



City of Cambridge Conservation Commission

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Public Meeting – Monday, March 27, 2023 at 7:00 PM Zoom MEETING MINUTES

The following meeting minutes were taken by Tracy Dwyer and are respectfully submitted.

Present Commission Members: Jennifer Letourneau (Director), David Lyons (Vice Chair), Kaki Martin, Kathryn Hess, Elysse Magnotto-Cleary

Absent Commission Members: Purvi Patel (Chair), Erum Sattar, Michelle Lane

Attendees: Tracy Dwyer, DPW; Jim Wilcox, DPW; Duke Bitsko, Hatch Engineers; Megan Shave, Department of Conservation and Recreation; Sasha Vallieres, Charles River Conservancy

David Lyons opened the meeting.

7:00 – Request to Extend Order of Conditions DEP File #123-294 Hell's Half Acre

Jennifer Letourneau Director of the Conservation Commission stated that Megan Shave were in attendance from the Department of Conservation and Recreation (DCR) and Sasha Vallieres from the Charles River Conservancy (CRC). Jennifer stated that they receive a letter in February regarding the extension and was it was filed in accordance with the Wetlands Protection Act well in advance of it expiring and meets the extension.

Jennifer stated that back in February Laura Jasinski from CRC was before the commission to give a presentation on Hell's Half Acre and Jennifer presented her slides from her presentation. Sasha Vallieres from CRC reviewed the project with the commission. She stated that this is a seven and half (7 1/2) acre site and on this site, they have identified four (4) habitat types. Sasha stated that her role with the project is to work with DCR and volunteers from the community to help with manual removal. Sasha stated that the project has been relatively successful and they are awaiting what spring brings with primarily the regrowth of buckthorn and garlic mustard. She stated that they also treated some honeysuckle but will work with the contractor LSI in the spring about what the best approach will be to manage these species.

Megan Shave from DCR stated that she has been overseeing a lot of the hand pulling work that Sasha is doing, which includes the woodies and the ground cover that Sasha mentioned. The contractor LSI has been handling the herbicide application and they have been also conducting

surveys of the area for the Japanese Knotweed and the phragmites common weed which have been receiving those herbicide treatments over the last three (3) years. The contractor LSI has been measuring the percent cover of those two invasives in their treatment areas over the past three years. Megan stated that in 2020 they reported 75% coverage of knotweed and phragmites in those treatment areas. She stated that since 2020 the report stated that over the last three years, they have been able to cut the knotweed down to less than 25%. Megan said with the phragmites they were able to reduce that as well and from 2020-2021 they have a 50% reduction and then again in 2022 they were able to reduce it again by 50%, so they are hopeful they will be able to continue to thin it out. Megan said that they have LSI under contract for another two years, so they are hopeful to see more improvements in the area. Megan stated that this is her first year with DCR as the Senior Inland Ecologist for the Boston and North Regions and she will work with Sasha going forward in the coming years as she continues with her hand pulling efforts. Sasha said that over the last year they have had numerous volunteer events and will continue those into this year. She said it's a great site to work with volunteers to help with the restoration project, they have worked with kids and summer camps in the past with helping the contractor LSI with some of the pre-cutting of the knotweed.

Jennifer stated that there were no attendees present for public comment.

Jennifer stated that this Order of Conditions is up for an extension for three (3) years.

David Lyons asked if there were any changes to the Order of Conditions.

Jennifer stated no.

David asked if they would be back for another extension after three (3) years.

Sasha said she anticipates this being a forever project, but in the future just a maintenance project with a treatment or two going forward.

David asked the question of whether the commission would like it to be extended to every five (5) years.

7:11 – The commission approves the Order of Conditions for three (3) years.

4 – In favor, 3 – Absent, 0 – Opposed, 0 – Abstained

7:18 – Request for Determination of Applicability

Fresh Pond Reservation Golf Course

Asphalt Path to Boardwalk

Duke Bitsko from Hatch Engineers was in attendance to present the project. Duke stated that on behalf of the City of Cambridge, Hatch and Kleinfelder have developed a series of plans to remove seventy-five (75) linear feet of asphalt golf cart path and replace it with a low timber boardwalk which will be on Sona tube footings at the Fresh Pond Golf Course. Duke stated that the main purpose of the project is to provide an improved golf cart path during heavy rain events mainly that occurs in the spring. Duke stated that the area of improvement would be the cart path between the first and ninth fairways, where Little Fresh Pond is to the north and Glacken Field, the golf course clubhouse and tennis courts are to the south as well as Huron Avenue. Duke presented an existing conditions map of the area where he showed the located of the upper stormwater pond and outlined the boarding vegetated wetland as well as the one hundred (100') foot buffer line. Duke stated that the project falls 100% in the one hundred (100') foot buffer

