



CONSERVATION COMMISSION

PUBLIC MEETING

2 Bathing Beach Road
Nantucket, Massachusetts 02554

www.nantucket-ma.gov

Monday, February 11, 2019

4 Fairgrounds Road, Training Room – 4:00 p.m.

Commissioners: Andrew Bennett(Chair), Ashley Erisman(Vice Chair), Ernie Steinauer, David LaFleur, Ben Champoux, Ian Golding, Joe Topham

Called to order at 4:01 p.m.

Staff in attendance: Jeff Carlson, Natural Resources Coordinator; Terry Norton, Town Minutes Taker

Attending Members: Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Earlier Departure: None

Agenda adopted by unanimous consent

I. PUBLIC MEETING

A. Announcements

B. Public Comment – None

II. PUBLIC HEARING

A. Notice of Intent

1. *Sconset Beach Preservation Fund – 59-119 Baxter Road (49&48-various) Area SE48-3115

Sitting Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham

Recused None

Documentation Supporting documents and plans. PowerPoint® presentation.

Applicant Steven Cohen, Cohen & Cohen LP

Representatives Dwight Dunk, Epsilon Associates Inc.

Maria Hartnett, Epsilon Associates Inc.

Arthur D. Gasbarro, Nantucket Engineering & Survey,

Jamie Feeley, Construction Manager Cottage and Castle Inc.

Public Emily Molden, Nantucket Land Council (NCL)

Hugh Ruthven, III, Applied Coastal Research and Engineering, for Nantucket Coastal Conservancy

Dirk Roggeveen, Squam-Quidnet Association

Maureen Phillips, Nantucket Coastal Conservancy

D. Anne Atherton, 48 Squam Road, Nantucket Coastal Conservancy

Rick Atherton, Former Board of Selectman

Ted Gilletti

Discussion

Cohen – He hopes today will involve reviewing Gregg Berman’s Peer Review Report and ensuring all major points are covered. At the next hearing, he hopes to talk about what the Order of Conditions would look like. We will only provide additional information if it’s asked for. We are five years into having geo-tubes in the area and three years of monitoring, which has provided data showing, that the tubes combined with planting the bluff and road drainage improvements, no additional erosion of the bluff or the beach. There is no negative impact on the cobble habitat, bio-diversity of the beach, or on the wetlands.

The peer review report was “highly confirmatory” of what SBPF has been presenting. A big point of the report is the timing of the exposure of the tubes, replacement of sand, and the sand nourishment formula; the Adaptive Sand Mitigation is the best way to do it and meets State standard. The peer report indicated the geo-tubes have shown no negative impact and pose no risk during the short time they are exposed. The key figure that the array is working is the walkable beach to include down-drift beaches.

This boils down to the two questions ConCom must answer. First, if we’ve shown evidence that justifies a Coastal Erosion Structure (CES). Second, are we proposing the best available means.

Hartnett – Reviewed the monitoring protocols and data from the original Order of Conditions. We’re not seeing evidence of erosion and not seeing evidence of harm from the structure. We are in a good position to ascertain what works and what doesn’t. Reviewed the adaptive management sand mitigation protocol; there is no maximum amount, which allows replenishment if the 22 cubic yards is used up before the end of the year. We’ve provided a document that goes through March 2018 and details lessons learned from the series of three storms that month.

Dunk – Noted the high points of Mr. Berman’s report not previously mentioned: measuring mean high water versus mean low water relating to recession of the coastal bank; use of mitigation sand to maintain the littoral system, which maintains the shoreline; adaptive management allows for sand to be provided as needed year to year; the design is essentially the same as what is already there with minor changes in the depth of the bottom tier and height of the fourth tier; the sand contribution volume was met during the March 2018 successive storms. Over time, we expect to see the need for longer, shallower return extensions to mitigate end scour.

Part of the design is that sand will be washed off into the system; that sand will be replaced. We've seen no adverse effects on adjacent beaches.

Suggested looking at the Woods Hold Group profiles 90.5 and 90.8, which show moderate amount of accretion; Profile 92 shows a minor amount of retreat between October 14 and October 15 of the first year; and Profile 92.1 has shown accretion. We now have dedicated equipment and persons for replacing sand.

The purpose is to protect and stabilize the coastal bank, which in this case is also a sediment source. The purpose is also to protect pre-1978 homes and infrastructure. We believe we've met the standards and provided all the pertinent information necessary to make a decision. We respectfully ask that this hearing be closed for the purpose of drafting an Order of Conditions.

Erisman – Mr. Berman, in his report, does indicate uncovered tubes do have an adverse impact leading to planking and scour. In the actual storm without the sand, there is a hard object being hit by wave run up and reflecting that energy; the bluff absorbs that energy.

Dunk – He agrees if the geo-tubes are left uncovered for an extended period of time. The intent here is to get the sand in place before the next storm. The design shows sand in front of the tubes at about 6.2 CY per foot. The geo-tubes are designed to provide a slope to absorb the wave energy; a vertical face reflects that energy. The returns are at a shallow angle to reduce the end scour effect. In Mr. Berman's report, he notes that the purpose of the CES is to stabilize the bank and protect the shoreline as well as the homes. We are not offering to replace the top tier with coir rolls because those need to be anchored usually with duck bills.

