

CONSERVATION COMMISSION MINUTES

September 17, 2015 ~ 7 pm ~ Lower Conference Room, Bourne Town Hall

Chm. Gray called meeting to order at 7:00 pm and explained the Commission's procedure pursuant to the Wetland Protection Act M.G.L. c. 131, s. 40 and the Bourne Wetland Protection Bylaw Article 3.7.

Note: Chm. Gray addresses the audience in regards to recording a public hearing. If anyone wishes to record a public meeting, they are free to do so, however, it must be known by the Board and the public. All cell phones are to be placed on vibrate or turned off during the meeting. Michael Rausch, Bourne Enterprise, recording tonight.

Members present: Chm. Robert Gray, V. Chm., Martha Craig Rheinhardt, Peter Holmes, Betsy Kiebala, Thomas Ligor, Rob Palumbo and Susan Weston.

Members excused: Paul Szwed.

Requests for Determination of Applicability

1) Herb Landsman

CC15-40

Barbara Frappier, Warwick & Associates, Inc.

170 Wings Neck Road, Pocasset

Construct a shed within a VE Flood Zone

Ms. Frappier – this is a simple shed project. It is within a VE Flood Zone.

Brendan Mullaney – as stated this is a simple shed in the Flood Zone only. No other concerns with the project.

No other board comment. No public comment.

Palumbo moved and seconded by Weston a Negative Two Determination. Unanimous vote.

2) James Madigan

CC15-41

Barbara Frappier, Warwick & Associates, Inc.

217 Presidents Road, Gray Gables

Restore mitigation planting within a VE Flood Zone and within 100 feet of a Wetland Resource Area

Ms. Frappier representing – permit expired and project does not meet compliance with regard to the mitigation restoration planting. She reviewed said planting mitigation to the board.

Brendan Mullaney – expired order for the property and application is the best way property into compliance as the property is up for sale. If the plan is followed as proposed then the property should be brought into compliance with the plan of record.

Chairman Gray asked for clarification what the applicant was looking for – Ms. Frappier responded that they were looking for permission to do mitigation plantings in areas that were outside of the approval on the Order of Conditions to bring the property into compliance.

No board questions. No public comment.

Palumbo moved and seconded by Weston a Negative Two Determination. Unanimous vote.

3) Paul & Diane Lowndes

CC15-42

Bracken Engineering, Inc.

45 Thorne Road, Gray Gables

Construct a garage and driveway within an AE Flood Zone

Hearing Under State Act Only

Chm. Gray recused himself for discussion and vote.

Brendan Mullaney – explained the representative from Bracken Engineering had a scheduling conflict and asked the board to review tonight. All abutter notifications were sent out. The application is for a new garage construction and driveway within the Flood Zone only. No other concerns with the project.

No board comment. No public comment.

Kiebala moved and seconded by Palumbo a Negative Two Determination. Unanimous vote.

4) Mary Whelan

CC15-43

Bracken Engineering, Inc.

790 Shore Road, Pocasset

Upgrade to new Title V septic system within an AE Flood Zone and within the 200 foot Riverfront Area

Chm. Gray continued to recuse himself from discussion and vote.

Brendan Mullaney - explained the representative from Bracken Engineering had a scheduling conflict and asked the board to review tonight. Application is for a standard, new Title V septic. Proposed system will be an improvement over existing conditions. No other concerns with the project.

No board comment. No public comment.

Palumbo moved and seconded by Kiebala a Negative Two Determination. Unanimous vote.

Notices of Intent

Chm. Gray back as Chairman at this time.

1) Gretchen Woodruff

DEP File Number: SE7-1927

Barbara Frappier, Warwick & Associates, Inc.

538 Scraggy Neck Road, Cataumet

Raze a portion of existing, construct an addition and perform renovations, including all landscaping, grading, utilities and other appurtenances within 100 feet of a Wetland Resource Area

Ms. Frappier representing – new owner seeks renovations which includes a one-car garage. All landscaping, grading, utilities and other appurtenances are within 100 feet of a wetland area. The work is outside of the Velocity Zone and outside of the 50 foot buffer zone. Not shown is a straw bale barrier for erosion control, but that is on the revised plan that has been submitted.

