

Approved 2/23/16



Town of Duxbury  
Conservation Commission

TOWN CLERK  
2016 MAR -9 AM 9:53  
DUXBURY, MASS.

**Minutes of February 9, 2016**

The Conservation Commission met on Tuesday, February 9, 2016 at 7:00 PM in the Mural Room at the Duxbury Town Hall.

**Members Present:** Chairman Corey Wisneski; John Brawley; Sam Butcher; Tom Gill; Dianne Hearn; Holly Morris; Robb D'Ambruoso (arrives 7:05)

**Members Absent:** none

**Staff Present:** Joe Grady, Conservation Administrator; Susan Ossoff, Administrative Assistant

The meeting was called to order at 7:00 PM

**BEACH RESERVATION REPORT TO CONSERVATION COMMISSION**

Al Vautrinaut summarized a letter describing work done last year and a separate letter with the proposed work for this year. The major project that began last fall is to raise the road from the bridge to High Pines; that work is underway. There were 25 Plover nesting pairs and 30 birds fledged for a rate of 1.2. Predator control for crows and coyotes was implemented, and a grant has been secured to help with predator control for 2016.

A letter from Natural Heritage approving the proposed work was distributed. This will include raising the road from the Gurnet Road entrance to the Pavilion, and if enough money is raised the Pavilion parking lot may also be raised. There were problems with the Plover monitoring last year, the system in place was designed when there were many fewer birds. A new system is being designed and Section 5 of the report is being revised and will be presented to the Commission within a month. Monitoring staff will be increased and a new Monitor Supervisor position has been created.

Proposed work items #10 which is to move the third crossover and #16 which is road work north of the Pavilion are not approved by Natural Heritage because the plans for these projects are not complete; when the details are finalized the Beach Reservation anticipates approval.

Maggie Kearney said that in this week's storm the third crossover washed out and they have ordered gravel to fill it. This crossover needs to be moved, it is only used for emergency vehicle access.

**PUBLIC MEETING; HABEL: 106 KING PHILLIPS PATH; SEPTIC TANK AND PUMPING CHAMBER**

Chris Habel, the applicant, explained the project. There are 2 houses on the property and they are upgrading the existing cesspool to a Title V system. For 106 B King Phillips Path, the pumping chamber and septic tank are about 10-15 feet inside the 100 foot buffer zone. Sam

878 Tremont Street, Duxbury, MA 02332; Telephone: 781-934-1100 x 5471; Fax: 781-934-1137

Butcher asked if the area where these components will be located is currently lawn and Mr. Habel said it is.

On a motion by Sam Butcher, seconded by Robb D'Ambruoso, it was voted 7-0-0 to issue a Negative Determination such that a Notice of Intent is not required for the septic tank and pumping chamber in the buffer zone as described in the Request for Determination filed for this project at 106 King Phillips Path.

**CONTINUED PUBLIC HEARING; DUXBURY CONSTRUCTION FOR CATALDO; 30 SPRING STREET; STONE SEAWALL  
SE18-1722**

At the request of the applicant, this hearing will be continued. Joe Grady plans to forward the information to Town Counsel to get some assistance with how to implement ongoing conditions.

On a motion by Tom Gill, seconded by Sam Butcher, it was voted 7-0-0 to continue the hearing for SE18-1722, 30 Spring Street until Tuesday, February 23 at 7:05 pm.

**CONTINUATION OF PUBLIC HEARING; PATEL; 20 BRADFORD ROAD; REVETMENT  
SE18-1698**

This hearing will be held concurrently with the 30 Bradford Road hearing; see below

**CONTINUATION OF PUBLIC HEARING; BRADFORD ROAD REALTY TRUST; 30  
BRADFORD ROAD; REVETMENT  
SE18-1697**

The quorum for these hearings is Holly Morris, Dianne Hearn, Sam Butcher, and Tom Gill.

Rick Grady began the presentation and introduced Attorney Tom Callahan representing Mr. Patel who was unable to attend, Jeff Baker and his attorney Gene Guimond, and Peter Rosen, coastal geologist. Stan Humphries, consultant for the Conservation Commission, was also present.

A meeting was held November 24 and was attended by Joe Grady, Sam Butcher, Stan Humphries, Peter Rosen, Mr. Zimmer, and Rick Grady. In response to comments at the last hearing and at that meeting, Rick Grady has made some changes to make the plan easier to read, moved the revetment back and smoothed the slope to the north end, and removed the second access ramp on the Patel property. He calculated sand replenishment needs as being 1 cubic yard per linear foot of slope, which would be 220 cubic yards for the Baker property and 55 cubic yards for the Patel property. The estimated cost for this is \$2575 for the Patel property and \$8100 for the Baker property. A stone marker that will be used to trigger replenishment has been added to the north end of the property. The toe stones on the ramp (below the sand) are more steep to reduce the projection under the beach which will reduce the disturbance to the beach.

