

TOWN OF HULL CONSERVATION COMMISSION

Meeting Minutes February 14, 2023

Members Present: Paul Paquin (PP), Chair, Sam Campbell (SC), Lou Sorgi (LS) Tammy Best (TB), Katherine Jacintho (KJ)

Members Absent: none

Staff Present: Ian MacDonald (IM), Conservation Administrator, Renee Kiley (RK), Conservation Clerk

Staff Absent: Chris Krahforst (CK), Conservation Director

6:30

1. Call to Order

- a. Review of Agenda, Overview of Hearings Procedure

2. Notices of Intent

325 Nantasket Ave (HRA Lot). Map 33/Lot 066 (SE35-1745) Continuation of a Public Hearing on the **Notice of Intent** filed by **Hull Redevelopment Authority** for work described as: **After-the-fact parking lot. Abutter Notification:** proof provided. **Resource Areas: Barrier Beach** (storm damage protection, flood control, wildlife habitat); **Coastal Dune** (storm damage protection and flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: AE 10'**, (storm damage and pollution prevention, flood control).

Representatives: Bartley Kelly, Chairman HRA

Abutters/Others: none

Documents: Proposed Plan, Memo from TEC

Kelly presents above project: This lot was used as a parking area for 50 years and is now leased to the Nantasket Beach Resort. TEC conducted test pits and collected soil samples and produced a report addressing stormwater runoff; the area is gravel parking lot with no formal (stormwater) drainage system; the water drains into the sandy soils, (document shown). The applicant's coastal geologist Stan Humphrey submitted a report characterizing wetlands resources. The Commission asked if stormwater report requirements are met? Any concern with it being so close to an Area of Critical Environmental Concern (ACEC)? Based on the (TEC) report, runoff won't reach the ACEC. A special condition was proposed to address any future negative effects on the ACEC and require the property owner to act on (observed impacts).

Motion to issue an Order of Conditions with the ongoing special condition: if there is any effect on the adjacent Weir River, which is an ACEC, that the applicant will have to take action to mitigate by LS 2nd by SC. Roll Call: TB-aye, SC-aye, KJ-aye, LS-aye, PP-aye.

259 Kingsley Road. Map 22/Lot 142 (SE35-1742) Opening of a Public Hearing on the **Notice of Intent** filed by **Jeffery Asmar** for work described as: **Install deck, footings, and concrete pad. Abutter Notification:** proof provided. **Resource Areas: Barrier Beach** (storm damage protection, flood control, wildlife habitat); **Coastal Dune** (storm damage protection and flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: AE 10. Site visits done: 12/27.**

Representatives: Jeffery Asmar

Abutters/Others: none

Documents: Proposed Site Plan

Asmar presents above project: When I replaced the windows and siding, we found out that the front entry way stairs are in bad condition and would like to remove and replace. The Commission noted that the plan submitted with the NOI a plot plan based on the Assessor's map and not a survey plan. The Commission asked if the stairs and landing are on Town property (i.e., the road layout). Asmar:

everything was done before I bought the house. I just need to replace the stairs. The Commission requires permission from the Town to maintain the stairs in the current location (or a survey showing this is within the boundaries of 259 Kingsley).

Motion to issue an Order of Conditions with the special condition that the applicant seeks a letter of permission to maintain the stairs from the town, 2nd by SC. Roll Call: SC-aye, KJ-aye, LS-aye, PP-aye, TB-aye

20 Sunset Ave. Map 16/Lot 008 (SE35-1744) Opening of a Public Hearing on the **Notice of Intent** filed by **John Struzziery** for work described as: **Build boathouse,/garage addition, paver driveway, patio, stone fireplace/pit, dry wells, (2) raised planters and shed, landscaping, and fence. Notification: proof provided. Resource Areas: Barrier Beach** (storm damage prevention, flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: FEMA AE 10'** (storm damage and pollution prevention, flood control).

