



City of Cambridge
Department of Public Works

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January 18, 2024

TO: Conservation Commission
Jennifer Letourneau, Director

FROM: Kara Falise, PE
Supervising Engineer

RE: Jerry's Pond Notice of Intent

The Engineering Division is in receipt of a Notice of Intent (NOI) dated December 2023 for the redevelopment of the area known as Jerry's Pond. The City engaged Kleinfelder (KLF), as a consultant, to complete a peer review of the filing for compliance with the Wetland Protection Act (WPA). Please see attached a memorandum, dated January 17, 2024, with KLF's comments on the NOI submittal. The Engineering Division would recommend that the Commission request that the proponents respond to each specific review comment that is presented in the memo.

Summary of the requested responses:

1. The proponents shall provide further clarification of the impacts to the resource areas. The temporary (during construction) and permanent (completed project) impacts need to be calculated and mitigated.
2. The selected contractor will have control of means and methods to construct the project. The proponents should provide some discussion specific to the maximum construction impacts and construction mitigation methods for the work.
3. The operation and maintenance plan for the site after construction should include a discussion on stormwater infrastructure, floating wetlands, plantings/trees, invasive plants, and snow removal.
4. The project's proposed stormwater components were designed to the "Maximum Extent Practicable" under the redevelopment standard. The proponents shall provide additional information on specific constraints, site features that limit the project's ability to fully meet the Stormwater Standards and review the alternatives that may have been considered.

The Engineering Division will have the following oversight of the project as it moves to construction that provide opportunities to comment and coordinate details of the redevelopment and confirm that all design progression and construction is in line with the discussions and conditions in the Commission's Order of Conditions (OOC).

- The project will trigger a Stormwater Control Permit from the DPW. This Permit requires the submission of a Construction Phase Erosion and Sedimentation Control Plan, Stormwater Management Plan that demonstrates compliance with City of Cambridge Stormwater Standards and a Long-Term Operation and Maintenance Plan for constructed BMP's. This permit includes construction phase inspections and post construction audits of BMP maintenance activities.
- The project will disturb over an acre of land area therefore will require coverage under the EPA NPDES Construction General Permit. This permit requires the Site Operator to prepare a Stormwater Pollution Prevention Plan (SWPPP) which will outline additional construction phase measures to be taken by the Contractor to minimize adverse impacts during Construction.
- The project will be filing with the Planning Board for a Flood Plain Special Permit and will have a public hearing associated with the process.



MEMORANDUM

TO: Jennifer Letourneau, Director – Cambridge Conservation Commission

FROM: Greg Avenia, PE
Daniel Pasquale, PE
Emma Mrowka, PWS

DATE: January 17, 2024

SUBJECT: IQHQ – Jerry’s Pond NOI Review

CC: Kathy Watkins, Jim Wilcox, Kara McSweeney Felise, City of Cambridge
Chris Balerna, Kleinfelder

Kleinfelder has conducted a review of the Notice of Intent (NOI) for the proposed improvements surrounding Jerry’s Pond (the Project). The NOI was prepared by Vanasse Hangen Brustlin, Inc. on behalf of IQHQ-Alewife, LLC (the Proponent) and was received January 9, 2024. The Project includes construction of elevated boardwalks and decking with seating areas supported by helical piles along the southern and eastern edges of the pond. Additionally, the Project proposes construction of a community garden and outdoor classroom, a new shared use path along Rindge Avenue fronting the pond, a new walkway west of the pond, pedestrian connections from the pond to Alewife Linear Park, and two floating wetland platforms to be placed within the pond. Portions of the Project area lie within the FEMA 100-year floodplain and are characterized as Bordering Lands Subject to Flooding, Bordering Vegetated Wetland, Land Under Waterbodies and Waterways, and Isolated Land Subject to Flooding, all of which are resource areas protected under the Wetlands Protection Act. Additionally, portions of the Project area lie within the 100-foot buffer zone to Bordering Vegetated Wetlands.

We note that the Proponent has enclosed with the NOI submittal an Invasive Species Management plan dated November 28, 2023, a Stormwater Management Report with associated HydroCAD information and water quality calculations dated November 29, 2023, and a set of Design Plans dated December 12, 2023. The scope of the submitted NOI is limited to work surrounding Jerry’s Pond, though the plans and stormwater report depict a previously permitted compensatory flood storage area related to a development project located on the same parcel.

We offer the following comments/questions with respect to the submittal.

NOI Application & Narrative

1. A 5 square foot wetland replication area is proposed, based on permanent impacts calculated as the diameters of all helical piles to be installed within Bordering Vegetated Wetland (BVW). The narrative states that 53 square feet of wetland would be temporarily impacted due to the diameter of the helical plates for each pile in BVW. Given that the