Brendan Mullaney – the new garage will remain in the same area and an existing septic will be upgraded as far from the resource as the lot will allow. There is a limit of work on the revised plans which will be incorporated into the order conditions.

No board comments. No public comment.

Palumbo moved and seconded by Kiebala to close the public hearing. Unanimous vote.

Brendan Mullaney – Draft Order of Conditions: All General Conditions, Special Conditions pursuant to MGL Chapter 131, Section 40 numbers 1-4,6,9,10,12,13,16-24 and Special Conditions pursuant to the bylaw 4,7,8,9 and Special Condition 20 and 24 to continue in perpetuity.

Kiebala moved and seconded by Holmes the Draft Order of Conditions to Final Order of Conditions. Unanimous vote.

2)Pinnacle Site Contractors, LLC

SE7-1915

JC Engineering, Inc.

0 Crab Rock Way, Sagamore Beach (“The Strand” below Indian Trail)

Construct a 760-foot long stone revetment and perform coastal bank stabilization within a VE Flood Zone and within a Wetland Resource Area

(Continued from 9/3/15)

Chm. Gray recused himself from discuss and vote. He turned the meeting over to Mr. Palumbo.

Atty. Kathleen Connolly on behalf of the property owners. The description of the application has been revised. At the last hearing several issues were raised. We have been working to address the concerns that have been raised and feel we have fully addressed three of the big concerns:

- 1) The Coastal Restriction is no longer an issue, we have designed the project to stay off the beach
- 2) Reassurance for annual monitoring to determine beach nourishment is necessary – we have proposed a separate tripartite agreement to address this and it has been submitted and forwarded to Town Counsel, we can work out details later; and
- 3) coastal construction and public access to the beach – we will agree to any condition and remedy any issues that arise, including restoring the beach access area

Don Perry, Pinnacle Site Contractors – since our last meeting we addressed a number of the issues that came from said meeting. Submitted a number of items in response to what the project involves and response to the consultant reports. Briefly reviews the current configuration of the project, which involves cobble berm transitioning into geo-textile bags, into the revetment structure, and back to cobble berm at the northern end.

In the reports in regards to the geo textile, concerns about being utilized in front of 2 Indian Trail. We have not been able to reach out to the homeowner as she is out of town, but have had discussions with her as far as considering another type of solution . We have brought a schematic of a coir sand filled envelope that could be used as a substitute - if this was considered more of a hard structure. This design mirrors the elevations for the Macafferri bags, includes a sand drift fence and helical anchors, similar to the design of the Phillips Road projects from three years ago.

The feedback for the berm is positive and we feel it is a good transition. Structure is being extended a considerable distance for additional protection and will offer future beach nourishment and beach protection up to the town owned right of way. At the last meeting with regards to the revetment, it would be the same profile. There was also an item about a section of wall that is shown on the beach - this will be addressed as far as survey purposes as well as construction means methods to ensure it is constructed landward of the bank. We have done this type of work before and has been very successful and we will not be coming out onto the beach at all.

Ligor – asked for any visuals to see what the project would look like when it is complete for the newest proposal tonight. Mr. Perry - Cross sections would give you an understanding and he could show projects done as a result of Storm Nemo in 2013. Brendan Mullaney said there are photos of similar walls done by Pinnacle. Mr. Perry explained details in photos to members and the proposed planting specifications for the bank.

