SHERBORN CONSERVATION COMMISSION

19 Washington Street, Sherborn, MA 01770

MEMO

TO: Sherborn Zoning Board of Appeals (ZBA)
cc: Jeremy Marsette, Town Administrator

FROM: Michael Lesser, co-chair, on behalf of the Commission

DATE: October 31, 2023

RE: Comments and Issues Related to Farm Road Homes Project

The land at 65 Farm Road encompasses 14 acres (609,702 square feet), including an acre of wetlands that surrounds a pond adjacent to Farm Road. The property also includes wetlands along the western property line consisting of an intermittent stream and associated bordering wetland vegetation (BVW). The land is steepest at the rear of the property and slopes toward Farm Road. Surface water runs and seeps downhill to the west, to the intermittent stream that joins a large, interconnected wetland that spreads west over about 50 acres to Sewell Brook, a tributary to the Charles River. Because of this topography, the proposed development could have an impact on the broader wetland ecosystem in this area.

In this project, there is:

- a minor disturbance of the western BVW by the construction of a large septic field located on the edge of the buffer zone;
- significant alteration of 100% (about 3,000 square feet) of the outer (100-foot) buffer zone on the project's property and alteration of about 1,500 square feet of the inner/no-alteration (50-foot) buffer zone for the isolated wetland (pond).
- a stormwater management system link to the buffer zone of the western wetlands.

With regard to the significant alteration within 100 feet of the isolated wetland, under the Sherborn wetland by-law and regulations, and unlike state wetland regulations, these wetlands have a 100-foot buffer zone. Given the size and extent of alterations in this buffer zone, it is important to protect this area as part of the Comprehensive Permit process. Generally, the Commission does not permit new alterations in the buffer zone, especially if this zone is currently unmanaged or is managed in accordance with wetland values, and the Commission requests the avoidance or reduction of such alternations. Furthermore, when buffer zone alternations are permitted, comparable mitigation is typically required.

In the review of this project, the Commission's first preference is that, as any project changes arise, alterations in the buffer zone are reduced or avoided.

The second option is to pursue mitigation of the proposed alterations. However, in the proposed project, there are limited options for mitigation within the jurisdiction of wetlands

protection as other buffer zone areas are unaltered; therefore, most mitigation is mostly only possible in how the altered buffer zone is designed and managed post-project:

- how the buffer zone area that will be disturbed by the proposed project will be landscaped/planted and managed and
- how the buffer zone that is planned to be undisturbed by the proposed project will be managed.

However, if possible under the Comprehensive Permit process, given the limited mitigation options within wetland resources and their buffer zone, it is recommended that other mitigation that support wetland values be imposed in other areas of the project (see below).

Recommended Mitigation

The isolated wetland and its buffer zone are important for a number of wetland interests under the state and local laws: contributing to quality and quality of groundwater and related private drinking water supplies including pollution prevention, flood control/storm damage prevention, and wildlife habitat.

As to water quality, having a well vegetated buffer zone and eliminating sources of pollution/contamination are critical. Therefore, we propose a number of conditions and a small study to address these issues.

As to water quantity and flood control, maintaining the capacity of the isolated wetlands area is important and the below issues are raised for the stormwater management and for compliance with the DEP stormwater standards.

As to wildlife habitat, again, how the buffer zone is vegetated and then managed is important and addressing this overlaps with the recommended water quality work. Furthermore, wildlife habitat of importance to wetland species extends well beyond the 100-foot buffer zone.

<u>Buffer Zone Vegetation Plan</u>

To best design the permit conditions for how to vegetate and manage the buffer zone of the isolated wetland, the Commission requests a study of this area that addresses water quality and wildlife habitat issues and outlines:

(i) the types of new plantings (tree, shrub and herbaceous layers) in areas to be disturbed and their ongoing management and
(ii) the management of the part of the currently open field that is not planned to be disturbed.

This study would reflect the current wetland-related wildlife needs. This study, for example, would cover the specific plantings on the newly graded berms, whether the detention basins could be rain-gardens/habitat friendly, open field management to reflect wildlife habitat, and any additional field plantings for habitat value. Having a densely vegetated buffer zone will help with water quality and pollution prevention.

The "Landscape Improvements Plan" (dated 07-17-2023) does not sufficiently address these issues and only has "wetland restoration and bottom of detention basins NE WETMIX" and five trees. This study could be done by the developer and then reviewed by the peer reviewer and the Commission. This might be part of the overall landscaping plan to be provided by the developer. Alternatively, a consultant or peer reviewer TetraTech could undertake the study for the ZBA, presuming the ZBA can hire consultants for technical support beyond simply peer review – something that Conservation Commissions can do. Or possibly this work can be considered peer review and undertaken by TetraTech.

If the ZBA decides not to pursue this study, the Commission requests that it has the time to develop and put forth its own recommendations, though its resources for such work are limited.

Other Buffer Zone Recommendations

• Outdoor/Exterior Lighting can disrupt wildlife habitats. Lighting should be designed to avoid illuminating wetland areas, buffer zones and potential wildlife corridors. Requested conditions are: All outdoor and street lighting in and near (within, for example, about 30 feet of) wetland buffer zones will: (i) be directed away from wetland resource and buffer zone, (ii) be of the minimum wattage and numbers to achieve safety needs, (iii) be of a warm color of 2700K or less (which is better for humans as well), (iv) have timers to turn off or greatly reduce wattage between about 10pm and 5am, and (v) have photocells to turn off lighting when ambient lighting is sufficient.

• Pesticides and Fertilizer: No pesticide (which includes herbicides) or fertilizer use in buffer zone.

