

**Present:** Chairman Paul Chamberlin, Jay Putnam, Billie Bates, John Geiger, Corinne Johnson, Associate Member DeeDee Holt, Conservation Agent Kristin Andres and Secretary Mary Fougere.

Commissioner Carol Scott was recused from the hearing.

**Absent:** Associate Members Keith Hutchings and Peter Donovan

**325 Fox Hill Road, Eastward Ho! Country Club, SE 10-2534:** The hearing was re-opened for a Notice of Intent for the proposed shorefront protection at 325 Fox Hill Road. Roy Okurowski/Coastal Engineering Co Inc represented the applicant. Jack Farrell was also present. The Commissioners held on-site inspections April 26 & 27 to review the staked areas; they were escorted by a member of the golf course maintenance staff who could address their questions.

The Commissioners were in receipt of a beach nourishment narrative and an expanded "Tide Data and Alternatives Analysis", both submitted after the initial discussion. The applicants addressed the amount of sand proposed and identified areas where fiber rolls (specifically Area 8 and Area 1) are proposed. The applicants asserts that these areas are not subject to intense wave energy. When considering Beach nourishment and use of sand as a sole, viable option Mr. Okurowski felt that the sand may eventually destroy the existing salt marshes and /or provide enough sand to choke off Muddy Creek.

In several areas 3-ft tall rock revetments are proposed as scour protection; the plan includes keeping the rocks covered in perpetuity. Initially an enormous amount of sand would be required; Mr. Okurowski has included a chart detailing the projected amounts of sand that will be necessary for the next 10 years and noted that Eastward Ho! members are committed to the re-nourishment plan over time. Additionally, the applicants would supply annual reports regarding the need for nourishment.

The Commission reviewed the proposal by Areas as shown on the Coastal Engineering set of plans dated February 5, 2009, starting from east to west along the shoreline. Mr. Okurowski noted that each area could be considered as an application on its own.

- \* Area 1---- The marsh restoration that had been tried 4-5 years ago is not worth doing again. Since MHW has risen, the Spartina grass is covered for a longer amount of time; a large portion of the grass that was originally planted has died off. Mr. Okurowski felt that the Spartina alterniflora may extend and re-grow along the high tide line; however the Commissioners felt that the sand from the bluff seems to be going south and that the salt marsh is sand starved, so it will be difficult for the marsh grass to creep landward. Annual reports were never filed as part of the permit issued in 2005 for the salt marsh restoration.
- \* Extension of existing fiber rolls along 400-ft to the south and renourishment- the eastern shore previously has had fiber rolls installed that have worked well. This area doesn't get large waves hitting the bank.
- \* Repair sections of coastal bank that have slid by installing jute matting and planting beach grass -this area has a heavy grade and would benefit from such an approach. The Agent observed that the beach grass area has not been defined on the plan

Area 2—This is an area of great concern to the applicant because the paved cart way leading to and from the seventh tee is located along the bank that is showing serious erosion. There are existing, permitted rock revetments on the east and west side of the cart path that have end scouring affecting the bank below the cart path.

- \* Since this is a large over wash area, the installation of a stone "bridge" revetment (constructed between the two revetments), up to elevation 7.0 ft is proposed; it will be no higher than the sidewalk
- \* Nourishment of the new revetment will be maintained; the existing revetment was never nourished; there are no plans to cover the existing revetments with nourishment sand

Area 3 and 4—Mr. Okurowski stated that the tail end of the existing revetment to the east has accelerated erosion on its western side. The existing bank has a high silt content. There is a high vertical scarp; Mr. Farrell stated that this area gets heavy pounding in storm events and there is over wash occurring on a regular basis. This area is in danger of vertical slides. Commissioner Putnam noted that the existing vegetation on the bank is well established invasives. There also appears to be a lot of surface erosion which would occur even if the toe stones are installed. He questioned whether there was evidence that well established herbaceous plantings are more beneficial as erosion control than invasive plants.

