



# Town of Stow Conservation Commission

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TO: Zoning Board of Appeals  
FROM: Kathy Sferra, Stow Conservation Director *Kathy Sferra*  
On behalf of the Stow Conservation Commission  
CC: Mark O'Hagan  
RE: Staff Comments on Residences at Stow Acres  
DATE: March 20, 2024

The attached memo summarizes the Commission's preliminary comments regarding the Residences at Stow Acres 40B project. The Commission's review generally encompasses wetland impacts, erosion and sediment control, and stormwater management. The Commission will need to review this project under the Massachusetts Wetlands Protection Act and associated regulations ("Act"), however the ZBA is being asked to waive the provisions of the Town of Stow Wetlands Bylaw and regulations ("Bylaw") for the project and 'stand in the shoes' of the Conservation Commission for the purpose of reviewing these issues under the local bylaw. Because there is a great deal of overlap between the requirements in the Act and the Bylaw, this memo reviews wetland issues in general for the project.

## **Wetland Delineation**

On January 25, 2022, the Commission issued an Order of Resource Area Delineation for the site confirming the boundaries of wetlands on the property under the Act and Bylaw. This ORAD is binding on the Town and on the applicant for a period of three years – meaning that the boundaries of the wetlands on site are legally fixed for the purposes of this application, except as noted below.

The Stow Conservation Commission reviewed and confirmed the accuracy of the resource areas shown on the **"Resource Area Delineation Plan in Stow Massachusetts for MCO and Associates," prepared by Stamski and McNary, Inc., Sheets 1-4 dated December 14, 2021, with a latest revision date of January 14, 2022.** Wetland resource area boundaries were originally flagged by B&C Associates in November 2021 and revised as a result of site visits by the Stow Conservation Commission. A series of small wetlands, streams, and ponds are present at the front of the site, with bordering vegetated wetlands, riverfront area, and bordering land subject to flooding (floodplain) associated with Elizabeth Brook, a perennial stream, at the rear of the site. The Commission made the following findings as part of this Order of Resource Area Delineation:

- 1) **The Commission has verified the wetland delineation on only those portions of the parcels shown on the above-referenced plans and with the following limitations:**
  - a) **Bordering Vegetated Wetland (BVW)** (state and local) – All flags were confirmed, as adjusted in the field, and shown on the above-referenced plan.
  - b) The WF51-67 Series drains via a culvert to the WF1-4 Series, as shown on the plans.

- c) The 200 Wetland Series drains via a channel toward a culvert at WF 201 to the 300 Wetland Series, as shown on the plans. The channel is not flagged, therefore the location of Bank cannot be addressed in the ORAD.
- d) Riverfront Area to Unnamed South Flowing Stream East of Parcel (state and local) – The RF -1 through RF-6 Series identifies the top of bank along the unnamed stream and the plans show the extent of Riverfront Area associated with this water body.
- e) **Buffer Area** (local only resource area): The plan depicts the 100' buffer to wetlands and other resources. These areas are protected by the Stow Wetlands Protection Bylaw and Regulations.

**2) The following Resource areas were not confirmed and should be addressed during the ZBA Comprehensive Permit and Conservation Commission Notice of Intent Review Process:**

