

**STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION**

December 23, 2015

Mr. Brian Bassett
Cape Henlopen School District
1270 Kings Highway
Lewes, DE 19958

RE: PLUS review 2015-11-10; Cape Henlopen School District – Sussex Consortium 2

Dear Brian,

Thank you for meeting with State agency planners on November 25, 2015 to discuss the suitability of acquiring a 20 acre parcel along Sweetbriar Rd. near Lewes for a 66,285 square foot school. The 20 acres would be subdivided from a larger 145 acre parcel

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. **The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.**

Strategies for State Policies and Spending

This project is located in Investment Levels 1 and 2 according to the *Strategies for State Policies and Spending*. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our office has no objections to the proposed development of this project in accordance with the County codes and ordinances.

Code Requirements/Agency Permitting Requirements

Office of State Planning Coordination-Contact David Edgell 739-3090

- The proposed school site must be reviewed and approved by the Director of the Office of State Planning Coordination, the Director of the Office of Management and Budget and the Secretary of Education in accordance with Title 29, Section 7525 of the Delaware Code. This section specifies that all lands proposed for school construction must go through the approval process. The first step for initiating the review process is for the District to submit a letter to DOE requesting school site approval. We note that DOE has received the letter, and we have begun the review process. The PLUS review is another important step, and now that it is complete we will be coordinating with DOE and OMB to complete our review.

Delaware Department of Transportation – Contact Bill Brockenbrough 760-2109

- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, we see that the total daily trips are estimated 200 vehicle trip ends per day. Based on that volume, this project would not warrant a TIS. However, this volume seems very low to us for an educational facility of the size proposed. We recommend that the District and their engineers review their traffic projections and contact me to discuss how to proceed if they find that the 200 vehicle trip ends per day estimate is low.

To obtain a scope of work for a TIS, the applicant may have their engineer contact Mr. Troy Brestel of this office. Mr. Brestel may be reached at (302) 760-2167.

- The site access on Sweetbriar Road (Sussex Road 261) must be designed in accordance with DelDOT's Development Coordination Manual (formerly the Standards and Regulations for Subdivision Streets and State Highway Access), which is available at <http://www.deldot.gov/information/business/subdivisions/changes/index.shtml>.
- Section 2.5.2 of the Manual addresses agreements for off-site road improvements. If this site is selected, DelDOT would anticipate requiring the School District to improve Sweetbriar Road to meet our standards for a collector road for the length of their site frontage as part of their entrance improvements. Those standards include 12-foot lanes and 8-foot paved shoulders.
- Section 3.2.4.2 of the Manual addresses the placement of right-of-way monuments (markers) along the roads on which a property fronts, in this case Sweetbriar Road. Monuments sufficient to re-establish the permanent rights-of-way after the dedication discussed below should be shown on the plan and provided in the field in accordance with this section.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DeIDOT will require dedication of right-of-way along the site's frontage on Sweetbriar Road. By this regulation, this dedication is to provide a minimum of 40 feet of right-of-way from the road centerline on Sweetbriar Road. The following right-of-way dedication note is required, **“An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.”**
- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DeIDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on Sweetbriar Road. The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, **“A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat.”**
- Referring to Section 3.4.2 of the Development Coordination Manual, the Initial Stage review fee shall be assessed to this project.
- In accordance with Section 3.4 of the Development Coordination Manual, a record plan shall be prepared prior to issuing “Letter of No Objection”. The following information will be required for the “Letter of No Objection” review:
 - Initial Stage Fee Calculation Form
 - Initial Stage Review Fee
 - Gate-Keeping Checklist – Site Plan
 - Design Checklist - Record Plan
 - Sight Distance Spreadsheet
 - Owners and Engineers' name and e-mail address
 - Record Plan
 - Conceptual Entrance Plan
 - Submission of the Area-Wide Study Fee (If applicable)
- Referring to Section 3.4.1 of the Development Coordination Manual, because the proposed development would generate 200 or more vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request this meeting is available http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf.
- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:
 - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.
 - Depiction of all existing entrances within 600 feet of the proposed entrance.