Stanley Humphries, LEC Environmental Consultants – As mentioned, I have submitted supplemental information to the Commission. Two of the main issues to address:

- 1) Beach nourishment – it is our position there is a very wide high-tide beach and the bank gets hit by storms on an episodic basis and unlike a lot of coastal banks where there may be high tide at the base of the bank. In that situation, I would support a larger nourishment program, but in this case the long-term erosion rate is considerably low for MA. For nourishment, we have tried to address tow erosion coming off the revetment with a monitoring program (chisel mark; he suggested 9, could be changed to 10). Calculating volume across entire revetment to bring to this elevation - proposing to bring to site directly or town could give us a place on town property.
- 2) Question about mac bags across the entire revetment - 600 bags vs. revetment; it is difficult to compare and assess to another project. Bags are more susceptible to puncturing. At this time, we are likely to change this to coir envelopes. This would be a large amount of bags to bring onto the properties. He hasn't seen any criticism on the revetments. We can stake out the toe of the bank to ensure the work is landward of the bank. With the position of these pre-78 houses, the Commission should give consideration to this revetment and bio-engineering. Mr. Perry - The lots are narrow which means there are not a lot of options left at this time.

Attorney Connolly – we believe we have addressed all issues – with respect to number 2, we still need to speak with the Jones' but believe they will agree with this new option.

Palumbo – not sure everything has been addressed, we have Jim O'Connell here to present his report.

Jim O'Connell, Coastal Advisory Services – retained by the board to review the project and submitted information. Has submitted three reports at this time. 4 main issues still remaining.

Houses are obviously threatened, 5 out of the 6 qualify for structural armoring.

- 1) Wetland Restriction Order – contours show the revetment on the coastal beach on the plans shown tonight, sounds like the plans will be revised to address this. Issue of no adverse impact on the beach, I believe this can be met through mitigation and by pulling the revetment back so there is no displacement of coastal beach.
- 2) Use of MacBags – Greg Berman's report calls these out as coastal engineering structures, have not seen this in writing from DEP. Geotextile bags have been used on both sides of the Cape for a number of years in various forms, mostly as long sand filled tubes. They have not performed very well, have primarily failed due to punctures from debris during storms. The reflection of the bags is equal, if not more, than that off a revetment. They have addressed this by removing in their latest plan with sand built

envelopes. Sand filled coir envelopes have been used in many communities. He feels the “jury is still out of these” as they have worked in some areas and failed in others. These are considered non-structural erosion control by DEP and other Conservation Commissions around the state, and can therefore meet the performance standards. They should be covered with sand for the life of the project.

- 3) Cobble berm – this is a non-structural component - he feels this meets performance standards. Would not consider the volume of these as part of the nourishment. Should be setback 10-20 feet from the property line on either end to minimize erosion and end scour. There should be some condition for when they will need to be rebuilt.
- 4) Mitigation – Stan did a nice job explaining the amount of material coming to this area from the north, creating the wide beach. The same thing is happening from this bank going south. This is an open cell, so the material eroding from this bank is feeding the beaches to the south, just as the material eroding from the north is coming here. It is important to discuss the material that will not be coming out of this coastal bank to feed the beaches to the south. When the beach lowers to elevation 9, they have discussed a trigger point for nourishment. The plans were done when the elevation of the beach was elevation 12; therefore you are going to lose a substantial amount of beach before reaching elevation 9. Need to calculate the amount of material coming out of the bank annually and replace on annual basis. Came up with a number of 960 cubic yards – would strongly recommend this amount is used to cover the revetment and it can then naturally erode and feed the downdrift beaches. This is the only point I disagree with on the project.

Weston – asked for clarification on beach nourishment and if it is allowed under the Restriction Act. Mr. O’Connell explained this is an allowed activity under the Restriction Program.

Ligor – report stated 780 yards. O’Connell – this is the latest figure based on calculations.

Palumbo – asked about the actual work as far as equipment, materials, etc. every year. Mr. O’Connell - it will have a temporary impact on the beach. Palumbo – what about the timing for placing the sand? They have asked to place it once before Thanksgiving, I assume this is to weather the storms of the winter – you have stated it should be covered at all times. O’Connell – if 780 yards is placed at once, it will likely erode after a couple storms. Ideally it would be best to be covered at all times – placing half the material and allowing to erode and then placing the other half would be best. However the distance from the access is far and you may have impacts on the beach multiple times per year. Palumbo – the applicants are looking to protect their homes, Commission is looking to protect the beach, so it appears we may be at odds once the structure is installed. O’Connell – ideally you’d want to have the revetment covered with sand at all times, this would eliminate adverse impacts to the beach.

