

TOWN OF HULL
CONSERVATION COMMISSION
Meeting Minutes
December 12, 2023

AGENDA

Members Present: Paul Paquin (PP), Chair, Katherine Jacintho (KJ) Danielle Dolan (DD) Sam Campbell (SC) Tammy Best(TB)

Members Absent: Lou Sorgi (LS)

Staff Present: Ian MacDonald (IM), Administrator, Chris Krahforst (CK), Director, Renee Kiley (RK), Clerk

Staff Absent: None

AGENDA

1. 6:32pm Call to Order
 - a. Review of Agenda, Overview of Hearings Procedure
2. **Request for Determination**
 - a. **Water St., Map 33/Lot 009 HRA Lot *Opening*** of a Public Hearing on the **Request for Determination** filed by **Dennis Zaia** for work described as: **Add gravel fill to mitigate stormwater accumulation. Abutter Notification: *not required*. Resource Areas: Coastal Dune** (storm damage protection and flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: FEMA AO 2'** (storm damage and pollution prevention, flood control). **Site visits done:**
Representative: Chris Dilorio, Dan Kernan
Abutters/Public: None
Documents: Proposed Plan

Commissioner: The plans show that you'd like to add 10 cubic yards of fill to the triangle lot within the low areas. Dilorio: We'd like to bring in a little bit of fill to make it more functional.

Commissioner: What does gravel mean? I think we need to be clear on what gravel is. We need to clarify on crushed stone or boulders that can vary up to 3"-6" in size. Dilorio something similar to what is there. Commissioner: You can't keep filling the spot as to move water from the lot. Dilorio: the area is a bowl and it will stay a bowl. Dan Kernan HRA Member: We are hoping for advice on what to put there to help the water percolate, larger crushed rock, loam, and grass. Commissioner: Loam or grass, won't work, the cars kill everything. Commissioner: The only thing that I've seen works is a concrete grid or Geo-tile and plant grass in it. I don't have a solution. Another Commissioner: We must be cautious offering advice for a project where we aren't liable to offer designs. I think that the gravel would qualify for an RDA. A more involved solution with geo textile that would be a more involved permitting process. Kernan: Longer term, a brick system would work, this is a temporary solution. Commissioner: If you want a place for people to park, I would leave the area as just gravel. Dilorio: There is grass at the edges of the other HRA parking lots, its dirt & gravel in the centers. Commissioner: We don't know what the substructure is. It's a bowl and it collects the water. ¾ inch crushed stone will help absorb the water and eliminate puddles. Kernan: What about top soil? Commissioner: Top soil will block the water from flowing and grass will have a tough time growing.

Motion to issue a negative determination with the special condition of 10 cubic yards of mixed fill to be provided to the conservation department by SC 2nd by DD Roll call: DD-aye, SC-aye, T-aye, PP-aye, KJ-aye

3. **Notices of Intent**

- a. **51 Harborview Rd. Map 56/Lot 028 (SE35-1735) Continuation** 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). **Site visits done:** many times
Representative: Matthew Watsky, Tony Sousa CEC
Abutters/Others: Bing Wang GZA, Bryan Stevens, John Lentini, John Struzziery
Documents: GZA Presentation Slides, CEC Cross section