zone and Fresh Pond is to the right. Duke presented a picture and explained that the path is about seven feet wide, also in this picture you can see where the water gathers even after a day or two after the rainfall event. Duke stated that there is a swale that was constructed with an underdrain that goes into the pond, but when the pond is full even with the swale and underdrain it still collects water in this area. Duke presented the plan for the boardwalk and stated that the boardwalk will be seventy-five (75') feet long and have a maximum height of under thirty (30") inches. Duke stated that there will be a compost filter sock placed during construction between the stormwater pond and the new boardwalk. Duke stated that nine hundred and thirty (930) square feet of impervious surface will be removed as part of the project, and they will replace four hundred and sixty (460) square feet of asphalt path because of the realignment. Duke said there will be a reduction of impervious surface for this project of four hundred and seventy (470) square feet. He said that the boardwalk as a fifteen (15') foot spacing for the concrete footings which will be placed in twelve-inch (12") diameter Sona tubes. Duke stated they are in the process with the Geotech and structural engineer working with the city and DPW staff to evaluate some soil borings to provide proper spacing for the footings. Duke explained they are just waiting for the right time to get that information and he stated that the footing size may get a litter larger or a little smaller. Duke stated if there was a change they will make sure that they report that back to the commission. Duke stated that they anticipate the construction to begin in April, May at the latest and would take approximately five (5) days. He stated that any sediment that would be accumulated behind the compost filter sock would be removed and disposed of offsite as will the asphalt path and the gravel sub base material that will be removed. The biodegradable compost filter sock will be cut open and the mulch will be spread onsite and the wooden stakes from the filter sock will be removed. Duke presented a detail of the boardwalk; he stated that the asphalt path is seven (7') wide and the boardwalk is proposed to be eight (8") wide with bumpers on either side which is enough clearance for mainly just golf carts. He stated that the footings are currently shown at forty-eight (48") inches which is just below the New England frost steps that may need to change based on the Geotech information. Duke stated that there was a peer review done of the project by STV. Duke went over the comments, he stated that the ones of most concern were submitting a locust plan and that they can provide the commission one. Duke stated that they submitted a photo log but it must not have been submitted to STV. Duke stated that the comment addressing the contractor's responsibility to remove the sediment offsite, and that comment has been addressed. Duke stated that comment number four (4) is up to the commission that this project was submitted as a Request for Determination (RDA) the suggestion was whether the commission would rather go with a Notice of Intent (NOI). Duke said that comment number five (5) they were looking for more grading information as Duke mentioned earlier there is no grading, or no proposed grading, they are taking up the asphalt path putting back soil and they will either sod or seed it and keeping the same swale underneath the boardwalk.

David Lyons stated that on the permitting process whether it's an RDA or a NOI, what is the theory it should be an RDA.

Jennifer stated that it was buffer zone only, there is no filling, altering or dredging in a resource area so it is a negative determination.

David had a question about the swale.

Jennifer stated that adjacent to the asphalt path there is a clean out and there is an underdrain that runs under the ninth green to the pond.

Duke agreed with Jennifer, and he stated that two feet (2') under there is a six (6") inch diameter perforated underdrain that is wrapped in filter fabric surrounded by gravel. He stated that when there is a lower rainstorm event that will help convey the water and that at the end of the pipe continues to the left and ends up directly into the stormwater pond.

David asked if the two stormwater ponds were built as part of the golf course.

Duke agreed with David. Duke also added that historically this was part of a larger wetland system associated with Little Fresh Pond and at one point was connected to Fresh Pond before they put in the perimeter road about hundred (100) years ago.

Jennifer went back to David's earlier question about the RDA, she stated that it meets the negative determination to the work described in the request is within area subject to protection under the Wetlands Protection Act but will not remove, fill, dredge or alter that area, therefore the work does not require a Notice of Intent.

David asked if there was other work that could be done while this project is going on that makes sense, like other work on the swale or is it functioning.

Jennifer said the swale is working well and she said that there really shouldn't be a path at this elevation because that is where the water wants to be. Jennifer stated that by putting in this elevated boardwalk this will allow the water to go where it needs to be.