Craig Rheinhardt – asked about coir envelopes – would they create less wave reflection than revetments? Mr. O’Connell said he isn’t convinced, but when you build a revetment it will

dissipate waves as well. The coir envelope is a softer structure and will absorb some energy. He feels both are equal.

Weston – asked if it is better to have envelopes the whole way rather than the revetment. Mr. O’Connell said it can be a benefit to the beach since the coir envelopes may fail during a storm and release sediment, but it is a difficult question to answer. Coir envelopes are more temporary in nature.

Ligor – regarding timing, when should the whole project be expected to be finished. Mr. O’Connell said it isn’t going to matter. If there is a storm with equipment on the beach it would be an issue. Boulders can be brought a few at a time to build each section and then watch the forecast is the best way to tackle it.

Don Perry – he explained how Pinnacle worked on projects in the past- keep a close eye on the weather, project is tightly managed and have worked successfully in bad weather and time of year for such projects.

Kiebala – asked about using the town landing and required permitting for access. Brendan Mullaney said in the past it was considered a temporary easement, but the Selectmen would have to grant permission to cross over town property. Palumbo – asked about permission from private property owners and crossing their land. Perry – we have explored going from south to north as well as north to south from Plymouth. We need to make the appropriate arrangements for access, do not have at this time. Further discussion about long term or perpetual permission to access site for nourishment and maintenance. Could potentially be addressed through tripartite agreement. Palumbo – the access issue needs to be resolved by the applicants.

Craig Rheinhardt – asked about the construction of the revetment without the bank collapsing and what happens if it does collapse. Perry – we have shoring devices that will always be in place and all construction takes place with a shield of shoring. We need to get the footing in place and build from there, we have performed this type of work in a number of settings. Shoring will be in place at all times – we have trench boxes and other devices we can slide as necessary, all of which are OSHA approved. O’Connell – commented on the project needing an experienced contractor to do the work.

Weston – recalled we had asked at the last meeting about the cost of beach nourishment - homeowners should realize it will take 3 times per year to maintain and what the cost of this will be. Brendan Mullaney said ballpark is about \$20-40 per yard, which would be \$15,000 - \$30,000 for 780 yards each year. O’Connell – it would probably be on the high end in this area because of transportation – alternative would be to build a chute down the bank to move the sand.

Craig Rheinhardt – suggested getting an average for the homeowners, based on the amounts that have been provided by consultants. Mr. Perry said it would be hard to say a number on an

annual basis, it will be depend on the actual requirements of the beach nourishment. Further discussion was held and the exercise has not been done with the homeowners. There was the issue that some years may be more or less than others due to the weather.

Holmes – this amount is critical, since this will determine if the homeowners can afford this in the future. If not, the responsibility would fall back on the town.

Atty. Connolly – we looked into the numbers, we are well aware this is an issue and could be worked into the tripartite agreement.

Palumbo – it appears there may be a difference in the amount you have proposed and what our consultants have come back with for numbers, so this is something that may be a problem and will need to be resolved. Perry – we are proposing a trigger and are willing to act when it drops below that level, seems to make sense to do this as-needed. O’Connell – sensitive to the costs and issues, but the revetment needs to be covered at all times. The volume that has been calculated is the annual average that will be lost from the bank and this should be required annually – if additional material is required to cover the revetment it needs to be brought in as necessary. Humphries – there is longshore sediment transport that brings sand onto the beach as well. We haven’t talked about the bank material from the top that contributes as well. The numbers that have been generated are based on the high tide location – our calculations are based on the amount that will be withheld from the length of the revetment, which is about 200 yards. We are proposing a trigger mechanism, rather than an annual volume and are pretty firm in this proposal. The volumes of sand brought in by the consultants are not on the table right now.

O’Connell – explains how he calculated the volume of nourishment, based on the bank erosion rates.

Palumbo – asked if there is anything at the top of the bank pulling the sand down, such as septic, run-off, etc – is there anything that can be done with the homes to prevent this.