- \* The installation/addition of 100 linear feet of rock revetment in area 3 and 433 linear ft of rock scour protection in area 4 is proposed; some toe stones would be buried, then additional rocks will be placed on top. The revetment will be tapered to meet the ends of each revetment on either side, tapering from elevation 18-ft to elevation 9 ft. Mr. Okurowski felt that if areas behind the stones get damaged, it can be repaired relatively quickly with sand, in a storm event. The Chair felt that the erosion on the banking is more related to end scouring from the existing revetment; it may be a better idea to taper the existing revetment.
- \* Bank restoration is proposed on the westerly side of the revetment; the Commission questioned whether it would be necessary to cut the bank in order to get a stable slope. Kingfisher nests were observed in area 4 in the silty clay bank material; Mr. Okurowski was asked if portions of the bank could be left alone for habitat protection.

The Commission questioned whether such a hard solution is necessary and noted that the whole vertical scarp may, over time, convert to a more stable slope. It may only be necessary to correct the scarp areas with nourishment sand and maintain adequate vegetation.

Area 5—This area is defined by the end of the second revetment (in Area 4) along the coastline to Chatham Yacht Club. The first part of the area is similar to Area 4 in that there is a very large, increasing slope failure. In the last two weeks this area has changed and the Club is beginning to lose real estate; the area has the same exposure as Area 4, more trees have come down. The addition of fiber rolls here is not recommended by Mr. Okurowski due to the length of the fiber rolls necessary. In a major storm event, the anchors would pull away, and there would be potential for the entire fiber roll structure to slide and break apart.

- \* Low rock scour protection and bank restoration are proposed; matting is not proposed since this area requires top to bottom fix; much of the work will be by shovel and will be done as quickly as possible.

Per Mr Okurowski, ground water in this area is perched, mostly rain coming from the course and irrigation; there is no real groundwater flow

Area 5-second part---This section of the coastline has salt marsh in front of it, the beach along the bank is 6" higher. There is evidence of tree failure at the bottom of the bank and there is need for shorefront protection. The bank levels out here near the paddleball court and is heavily vegetated. The Commission felt that there were no signs of erosion and to

approve a rock revetment would be like treating a disease before it occurred. There are many applicants that come to the Commission with rock revetment proposals for many reasons, to date there have been two denials; the Chair felt that the Commission would be remiss in approving any sort of rock revetment in areas that have no erosion problems. The area has a nice beach area already.

Mr. Okurowski felt that a fiber roll or two is necessary to hold the bottom vegetation. The applicant was willing to consider a soft solution here; and approximately 450 linear feet of beach is involved. The Chair noted that using the word "solution" implies a problem and that to chop off existing vegetation because something might happen is not a prudent way to approach this area.

Sheet 8- Nourishing and planting--There are two small slumped areas that could be repaired with management

Area 7---This area had been a test case. The fiber rolls were installed three years ago, they annually get undermined, re-installed but some of the slope comes down. The fiber rolls are getting bombarded by wave action and the applicant is concerned that the fiber rolls will not hold much longer. The proposed work will protect the service area above.

- \* The applicant proposes to remove the fiber rolls and replace with a rock revetment. The applicant will provide a time line showing the rate of erosion and whether the fiber rolls were destroyed by storm events; the Commission will require verification that the fiber rolls were installed and maintained properly. There are no monitoring reports available.
- \* Bank restoration is proposed above the rock scour protection

Area 8---There is no work proposed in the area along the existing rock revetment. Area 8 as shown on the set of plans is at the end of the existing rock revetment. Some of the fiber rolls from Area 7 will be re-used here as scour protection for the bank. The applicant has reduced the amount and size of the fiber roll proposal to soften the end of the revetment; they are not trying to recover any shoreline, the intent is to stay out of MHW. The bank in this location protects a key feature of the course, the 15<sup>th</sup> Tee; there are existing wood retaining walls around the tee.

- \* The intent is to stabilize what they have at this site with the addition of fiber rolls
- \* Beach nourishment is proposed at the far end of the revetment closest to the public beach

Ted Keon, Director of Coastal Resources, said he was startled at the erosion at this end of the revetment during the site walks. The sand starved beach is eroding and affecting public infrastructure, the public parking area. He felt that the nourishment proposed here will not be sufficient to provide enough sediment to the beach area. There will be continued loss of public parking area.

