

**February 21, 2014
Bioswale Meeting**

Attendees: Jessica Watson – Sussex Conservation District
Michael Shone
Jane Taylor
Judy Henriksen
Jim Henriksen
Tim Macmillan
Karen Fleck
Edward Fleck

1. Team reviewed the stormwater management plan for the bioswale
2. All water from the bioswale flows into the New Road ditch via underground pipe
3. Perforated drain pipe is in the middle of the swale
4. The bioswale is made up of perforated pipe, gravel and mesh at the bottom, and layers of concrete sand, peat moss and mulch to ensure water is infiltrated into the ground quickly
 - a. Mixture is approximate 3 feet deep
 - b. Homeowners should not change the mixture and layering of the soil if anything is planted in the bioswale
5. Plants and trees with deep roots will damage the bioswale
 - a. Trees must not be growing in the bioswale because the root system of the tree will undermine the filtration and drainage provided by the layers of the bioswale and possibly penetrate and block the perforated pipe at the bottom.
 - b. Team marked some trees with blue tape to discuss with Solitude
 - c. Bioswale has many trees that need to be removed
 - d. Removed trees root systems must be terminated
6. Several cleanouts are visible in the swale and should be checked semi-annually
 - a. Check Solitude agreement to verify inspections of the bioswale and clean-outs.
7. The top layer of mulch is cosmetic and optional. The lower layer of mulch is an integral part of the design which must not be disturbed by digging holes for plants, trees, etc.
8. The plant list on the original plans for the bioswale will be sent by Jessica
 - a. The plant list was developed to enhance drainage and to retain the health of the bioswale
 - b. We do not have to conform to the original plant list but recommended to use only native plants with shallow roots, no trees.
 - c. Developing a HOA guideline will keep the bioswale healthy if individual homeowners abide by it.
9. Pruning plants in the bioswale is to our discretion
 - a. Debris from any trimming done by a homeowner needs to be removed from the bioswale
10. Bioswale was used to dump ornamental grass trimming or bushes. The City of Lewes picks up yard waste monthly. Please do not use bioswale for trimmings.

11. Sussex Conservation will conduct a yearly inspection of the bioswale upon request from the HOA
12. Jessica noted a few houses that were being built without proper silt fences
 - a. Jessica talked to 2 of the builders
 - b. An inspector will be out on Monday to review the silt fences for new construction
13. Team is going to review the plans once they are sent from Jessica to develop guidelines
 - a. Trees must be xx feet from middle of swale
 - b. Approved plant list for the bioswale to maintain its health and functionality
14. Bioswale Inspection check list will be sent by Jessica
 - a. After a major storm event we should make sure bioswale drains in 48 hours and check for erosion
 - b. Approximate cost to dig up and replace bioswale is \$20-30K (this estimate was secured by the HOA many years ago, undoubtedly higher today and in the future). It's in our best interest to bring the bioswale up to standards, including tree removal, and then continue to inspect and maintain the bioswale on a regular basis in order to maximize its life.
15. The team marked with blue tape a number of questionable trees that may or may not be problems in the bioswale. (Subject to professional judgment by experts.)

Next Steps

1. Jessica Watson
 - a. Bioswale plans and original plant list
 - b. Inspection check list
2. Karen
 - a. Check bioswale contract for checking cleanouts every 6 months
 - b. Meeting with Solitude to review trees in bioswale – March 10 at 1:00 per John Phelps and Greg
3. Team (Judy and Karen to lead)
 - a. Develop guidelines for bioswale for new homeowners and current owners
 - b. Meet with Solitude to review and mark trees causing damage to bioswale
 - c. Make recommendation to HOA Board regarding the tree removal
 - d. Make recommendation to HOA regarding mulch/no mulch in the bioswale
4. Tim and Karen
 - a. Check buyer booklet regarding lack of proper silt fence during construction and deposit retention