Rick Grady discussed alternatives. They are not recommending moving the revetment against the foundation of the Baker property as was discussed at the November 24 meeting. They are concerned about having boulders against the foundation, and at the top of the revetment the stones will be higher than the deck. It will also block egress through the sliding doors. They are concerned about the load it will place on the foundation and possible concerns for structural

integrity. Instead they have tightened up the distance from the deck to shorten the distance the wall extends onto the beach and reduced the size of the overtopping apron.

There was a suggestion to elevate the house on pilings. According to Rick Grady this would result in a height violation of the zoning bylaws, and the property lines are too tight to relocate the house.

Peter Rosen, consultant for the applicants and a coastal geologist, further discussed the revised alternatives analysis that has been submitted. It is not feasible from a zoning perspective to elevate the house and put the revetment underneath. Having storm waves go under the house is not a sound engineering approach. Using coir logs offers no advantage, and as a natural fiber they only last 3-5 years at which time the project must be redone. In his experience these only offer protection from 1 major storm, so it is a temporary solution. The revetment is the best solution with ongoing sand replenishment to provide nourishment to the beach.

Peter Rosen then responded to a letter submitted to the Commission by neighbor Tony Kelso. Mr. Rosen said that in this setting, the erosion is not due to surface runoff from the yards; if this was the case notches or v-shaped channels would be seen from the runoff, he sees a clean face so runoff is therefore not present. The erosion is from the waves at the base of the bluff and the coir envelope approach is a Band-Aid. Native plantings will help especially if runoff is an issue but there is no issue of runoff here so it is not relevant. Comparing nearby properties as Mr. Kelso does in his letter is not of value because they are in an accreting zone. The seawalls to the south were built in the 1920's and were sand-starved until 15 years ago, now there is sand accretion, showing beach walls can coexist with an accreting beach. Walls are constructed differently now and the added sand from the proposed nourishment will help. There is shoreline retreat and the property is functioning as a seawall, a sloped seawall will increase the stability.

Rick Grady explained that to address the surface runoff concerns, a layer of crushed stone will be used as bedding along the entire top length of the wall and behind the entire wall extending to the base. Runoff will hit the stone and go down through the crushed stone behind the wall.

Corey Wisneski asked about the trigger marks in the wall for nourishment; Mr. Grady said there will be 3 trigger marks in the wall. Any stone exposed below the designated elevation will in essence trigger the sand nourishment requirement.

Holly Morris asked how much beach will be lost to the revetment. Rick Grady wasn't sure, Sam Butcher said he had calculated that 2300 square feet of coastal beach will be lost (not including the part of the revetment that will be below the sand) based on a very rough calculation. Holly Morris asked where the existing pipes and drains will go. Rick Grady said they will remain and will be behind the stone revetment. Holly Morris asked if there will be any plantings in the sand, Rick Grady said none are proposed at the top of the seawall. Holly Morris said she thought a planting along the top of the wall would help reduce effects from watering and fertilizer used for a lawn.

Stan Humphries, consultant for the Commission, said the major issue is the adverse effect of the loss of the beach. He questioned whether you can trade beach nourishment for this significant loss. The alternatives analysis is not adequate because it seems no contractors were consulted and no cost estimates are provided. He agrees that trying to put the house on piles would be difficult. The coastal bank is behind the house, and revetments under the regulations are for the protection of coastal banks. There is no sediment source to the beach where the house is.

Stan Humphries provided an example of an alternative to the Commission and to the applicant where the structure would be retrofitted to leave the bottom open, and columns would be added to support the house. The east facing wall would be removed, leaving the north and south walls, the support columns for the deck would remain, the western wall would remain against the bank, and interior columns added. This way the revetment can be moved nearer to the back wall and it would bring the structure into compliance; currently the Velocity zone is higher than the lower floor which means it is out of compliance. Because the existing bank behind the house doesn't provide sediment to the beach now, compensatory nourishment would not be needed. The impact on the beach would be temporary and more beach is preserved with this approach.

Joe Grady said the difficulty the Conservation Commission has is with the applicants occupying the beach with a riprap stone wall. You can armor the coastal bank as is being proposed at 20 Bradford Road to the Right of Way, though the toe of the proposed sloped stone wall encroaches on the beach. Typically when the Commission permits these walls the land behind the wall is cut back so the toe of the wall starts at the toe of the bank. Near the house, the ramp and decks on the side are occupying the beach. This project as proposed doesn't meet the performance standards of the Town's regulations, which is no adverse impact to the beach. The alternatives analysis does not provide adequate depth of analysis of the alternatives.

