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Memorandum

To:	Village of Mamaroneck Planning Board
From:	AKRF, Inc. (Teresa Cannone, Senior Environmental Scientist)
Date:	March 17, 2023
Re:	921 Soundview Drive Site Plan Review and Wetlands Permit Application Response to Westchester Land Trust February 8, 2023 Letter

In a letter to the Village of Mamaroneck Planning Board dated February 8, 2023, the Westchester Land Trust provided comments on the proposed project at 921 Soundview Drive ("the project site") and its potential ecological impact on the adjacent Otter Creek Preserve. As requested by the Village of Mamaroneck Planning Board, AKRF reviewed the comments from the Westchester Land Trust and provided proposed responses in this memorandum.

Comment 1: The proposed residence is almost entirely within the 100-foot wetland buffer. Wetland buffers exist to protect wetlands from thermal impacts, decrease runoff velocity, provide opportunities to settle sediment and contaminants, and promote edge habitat. Development within a buffer degrades its ability to protect the wetland.

Response: Per Chapter 192 of the Village of Mamaroneck Code (i.e., the "Wetlands Protection Law"), in addition to any adjacent area regulations set forth by the New York State Department of Environmental Conservation (NYSDEC), the wetland adjacent area for wetlands within the Village is defined as "any land in the Village of Mamaroneck immediately adjacent to a wetland or lying within 100 feet, measured horizontally, of the boundary of the wetland." Mitigation for impacts in the wetland adjacent area is not required per the Wetlands Protection Law. As shown on the engineering and architectural plans, much of the property at 921 Soundview Drive falls within the 100-foot Village of Mamaroneck wetland adjacent area (i.e., the wetland buffer area). A Wetland Permit for work in the 100-foot Village of Mamaroneck wetland adjacent area is required under the Wetlands Protection Law.

All elements of the proposed project are located outside of the NYSDEC-regulated tidal wetland adjacent area, which extends to the 10-foot contour (elevation), as shown on the engineering drawings. It should be noted that while the NYSDEC regulates activities within the NYSDEC-regulated adjacent area, the NYSDEC only would require mitigation

for impacts to wetlands and would not require mitigation for impacts to NYSDEC-regulated adjacent area.

Comment 1a: The design should incorporate measures to decrease impervious surface to lessen the environmental impact of development within the wetland buffer. This may include the use of permeable pavement or grassed pavers for the driveway and other green infrastructure practices.

Response: Mitigation for impervious coverage within the project site was discussed during the Harbor & Coastal Zone Management Commission (HCZMC) Consistency Review. The stormwater management practice, as reviewed by Kellard Sessions, the Village's Consulting Engineer, was determined to adequately mitigate the amount of impervious coverage proposed for the project site. The optional measures proposed by the Westchester Land Trust could be incorporated into the proposed project's design by the applicant as an additional measure for green infrastructure.

Comment 1b: There is no attempt to mitigate the disturbance of the wetland buffer. Other communities in Westchester County require mitigation when there is a significant disturbance of the wetland buffer.

Response: As discussed under Comment/Response 1, mitigation for impacts in the wetland adjacent area is not required per the Wetlands Protection Law.

As a result of the HCZMC Consistency Review, the proposed project was modified to remove an elevated/suspended pool structure and instead relocated the proposed saltwater pool at grade. The HCZMC was concerned about the structural stability of an elevated/suspended pool, and subsequently the potential impact of a structural failure of the pool on the adjacent Otter Creek. The modification of the design to include an in-ground rather than an elevated pool resulted in more direct impacts to the wetland buffer area. However, this redesign alleviated the HCZMC's concerns about a potential collapse of the pool and its contents into Otter Creek and the wetland buffer area during an extreme storm event.

The proposed project would include a stormwater management practice, which would be inspected and approved by the Village as a condition of occupancy. The stormwater management practice would reduce the potential impact of stormwater from the proposed project on Otter Creek and its associated wetland buffer area. According to the Kellard Sessions Memo (dated February 3, 2023) and discussions during the HCZMC Consistency Review, changing the pool design, while increasing direct disturbance and impervious surface in the wetland buffer, allowed the stormwater management practice to be relocated to a more appropriate area with gentler grades and deeper soils. The stormwater management practice would adequately treat the amount of stormwater within the project site.

As detailed on the tree protection plan, several trees within the wetland buffer area would be retained and protected during construction of the proposed project. In addition, the removal of several trees would require restitution and planting of replacement trees as part of post-construction landscaping. Furthermore, the post-construction landscape plan includes native plantings that would be tolerant of the

wetland and wetland buffer conditions within and adjacent to the project site (USACE 2012, 2020). The proposed landscaping plan would incorporate appropriate native plants for the conditions within the wetland buffer zone.

Therefore, even though the Village of Mamaroneck does not explicitly require mitigation for development within the wetland buffer zone in the Wetlands Protection Law, the proposed project design does endeavor to reduce impacts on the wetland buffer zone and Otter Creek.