Steinauer – He disagrees the slope is as Mr. Dunk proposes. However, if the lower roll is uncovered, it bows out, which reflects the wave energy not absorb it; when they are exposed, the tubes behave as any hard, smooth CES. There is end scour in on both ends of the existing stretch, not just on the clay nob. Adaptive mitigation doesn't account for losing more than 6 CY per linear foot; we've had losses of as much as 60 to 70 CY per linear foot in one winter. The structure is tall enough to withstand a 100-year storm but the mitigation does not meet that standard; the mitigation should also match the 100-year storm. He's not satisfied with the Adaptive Sand Mitigation.

Dunk – There is 22 CY per linear foot is placed on the template in the fall to replenish the front after each storm event; the dedicated bulldozer can recover the template within one day. If there isn't enough sand left for more storms, the adaptive management plan allows for more sand to be brought in. We have proposed more sand than the Coastal Zone Management (CZM) requires.

Golding – You said the minimum required by the state, i.e. 22 CY per linear foot all of which won't be available because the top of the tubes need to be protected. The extra amount should be available on the geo-tube.

Dunk – The State requirement is the annual average which is 8.8 CY per linear foot; we are providing three time more than DEP requires.

Golding – The photos images 8-12 provided under the 2018 NOI contradict the statement that enough sand was available. During the March 2018 storms, end scour was very significant. The ramp at Hoicks Hollow was completely lost. On March 16, the ramp had been rebuilt and sand was starting to be delivered.

Erisman – She asked about how this geo-tube configuration would be handled to accommodate sea-level rise in the future and what the triggers for failure criteria are.

Dunk – That was presented September 17, 2018. There are many models of what the sea-level rise will be at any point along the shore. The existing order identifies failure criteria.

Champoux – Mr. Berman suggested maintaining a walkable beach is possible in theory but not in the long term. A failure criterion is the loss of the walkable beach. Asked if Mr. Dunk thinks this structure will be able to maintain the walkable beach due to the length.

Dunk – Yes. The littoral system will provide the sand necessary to maintain the walkable beach for a good period of time into the future.

Bennett – About the delivery point, asked if with this extended project there would be the ability to dump sand right onto the beach.

Feeley – We have one access point directly down to the project at the northern end.

Bennett – He's concerned about the northern end because the bluff is much higher but the structure is still the same height. Asked about stabilization on the ocean side of the road in that area.

Dunk – The idea is to keep the tubes where they are rather than pulling back under the bank's over-steeping. This would hold the toe in place so the bank can reach a natural angle of repose. We'd have to confirm with the design engineer, Gordon Thomson, about shifting the geo-tubes.

Feeley – Once the natural angle of repose is reached and with the geo-tubes in place, we have the opportunity to vegetate the bluff.

Bennett – At present, about 50% of the project has an empty lot behind it.

Golding – SBPF is claiming six houses warrant pre-1978 protection which his research indicates they do not.

Dunk – We found two lots not eligible but consider them stop-gap lots; five lots are vacant. That is between lots 59-85 and 105-119.

Steinauer – The emergency order was to allow the Town time to come up with a plan to move Baxter Road. SBPF is playing the protect Baxter Road card again; he thinks Baxter Road is off the table.

Cohen – Part of that NOI was to look for a viable alternative for access to Baxter Road, not move it. We looked for a viable alternative but there is no viable alternative. There is an alternative access plan for the northern end; but no way to replace access to the middle of Baxter Road.

Golding – His understanding is that there is a plan to provide alternative access for 109, 115, and 119. I've seen the plans; I've seen the drawing.

Cohen – A requirement of that alternative access is that the permitted structure remains in place. That plan can only be implemented if there is a legal right to take the land.

Golding – He checked every lot and presented his analysis to ConCom about the houses not eligible for pre-1978 protection due to increases of 20% in footprint. Asked if SBPF is still arguing these houses are still entitled to protection. He would like a written response explaining why the houses he noted should be provided full protection.

Cohen – He will provide a written response. SBPF takes the position that the bylaw section is not legal. The commission can grant a waiver. The commission granted a waiver under the current NOI.

Golding – That waiver was granted on an emergency NOI that would be in place until the Town came up with an alternative access to Baxter Road.

Bennett – Asked if CZM or Department of Environmental Protection (DEP) have weighed in on the project.

Dunk – Everything SBPF submitted to ConCom was also submitted to DEP.

Topham – Asked if there is an opinion on whether or not the tubes suffered any negative impact.

Dunk – The four storms in March 2018 had waves hitting exposed tubes.

Steinauer – March 2018 was one of the most intense storm months in five years. That has been the only test of the existing CES. Suggested people dig up Jim O'Connell's comments during the first NOI about the storm being a critical time to have sand in place.

Dunk – There were other storms that counted as severe storm events.

Steinauer – A deck turned into habitable space doesn't change the footprint but does increase the habitable space.