Bin Wang: Presentation slides shown. Commissioner: We should review what we learned during the week. What about the neighbors? Wang: I don't think that 49 Harborview is as impacted as much as 53 Harborview. Maybe this project should extend beyond the property line so it's a more organic project. The slope failure didn't just stop at the property line. Option 1 will restore & stabilize at the property line. Option 2 seems to be a better solution. Commissioner: You favor option 2? Wang: Yes. I think that also restoring the slope with vegetation could also work. Commissioner: Gabion, containers of wire holding rocks. Where are the gabions? Wang: They are on the sides to tie into the neighboring property. Commissioner: Will they be galvanized metal or plastic baskets? Wang: In our memo we made a note that we needed more details on the gabion baskets. They may be metal. Commissioner: I have heard and or seen examples of soil nail technology on the sides of roads, I've never seen them in coastal environments. Wang: We did look at soil nail walls in coastal settings. The wall is mostly above wave action, saltwater should not be a factor; the vegetation will have to be salt tolerant. The wall is 20 feet above FEMA BFE. It's not very common to have a soil nail structure at a residential location. Another Commissioner: Is your concern about the salt air? Commissioner: What is coating the soil nails? Wang: Shotcrete, which is a form of spray-able concrete. Another commissioner: The town used it to repair the sea wall. Wang: CEC mentioned for aesthetics, more layers can be added and a sculptor can come in. Commissioner: The soil nail wall ends 20' above the 100 year storm boundary. Another Commissioner: How would they be carving this out, and would it affect the neighbor? How does unloading the top of slope affect the design? Wang: If the deck and stone were removed there would be less weight on the slope. The plans do show the column will be underpinned to redirect the weight of the deck elsewhere. Another Commissioner: Would they be fully vegetating the bank? The process of installation would be as follows; nails, shotcrete, fill, and vegetation? Watsky: Comment at the beginning of the discussion; the wood retaining structure being built without a permit is untrue. The ERS has an order of conditions. Option 2 we are not proposing work on Mr. Steven's property. This NOI is only proposing work at 51 Harborview. GZA agrees that the soil nail technology is feasible. Commissioner: Is option number one reasonable if nothing is done with the neighbor? Wang: it is reasonable, but we think that it can be improved. Commissioner: Did you review Dr Rosen's memos? Wang: Yes, we cited the memo. Commissioner: Do you think that the soil nail is the only way to stabilize the wall? Wang: Soil nail technology is reasonable but there are other methods out there that can be done. We talked about gabion baskets with vegetation if properly designed. Tony Sousa: Documents shown: Existing & Proposed wall cross section. We will segment the wall; remove the ERS, excavate the washed out area, and install a soil nail wall. The plan is to work by segments; remove 3'-4' at a time, cut the slope back and then drill a hole in the ground, install the nail and then spray the 1st coating of shotcrete. Once the 1st four feet, we'll do 2-3 feet at a time, it's a function of the soil behind, each lift. It will be top down construction. We calculated the factor of safety above the safety rating. Once installed, there would be a permanent facing of shotcrete. If there were aesthetic requirements and sculpture could make it look natural. The 1st column, underpinning to be installed. If we get to the column and the sub grade soil is stable, we can go back and re-run the safety rating. Factor of safety above 1.3. the column has a light load. I don't have any concerns for a design even if we don't have any underpinning. Underpinning would be a means and methods. They would provide a design. If the columns were undermined, we would install a more vertical soil nail to transfer the load. On the front side of the wall; rip rap at the base, drain strips behind that would tie in. Weep holes, at a 2-1 slope you can plant things. Looking at the Topographic lines its soil nail, rip rap on a 2-1 slope. There will be a lot of material to re-grade and install erosion control plantings, grade is steeper than 2-1 it would be better to have rip rap. Watsky:

Bin talked about alternatives, did you consider alternatives, and the logistics to get the material in. Sousa: We considered restoring the slope naturally but the slope is 1.6-1. If we raised the stone revetment beyond the property line we might be able to reestablish pre existing grade. In this case, where the soils consist of naturally cemented glacial till, once disturbed, it is generally impossible to replace it as is. A massive rip rap would be required; it's more cost effective and a shorter time line to go with the soil nail structure. Another reason, since the landslide, there has been washout behind the ERS. The best long term solution is the soil nails; in hope to eliminate the void spaces that exist today. Watsky: If you installed Rip rap, what would be the size of equipment. Sousa: It s a Massive slope, large excavation ½ ton to a ton of rip rap. It would have to be installed piece by piece, one by one. It doesn't take in account the amount of material behind the wall. Krahforst: I just wanted to shed some light on the discussion of hearing the alternatives. I feel that all alternatives should be included and captured in the final peer review for the sake of time. It was asked for in part in the draft. Watsky: CEC considered alternatives. Commissioner: I think that Bin mentioned vegetation being used to stabilize the slope. The rip rap only is in the other extreme. I would like to ask that consideration of alternatives be amplified in the final version of the peer review. Another Commissioner: I second that request; also to mention. The charge of this commission is to take into account what is the most beneficial for the environment and resource areas. Not for what is the quickest and most cost effective. Krahforst: More information is needed before the commission decides. Another Commissioner: regarding using excess material to re-grade the slope, would that be soil come from already vegetated areas, what are you proposing? Sousa: CEC would need to further inquire the logistics of material reuse. Now we have a general idea of reuse material beyond the base of the ERS, with the grading proposed beyond the soil nail wall, areas closer to the west, is less steep than a 2-1. Depending on the time of the year, as well as the glacial till that is presently there has a high silt & clay content which can be affected by higher amounts of rain and stormwater. We are open to the potential of material to be reused. John Lentini: I was expecting a more in depth analysis for the gabion baskets with vegetation. I was concerned with moving soil down below. Commissioner: I thought that there would be more alternatives even one that is a no-build alternative. Bryan Stevens: The response has some limitations, didn't get into alternatives. The narrative has been non public. Some of the conclusions are right on; damage from the top. I have a background in litigation, and a masters in environmental. I want an environmental solution on my property. I want my property re vegetated. I cannot join in on what has been presented. The long term solution is only to be based on engineered solutions. This was an incompatible solution. It will fall down because of the wind. It will become a sail and will not have a long term life, what are the interests of the act? Animal habitat for instance, each step some more of the coastal bank gets removed. Why do we have to save the deck? Bin expressed the notion of other alternatives. One of which should include the removal of the deck and retaining wall. Even more soil will need to removed off the bank to install the soil nail system. Commissioner: You aren't the applicant. Krahforst: The department will take anything in writing in response of the peer review. Commissioner: Many of us have argued why are we protecting this deck? John Struzziery: The sewer force main has been investigated to assess if the pipe line moved. It did move, but not much. The wall and slope has continued to move. We've provided comments to GZA. The slope has continued to move with heavy rain. If the main fails it will be an environmental and fiscal disaster. Does the proposed solution meet the interests of the act? 50 years ago there was a slope failure at Pt Allerton. That is a steep slope. It was vegetated and a stone rip rap installed at the base. There is some erosion. Does CZM need to be involved? Commissioner: Can you provide plans or documentation of the Pt Allerton project? Struzziery: I do not have documentation. It should be in the conservation department. Krahforst: There was a stabilization project on green hill.

Motion to continue until Jan 9th by SC 2nd by DD. Roll call: PP-aye, SC-aye, TB-aye, DD-aye, KJ-aye

- b. **167 Samoset Ave., Map 19/Lot 121 Opening** of a Public Hearing on the **Notice of Intent** filed by **Jeff & Karen Marcel** for work described as: **Demolish existing home; construct proposed 2-story house, landscaping, deck, shed, & permeable driveway. Abutter Notification: proof provided. Resource Areas: Coastal Dune** (storm damage protection and flood control, likely wildlife habitat); **Land Subject to Coastal Storm Flowage: FEMA AE 10'** (storm damage and pollution prevention, flood control). **Site visits done:**

Representative: David Ray, Karen Marcel

Abutters/Public: none

Documents: Existing and proposed conditions plan

Commissioner: You are demolishing house and rebuilding? Marcel: Yes. Another Commissioner: What about the concrete patio? Will that be removed? Marcel: Yes. Commissioner: What will the driveway be? Ray: Proposed permeable driveway, pavers, a deep bed of gravel no stone dust and remain permeable in its lifetime. Commissioner: What will it look like? Ray: The home owner hasn't picked them out yet. Commissioner: Will there be dry wells and gutters? Ray: All roof leaders will lead to gutters. The owners could install dry wells. Marcel: We will install dry wells. Commissioner: What does the former lot line mean? Ray: When lots are built on the survey, there is a note to other surveyors that show old lot lines. Commissioner: What fill will be below the pergola. Will it be pavers? Marcel: Pavers will be fine. Ray: The entire concrete patio will be removed. The house had a basement. It will be FEMA complaint foundation with flood vents. Commissioner: What about the fence? Marcel: The fence will stay, it needs to be replaced. Commissioner: The new fence will have to be permitted under a new NOI. Krahforst: If you are just repairing the fence please reach out to the department and we can provide further guidance.

Motion to issue an order of conditions with the special condition that the driveway be maintained as permeable; as well as the area under the pergola and dry wells will be installed by SC 2nd by DD Roll call: KJ-aye, PP-aye, SC-aye, TB-aye, DD-aye

4. New Business

- a. 12/26 meeting. Meeting moved to Wednesday 12/27, if the meeting can't be moved to the 9th
- b. Meeting Schedule- To be sent to commissioners
- c. Affordable Housing Working Group Jan-March time frame-Commissioners interested but cannot commit until they receive more information

1. Adjourn- Motion to adjourn by SC 2nd by DD Roll Call: SC-aye, TB, DD, KJ, PP-aye