Comment 2: Curbs and catch basins act as funnels and traps for amphibians that are habituated to crossing territory to access wetland buffers, wetlands, marshes, streams, and vernal pools. Cape Cod-style curbs should be used whenever possible to allow for amphibians and other wildlife to move into and through the wetland buffer and wetland.

Response: According to the United States Army Corps of Engineers (USACE) *Vernal Pool Best Management Practices (BMPs)*, curbs are important design features to consider in order to minimize obstacles for amphibians, including hatching turtles and salamanders. Traditional curbs with steep edges may present an obstacle for amphibians, reptiles, and other wildlife in the vicinity of the proposed project. For smaller roads and driveways, the USACE recommends Cape Cod-style curbs, which slope down at an angle toward the pavement and provide a continuous low-gradient ramp for wildlife to traverse. Alternatively, the USACE recommends in areas that cannot accommodate Cape Cod-style curbs, such as when stormwater management systems require more traditional curbing, that it may be possible to include "escape ramps" on either side of catch basins (USACE 2015).

Based on what can be observed through Google Streetview, the Cape Cod-style curbs are used along Soundview Drive adjacent to the property at 931 Soundview Drive. The engineering plans show that the proposed curb would meet the existing bituminous concrete curb at this location. AKRF recommends that the engineering plans specify that the curbs for the proposed project, including along Soundview Drive, the proposed driveway, and surrounding the stormwater management system, would be Cape Cod-style or include "escape ramps" to avoid impacts to amphibians and other wildlife.

Comment 3: The letter from Water Concepts is not binding. We request that the pool design follow all the recommendations made in the Water Concepts letter to minimize further impacts to the wetland buffer, wetland, and Otter Creek; discharging pool water to the wetland buffer is unacceptable.

Response: Group Works Water Concepts wrote the June 17, 2022 letter to address the HCZMC's questions regarding the structural stability of an elevated/suspended saltwater pool and the potential effects of pool water on Otter Creek should the structure collapse during a catastrophic storm event. The proposed project design has been modified and the elevated/suspended pool has been replaced with a proposed at-grade saltwater pool. AKRF does not believe the Group Works Water Concepts letter (dated June 17, 2022) is relevant to the current iteration of the proposed project.

Comment 4: The stormwater management system located within the wetland buffer is insufficient to protect the wetland buffer, wetland, and downstream Otter creek watershed.

Response: Kellard Sessions reviewed the stormwater management practice as part of the HCZMC Consistency Review and found that the proposed stormwater management practice and

SWPPP would adequately manage the stormwater and runoff as a result of the proposed project.

Comment 4a: Hydrodynamic separators entrap amphibians and are not appropriate for use in wetland buffers and wetlands.

Response: According to the Kellard Sessions Memo (dated February 3, 2023), the applicant included hydrodynamic separators in the stormwater management practice to address water quality pre-treatment requirements. According to the USACE, hydrodynamic separators are acceptable for use in stormwater management systems when used in conjunction with Cape Cod-style curbs (Calhoun and Klemens 2002, USACE 2015). In addition to aiding amphibian migration, as discussed under Comment/Response 2, using Cape Cod-style curbs and/or "escape ramps" around the stormwater management system would minimize the probability of trapping amphibians (USACE 2015).

Therefore, AKRF recommends that the applicant incorporate Cape Cod-style curbs or "escape ramps" surrounding the stormwater management practice.

Comment 4b: The system is designed with an overflow for storm events in excess of the 1-year storm. Given the increasing frequency and intensity of storm events and the proximal location to a floodplain, this storage volume is insufficient to adequately protect downstream habitat.

Response: Per the Kellard Sessions Memo (dated February 3, 2023) and the Stormwater Pollution Prevention Plan (SWPPP) (dated December 12, 2022), the proposed stormwater treatment system would have an overflow discharge from the infiltration units during storm events in excess of the 1-year storm. Overflow would be directed to an erosion control mat to mitigate potential erosion of the hillside.

As detailed in the SWPPP, the proposed stormwater protection practice reduces the peak rates of runoff from the proposed project as compared to existing conditions during the 1-year storm, 2-year storm, 10-year storm, 25-year storm, and 100-year storm, thereby reducing runoff to Otter Creek.

This conclusion should be verified by Kellard Sessions, the Village's Consulting Engineer.

REFERENCES

Calhoun and Klemens, 2002. *Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Development in the Northeastern United States*. Available from: https://www.maineaudubon.org/wp-content/uploads/2017/03/Best-Development-Practices-Conserving-Pool-breeding-Amph.pdf

United States Army Corps of Engineers (USACE). July 2012. *National Wetland Plant List Indicator Rating Definitions.* Available from: https://www.fws.gov/wetlands/documents/national-wetland-plant-list-indicator-rating-definitions.pdf

United States Army Corps of Engineers (USACE) New England District. January 2015. *Vernal Pool Best Management Practices (BMPs).* Available from: https://www.nae.usace.army.mil/Portals/74/docs/regulatory/VernalPools/VPBMPsJan2015.pdf

United States Army Corps of Engineers (USACE). 2020. *National Wetland Plant List, version 3.5. Northcentral-Northeast Subregional Plant List.* Available from: http://wetland-plants.usace.army.mil/