Gene Guimond said the proposed beach replenishment requirements are better than a structure with no replenishment. Joe Grady said it is possible to do the replenishment without the riprap wall; this project is adding a revetment on the beach in the wetland resource area. The Commission asked for a good review of alternatives and some options, but that has not adequately been done. The house was built on a wetland and it is hard to permit adding more armor to it.

Sam Butcher said the challenge is that the regulations say you can't decrease the volume of beach and this proposed project does. His question is when the limit of the beach line was drawn; there is erosion in this area. When a wall is built with an angled face, it gets pushed back into the yard but the erosion has already pushed it into the yard in this case. The beach has migrated landward since the application was filed. He is interested in knowing how much of the beach will be occupied by the revetment if the line as it existed prior to the erosion events is used. He encouraged the applicant to determine the location of the beach/bank interface based on previous submissions.

Sam Butcher said that in front of 30 Bradford, the beach is being occupied with the proposed revetment. He is interested in an engineering opinion if it is asking for trouble to put the revetment in front of the deck, it seems like it would be an opportunity for scour between the revetment and foundation and under the foundation and for the revetment to then become unstable. If the revetment is in front of the deck, the water will go over the top and lead to scour. It is hard to justify removal of the beach.

Rick Grady said it is hard for him to look at it as removal of the beach, because they will put sand back to elevation 12 where it is now elevation 7-8 in front of the existing deck. Sam Butcher asked if the angle of sand at the top of the revetment is beach or bank. The regulations don't allow the removal of beach, but he recognizes it is an eroding beach, so it can be looked at where the beach bank break has been historically. Rick Grady said they are landward of where the bank was before at the Patel property; at the Baker property it was sloped sand.

Sam Butcher said there is significant erosion due to drainage. Rick Grady said there will be sufficient crushed stone used and it will provide more drainage than the old leaching pits. He

said he is open to ongoing Orders of Conditions for the property that allow for sand to be brought in.

Sam Butcher asked about the covenant, it being an ongoing obligation and whether it would live beyond a Certificate of Compliance. Stan Humphries said you can have an Order in perpetuity, and not issue a Certificate of Compliance, or issue a Certificate of Compliance with ongoing maintenance requirements though this is harder to enforce.

Gene Guimond said the previous project did not offer a permanent solution. A permanent revetment is a permanent solution, with the burden on the Conservation Commission to enforce the ongoing obligations. The proposed Covenant is permanent, no statute of limitations applies.

Peter Rosen said you can have continuing conditions that survive beyond the Certificate of Compliance. Thomas Callahan thinks the Covenant is redundant, that permanent Orders can be effective, and when a Certificate of Compliance is issued it can include 'these conditions survive' written on it. There is nothing in the covenant that can't be in the Orders of Conditions.

Robb D'Ambruoso said the Orders of Conditions doesn't address how the property owners will apportion the cost and accountability for the ongoing nourishment. It is not clear who is responsible. Thomas Callahan said it can be based on linear feet; the enforcement authority belongs to the Conservation Commission and it may be necessary to referee between neighbors.

John Brawley asked Stan Humphries what he thinks the likelihood is that a storm event will expose the trigger point but then, with accretion and without nourishment, there will be natural replenishment of sand to a higher elevation. Stan said it is a given on open ocean coast that the process can happen that way, but in an embayment with tidal flats it is different. John Brawley wondered if there should be a duration defined such that the markers be exposed for a certain length of time before replenishment is required. Sam Butcher asked how long after an event it can wait before requiring replenishment; Rick Grady suggested replenishment be done if needed once per year on May 1 which is a time of year that it is good to do plantings. John Brawley asked how important the plantings are, his understanding is that the plantings hold 1% of the sand.

Tom Gill asked how the whole process will work, who will do the monitoring, and Peter Rosen said there is neighborhood access and the neighbors will be able to watch for the markers.

Leo Chylack of Bradford Road said the ramp that provides beach access now erodes rapidly and nobody fixes it. He asked who has the authority to enforce the repair of the ramp because access to the beach is severely limited. Gene Guimond said the proposed ramp design will be a permanent ramp. The property owner is under no burden to create a ramp if people have easements to the beach. Those with access can take court action and create a ramp themselves.

Debbie Caso of 35 Bradford Road said they think they will lose sand from their property because of the revetment. Where the seawall ends there will be erosion.