Representatives: John Struzziery

Abutters/Others: none

Documents: Proposed Site Plan

Struzziery presents above project. The Commission asks about the shed (shown on the plans) Struzziery: The current shed will be moved offsite and replaced with a smaller shed. I'd like to store the boat in the winter, and add a garage with bedrooms above. The Commission asked if the existing permeable area will be changing. We use stone for the landscape. The only impermeable area will be the house. Commission: What is the size of the (new) shed? Struzziery: Current shed is 10' x 16'. The Commission asked if drywells are considered to handle (roof runoff). Struzziery explained that runoff from the roof and storm water runoff from over topping of the bay runs down the driveway into the existing drywell. We want to add more for extra protection. Existing house gutters currently drain into (existing) stone infiltration system installed around the house. This system will be able to handle the additional roof runoff of the proposed addition.

Motion to issue an order of conditions with the special condition that proper sediment controls are in place to prevent erosion (prior to beginning any work) and all debris (generated by this project) be removed off the property and taken out of town by LS, 2nd by SC. Roll call: KJ-aye, LS-aye, PP-aye, TB-aye, SC-aye.

51 Harborview Road. Map 56/Lot 028 (SE35-1735) Opening of a Public hearing on the **Notice of Intent** filed by **Thomas P. Fitzgerald** for work described as: **Complete slope stabilization project for a portion of the northerly slope. Abutter Notification: proof provided. Resource Areas: Coastal Bank:** (Storm damage prevention and flood control); **Coastal Dune** (storm damage protection and flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: FEMA VE 20'** (storm damage and pollution prevention, flood control).

Representatives: Thomas Fitzgerald, Thomas Watsky, Steve Gioiosa, Dr. Peter Rosen, Barry Fogel representing Bryan Stevens, Greg Bowe , John Struzziery: Director of Waste Water Operations
Abutters/Others: Ernest Lanti, Barry Fogel representing Bryan Stevens, Greg Bowe, John Struzziery: Director of Waste Water Operations, Jim Lampke, Town Counsel.

Documents: Proposed Site Plan, (Soil) Nail Detail, Woods Hole comments to the 2019 plan, OOC SE351516, Arial photo 1995, 3 photos of (existing) deck.

The Commission asks if Town Counsel has any comments on this project. Lampke: They have submitted a NOI and the Commission should proceed with the application.

Watsky : The Commission does have an open order of conditions for this property to put in tie backs and engineering structure (a part of which goes) underneath the patio under an Order of Conditions number SE35- 1516. This OOC is valid and in effect until late February of 2024. Work that still can be done, like vegetation, in conjunction with this project. The prior project did what it was supposed to do which is to hold the top of slope stable and protect the house. The problem is now seaward. When DEP issued (this) file number they provided a couple of comments; 1. That we show that the purposed work is protecting a structure built pre-1978, 2. that no non-coastal engineering alternative is feasible, and 3. that the structure will not reflect wave energy back onto the beach (that would cause added) erosion. The house was built in 1960's. We have a plan showing it existing in 1967. The existing tie back system is tied back to foundation of the house. Work proposed now is to stabilize the coastal bank to not undermine the

