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March 20, 2019 **DRAFT**

*Via E-mail: [heidi.davis@state.ma.us](mailto:heidi.davis@state.ma.us)*

Heidi M. Davis  
Environmental Analyst, NERO Wetlands Program  
Massachusetts Department of Environmental Protection  
205B Lowell Street  
Wilmington, MA 01887

**Re: MassDEP File #123-288**

Dear Ms. Davis:

Thank you for conducting a site visit at 55 Wheeler Street on Monday, March 11, 2019.

First, I'm told it is now clear from the site visit observations and the facts on record already that the Wetlands Protection Act requires MassDEP to exercise jurisdiction over substantially more of the site area than was reviewed by the local Conservation Commission, including the courtyard areas and the subsurface proposed work areas located within the Alewife waterway beneath the site.

The expanded jurisdiction is quite important to my client, because among the most important goals for my client is retaining the dozens of trees in the courtyards, not previously addressed in the Order of Conditions, as well as preserving the large old trees canopies (not calipers) on site to the west of the Alewife mall.

Many are concerned about the drinking water quality to be impacted at Fresh Pond by this project, as well, due to the hydrogeological impacts of building in the subsurface waterway, which is already strained by prior developments. Pressure from the new development should be studied to assure it does not transport contaminated material to the drinking water either from the soils or from breaking a sewer line subsurface from the pressure changes.

This more extensive WPA jurisdiction means the proponent should be submitting a substantially revised proposal for its plan of work to MassDEP including:

- i. the corrected jurisdictional areas,
- ii. proposed work details and resource management plans for the expanded jurisdictional area, meeting all the usual WPA requirements;

- iii. evidence of minimization for alteration and, where appropriate, mitigation.

These submissions from the proponent are the minimum needed for MassDEP to write appropriate protective conditions into an adequate Superseding Order of Conditions.

Specifically, MassDEP should require the developer to submit for review the logs and test lab soils analyses that were used for their drainage systems design and structural footing designs for the project. This along with the noted water table, soils percolation rate, and amount of clay/fine silts in the test cores can give MassDEP much more insight into what is really there to be impacted and mitigated. The report from the proponent's Geotech consultant that the structural engineer based the footing design on for the proposed project would also be revealing for MassDEP's analysis under the WPA.<sup>1</sup>

It seems very likely the proponent's footing design is a floating "bathtub" footing system with soil tie downs to counteract the uplift from the hydrostatic pressure from the high water table, if it parallels the characteristic of the existing underground garage on the site. We do not know why the proponent does not discuss reusing the existing subsurface garage, which is already made of 4' thick suspended concrete and can carry many added stories of weight, except to note that on the site visit, it seemed members of the design and engineering team were unaware this former garage even existed, thinking it was merely old unused office space and not aware it was engineered to carry many many additional stories of weight. What we do know is that proponent's reasoning for removing the mature large canopy trees and excavating the courtyard is to construct a new underground garage.

Regarding the correct jurisdictional areas for this project, I hope it will not be necessary to have a debate over the undisputed fact that Alewife Brook runs directly through the site, subsurface, and that construction of an underground garage literally within the underground Alewife is jurisdictional (even though subsurface). The same is true for the proposed pilings. They are jurisdictional work because they alter land under a regulated waterway.<sup>2</sup> A description of Alewife Brook sub-watershed can be found in Attachment "A", and a GIS map of the Alewife sub-basin and its relation to Fresh Pond can be found in Figure 4 of Attachment "B." That the 55 Wheeler Street property used to be an ice pond is historical fact, and another indicator of the regulated resource area status of the site.

The planned construction of the underground parking garage constitutes a subsurface intrusion into a waterway because of the high water table at the site and the extensive flow of the Alewife

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<sup>1</sup> Since the Proponent regularly referred to the City of Cambridge's 3 year Envisioning process in its Design Narrative, Proponent should be able to show alternative plans for their garage and any building plans which will destroy the main courtyard arboretum. Omission of the courtyard trees in their special permit application indicates an awareness of the significance of the large mature trees which dominate the existing center of the building area.

<sup>2</sup> The Alewife is at least a "stream" as defined by 310 CMR 10.04 if not a river. Land Under Waterbodies is discussed at 10.56 as including "...the land beneath any creek, river, stream, pond or lake." The definition goes on to observe how varied the characteristics may be, from soil to concrete and conduits.

below the site. This means that any underground construction must counteract the significant hydrostatic pressure that is present. Supportive documentation from the proponent is required, from a geotechnological consultant, that the construction would not pose a threat to the water table and the receiving water of Fresh Pond, the drinking water supply, as well as Alewife itself. Therefore, it is essential that MassDEP be provided with any and all evidence of hydrogeological findings and what the site proponent is doing to address the potential threat to the Fresh Pond waterway. The WPA regulations provide for performance standards for Land Under Waterbodies and state "...any proposed work within Land under Water Bodies and Waterways shall not impair the following: 1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks; 2. Ground and surface water quality." 310 CMR 10.56.