- a) **Banks or Land Under Water to Streams and Ponds:** There are streams or channels within the A-series BVW, the 200-series, and the 400-series wetland which were not delineated in the field. No information was submitted to determine if they are intermittent or perennial streams, and no Bank or Riverfront Area determination has been made.
- b) **Riverfront Area and Bank to Elizabeth Brook** (state and local) – All 300-series BVW flags were confirmed as shown on the above-referenced plan. There are no Bank flags and the Riverfront Area to Elizabeth Brook is not shown on the plans. Elizabeth Brook is located immediately north of the subject site.
- c) **Vernal Pools** – There is a potential vernal pool near wetland flags 220 to 227, in an area with a great deal of woody debris. This area shall be investigated during vernal pool season and a report provided to the Commission prior to the submittal of a Notice of Intent for the development of the property. If the area is determined to be a vernal pool, appropriate documentation for certification should be submitted to the Massachusetts Natural Heritage and Endangered Species Program. The development does not affect this area.
- d) **Bordering Land Subject to Flooding** (state and local) – BLSF (floodplain) was not delineated on the plans but rather scaled from other plans and is present on the subject site. The Commission makes no findings regarding the boundaries/elevations of BLSF on the subject site, or the 100' buffer zone to this area under the Bylaw. Our understanding is that floodplain areas are within wetlands and will be added to the plan.
- e) **Culverts** – The Commission noted other culverts and pipes that may function as flooding or water diversion, field drainage or irrigation. It was not clear how these drainage features function to support the wetland resource areas or contribute to the interests of the Act or Bylaw. As part of design and preparation of the Notice of Intent, watershed and subwatershed plans should be prepared and stormwater management addressed to ensure that wetland hydroperiods are not significantly altered.

**3) The following REVISIONS were requested by the Conservation Commission during the wetland delineation process, and have all been made in the ZBA submittal:**

- a) The B Series has a culvert that flows out of it between Flags B-2 and B-3, to the 1 – 4 Series. A “hole” in the ground was observed in the lawn area off of Flag A-1 where flow could be observed.
- b) Evidence observed in the field indicates that the A-series channel likely drains into a culvert (Item #1 above) that is assumed to flow from Flag A-27 toward the 1 – 4 Series.
- c) At the field visit, it was agreed that Flag A-18 should be connected to Flag A-21, and flags A19 and A20 should be deleted from the plan.
- d) The 400-series wetland is shown as local bylaw only. This area should be shown as Bordering Vegetated Wetland.

### **Well Permitting**

On January 25, 2023, the Commission issued an Order of Conditions for the development of water supply wells at the rear of the property near Elizabeth Brook. This permit was issued under the Wetlands Protection Act and Town of Stow Wetlands Protection Bylaw. This work is within the 100' buffer to bordering vegetated wetlands associated with Elizabeth Brook and includes installation of three bedrock wells and site preparation work associated with the installation, including six 8' x 2.5' x 2.5' settling pits (two at each well location). Additional wells may be installed in line with the proposed wells to meet required design flows. At the conclusion of work, disturbed areas will be restored to the existing condition.

No work is proposed within the 35' buffer to wetlands except for discharging clean well water during pump testing. Erosion controls, consisting of straw bales and silt fence, will be installed at the 35' line which will serve as a limit of work. During the process of review of the project, the site plan was modified to move all erosion controls to or outside the 35' buffer and require additional erosion controls associated with well discharges.

Conditions in the permit require notification to the Conservation Commission 72 hours prior to the start of construction, installation and inspection of erosion and sediment controls (straw bales and silt fence), staking of pump test discharge locations, management of pump test discharge water, limits on storage of hazardous materials, and protection of the culvert connecting the southern wetland to Wheeler Pond/Elizabeth Brook from damage from heavy equipment.

**Given the existing well permit, the ZBA should not review wetland issues in conjunction with the proposed wells as this review has already been done. In addition, any issues associated with the drawdown of nearby resource areas is properly within the scope of DEP's well permitting. Not yet reviewed by the Commission are any physical construction impacts associated with the well line, storage tank and treatment facility.**

### **Proposed 40B Development**

The following development-related activities associated with the proposed project are located within areas subject to the jurisdiction of the Conservation Commission:

- Stow Acres Drive – Station 0+00 to Station 6+00 and associated grading
- Stow Acres Drive – Station 35+00 to Station 36+00
- A small Section of Alley C and associated grading
- Grading associated with the emergency access drive
- All or portions of unit/lot development for Units 1, 4-9, 16, 17, 21, 22, 42-51, 107-110, and C3, C4, C6, C11 and C12.
- Grading behind units 20-23
- Wastewater treatment building
- Stormwater outfalls
- Subsurface chambers
- Several retaining walls
- Infiltration Basin 1G
- Water main, treatment building, tank