existing system. We had CEC engineer Steve Gioiosa examined the site in some detail and to evaluate the alternatives. They concluded that because of the steepness of the slope, the alternatives are not feasible. It is not practical to do a non-coastal engineered structure. They considered rip rap, building a wall, the conclusion was the best solution is to use soil nails on the portions of the coastal bank that are the steepest, and revegetate the remaining slope. With regards to reflecting wave energy, we are not proposing to build a vertical wall that would reflect wave energy in any event. All of the soil nail structure is at elevation 22. That is 2 feet higher than the 100 foot flood elevation and no potential for wave energy to reflect off of the structure. (Note: Plans seem to show otherwise.) The dune and material at the bottom would be kept in place by vegetation. Gioiosa: This is not simple revegetation, and is not easily stabilized with (just) vegetation. Homeowner is seeking a long-term solution. We have completed a field survey and generated a base drawing for the project. In this case, we brought in a geotechnical engineer, and consulted with other geotechnical engineer. If the slope were 8-10 foot, we would reset the grade and vegetate, if it was a 10-15 foot slope we would use large stones with fabric backing. In this case a slope with a 20 foot grade change that needs to be stabilized with a more structured system and then we have another 10-15 feet of grade change more suitable to the softer approach with a vegetated cap or vegetated material. Looking at options, the engineers looked at soil nailing technology which is not a new technology. It is used to deal with unstable steep slopes; drill in rods into the ground, grout them in place. The rods act as a tie back, a back drainage system would be installed in between very thin structures with voids, which would allow relief of water pressure behind the wall, which includes a toe drain. We will try to match the natural slope. The soil nailing will be above the 100 year flood zone, at an average of 28' elevation. (Note by IM: inconsistent with previous statement). We are not looking to protect from wave action but to protect from slumping of the surface. The lower area we are calling the vegetation stabilization area. We are proposing a salt tolerant mix of vegetation, and we will use the planting plan from the 2019 plan. The next step is a more detailed geotechnical (assessment) to fine tune the number of soil nails needed, borings, design of the back drainage, and guide the final construction details. Commission: How will you do the work? Are you going to do it all from above? Gioiosa: Portions will be done from above. Concrete will be pumped from Harborview Road. The soil nails are implemented from a track mounted piece of equipment, using the access from the same area as the town's project. Commission asks if heavy equipment will be on the beach. How would it get past the large area that is slumped on the beach, the soft area? Gioiosa: Track mounted equipment is intended for this type of terrain. Any disturbance would be revegetated after. Commission: Are we proposing some contour the way they are or to tie in? Gioiosa: We would maintain the existing slope. There would be minor re-grading, we want to use the existing topography, trying not to bring in fill or steepen the slope. Commission: What about the (abutting) property on the right? Watsky: The topography shows that there is an area to the right that had slumped. The original plan and the original NOI proposed the soil nail technology to (include) this abutter's property. The abutter declined to have his property included. We are (now) only proposing the work on 51 Harborview property. Mr. Fitzgerald (applicant) will file new NOI if the abutters wish to join in on this project. Commission: Will this just be an abrupt change to the thickness of this wall, what is the (proposed) grade change? What is the impact to the shoreline, and what is there to minimize the erosion? Gioiosa: The lower section will be revegetated; at the base it will be flush with the natural ground on either side. The original plan created a wedge on the east side. We pulled it back to the property line; it will be flush with the adjacent property. Commission: Where is limit of vegetation ending? Gioiosa: We cannot go onto 53 Harborview. Our limits of revegetation will be remediation to restore due to disturbance from the collapse of the coastal bank. The Commission expressed concern about the proposed cement structure ending at the property line and was unclear as to the impacts and request input from a coastal engineer. Watkins: The applicant proposed to include the neighboring property, we can file a plan to just revegetate, and we think that it the best solution. The Commission asked if this project is to support the patio/deck or the house. The Commission also asked what analysis is driving the feasibility assessment. Watsky: 16 tie backs under the patio and a large ground beam on the house side, the embankment is being held back by the structure. Soil nails will tie into in and hold everything in place. The Commission asked of the history of the retaining wall. There is a patio and deck very close the top (of the bank) and the house is located further back. Watsky: The house was built mid 1960's. The owners chose to cut into the bank which steepened the embankment and built the house, the top of bank hadn't been moved seaward. The OOC was issued in 2019 to permit the structure retaining wall and tie backs to maintain the top of the bluff and to stabilize and protect the