In addition to the work in the subsurface waterway, the wetlands vegetation and hydric soils on site are much more extensive than previously shown, such as in the courtyards. As I stated in my previous letter, the former site owner Clark Abt attested that the soils are "hydric," as per the meaning of 310 CMR 10.55(1). Using online technology provided by the Massachusetts Bureau of Geographic Information, one can see that the soil at 55 Wheeler Street is classified as *urban land, wet substratum*, and is bordered by *udorthents, wet substratum*. (See Attachment "C"). According to the most recent soil survey of Middlesex County conducted by the U.S. Department of Agriculture (Attachment "D," p. 518), *urban land, wet substratum* is in fact "hydric soil."

MassDEP commonly observes in its guidance to Conservation Commissions that many wetland indicator plants are dormant during the winter time, and thus not all wetlands indicator plant species would have been readily apparent during the site visit (especially given the snow coverage). Also the grassy areas were altered previously and have not had time to fully repropagate with natural wetland species, preventing usual wetland species from being seen. However, a perfunctory look at 55 Wheeler Street's existing tree inventory (Attachment "E") shows at least four wetland indicator tree species are present on the site: Atlantic White Cedar, (Black) Willow, River Birch, and Green Ash.<sup>3</sup> See 310 CMR 10.55(2)(c).

Given the prior owner's attestations and the presence of hydric soil and at least four wetland indicator species, the Cambridge Conservation Commission Order of Conditions is clearly inadequate. It should be noted that the prior owner himself was denied from building a 5-story building on the site back in 2009, with the City of Cambridge justifying its decision to Mr. Abt on the fact that "the site is wetlands."

We believe MassDEP should require the developer to do a proper job of meeting the true Wetlands Protection Act jurisdiction and requirements, not the limited version provided by the Conservation Commission. We respectfully request that MassDEP require proponents to submit soil sampling for the purpose of documenting the proper delineation of wetlands on site. We also request that a hydrogeological study be done and that WPA protocol soil sampling should either be provided or be retaken before making any final determination as to the Superseding

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<sup>3</sup> See <https://plants.usda.gov/core/wetlandSearch>

Order of Conditions. Only submission to MassDEP of this information will allow MassDEP to make an adequate WPA decision on these issues.

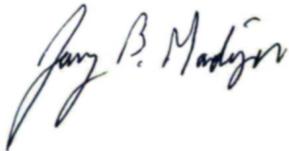
My client's respectful petition to MassDEP is that the Superseding Order Conditions calls upon proponents to submit a careful alternative design that omits destruction of the courtyard. Because of the splendid nature of the Arboretum of more than 30 fully mature trees, perhaps MassDEP can do a thorough job of assessing possible alternatives to excavation of the courtyard, and condition the work accordingly.<sup>4</sup>

It is my understanding that you have a current deadline of two weeks for receiving new information. After you review this letter, I hope you will require the proponent to submit specified new information, even if it means extending that deadline to be sure you obtain all appropriate data before MassDEP makes its decision.

Finally, we continue to assert no state action may be taken until MEPA has been concluded.

Thank you again for your attention to this matter and your professionalism on the site visit.

Sincerely,



Jamy Buchanan Madeja, Esq.  
For Appellant, Ellen Mass

cc: via Email:

For the Applicant, 55-9 Wheels Owner, LLC  
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<sup>4</sup> Regarding the trees on site and minimizing and mitigating impacts, it has been noted that there was a 5" caliper Stewartia on the "not valuable enough to save" list from the proponents. I'm told Stewartias that size are very rare and that a 5" caliper one goes for \$5000 wholesale. Perhaps someone can suggest if not mandate salvaging the better value trees for planting in City open spaces if not retained on site, which is preferred. Also, regarding minimizing and mitigating, a lot of the trees that the proponents are talking about "protecting" such as the large height (not caliper) arbor vitae may not survive proximate heavy construction because of their maturity.

Michael Nakagawa, for other appellants: [lorax@alewifeighbors.org](mailto:lorax@alewifeighbors.org)

## **Attachments**

- A.** City of Cambridge Department of Public Works Wastewater and Stormwater Management Guidance Document (May 2008).



Attachment A - Cambridge DPW Wastewater & Stormwater Management Guide.pdf

- B.** Horsley Witten Group Technical Analysis of Upper-Alewife Basin (2012)



Attachment B - Horsley-Witten-Technical Analysis of Upper-Alewife Basin.pdf

- C.** MassGIS map of 55 Wheeler Street (with “Soils Polygons with Mapunit Names” Active Data Layer selected) [http://maps.massgis.state.ma.us/map\\_ol/oliver.php](http://maps.massgis.state.ma.us/map_ol/oliver.php)



Attachment C - MassGIS Soil ID for 55 Wheeler St..pdf

- D.** USDA “Soil Survey of Middlesex County, Massachusetts,” (2009), Table 19 (at pg. 518). [https://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/massachusetts/MA017/0/middlesex.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/massachusetts/MA017/0/middlesex.pdf)



Attachment D - Soil Survey of Middlesex County, MA.pdf

- E.** “Existing Tree Inventory” from Proponent’s Final Tree Mitigation Plan, prepared by DiMella Shaffer Associates (February 2019).



Attachment E - Existing Tree Inventory for 55 Wheeler St..pdf