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November 28, 2023

Town of Goshen
Inland Wetlands & Watercourses Commission
42 North Street
Goshen, CT 06756

RE: WETLAND ASSESSMENT REPORT
Proposed New Single-Family House
Lot 477 – Sherbrook Drive
Woodbridge Lake Community, Goshen

Dear Chairman Stansfield and Commission Members:

On behalf of the Applicant Mr. & Mrs. Sandor, I have completed a field visit, wetland verification, application file review and a wetland impact assessment of the planned development of an existing lot of record listed at Lot 477 on Sherbrook Drive in the Woodbridge Lake community.

INTRODUCTION AND PROJECT BACKGROUND

In 2004, the subject lot was previously issued a permit by the Town of Goshen Inland Wetlands and Watercourses Commission (IWWC) for the filling of wetlands to facilitate the construction of a residential dwelling and associated appurtenances. Subsequently, the Applicant (Mr. & Mrs. Sandor) purchased the lot, and the permit approval was transferred to the Sandors. Permit extensions were granted and finally expired 5/11/2018.

On 10/5/2023 the Town accepted a new application from Mr. Sandor to again renew the previously approved application. The regulated activities associated with the subject 2023 application are substantially and materially the same as, and within the scope of, those regulated activities that were approved in the Town's Wetland Permit #05-04-01.

I reviewed the current 2023 application and the following additional documents:

a. Map entitled "Zoning Location Survey Showing Proposed Improvements Lot 477 Woodridge Lake." Prepared for C.M. Pateman & Associates, LLC, Sherbrook Drive, Goshen, CT, prepared by Berkshire Engineering & Surveying, LLC, dated 9/3/03, scale 1" =20'.

b. Proposed Mitigation Measures Letter Dated January 4, 2004, From Stephen W. Coleman Environmental Consulting, LLC.
c. Two review letters to the commission from Mrs. Penelope Sharp, an environmental consultant to the Town of Goshen Inland Wetlands Commission dated November 18, 2003, and January 28, 2004.

I visited the subject site on November 6th, 2023, to review the on-site soil conditions and wetlands as previously identified by Stephen W. Coleman Environmental Consulting, LLC and further described in detail by Mrs. Penlope Sharp. The following observations are important to the functional assessment of the wetlands and are listed here to provide context to the later discussion of functions and values and wetland impacts.

1. The site is located in an established subdivision and is an existing lot of record.
2. The site previously was granted approval for the filling of inland wetlands in 2004 to facilitate the development of the lot.
3. There are no major substantive changes to the 2004 approved proposal. The subject 2004 Berkshire Engineering and Survey LLC, site plans are to be supplemented with additional conditions to the satisfaction of the IWWC for the 2023 wetland application.
4. The site is served by public sewer per the Town GIS.
5. The wetland features are in-part man-made, by blocking the naturally occurring drainage patterns from the construction of Sherbrook Drive, which has artificially constricted surface runoff exacerbating flooding on the subject property (photo 2).
6. The wetland is already fragmented by surrounding developments.
7. The wetland fringe is vegetated with invasive plants such as but not limited to: Phragmites, Japanese barberry, multiflora rose, mugwort, honeysuckle, and bittersweet.
8. The downstream receiving wetlands are significantly vegetated by Phragmites (photo 6).
9. It is my professional opinion that wetland delineation completed by Mr. Coleman is very conservative. In reviewing the application material, it suggests the original delineation in 2003 may have been performed in the winter with snow cover, which could partly explain the conservative estimation of wetlands on the property, this fact was also mentioned in Mrs. Sharp's review. I do not believe the entire lot is a wetland, particularly in the northwest corner and along the western property line (photo 4 & 5). I guestimate that approximately 70 percent or even less of the lot is a forested wetland concentrated on the eastern side of the property and drains to culvert along the southern property boundary opposite the intersection of Sherbrook Drive and the easterly loop of Wellsford Road. Therefore, using the previously approved plans as is, in my opinion would be a conservative estimate of anticipated impacts and, the impacts in reality would be less than what was approved and/or is requested to be re- approved now in 2023.

DESCRIPTION OF THE WETLAND AND ECOLOGICAL COMMUNITY

The ecological site descriptions presented by Mrs. Sharp and Mr. Coleman do accurately reflect the general site and wetland conditions. The site is still vacant, undeveloped and is

characterized as a mixed hardwood forest with a high concentration of hemlocks and white pines covering the lot (photo 1). Overall, the wetlands exhibit classic Red Maple swamp vegetation (photo 3). The wetlands are seasonally flooded, situated in a flat dense glacial till landscape with very stony ground conditions and poor drainage. I presume that over the past 20 years there has been an increase in the propagation of invasive plant species listed above, as their mention is absent from the past site descriptions and are now prevalent, particularly along the roadside boundary where there is the highest level of disturbance by the routine maintenance cutting of roadside vegetation by the Public Works Department.

Representative photos of the resource areas proximal to the proposed activities are provided below.

