the crossing would create new longer-term impacts from sediment associated with the driveway and increased downstream erosion. Any impacts of the proposed project within the Kimball Brook headwaters would travel downstream, impacting water quality, aquatic habitat quality, ecosystem services, human uses and land values along the way. The summer before last a dense algal bloom was reported at the confluence of Kimball Brook with Lake Champlain; although the cause of the bloom was not determined, it demonstrates the potential impact of Kimball Brook on the lake and by extension all lake shore properties.

### **Wildlife Corridors**

*The greatest disruption to wildlife movement in this plan is the multiple intrusions into the designated wetlands, their feeders drainages, and the buffers associated with them.* As stated before, all wetlands are wildlife corridors while not all wildlife corridors are wet lands. The comments pertaining to the designated wildlife corridor lands in the Northeast corner of this property apply directly to all the wetlands in this property and are amplified by the functional dependency between the wetlands and the designated linkage habitat. This functional dependency amplifies the impacts we are considering beyond the 53 acres of this proposal to many hundreds of acres between Lake Champlain to the West, Pease Mountain to the North and Mount Philo to the East. The Conservation Commission identified the specific linkage habitat in question as critical 2 years ago and as a result we have direct observations from along Mount Philo Rd. that confirm this area is an active wildlife travel corridor. Wildlife from both Mount Philo State Park and the Kimble Brook drainage funnel through the northeast corner of the proposed development to extend their range. Those observations, including pictures, and are available on the I-Naturalist website under the Charlotte Wildlife project.

The wooded corridor extending north to Pease Mountain is heavily threatened by existing development but is confirmed as a functioning travel way by observations of Charlotte residents associated with the conservation commission. Those citizens, Louis Cox and Jamey Gerlaugh have been requested to submit written statements. Mr. Gerlaugh has trail cam pictures to substantiate his observations. The Conservation Commission is encouraged by these observations to continue to evaluate the health of this north - south corridor between two gems, Pease Mountain Natural Area and Mount Philo State Park, to insure that they do not become isolated islands of protected habitat. The population diversity of both these areas will be diminished if they are allowed to be isolated so we have identified and placed on the SWH map the critical property in question.

The connection to Lake Champlain has already been illuminated in the section on Water Quality and Aquatic Habitat. As a general rule for all culverts, public and private, perched culverts are unacceptable. *Perched culverts are those in which either end is raised above the stream bed so that an animal entering the culvert would have to "jump" to get into the culvert.* This is specifically an aquatic wildlife linkage issue that the Conservation Commission intends to evaluate town wide in the near future. On this point a bridge is always superior to a culvert. It is of particular concern in this proposal because of the number of intrusions into wetlands. The Kimble Brook riparian corridor is

the primary connection for both Pease Mountain and Mount Philo to Lake Champlain. Two of the proposed building envelopes and attending drives are a threat to wildlife travel between lowland habitat and headwaters with associated upland habitat areas. More will be said about existing conditions and previous efforts to maintain both the quality of and the connection to these upland habitats in the final section on continuity with surrounding property.

## **VIEWSCAPE**

In this case the Conservation Commission feels compelled to comment as stewards of cultural and historical resources. We convinced ourselves of the cultural value of the Mount Philo viewscape by sharing personal stories. All commissioners and guests present at the discussion of this letter had personal anecdotes. These ranged from a new resident whose first orientation to Charlotte after moving into their new house, was to take a look around from Mount Philo. Another resident reminisced on an international congregation of scientists who met on the summit of Mount Philo for lunch and informal talks. More than ten years later he still gets comments from across Europe and Australia referring to the experience of viewing this land and lake which were so emblematic of their concern for the life sustaining services of our human natural habitat world wide. The Mount Philo view shed is a prime example of an ecosystem service that sustains the soul just as our farms sustain our flesh. All present had fed from this trough.

We know this is a state wide issue not limited to Charlotte because of the recent refusal to allow a solar farm in this view shed.

The CCC is unable to support the applicant's assertion that the barn with support facilities would enhance the view. In any case, without an actual barn design proposal we could not evaluate that claim. We find the material submitted by the applicant does not strongly support their claim. And we find that material inadequate to inform our decision. We concur with the staff report on this concern having a number of personal observations of our own which support the staff conclusions.