- helical piles will be located below the boardwalk, it is unlikely that vegetation would naturally re-establish itself to its full pre-construction state in the helical plate footprints immediately surrounding the piles. We recommend that the wetland replication area be equal to the final temporary and permanent disturbance associated with pile installation.
2. The narrative states that the wetland replication area will be graded to achieve wetland hydrology. Section A-AA on sheet L2.1A includes a callout stating no change to existing topography. Please coordinate this section view with the narrative and clarify if there will be grading to change elevation within the wetland replication area, or if the grading as mentioned is in reference to the excavation of 12 inches of the existing soil in order to backfill with wetland soils. If no elevation change is proposed, clarify how wetland hydrology will be achieved.
 3. Verify and document that WPA area temporary disturbance quantities reflect construction-related temporary impacts, inclusive of areas necessary for equipment access to install helical piles.
 4. More information is needed on the potential impacts, benefits, and construction and planting methods for the two floating wetlands. The narrative states that the purpose of the islands is to promote wildlife habitat, however they are not discussed in the Mitigation Measures section. More details on the existing condition including depth and extent of aquatic vegetation of Jerry's Pond would be helpful in assessing the impacts/benefits of the floating wetlands. More detail on the construction means and methods, including equipment, staging, supervision, and post-installation monitoring is needed to understand potential impacts.
 5. The BVW surrounding Jerry's Pond is described in the NOI narrative, wetland data sheets, and photographs as a wetland fringe dominated by shrubs (many being invasives) and *Phragmites australis*. The proposed work in BVW does not discuss if vegetation cutting will be necessary in order to install the boardwalk. Removal of invasives and replanting is described for 4 feet on either side of the boardwalk (covering both upland and wetland areas). Clarify if any proposed vegetation management and replanting is proposed below the boardwalk. The BVW should be labeled on the profile view and the ground surface (existing vegetation, planted vegetation, other, etc.) should be clarified. Changes to BVW vegetation/BVW ground surface below the boardwalk should be accounted for in the impact numbers, or clarification is needed for how there is no impact to BVW except for the helical plate installation.
 6. Provide an anticipated sequence of construction and proposed work methods.

Stormwater Management Report

7. The Stormwater Management Report states that the Rindge Avenue sidewalk area qualifies as redevelopment, thereby allowing compliance with the MA Stormwater Management Standards to the Maximum Extent Practicable (MEP). Please update the report to explain why MEP stormwater compliance is assumed to be applicable for the remainder of the site.
8. Please provide additional justification that compliance with the MA Stormwater Management Standards is achieved to the MEP for the following standards:
 - a) Standard 2—post-project peak discharge rates were noted to increase throughout the site, while the standard requires peak discharge rates to be less than or equal to the pre-project discharge rates for the 2- and 10-year 24-hour storm events.



Document consideration of design alternatives that would provide additional peak rate mitigation measures (i.e. additional use of porous pavement, stabilized stone dust, infiltration trenches for pathways, and/or enlargement of flood capacity) and document feasibility of implementing these measures.

- b) Standard 4—calculations included with the report show maximum removal of 78% TSS is achieved for the proposed wet water quality swale treatment train, while the Standards require removal of 80%. Document consideration of design alternatives that would provide additional treatment and document feasibility of implementing additional treatment practices.

Project Plans

9. The plans show a pea gravel diaphragm that borders the eastern edge of the flexible porous pavement walkway west of the pond. The diaphragm extends for most of the walkway's length but terminates approximately 120 feet from the north end of the walkway. Please clarify the intent for the pea gravel diaphragm and why it is discontinued at the northern end of the path.
10. Section B-BB on sheet L3.1 shows a "Potential Fill Area" held back by staked coir logs that appears to encroach on the pond area below the flood elevation. Please verify that there is no fill proposed within BLSF due to grading or items other than bracing/piles as stated in the NOI Narrative. If other fill within BLSF is proposed, the proponent should demonstrate that the compensatory flood storage area accounts for this fill.
11. Detail 4 on sheet S1.2 (Timber Decking Detail) shows a 0" gap between the pressure-treated boards making up the boardwalk decking. However, page 6 of the NOI Narrative refers to a 1" spacing between boards, and section 2.2.3 of the Stormwater Management Report refers to "decking that allows runoff to drain through." Please correct the discrepancy between the plans and the reports. Verify that proposed spacing between boards, if any, conforms to applicable ADA requirements.
 - a) If there is no gap, post-construction hydrology should not be reflective of the ground surface below the decking.
 - b) If there is a gap, provide explanation of the groundcover below the decking, and if vegetated, clarify how vegetation will establish in highly shaded locations (see next comment).
12. Clarify plan for ground treatment below the proposed boardwalk. Some existing slopes beneath the proposed boardwalk/decking are steep and unlikely to vegetate due to shading. Clarify whether measures to stabilize soil below the boardwalk erosion control are necessary.
13. Detail 1 (Flexible Porous Pavement) on sheet LD1 does not specify the pavement material. Please clarify the material of the flexible porous pavement. A 2" minimum stone base depth above tree roots is called out on the detail. Verify this depth is sufficient to protect roots and ensure the effectiveness of the porous pavement.
14. Please show the construction staging area on plans. Visually describe anticipated sequence of construction.
15. Please show a plan view or views showing locations of resource area impacts.



Operation and Maintenance Plan

16. A flexible porous pavement walkway is proposed. Vacuuming of porous pavement is necessary to maintain its effectiveness. The O&M Plan does not discuss vacuuming—verify the frequency of vacuuming required to maintain flexible porous pavement material and add vacuuming to O&M plan.
17. Please revise the address at the top of the Stormwater Management System Inspection Form to the project site.
18. Please provide a post-construction monitoring plan inclusive of all site features (wetland replication, floating wetlands, landscape areas, boardwalk decking, invasive species removal, floodplain compensation area, etc.).