Mr. Farrell noted that a portion of the beach area at Jackknife Harbor was given to the town in the mid-1960's. There is nothing in this plan to address the "starving of the system" due to the existing revetments.

Ted Keon, Director of Coastal Resources, commented on the proposal and agreed with the comments of the Commission after his site walk. There are a lot of different mini-systems going on all around this area and they are hard to separate. In this area his observations

lead him to believe that what is happening to Area #5-6 in the form of substantial vegetation and limited erosion is due to what is happening in Area 5 with its large, high eroding bank. The bank to the west of the revetment is a feeder source all the way to the Yacht Club. This bank in area 5 is the only source of sand left; his concern is that if the feeder zone does not continue other areas will become feeder sources and the erosion problem will progress along the shoreline. In this kind of estuarine area, simply replacing the sand consisting of a single substrate may not be enough. The clay silty substrate on portions of the bank in Area 5 are the beginning of the marsh itself; it is difficult to determine the composition of sand that may be necessary (or not necessary) along the whole coastline.

Commissioner Geiger felt that the issue of sediment supply is overwhelming. There is so much going on with each system and the determination is very difficult to make without a substantial amount of data. The amount of nourishment needed or proposed, where it should go, the benefits of various types of sand, etc all need to be quantified and studied.

Jackknife Harbor is also a source of concern since bringing in large amounts of single substrate sand may drastically affect the Cove Area. It is possible that the water source for that beach could be choked off. Ms Andres felt that it may be necessary to hire a third-party consultant due to the size of the project; the consultant will have to address the following issues:

- \* The high water line change, in light of the evident stains along the rocks
- \* Where the sediment is going; there is no clear understanding of the impacts of the existing revetments and the volume of material needed.
- \* At the on-sites, the existing rock staining tells a different story regarding the location of MHW, as staked in the field. In the areas that need to be treated, it will be important to know whether the proposed work is intertidal, if so, there are other agencies that will need to be consulted; will this require MEPA review?

The Chair summarized the discussion and stated the need for the following additional information:

- \* History of erosion treatment in the areas that need to be treated, including how often and when the fiber rolls will be replaced
- \* Over wash history, primarily for the 7<sup>th</sup> tee, whether there is a monitoring log
- \* Cost analysis
- \* The project is within the ACEC and the ConsCom will seek comment from the Pleasant Bay Alliance

**The hearing was continued to May 6, 2009 only to determine a date certain for a Special Meeting to allow the applicant to address the concerns of the Commission.**

**9 Kingsbury Way, Leibowitz, SE 10-2343:** A Certificate of Compliance was signed .

**Lots 14, 15 & 16 Cranberry Lane, Junda, SE 10- 2144:** A Certificate of Compliance was signed.

**Pcl M85 Winter Home Road, Sink, SE 10-2264:** A Certificate of Compliance was signed.

**45 Barcliff Ave Extension, Nickerson, SE 10-:** A Certificate of Compliance was signed.

**North Beach, Coppedge/Fuller camp, SE 10-2531:** Ms Andres was in receipt of a letter from William Riley, Esquire in which he asked for clarification on a number of points in the Order of Conditions.

The Commission agreed the re-attachment of the deck to the cottage would not require an additional filing, and that if the applicant wanted to remove the wheel-foundation and put the camp on cribbing, an Amendment to the existing Order would be necessary. Making the building a permanent structure by placing it on pilings would also require permits from the building department and the health department and some sort of monitoring of the beach conditions. Mr. Riley wrote that the applicant has no desire to place the building on pilings at this time.

The Commission questioned whether a letter should be sent to the camp owners who currently have their camps temporarily located on cribbing on the Hammatt property to address the future of the camps and their ability to use the buildings while they are on cribbing.

**Greenhead fly boxes, S Schneeberger:** The Commission was in receipt of a proposal to install two Greenhead fly boxes on private property. It was felt this could proceed for one year and if it were to continue, a filing will be necessary.

**Adjournment:** It was moved, seconded and voted to adjourn the meeting at 6:40 PM

Respectfully submitted,  
Mary Fougere