## **Agricultural designation**

The Conservation Commission is uncertain of the limitations of the Town of Charlotte in establishing the voracity of claims for agricultural exemptions. We know that the State has jurisdiction and as a result we decided not to comment but to raise questions which might be pertinent for the town to investigate.

We understand that part of the special consideration given Agriculture in the State of Vermont is to conserve not just farms but farm jobs. How many farm jobs does this business expect to generate?

The applicant proposes a 180° reversal of the current nutrient flow via removing hay from the land. The change represents a net deposit of nutrients in this sensitive headwater drainage. Feed and bedding will come in and be deposited as manure. Is there a well developed nutrient flow / waste management plan?

The above concerns raise the question of a business plan. Do the applicants have a business plan?

Is the Planning Commission aware of any demand for additional equestrian boarding capacity in Charlotte and does the business plan make any assessment of this demand?

There is historical precedent for private business taking risks and leaving the costs of failure to the public. Since the risk to the Town is immense in terms of both cultural and ecological resources, should the Town consider requiring a bond adequate to cover the cost of an attempted restoration should the business fail? (*The word "attempted" is used deliberately here as the official stance of the Conservation Commission is that these resources are invaluable and their destruction irreversible.*)

What are the consequences of a business failure to this property? Does resulting neglect further degrade views, eliminate stormwater protections and abandon waste management programs?

The Conservation Commission believes these are legitimate concerns of the Town of Charlotte and should be pursued by what ever means possible in consultation with the State.

### **Inconsistent with adjoining properties**

This property is joined on three sides by properties protected either as conserved lands or as designated open spaces. Other conserved and protected lands spread to the east south and west in a pattern that reflects a deliberate attempt to maintain the ecological functions that provide views, clean water and wildlife diversity to the residents of the town of Charlotte. Those properties contain the contributions of particular land owners as well as the tax paying residents of Charlotte to maintaining these ecosystem services. We would draw attention to conserved properties along Kimble Brook both upstream and downstream that represent an interest in water quality and lake shore property values. Two years ago we had lake shore property owner at the mouth of Kimble Brook attending Conservation Commission meetings because of algal matting around his dock and fears of blue green algae. He had only a vague understanding of the connection between his lake side problems and headwater disruptions. That is the purview of the Planning Commission in consultation with the Conservation Commission. *The Conservation Commission is advising from a realistic understanding of "adjoining" as all properties bordering Kimble Brook of which at least ten have some conserved or open space protections.* This proposal is certainly inconsistent with the nature of those protected properties and the intent of their owners.

In the more conventional sense of "adjoining" we want to repeat our concerns about the viewscape, agricultural practices and recent development plans in the area. Regarding viewscape we believe the amount of impermeable surfaces, whether created by rooftops or road surfaces will be highly visible and disruptive of the existing aesthetic. Both in appearance and in function the proposal is inconsistent with the conserved hay field to the south. Nobody would argue that putting only the drive ways from the Four

Meadows proposal into the conserved field would not change the appearance, much more so the buildings and paddocks. Functionally, the introduction of animals, both permanent and intermittent, would mean reversing the nutrient flow related to agriculture, a direct functional conflict with the adjoining property. And finally, I want to draw attention to the ongoing concerns with the Krasnow property. To allow the proposal as presented to go forward would represent an inconsistency in dealing with property owners having similar potential impacts on Kimball Brook and wild life corridors. At this point in Charlottes history where nearly all development represents a pressure on habitat both human and wild, the Planning Commission has made a good faith effort to direct development away from damaging impacts in that case. I want specifically to point to just one of many concerns raised by the Conservation Commission, pursued by the Planning Commission and accommodated by the applicant. That objection was to a drive way across Kimball Brook. In the end the applicant not only eliminated any new incursions into the wetland but extended the buffer beyond the minimum and agreed to very specific limitations on grazing activity. The current proposal is radically more disruptive than the Krasnow subdivision.

In summary, The Conservation Commission finds the two lots on the north boundary and their driveways to be in direct conflict with critical wildlife travel corridors both as regards designated linkage habitats and wetland corridors. The proposed barn and related activities are objectionable both as visual distractions and functional disruptions to the sensitive headwaters of Kimball Brook. We would recommend a complete abandonment of this proposal and reimagining changes more compatible with both wild and human community concerns.



Chair - Charlotte Conservation Commission

April 5, 2018