house. Commission: When was the patio and deck permitted? RK: Per the building department, the deck was built in 1984 we do not have a permit for the original deck. There was an OOC for a deck rebuilding. Commission: If I lived in the house after the washout, I would have panicked and immediately pulled back all that weight. I'm not in support of this without complete support of the neighbors. Is the deck permitted or not. RK: The original deck from 1984, we could not locate an OOC. There is a deck in the 2019 OOC. I don't know if there an RDA for the project. There was a building permit. Commission: How did the washout happen? It doesn't seem that the retaining system is working. Watsky : In 2019 the Commission permitted the structure and it is now holding the top stable, CC required that storm water infiltrate under the patio into the ground. A historic rain event supercharged the ground and caused the seaward edge to washout; the proposed soil nail technology will collect and channel the water. Rosen, representing the applicant offers that 2 factors contributed to the bank destabilization: infiltration of stormwater caused the slope to be destabilized and caused a slump. The 2nd factor is that the base on the bank is supported by a vertical sea wall. Rosen looked at historic aerial photographs prior to the slump, the sea wall is in disrepair, and run-off disturbed the vegetation. From over saturation of surface runoff, the base was weakened by the seawall shifting breaking the seawall. Commission: Did you notice that this massive deck and patio sticks out much further than every other house. Rosen: I did notice. Commission: What about the enormous weight (from the deck and patio) on the top of the bank? Rosen: I don't think that the weight from the deck is comparative to that of a structure on the edge of the bank. I'm mostly concerned with the runoff. Does this project control runoff? Management of the surface soil is important, and there is no problem with the seawall because the slump is covering it. Rosen: The coastal bank in this area is well vegetated. The seawall at the base is in disrepair, the base is starting to de-vegetate. I didn't notice any other houses disrupting the line of the (top of the) bank and that is a historic reality for this house. Commission: Was this area fully vegetated prior to the slump, or was the vegetation disturbed? Rosen: To the best of my knowledge this was fully vegetated except at the edge of the base. Over the previous 5-8 years at base due to the failing seawall. Commission: Any fill proposed to be brought in? Rosen/ Watsky: Fill may be necessary. The steepest sections of the slope may require minor amount of shaping with fill to create a uniform edge at the structure, to ensure enough natural material at the base. The Commission again expressed concern about end effects from this project. The Commission asked about the life expectancy of this project. Gioiosa: It's a permanent solution. I don't know what the life expectancy would be. We're not in a wave (impact area). It should be indefinite. The Commission asked for examples of other coastal applications of (soil nail technology on coastal banks). In your structural details we're at a 5 degree depression but that is subject to change. How much? Gioiosa: We thought that 5 degree standard detail, minimum that they would like to see. We will work closely with the natural topography. Commission: The detail (shown) of the project design is close to vertical. If you got approval on this project, you would (need to) do additional geotechnical (assessments). Why not do that prior to getting your permits to make sure that this system will function (as proposed)? Watkins: We are comfortable that this design will work. This project would require us to bring equipment through the resource area (barrier beach) and would require Conservation approval. The changes after additional geotechnical assessments will add to the details; the limits of activity will not change with the limits of the proposed project. Specifically, the length and size of the nails in the ground. This is not something that every contractor can do. They will have to be trained on the technology. The Commission expressed concern about the lack of geotechnical assessments and requested construction plans. Watsky: It depends on contractor availability, the evaluation, if we had the permission from conservation to do more detailed analysis. We don't want to add additional work (assessments) if Commission was opposed to the soil nail approach. We will have to provide some more material and information on the implementation of soil nails. Like any construction project the team will generate construction documents and solidify the final design. Given any significant changes we would have to file an amendment. Commission: There are provisions that would allow for exploratory activities. Access to the site from the beach side is along the old railroad right of way. Would we need Town's permission to use this right of way? Commission: We need some information with regards to the effect of what is going on. The project is a no go as is, we have never let anyone go right to the border if it affects the neighbors. We leave 10 feet untouched. The section of the slope along the abutter property boundary is going to erode exponentially. Commission reiterated the need to clarify if the deck is properly permitted and if this project is protecting the house (or the patio/deck) which is a post-1978 structure. This project may need peer review. Watsky: The patio underneath the deck on the 2019 plan tie back system is a coastal