- Access Trail as it crosses WF 401-414 on the east side of the project
- Temporary Sediment Basin

### **Local Bylaw Waiver and Issues**

The applicant is requesting that the ZBA waive compliance with the provisions in the Stow Local Wetlands Bylaw and Regulations with regard to the proposed project. If granted, this means that the Commission would review and approve the project solely under the requirements of the Massachusetts Wetlands Protection Act and associated regulations. The Bylaw and regulations are more stringent than the Act, particularly regarding the requirement for a 35' undisturbed buffer to wetlands, protection of the 100' buffer zones as a resource area, and jurisdiction over land within 200' of ponds, so the ZBA is being asked to waive these more stringent requirements given the public interest in providing affordable housing the site.

Of these, the following items are within the 35' "no disturb" buffer required by the Stow Wetlands Protection Bylaw and should receive scrutiny:

- Stow Acres Drive – Station 0+00 to Station 2+50 and associated grading
- Grading Associated with the Emergency Access Drive and wastewater treatment building
- Retaining Walls at the intersection of the Emergency Drive and Stow Acres Drive
- Grading and/or retaining walls for Units 5-8, 21, 22, 43-50
- Access Trail as it crosses WF 401-414 on the east side of the project
- Grading for Alley C
- A stub roadway that leads to the edge of the pond
- Units 43, 44, 46, 47, 48
- Stormwater outfalls behind unit 44, 50
- Temporary sediment basins near WF 1-55 and the WF C series
- Any development within 200' of the B series wetland which is shown as Bylaw only but connected by a subsurface drain that leads to the west which makes it jurisdictional under the Act.

**Of these items, those of greatest concern for additional scrutiny due to their proximity to wetlands are the wastewater treatment building, grading and/or retaining walls for Units 5-8, 21, 22, 43-50, Units 44 and 48, and grading for Alley C. We are particularly interested in seeing any proposed landscaping in these areas.**

It is not uncommon for applicants to request waivers within the 35' buffer. The Commission generally treats new development and redevelopment in these areas somewhat differently. When new development or expansion of impervious surfaces is proposed within the 35' buffer, the Commission generally applies the requirement fairly strictly, either prohibiting new development, or when impacts are unavoidable and/or for a project that provides a public benefit, requiring an equivalent area of mitigation area be provided – this might be removal of impervious cover and/or restoration of disturbed areas within the 35' buffer, invasive species management, or some other benefit to the wetland resources on the site. In already disturbed areas, the Commission may allow new development, but seeks to limit any increases in impervious areas or advances toward the wetland and mitigate unavoidable impacts. We look forward to seeing proposals for mitigation for unavoidable work in the 35' buffer.

In general, ponds and the larger wetland areas of the site are more sensitive to the impacts of disturbance and new development. I would prioritize protection of the wetlands associated with the riparian corridor along Elizabeth Brook and its adjacent wetlands, protection of the 200 series wetland at the rear of the site, and protection of the ponds along western property line – both the linear ponds and “Dog Bone” Pond. Possible mitigation measures that present themselves on this site might include restoration of existing disturbed areas of the 35’ buffer with tree or shrub plantings and/or native grasses that are allowed to become restoration areas. For example, a commitment to reseed/plant portions of the greens and fairways at the rear of the site and mow them no more than annually so that they become meadow habitat would be a benefit and would likely be consistent with the town’s vision for the management of the Town-owned portions of the North Course. Another restoration opportunity would be to daylight the crushed culvert between WF 201 and WF 335 at the rear of the site and span the trail crossing in this area as the existing culvert is no longer functional. Any restoration plans should be developed by the applicant’s landscape design consultant and restoration should be done with professional oversight.