Peter Rosen said the stone revetment with the beach nourishment will be more protective of the beach.

Tony Kelso of Marshall Street said he disagrees with Peter Rosen about the issue of runoff. He said there are 4 large fissures in the sand bank in the spring from drainage and runoff issues; these happen without any storm events. He asked why runoff couldn't be directed away from the bank and the beach. The properties to the north don't have erosion issues. There are no drains or irrigation systems and the banks in that area are heavily vegetated. He thinks there are two main issues, the lack of vegetation and drainage issues that need to be addressed. Sam Butcher asked whether the placement of stone behind the revetment will adequately diffuse this runoff. Rick Grady said the catchment system behind the wall will work and they could add 5 feet of vegetation at the top. They don't want to redirect the runoff. He then asked whether there is less concern about the work on the beach if the coir log approach is taken. Corey Wisneski said the concern is loss of beach regardless of what is done. Sam Butcher agrees that in terms of beach loss there is no significant difference between the logs and the revetment approach.

Peter Rosen said the runoff is being dealt with. The retreat of the shoreline is not due to runoff, it is due to storm waves at the base of the slope, and this proposed work will address the runoff.

Sam Butcher said the applicants have addressed some concerns, but that the hang up is the loss of beach area. He would like to see how much beach is lost if the line is drawn as it was pre-erosion.

Sam Butcher said there is also the issue with the ongoing maintenance requirements. Perhaps Town Counsel could be consulted about ongoing Certificates of Compliance, leaving Orders open, using a Covenant, or other approaches. The draft Covenant supplied by Attorney Callahan also needs to be reviewed by Town Counsel. He would also like to see more evaluation of alternatives, both looking at options and cost estimates. So the issues for the applicant are the loss of beach, and the alternatives analysis; the issue for the Commission to look into with Town Counsel is about ongoing maintenance requirements.

Rick Grady said the alternative suggested by Stan Humphries is not viable because the applicant will be losing living area. Corey Wisneski said the loss of the beach is an important issue and she is not convinced that the analysis of other options, such as moving the house, have been looked at thoroughly.

Joe Grady said that on Wirt Way there was a house on a marsh that they wanted to reconstruct and push back as far as possible. The Conservation Commission supported a petition to the Zoning Board of Appeals to get a variance from the setback requirements so they could get the house off the marsh – so there are other mechanisms such as this that can be investigated as the alternatives are considered. The house is currently out of compliance with the State building code because the basement is below the velocity zone. Rick Grady said that statement ignores grandfathering provisions. Joe Grady said that is true, so perhaps the house is not in violation, but it doesn't comply with current regulations. Joe Grady asked if the house has water damage in the basement; Mr. Baker said last year they had small puddles only.

Joe Grady said an administrative concern is that some additional funds are needed for the consultant account. The office will forward that information to the applicant shortly.

Robb D'Ambruso asked the Commission why they would pursue the covenant language when the Commission does not know if the issue of beach loss can be addressed; in which case the covenant could be irrelevant. Sam Butcher thinks it makes sense to pursue that at the same time as the other work.

On a motion by Corey Wisneski, seconded by Tom Gill, it was voted 7-0-0 to continue the hearing for SE18-1698, 20 Bradford Road, to Tuesday, March 22 at 7:10 pm.

On a motion by Sam Butcher, seconded by Robb D'Ambruoso, it was voted 7-0-0 to continue the hearing for SE18-1697, 30 Bradford Road, until Tuesday, March 22 at 7:11 pm.

**251 GURNET ROAD: DISCUSSION**

This will be postponed until the next meeting.

**ADMINISTRATIVE MATTERS**

**MINUTES:**

On a motion by Corey Wisneski, seconded by Tom Gill, it was voted 7-0-0 to approve the minutes of **January 26, 2016**.

**CONSERVATION FUND EXPENDITURE**

There is a barn on the newly purchased Merry property that needs to be taken down. Joe Grady is asking for \$1500 from the Conservation Fund to hire equipment to take the barn down. On a motion by Robb D'Ambruoso, seconded by Holly Morris, it was voted 7-0-0 to approve that \$1500 be expended from the Conservation Fund to hire equipment (Phillips Tree) to take down the barn on the Merry property.

**Adjournment:** On a motion by Robb D'Ambruoso, second by Tom Gill, it was voted 7-0-0 to adjourn the meeting at 8:50 pm.

**MATERIALS REVIEWED AT THE MEETING**

Beach Reservation Proposed Work letter and report on last year's work letter  
RDA materials for 106 King Phillips Path  
NOI materials for 20 and 30 Bradford Road  
Draft minutes of January 26, 2016