engineering structure designed is to protect the pre-1978 house. Fogel: Sent a letter to the commission in Dec 2022. Detailing the concerns about the history. Greg Bowe-1150 Nantasket Ave: My understanding of the collapse is, the home owner cleared the vegetation on the hill, and then it collapsed. My concern is access to the property along the railroad, disruption of the railroad bed puts our house at risk. Waves come over, damaging our property and further east of east of us. I would ask that the commission add the condition which existing circumstances, be restored in full. John Struzziery, Director of Waste Water Operations: We made an assessment of the pipeline (located below grade adjacent to this property on the railroad right-of-way) after the slumped material accumulated over this infrastructure. The pipe is a pressured pipeline. This pipe was replaced in 2012 with a PVC pipe located 5-6 feet below grade. We found that the pipe moved down and to the right but not enough to undermine or compromised it structurally. However, further movement could impact the (integrity of the) pipeline. Our (town) consultant (GEI) looked at the plan and, like DEP, would prefer a vegetated approach. Was a vegetated alternative evaluated? For this project, access would be along the beach; however there are large revetment stones on the beach adjacent to this property. (During our assessment of the pipe), our equipment couldn't pass through. Working along the slope with machines will further disturb the slope and drilling could cause further erosion. With the nail design, how will sediment clogging be prevented? What if it does get trapped (runoff) will it go laterally? If so, it will further loosen soil, which implies the need to provide a storm water collection. The towns Seawall project being planned and designed to strengthen the town seawall. The town's consultant should review to make sure that there is no impact to the project. The town will need more time to review the details of the proposed plan. This project should have a peer review. Woods Hole reviewed the 2019 project (CK-Actually, WHG provided the vegetation plan-they did not review the ERS (earth retaining system). The Commission agreed. The Commission also noted that they asked water to be rerouted toward the street. Fogel: (Aerial photo 1995 shown). In 2013, an RDA was submitted to extend the deck and patio. The Commission issued a negative determination with the condition that that extension wouldn't destabilize the bank. In 2014, an EO was issued because the bank was de-vegetated and damage occurred. The deck is cantilevered over the bank. A photo of green shields over the installed ERS shown which directs runoff and precipitation over to the bank. The wall (ERS) was put in to stabilize the bank to protect the patio and deck. MACC & DEP agree that coastal engineered structures only allowed to protect pre-1978 dwellings, not non-residential structures. DEP asked are there alternatives to protect the pre-1978 dwelling. (Plans from 2019 and special conditions shown.) Special conditions (for SE35-1516) are: TOB will be graded such that runoff will collect into drywells; patio to be partially removed to be no closer than 12 feet to the TOB; ¾ inch nylon instead of rods used in the tiebacks. The Tiebacks go underneath (the patio). In May of last year, the Commission issued an EO because the work was in violation of OOC. Requirements are to remove the patio (Note by CK: The OOC requires that part of the patio to be removed). Mr. Stevens wants no part of the soil nailing project. Calling to the commission to put a hold and take action the 2022 EO based on the problems of deck, failure to remove the patio and provide real analyses of alternatives. Removal of wall, patio, etc. deck pulled back in line with the last post, top of the bank. Applicant could grade area to match the grade of adjoining properties. Commission: express the need to address the matters of the EO and the conditions required in the original OOC (SE35-1516). Ernest Lanti: I feel that we should have more information. I'm the abutter at 49 Harborview and I am concerned with the future behind Harborview road. We do all we can to preserve the property. I think that we need a peer review. Watsky: I would encourage staff to get bids for a peer review. The Commission asked Town Counsel if anything else needed to be done? Lampke: I support that the need for a peer review. What exactly is the peer review reviewing? That should be made clear. The Commission will be requesting a peer review on this project but need additional Information before: 1: A response on how the applicants will to come into compliance with the EO, 2: detailed analysis on alternatives including consideration of hard vs. soft solutions, 3. Coastal engineering expertise on how to protect the abutter(s), and 4, Examples where soil-nail stabilization in coastal settings are being used. The Commission noted that the patio wasn't brought back away from the top of the coastal bank as required in the OOC (SE35-1516). Watsky: It's an open order of conditions; after the slope went down (the owner) realized that he had a bigger problem. There are a lot of questions remaining. We'll address them and make a submittal to the Commission. The applicant's representatives requested to continue to 2 weeks and stated it would be helpful to get the request for the peer review as soon as possible. Fogel and the Commission stated that a more detailed geotechnical assessment and alternative be provided before seeking a peer review, as these are needed

before the peer review process could begin..

Motion to continue to 2/28 by LS, 2nd by KJ. Roll call: LS-aye, PP-aye, TB-aye, SC-aye, KJ-aye.

3. **Requests for Certificates of Compliance** (none)

4. **Continued & New Business**

_Move to accept the annual report for 2022 as amended by LS, 2nd by SC. PP-aye, TB-aye, SC-aye, KJ-aye, LS-aye.

Administrative Review. What are the benefits? IM will gather more information.

MACC Annual Conference is Virtual in 2023. Staff will help register.

5. **Violations & Compliance** (none)

8:55 Adjourn

Motion to adjourn by LS, 2nd by SC. Roll call: LS-aye, PP-aye, TB-aye, SC-aye, KJ-aye.