Molden – She will provide her points in writing for the record. The peer report emphasizes the importance of sacrificial sand and the time of placement – during a storm. The continued natural erosion adjacent to the geo-tube project will cause continued end scour. The maintenance of the walkable beach was conditioned; its impact important to this project; Mr. Berman said on-going maintenance of the beach in front of the structure isn't feasible. The impact to resource areas due to inadequate sand mitigation in addition to these impacts add up to a project that is not permissible. The applicant talks about their burden to demonstrate that the project is using best available measure; we disagree because local regulations require they go beyond that and that it have no adverse impact.

Ruthven – He interprets Mr. Berman's report very differently than the applicant. In 2015, the idea of those hearings was that there would be 22CY on top and that sand would fall down by gravity always being available. When you meter the sand, you aren't providing additional sand when it's required. There have been no design changes to the structure or changes to the mitigation sand. The applicant is putting in a system to protect the bank; but the mitigation is for the properties adjacent to the structure, not behind it. This bluff is only 7% of the coast line; but if you take that contribution out, the system will notice the difference. The mitigation volumes over time will increase as the sea level rises; if they were decreasing, we wouldn't need this project. We shouldn't force everyone along the Nantucket coast to go to a revetment to protect their property because of one project. The mean high water line is quick to show acceleration; that's why engineers focus on it. There were 21 days in March 2018 when there was no sand available; nothing is being done to make this better. They've had five years to come up with a better-working project; this proposal isn't better.

Roggeveen – The Squam-Quidnet Association is north of this project; many members have coastal properties. If the mitigation for this property fails, it will impact their properties. Squam-Quidnet Association provided a letter to be submitted into the record; the letter addresses several elements of concern which directly impact their properties. Four points in the letter are: mitigation, security, Sesachacha Pond, and scale. In addition to the letter, Jim O'Connell noted that if the nourishment isn't immediately provided, the wave energy reflects off the sea wall and creates an erosion cell; that cell will migrate along the beach following the littoral drift. The existence of the sand, not present in the erosion cell, dissipates the wave energy. The process of how mitigation and wave energy works is more complicated than it is being presented. In the future the money for mitigation could dry up and the question becomes who takes over responsibility; ConCom has to secure for future mitigation. When the nourishment fails, the erosion cell starts taking sand out of the bank; replacing the sand on top of the template isn't fixing the damage to the bank. DEP has said that specific houses were allowed to protect themselves; but on the first project, DEP denied protection for some of the houses. Suggested the commissioners reread the superseding emergency order. The commission should analyze this lot by lot and issue findings on individual lots. What they are calling gap lots aren't consistent with the way the law is applied, which refers to small areas as gap lots. Failure criteria is another important issue; if this fails and SBPF is told to remove the structure, how do they do that without damage to the resource areas and in the face of legality.

D.A.Atherton – She will submit her comments in writing. The assertion that the original project was a pilot project; she sat through the entire hearing and never heard the word pilot project. It states on the title page for the original NOI that it is "Baxter Road Temporary NOI Submission"; there was no pilot project.

R.Atherton – His observation is that material provided by Applied Coastal shows that the water line is eroding faster than before the geo-tube. To him that is an adverse impact. If it keeps eroding at that rate, in five years it will erode to within five feet of the tubes; the beach is part of what ConCom should be protecting. He doesn't think the data supports that there will be enough sand going into the system to protect the beach.

Gilletti – Asked if the ConCom had considered engaging in a coastal study to do a round-the island sediment transfer project. Another question is if the granular size is correct. Lastly, what is the ConCom long-term strategy for the project; he's concerned the Island will end up encircled by a revetment and damage to the coastal bluff will continue by end scour.

Erisman – In our letter from Mr. Berman, in four years of sea-level rise there will be no walkable beach; the question is, what is the goal here.

Steinauer – Asked if there is an estimate on the cost to remove this.

Erisman – She questions if it could be removed, especially if the bluff collapses on it.

Bennett – There are too many unknowns in the face of sea-level rise. Asked for a profile of the northern end given the top of the bank; his concern is getting a stable slope there.

Dunk – Asked that the applicant and representatives get copies of notes and letters submitted and asked for a continuance.

Staff CZM has not requested a review and DEP has issued a number. He can ask them for comments if they have any.

In the performance standards, "Substantially improved" is defined as up to 20% increase of "habitable space".

Jim O'Connell's letter and the superseding order are on the Baxter Road information page.

The Town is actively preparing a sediment budget for the Island.

We require a yearly estimate for the complete removal of the structure and escrow in place to cover that cost. We don't have that for this proposed extension.

Everything that was submitted tonight will be posted on the website.

Next hearing discussion A hearing date on March 11, 2019 would allow plenty of time for material to be submitted. A deadline for comments would be by March 1 with deadline for responses March 8.

Motion **Continued to March 11, 2019 by unanimous consent.**

Vote N/A

III. PUBLIC MEETING

A. Other Business

1. Approval of Minutes 12/03/2018: Held
2. Monitoring Report: None
3. Enforcement Actions
 - a. None
4. Reports:
 - a. None
5. Commissioners Comment
 - a. None
6. Administrator/Staff Reports
 - a. None

Adjourned at 6:20 p.m. by unanimous consent.

Submitted by:
Terry L. Norton