WETLAND FUNCTIONS AND VALUES ASSESSMENT

The assessment of wetland functions and values is based on the US Army Corps of Engineers' (USACE) Descriptive Approach (1995) methodology, and on best professional judgment. The principal function of the regulated wetlands is the conveyance of stormwater runoff and groundwater discharge and recharge, local flood flow alteration (*storage and desynchronization*), and water quality renovation properties (*nutrient and sediment uptake and retention*). Other wetland functions and services are either limited or impacted due to the private ownership of the property, overall site setting, relatively small size, association with an open channel, landscape position, intermittent hydro-period, lack of open standing deep-water habitat, and presence of invasive and non-native species.

SOIL SURVEY

The on-site soils formed from parent material derived from dense glacial till. A copy of the Natural Resources Conservation Service soil survey is attached for the Commissions reference. Of note is an area of moderately well-drained Woodbridge soils mapped in the northwestern corner of the lot, which is supportive of my initial field inspection and also suggests that the entire lot is not a wetland.

IMPACT ASSESSMENT

Construction of the previously approved development plans will require wetland filling. The wetland filling is likely to alter the hydrology of the remaining wetland, possibly making it saturated and ponded for longer durations than current conditions. However, the types and species of wetland vegetation present, the on-site soil conditions, and landscape setting, it is unlikely that the increased wetness will have a significant negative impact on the wetland resources. Red Maple wooded swamps tolerate a wide range of hydrology and occur across the landscape. I do not think the additional hydrology generated by the development of the lot will be detrimental to the wetland or change the vegetative community in a significant or adverse way.

Overall, the proposed activities will maintain the holistic functions and value of the wetland resources. The beneficial and functional service of the wetland is the conveyance and treatment of seasonal flow and groundwater discharge, which the development will be preserving by maintaining overall existing drainage patterns and flow dynamics. The

development is keeping clearing limits to what is needed to develop the dwelling, and a conservation easement will limit future clearing. Additionally, the development would install a permanent exclusion fence at the perimeter of the allowed limits of disturbance to mark the wetland boundary and establish a marker for the conservation restriction line.
The site risk or potential for adverse impacts from erosion and sedimentation during construction is considered low-moderate because 1.) A detailed erosion and sediment control plan has been prepared and submitted, and 2) the site's in-situ undistrubed soils are for the most part low to moderately erosive. 3) the site is generally level and topography is easily managed, 4) there is no need for large scale tree removal 5) no substantial changes in existing grades.

CLOSING REMARKS

I agree with Mrs. Sharp's 2004 assessment that it may be preferable to leave the wetland in its natural condition and place fencing as a barrier to protect the wetlands. The previous plan to transplant native shrubs removed to facilitate the construction may sound good in theory but in practice is unlikely to be successful. Also, the addition of plantings at the limits of disturbance will have no measurable effect on the functions and values of the adjacent wetlands and again may be a vector to introduce or propagate invasive plant species.

Any standard development on this lot will require filling of inland wetlands. In considering feasible and prudent alternatives, the current proposal has provided a minimalist footprint and BMP measures that will protect the adjacent resource areas during construction. It is the most feasible and prudent alternative for the reasonable development of this property, giving due consideration to balancing the protection of the inland wetlands and watercourses while fostering the economic development of the site.

Alterations will have some habitat conversion and will introduce new impervious surface. The activities required to facilitate the development will not result in loss of overall wetland function. Post development the wetlands and watercourses will still have the same ability to perform the existing functions currently provided. As a result, environmental effects will be minor and highly localized. The applicant will mitigate such impacts by implementing standard construction BMPs and conforming to permit conditions.

In my professional opinion the design has minimized wetland impacts by:

1. Adhering to a modest dwelling footprint.
2. Providing deed restrictions
3. Providing and maintaining erosion and sediment controls during construction.
4. Commitment to adhering to permit conditions and construction industry standard best management practices (BMPs).
5. Compliance with all regulatory standards.

In conclusion, the proposed reconfigured layout makes reasonable use of the property, and in my professional opinion, the regulated activities associated with the residential

development depicted on the subject site plans are materially and substantially the same as, and within the scope of, those approved in the previously authorized Wetlands Permit.

Please do not hesitate to contact me at; (860) 514-5642 or itcole@gmail.com if you have any questions or need any additional information.

Respectfully Submitted.

Ian T. Cole
Professional Registered Soil Scientist
Professional Wetland Scientist #2006

WETLAND SITE PHOTOS

NOVEMBER 6, 2023

LOT 477

SHERBROOK DRIVE

WOODBRIDGE LAKE

GOSHEN

CONNECTICUT

Photo 1: Existing Conditions

Photo 2: The subject wetlands and lot drain to this culvert point which conveys flows under Sherbrook Drive.

Photo 3: General conditions of the forested wetland

Photo 4: Upland area of moderately well-drained Woodbridge soils in NW corner of the lot

Photo 5: Upland conditions proximal to the western property boundary

Photo 6: Downstream receiving wetlands opposite side of Sherbrook Drive are significantly vegetated by invasive Phragmites.