

March 21, 2022

Dear Durham Planning Board:

I am writing to provide comment concerning the proposed Church Hill parking lot project currently under review.

I have a BS and MS in Forestry, and I worked for 42 years with State and Federal government forestry agencies. Most of that time was in the specialty area of Urban and Community Forestry, which involved assisting communities in planting, maintaining, and protecting trees, woodlands, and associated resources in developing areas for the many benefits they provide.

The value of urban forests is significant

Since the early 1990's, all 50 U.S. State Forestry Agencies and the U.S. Forest Service have recognized the value of urban forests and have established Urban Forestry Programs with the intent of better conserving and managing this resource. As our communities grow (80% of the U.S. population now lives in urban areas), this goal has become a priority.

Community trees and small wooded areas often cover a significant portion of a community. Forest canopy covers 30% of the typical U.S. community. This metric can be used as one measure of community health. In most communities, the amount of canopy cover is decreasing, and many have active programs to increase tree cover by planting more trees and protect existing vegetation.

Research in recent years helps document the value of environmental services that urban tree cover provides to communities.

Trees and wooded areas can:

- Help reduce the volume of stormwater and improve water quality.
- Improve air quality, store carbon, and combat climate change.
- Conserve energy in buildings by reducing air conditioning needs by 56% and heating costs by up to 25%.
- Increase property value by as much as 10%.
- Provide a buffer to increase privacy and reduce noise.
- Improve wildlife habitat.
- Tree-lined business areas attract more frequent and longer shopping trips, with shopper spending more for parking and goods or services.

Trees and urban forests are a great investment. For more detail go to:

<https://www.arborday.org/urban-forestry-economic/>

Durham continues to grow at a rapid pace, and canopy cover is decreasing. Each year, construction activities and new development remove more trees and small wooded parcels. These small removals add up, leading one to ask: What will Durham look like in 30 years?

The proposed parking area on Church Hill will result in the loss of another small urban wooded area, this time in a prominent location. As one of the few remaining wooded sites in the core downtown area, it provides a valuable aesthetic buffer between businesses, residences and other properties. These woods also provide watershed protection on a steep slope with drainage moving down towards College Brook. Professional assessment tools can help us estimate the environmental service values mentioned above. I think those values would be far more significant than some readers might guess.

Observations about the applicant's forestry report

I participated in two site walks in the area and read the forestry report submitted by the applicant. I have the following comments, questions and observations.

I believe the forestry report focused more on the northwest portion of this woodlot. However, the parking lot site is proposed for the southeast portion of the woodlot, which is somewhat different in makeup. This is a nice small woodlot for an urban area. Trees are larger than in the northwest. Fewer invasive plant species are present than are found in many Durham forests. Ash is the most common species, but there is a mix of other species. Emerald Ash Borer (EAB) and diseases that affect ash are present in NH, and there has been some decline of ash in this woodlot over the past few years. Although continued ash decline may have a negative impact here, I feel other species in the understory and overstory are adequate to fill in any resulting open space.

Observations about project impacts

Despite its small size, this woodlot does provide benefit to wildlife and especially to birds. It currently links to the wooded area south of College Brook and then out to Oyster River and Mill Pond. Maintaining these linkages to different types of vegetation is beneficial in creating good wildlife habitat.

The woodlot has significant value in reducing stormwater volume and in delaying the peak flow. Trees help reduce stormwater flow in three ways: 1) water is stored on the leaf and tree surfaces, 2) tree roots help water percolate into the soil, and 3) trees have a wicking effect – through transpiration they pull water out of the soil, through the tree, and it is evaporated out through the leaves. This keeps the soil from becoming saturated and enables it to absorb more rainwater.

The Church Hill woodlot provides stormwater management in a holistic way. This may be replaced in part by an engineered system, but that system cannot provide the many additional environmental benefits described above.

This parcel is on a significant slope and will require huge amounts of earth moving for construction. It is hard to quantify all the impacts that could have, but it seems clear that it will have a major effect on the watershed. I recall when the Lodges on Mast Road were built six or so years ago, people were disturbed at how this changed the view of the landscape. I feel people will be similarly shocked by what the view would look like if the Mill Plaza and Church Hill proposals are built and most of the

woodlots are removed. It would be helpful if the planning board could require realistic conceptual drawings of what completed construction will look like from different viewpoints.

If the project is approved, a retaining wall will be built at the southeast end of this woodlot, and a narrow wooded buffer (reduced from 100 feet wide in earlier plan to only 50 feet in the current plan) will be left below that wall. 50 feet is an inadequate buffer. Trees and other landscaping will be placed there to help buffer the wall and almost 20-foot-tall retaining slope. There will be challenges with the growth of landscape planting here because they will be in the shade of trees in the buffer. Planted trees/shrubs may survive, but growth would be limited. It appears that relatively little wooded buffer will be left on other sides. I feel a wider buffer should be required for aesthetics, ecological benefit, and privacy for adjacent landowners.

My understanding is that the water collected on the parking lot (carrying salt and other pollutants) will go through a filtering/drainage system and be discharged into a stone or gravel bed further down slope. The redirection of stormwater could very well impact the natural vegetation, by either diverting water away from some areas or dumping excess amounts of water into others.

In sum, it seems clear to me that this project violates the conditional use criterion below and should not be approved:

5. Preservation of natural, cultural, historic, and scenic resources: The proposed use of the site, including all related development activities, **shall preserve** identified natural, cultural, historic, and scenic resources on the site and shall not degrade such identified resources on abutting properties. This shall include, but not be limited to, identified wetlands, floodplains, **significant wildlife habitat**, stonewalls, **mature tree lines**, cemeteries, graveyards, designated historic buildings or sites, **scenic views, and viewsheds**.

Thank you for the opportunity to comment. I appreciate the planning board's efforts in the past to consider our community trees and forests and hope you give the comments in this letter strong consideration.

Sincerely,

John Parry
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