#### **Comments on Erosion Controls**

We look forward to the peer review consultant’s comments on erosion and sediment control. Several methods of erosion control barriers are detailed in the plans without discussion of which will be used in which locations. These include 12” filtermitt and silt barrier with strawbales. In general, the Commission prefers installation of the latter particularly for large sites or when work is proposed close to wetlands.

#### **Comments on Stormwater Management**

We look forward to the peer review consultant’s comments on stormwater management. We have a slight concern about discharge from DMH-G2, which is located upgradient of the proposed walking path and we want to make sure it does not undermine or saturate the path.

#### **Miscellaneous Questions/Comments – Wetlands Issues :**

1. How will the two drain lines shown on the plan near Station 4+00 on Stow Acres Drive be treated and/or can surface hydrology in these areas be restored during construction? If left underground, to what extent do these culverts need protection during construction?
2. Is the short access path to the shoreline of Dog Bone Pond really needed? This pond is expected to be a major feature of the adjacent town land and we’d like to minimize impacts in this area. Perhaps the plan could take advantage of the topography with some overlook benches that avoid the necessity of constructing the path down the slope?
3. Will the existing pump house and abandoned oil storage tank along the shoreline of Elizabeth Brook be removed? This would be a benefit of the project within the 35’ buffer.
4. Will the existing logs that have been dumped by Stow Acres in the 200 series wetland be removed during construction? What is the status of the vernal pool investigation of this area required by the Conservation Commission in the Order of Resource Area Delineation? If not already complete, the work should be done this spring.
5. The portion of the access path that crosses the 400 series wetland on the east side of the property must be constructed on boardwalk supported by helical piers. In general, the plans should show the proposed width and surface material of the proposed path. It is desirable to maintain the ability of this path to serve as a fully accessible trail, linking up with the trail on town land.

6. There are several headwalls that are proposed to discharge within the 35' buffer. All headwalls should have rip rap at their outlets.
7. How will snow storage be handled on the site. Stow should not be pushed into wetlands or onto the pedestrian trail, which is likely to be used for cross-country skiing.
8. Given the possibility that the houses on exterior lots will not have the shape shown on the plan – or may be larger or small, how will modifications be handled in terms of wetland permitting. Typically, the Conservation Commission would see any changes from what is proposed on the plans. Does it make sense to have a filing for each single family house lot?
9. Proposed plantings are not specified but should be native and ideally species that will thrive as temperatures increase.
10. We would recommend that the proposed infiltrations not be fenced in a manner that would interfere with wildlife movement across the site. If possible, it would be desirable not to fence these areas.
11. Following discussion with the ZBA, the Commission can recommend permit conditions in line with our typical permits. We should also discuss responsibility for construction monitoring and compliance regarding the wetland-related conditions in the ZBA's permits.

#### **Miscellaneous Questions/Comments - Open Space Issues**

12. In our experience as managers of Stow's Community Gardens, garden plots involve significant management and may require fencing, a source of water, composting, and regulations/oversight to keep them from becoming unsightly. Residents will also want to be able to drive to plots for loading/unloading. Given that there is existing space in the Town's Community Gardens, we wonder whether the 24 plots will fill and who will manage/oversee them?
13. We think it is desirable to have at least four locations where residents can access the adjacent town land – front, middle and back of the project, and via the recreational trail. We wonder if it is possible to design a connection between the two sites in the area of the two infiltration basins along the west side.
14. Who will make management decisions regarding the open space? Who will maintain the land? And is there an opportunity for a role for the Town in decision-making to ensure consistency with plans for the Town-owned land?
15. Can there be a small 4-5 car parking lot at the rear of the site outside of the Zone 1 to serve those who would like to access the trail there or hand carry a canoe or kayak to the river? Is a launch site possible and would it be agreeable to DEP? This is an activity that has been supported in the town's master planning effort, but the best site is on this parcel.
16. A bicycle rack may be desirable at the rear of the project.