• De-icing chemicals: No sodium chloride will be used in the buffer zone. (Consider whether to specify acceptable types.)

• Snow Storage: No snow storage will be in the buffer zone and any run-off from snow storage will be appropriately treated before entering the buffer zone.

• Fill: Incorporate and follow the wetland Regulation 5.2 on using fill in buffer zone under the local by-law and regulations; see text in Attachment 1 at the end of this memo.

• Erosion/sediment control along the edge of the wetlands buffer zone should be extended to any areas where there will be planned work, including any tree clearing or solar array work.

Septic System Related Recommendations

The development proposes a large septic field with capacity for 32 units and 76 bedrooms located upgradient of the large wetland complex to the west. There is a risk of contamination of the wetland surface waters that needs to be avoided. Given the project's plan to create such an unusual, large, concentrated source of septage in an area of wetlands and private water wells, the Commission requests the following testing condition.

Requested conditions are: At the cost of the developer, before the start of construction, baseline groundwater quality tests for (i) nitrogen and (ii) one to two other septage indicators (e.g. caffeine or detergent brighteners, phosphorus or another indicator depending on cost and accuracy) will be done in two wetland areas downgradient of the septic field. Similar testing will be undertaken every two years (given uncertainty of travel time while balancing testing costs) after the start-up of the septic system use at the expense of the project's homeowners' association. The Commission also has the right to do some additional testing at its own expense. All testing will be supervised by either the Conservation Commission or its designee.

If the ZBA does not incorporate the above requested testing condition, the Commission would then request the following: The developer grants permission to the Conservation Commission to undertake baseline testing (before septic system operations) of water quality within the wetlands and their buffer zone as well as periodic similar testing in perpetuity. Such testing will be done in the presence of the project owners to the extent possible. (This condition was part of a past large affordable housing project permitting.)

In addition, it is requested to reduce the grading in the buffer zone related to the septic field to the extent possible.

<u>Stormwater Management/Flood Control</u>

Overall, the Commission is presuming that the peer reviewer will be ensuring compliance with the DEP stormwater standards, including examining all of the inputs and calculations and outside comments. The overall scale of the project introduces 6.57 acres of disturbed surface to the watershed contributing to the adjacent wetlands.

Some issues of particular importance include:

- The appropriate post-project flows to the two different existing wetlands and their different parts;
- The appropriate capacity of isolated wetland/pond area is both used in the stormwater analysis and is maintained post-project;
- The impacts and regulatory appropriateness of the stormwater connection along Farm Road to the wetland buffer zone in the southwest corner;
- The viability of the proposed detention basins adjacent to the pond in light of occurrences of seasonal flooding outside the delineated wetlands.

It is also important to note that soil conditions for the proposed detention basins within the buffer zone have not been tested (an RDA needs to be submitted for testing to take place). Although test pits are shown in basins B1 and C, the tests were never performed. The applicant opted to perform tests outside the wetland buffer zone in areas that did not require Conservation Commission permitting. Testing will need to be performed (permeability, groundwater, soil classification) in the areas of the detention basins to determine if they are appropriately designed.

As submitted previously:

For the peer review of DEP Stormwater Standards compliance, the Conservation Commission would like to note two related specific concerns at this point:

1. The Isolated Land Subject to Flooding ("pond" along Farm Road):
    a. The peer review should capture the pond's full flooding capacity based on the maximum extent of the "pond's" flooding [as under 310CMR10.57(2)(b)3.] and any impacts on this capacity by the project's proposed grading and impervious areas around the pond and any subsequent adverse impacts from any changes.
    b. The peer reviewer work should quantify changes in the hydrology of the pond in terms of quantities and seasonality in order to assess any adverse on this wetland resource in terms of the interests of as per 310CMR10.57, such as wildlife habitat, private water supply and prevention of pollution.
2. The stormwater system connection to a wetland buffer zone via a "pipe easement" along Farm Road going west from the project site: Though expected, the peer review should assess the compliance of this connection with stormwater standards and any related conditioning.

<u>Additional Recommendations Beyond Wetland Resource Areas and Their Buffer Zones</u>

As part of mitigation for alterations of the buffer zone as well as for general open space and natural resource benefits, the alteration of other natural unmanaged areas should be minimized. For example, any tree cutting should be minimized.

Also, as part of overall mitigation, the Commission also recommends that the following recommendations are also applied to other parts or the entire project:

- No pesticides or at least only pesticides that are of low toxicity and preferably considered organic.
- No fertilizer except for slow release organic nitrogen.
- No de-icing with sodium chloride.
- Apply the Commission's fill regulation to the entire project is/as needed.

Attachment 1
From the Sherborn Wetlands Regulations: 5.3 Fill

All fill used in connection with any project under the jurisdiction of the Commission will be clean fill, containing no garbage, refuse, rubbish, industrial or commercial or municipal fill or waste, demolition debris, or septic sludge, including, but not limited to lumber, wood, stumps, plaster, wire, rubbish, pipes, lathe, paper, cardboard, glass, metal, tires, ashes, appliances, motor vehicles or parts of any of the foregoing. No fill containing levels of oil or hazardous materials above GW-1/S-1 Method 1 Standards, as described in the Massachusetts Contingency Plan (MCP) environmental regulations as revised, will be used in connection with any project under the jurisdiction of the Commission.

The source of any fill will be made known in writing to a member of the Commission at least one week prior to placement at the site. All environmental reports and results of chemical testing of such fill will be filed with the Commission at this time. The Commission reserves the right to require specific additional chemical testing of fill by a third party, at the applicant's expense, prior to placement at the site.