O’Connell – majority of erosion is from storms – they could use vegetation strips to slow down at the top. Palumbo – it appears we may have reached an impasse between what is being proposed and the numbers our consultants have proposed for nourishment. If trying to protect the beach from being adversely affected, we have a duty to do what we can to make sure it doesn’t go to its lowest point before we start doing something.

Perry – this has to be practical for the owners, some type of nourishment is needed that is reasonable. If the crest of the bank continues to recede, we will start to see destruction of real estate with structural issues and this is a real issue. The homeowners are committed to do the right thing, motivated to be good neighbors as well-being reasonable with what could be established. The alternative to do nothing is that the structures will be in jeopardy – the Sagamore water district has concerns about Indian Trail, we have concerns about water, gas in the street. We need to get our arms around the beach nourishment, some of the numbers are

staggering – the end result has to be considered when coming up with a reasonable point to arrive at.

Atty. Connolly – the homeowners have put a lot of money into soft solutions, the homeowners are willing to do reasonable beach nourishment, but to have an open ended \$30,000/year forever is putting a burden on them. They are trying to protect their properties, if those houses go onto the beach, there will be more serious environmental issues to address beyond beach nourishment.

Palumbo – understands the issue, we are a reasonable board, this is a huge project and we are just trying to do the best job we can do for the town.

Kiebala – asked about the language stating “each landowner will conduct monitoring”. Humphries - the homeowners are aware they will have to coordinate with each other. Kiebala- who would pay for the monitoring and would the selectmen have to approve this. Perry- stated they would score the revetment in front of each property at a certain elevation. Said the homeowners are very serious and would like to work through and come up with a happy medium. Additional discussion regarding specifics of monitoring – still to be worked out.

Palumbo – asks about the Tripartite Agreement and if we are going to go through this tonight. Atty. Connolly – waiting to hear from Town Counsel. Would like to know what the board feels in principle regarding the project and agreement. Palumbo said the board isn’t prepared tonight and will not vote until we have something worked out regarding an agreement. Atty. Connolly – we would like to see what the general concerns of the board are.

Weston – commented in the future 100 years and the homeowners don’t want to have anything to do with the revetment. How will this hold up in court – we need to protect the town. Also has issues with the beach nourishment and monitoring language.

Craig Rheinhardt – she had issues with the language regarding nourishment within 10 feet of the revetment and that the homeowners would not be responsible in a catastrophic event – that’s the whole point, not sure if the language is appropriate. Atty. Connolly clarifies some of the language and states it is standard contract language.

Mr. Palumbo – asked about the termination section as he doesn’t know what the intent is. Atty. Connolly said it is standard language and this just a draft and not set in stone. Since the property owner and applicant are different entities, we need a contract that would hold up in court.

Craig Rheinhardt – asked about repair and maintenance. Atty. Connolly said the details can be added after review from Town Counsel.

Holmes – suggested waiting for Town Counsel to continue further discussion with the agreement.

At this time Mr. Palumbo opened the discussion to the public.

Richard Regnante – we have 46 homeowners and have submitted three (3) letters for the project. A lot of the issues have been answered in the reports. We have all read “The Last Beach”, which basically states that revetments destroy the beach. This is a fact. Beach replenishment does not work. Revetments don’t work in perpetuity because of the financial issues. He asked about the maintenance, monitoring and compliance of the beach replenishment on a yearly basis. The other issue is the cobble berm which they feel is the “sacrificial lamb”. What about the maintenance? What about compliance and monitoring of the beach nourishment? And what about the future owners? These are the issues we have brought to the Commission. We want the homeowners to protect their properties, but we don’t want to destroy the beach.

Ray Jusseau – asked about guarantees on the wall against storms and hurricanes. This is costing the homeowner a lot of money. If the wall goes, who is going to take care of that? It seems like there are no guarantees.