Duke added that the hydraulic system is the water goes from the golf course to the upper stormwater pond and from the upper pond to the lower stormwater pond and from the lower pond to a broad swale and the broad swale connects to Little Fresh Pond. Duke stated that Little Fresh Pond has a pump station and the water from Little Fresh Pond is used for irrigation and one of things they talked about the city with was in anticipating of a larger rainfall event they could lower the elevation of Little Fresh Pond to accept more water to reduce the number of impacts to the golf course. Duke stated that this is something that DPW is looking into to be proactive.

Kaki Martin stated they are planning on using Sona tubes and that their size and depth are still being confirmed.

Duke stated yes and because they are working with Geotech and structural engineers he said historically they are overly conservative. Duke explained that is why they gave the commission the worst case scenario and why they put the footings fairly close together and why they were using the concrete Sona tubes but there could be a way to be a bit more sensitive. Duke stated that the Sona tubes are a little bit cheaper than the helical pier system which would be less intrusive. He stated until they can get the information from the soil borings they wanted to be conservative what they represented to the Conservation Commission.

Kaki stated as Duke knows that the helical pier system would be more site sensitive.

Duke stated that there are three to four other boardwalks that were construction adjacent to Little Fresh Pond that were built on a diamond pier system and he said that was the first and only time they ever used those and twelve (12) to fifteen (15) years later they are still holding up well and those were designed mostly for pedestrian traffic and not golf carts. Duke stated that because this boardwalk will be used for golf carts as well as pedestrian that is why the structural engineers are proposing something a little bit more substantial.

Jennifer wanted to confirm with the commission that all they need to do is two test pits and confirm with the Geotech what the soils look like.

Duke stated that they do have some soil boring test results from testing they did back a while ago for the bordering vegetative wetland, but that information was not good enough for the Geotech engineer.

Kaki stated she is okay with a negative determination, but she would like to know how everything resolves in terms of the structural construction. She is not making a motion but is bringing it to the commissions attention and she would like to see if it can be worked out so they can use the helical pier system.

Kaki asked if Duke could explain to the commission about the constructability with the diamond pier system rather than what they are going with in the drawings.

Duke stated that the system they brought before the commission is a Sona tube that is pre-fabricated and is twelve (12") inches in diameter, they would bring a small machine in and drill a hole and drill down to forty eight (48") inches plus eight (8") inches for gravel and that soil from the drilling will come out, removed and taken offsite, the Sona tube will be put into place they will pour concrete to the depth and then build the boardwalk on top of that. The helical pier system would also use a small machine like a Bobcat and it has an instrument on the front which drills a stem into the ground that would stay there and the design of the stem would be based on the soil properties and they would drill the stem down till it reaches a certain torque within the existing soil and once the torque is reached they cut the metal drill stem and build the boardwalk on top of it. Duke stated that at Blacks Nook there is a boardwalk that goes out into the pond, and he thinks that there was a total of eighty-eight helical piles used to construct the boardwalk and each one had a different depth to it and the shallowest one was around twenty (20') feet and the deepest was about thirty-five (35') feet. Duke stated that there is less soil that comes to the surface using the helical pier. Duke stated the design using the Sona tubes there will only be about eight holes drilled for the tubes. Duke said in his experience these drillings will be done in a day and the soil will be removed the same day.

David stated that he agrees with Kaki, and they should also look at constructing the helical pier system, but he said that on the determination he thinks its going to be a negative 3, it's in the buffer zone but it will not affect the resource area, and the stormwater pond and they can condition that on the Geotech studies.

Kathryn Hess wanted to confirm with Duke that what he is presenting is the worst case scenario and will not be putting in more piles or larger diameter pilings. Kathryn also stated we could nudge the city to do the right thing by keeping this open, she couldn't figure out why they would need to have this extended.

Kaki stated that she does not think the commission needs to have this extended but can add in a condition that the commission gets a report back on how things were constructed and what the outcome was of the test pits.

Duke added that this designed was vetted through the golf course management team and recreation group so in terms of the length and width of the boardwalk that would not change, and the only possibility would be a change in the number of tubes and spans.

Jennifer stated that there were no attendees present for public comment.

7:46 – The commission approves a negative determination number three (3) working in the buffer zone that will not alter the wetland and subject to the condition that the commission gets notified about the construction method for the piles.

4 – In favor, 3 – Absent, 0 – Opposed, 0 – Abstained

7:47 – Administrative Topics

Meeting Minutes from March 13, 2023

4 – In Favor, 3 – Absent, 0 – Opposed, 0 – Abstained

7:49 – Meeting Adjourned

4 – In Favor, 3 – Absent, 0 – Opposed, 0 – Abstained