Laura Richards – read a letter into the record. Constantly worried about the erosion issue, and lack of progress in the permitting process for protecting their homes. We have been treated as “bad guys” in the neighborhood with trying to protect our homes. We have a right to protect our homes just as well as they have. We take pride in our home and invested a lot of money to try to secure the erosion. Other landowners can protect their property any way they choose and do not have to go through permitting. Pinnacle Construction successfully did a project in the past and that is why we contacted them. The town, upon accepting this land as a gift, should have some responsibility to the taxpayers to avoid catastrophic damage to our homes. We have watched the natural beach erosion during storms first hand. We are regular people who love the beach in this town. We are offering to invest significantly to save the beach that we all can enjoy. Let’s be smart and get something done.

Keith Jones – we are not against our neighbors. We are concerned about the best alternative moving forward. There is good will on both sides and it hasn’t been conveyed as such. He is committed on looking up alternatives and do want something to be done. What to be done is the question. It seems some sort of barrier needs to be put in place. If we go with the stone revetment, he has mitigation concerns with erosion. Is there a way to have a revetment for some sand to reach the beach but doesn’t need to be replaced on a yearly basis.

Mr. O’Connell – in his experience for coastal structures, replenishing sand is not a definite as we cannot see the future; the best we can do is take an average. If you don’t keep sand on the revetment, it will result in the erosion of the beach. Vegetation on the sand is a waste of time and money in this particular case. Putting sand on the revetment will mimic the natural occurrence and you will get better longevity of the sand.

A member of the audience asked about keeping the revetment covered with sand annually. Mr. O'Connell said there should be a commitment to use the annual amount – how much is lost depends on the intensity of the storms.

A member of the audience stated erosion happens when a revetment is not there – just with regular rain storms. These 6 homeowners would like a revetment and will take care of it, but there has to be some fairness. Why cover a revetment with sand that will always wash away. It will need to be covered all the time. Also, there is an area at the Indian Trail that is part of the strand that is owned by the town of Bourne that I am sure the town will not build a revetment on – that land will always be there for beach nourishment. The beaches change every year with each storm, the changes happen all the time. We are willing to do fair beach nourishment but cannot be expected to take care of the whole beach. Why hasn't anyone talked about the success of revetments in Sagamore Beach.

Palumbo – the revetment will prevent what is being done naturally. Every area is unique and different. Both specialists looked at the best possible solutions for the unique area. The board will likely use the suggestions of the town's consultant.

O'Connell – I am unbiased, I hope something can be done. Commented on how vegetation on top of the sand is a good suggestion, but often doesn't work. Right now, the proposed alternative is that if the beach drops, homeowners are responsible to replenish the beach at elevation 9. There will be no dry beach at elevation 9 and the high tide will be forced up against the wall. The sand will not last - it is not a viable solution. The sand on top of the revetment is looking out for the homeowner's best interest and the best compromise.

Mike Powers – it is not just trying to cover the revetment, it is to protect the beach and make up for what would have come out of the bank naturally. He asked about the sand traveling down the beach – coming from Plymouth. Could the sand go down the stairs?

Palumbo – those are questions that need to be discussed and come up with an idea. There are changes that need to be done to the application as far as access, how the mitigation is going to be done, issues where Town Counsel needs to come back and address for guidance.

Craig Rheinhardt – in addition to the monitoring plan of the beach, she would like to see a monitoring plan for the revetment – whether nourishment is needed for the revetment rather than just the beach.

Palumbo – a project of this magnitude takes time and the protocol is the applicant asks for a continuance moving forward. He would like to have a certain time to get timely filings for our consultant to review prior to our next hearing, if possible.

Atty. Connolly – she will contact Town Counsel and is requesting a continuance at this time.

Perry – time is of the essence and would like to get construction moving sooner rather than later.

Holmes moved and seconded by Weston to continue hearing to 10/15/15 at the request of the applicant. Unanimous vote.

Chm. Gray is back as Chair at this time.

Other Business

Excuse Absent Members – this doesn't need a vote for an Associate Member.

Public comment

None.

Adjourn

Palumbo moved and seconded by Holmes to adjourn. Meeting adjourned at 10:10 PM. Unanimous vote.

Respectfully submitted – Lisa Groezinger, sec.