- Notes identifying any off-site improvements, agreements (signal, letter) contributions and when the off-site improvements, if any, are warranted.
- Section 3.5.4.2.A of the Development Coordination Manual addresses shared-use paths and sidewalks along the frontage of developments on State-maintained roads. Because this project would be in a Level 3 Investment Area with regard to the Strategies for State Policies and Spending, and there are no paths or sidewalks abutting the property frontage, DelDOT's Subdivision Engineer has discretion to require or not require a path or sidewalk. No decision has been made in this regard but given the number of dwellings within walking distance, DelDOT will likely require a path or sidewalk along the property frontage.
- Section 3.5 of the Development Coordination Manual provides DelDOT's requirements with regard to connectivity. The requirements in Sections 3.5.1 through 3.5.3 shall be followed for all development projects having access to state roads or proposing DelDOT maintained public road for subdivisions.
- Referring to Section 3.5.5 of the Development Coordination Manual, existing and proposed transit stops and associated facilities as required by the Delaware Transit Corporation (DTC) or DelDOT, in consultation with Sussex County, shall be shown on the Record Plan. There is no existing transit service on Sweetbriar Road.
- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along Sweetbriar Road.
- Referring to Section 4.3 of the Development Coordination Manual, the Construction Stage review fee shall be assessed to this project.
- Referring to Section 4.3 of the Development Coordination Manual, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review:
 - Construction Stage Fee Calculation Form
 - Construction Review Fee
 - Gate-Keeping Checklist – Entrance Plan
 - Design Checklist - Entrance Plan
 - Auxiliary Lane Spreadsheet
 - Entrance Plan
 - Pipe/Angle Spreadsheet (If applicable)
 - SWM Report and Calculations (If applicable)
- In accordance with Section 5.2.5.6 of the Development Coordination Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrance. As per Section 5.2.3 of the Manual, the entrance shall be designed for the largest vehicle using the entrance.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls.
- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at <http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls>.
- Section 7.7.2 of the Manual addresses the need to provide 20-foot wide drainage easements for all storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. In accordance with this section, metes and bounds and total areas need to be shown for any drainage easements. The easements should be shown and noted on the record plan.

Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

Wetlands.

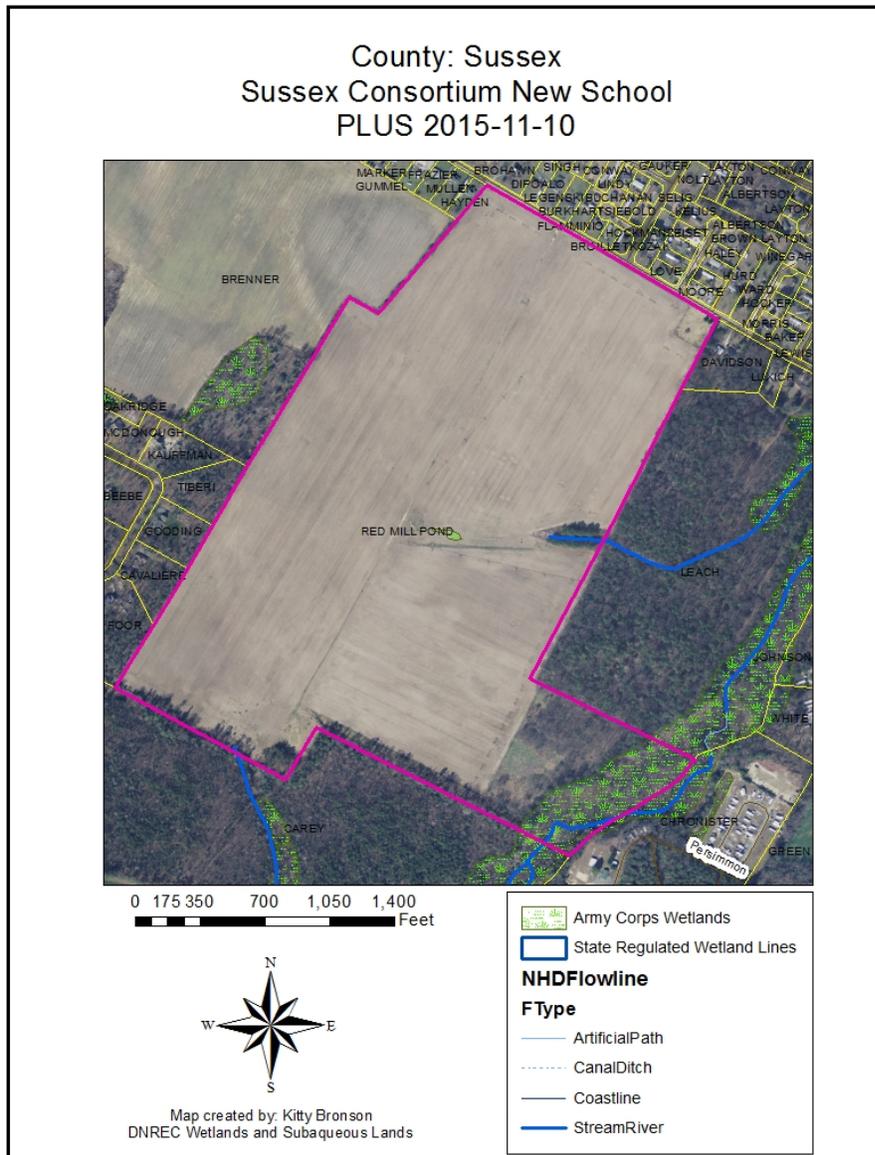
- State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. State regulated subaqueous lands are likely to be located on or adjacent this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands. Upon review of the GIS layers, unnamed streams are on and/or adjacent to this property. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or online at: <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.

Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. According to our GIS SWMP maps, there are possible wooded wetlands regulated by the Army Corps of Engineers on this property.

Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate waters or to navigable waters of the United States, where the use, degradation or destruction

of these waters could affect interstate or foreign commerce.

The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdiction. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at: <http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.



TMDLs.

- The project is located in the greater Delaware River and Bay drainage area, specifically

within the Broadkill River watershed. In this watershed, the State of Delaware has developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nitrogen, phosphorus, and bacteria (under the auspices of Section 303(d) of the Clean Water Act). A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. The TMDL for the Broadkill River watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 75 percent reduction in bacteria from baseline conditions.

A nutrient management plan is required under the *Delaware Nutrient Management Law* (3 Del.C., Chapter 22) for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project’s open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements, or view the following web link for additional information: <http://dda.delaware.gov/nutrients/index.shtml>

Water Supply.

- The project information sheets have no information provided about how water will be provided for the proposed project. Our records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 07-CPCN-54. DNREC recommends that the developer contact Tidewater Utilities to determine the availability of public water. Any public water utility providing water to the site must obtain a certificate of public convenience and necessity (CPCN) from the Public Service Commission. Information on CPCNs and the application process can be obtained by contacting the DNREC Public Service Commission at (302) 739-4247.

Should an on-site Public/Miscellaneous Public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank or sewage disposal area. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permits must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time

for processing the well permit applications into the construction schedule. Dewatering well permit applications take approximately four weeks to process, which allows the necessary time for technical review and advertising. Should you have any questions concerning these comments, please contact Rick Rios at (302) 739-9944.

Sediment and Stormwater Management.

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Division of Soil and Water Conservation Sediment and Stormwater Program. Contact Elaine Webb with the Sediment and Stormwater Program at (302) 739-9921, for details regarding submittal requirements and fees. It is strongly recommended that you contact the reviewing agency to schedule a pre-application meeting with the Sediment and Stormwater Section to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.

Air Quality.

The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply:

Table 1: Potential Regulatory Requirements	
Regulation	Requirements
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> • Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Use covers on trucks that transport material to and from site to prevent visible emissions.
7 DE Admin. Code 1113 – Open Burning	<ul style="list-style-type: none"> • Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibit the burning of land clearing debris. • Prohibit the burning of trash or building materials/debris.
7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan	<ul style="list-style-type: none"> • Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)
7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products	<ul style="list-style-type: none"> • Use structural/ paint coatings that are low in Volatile Organic Compounds. • Use covers on paint containers when paint containers are not in use.

<p>7 DE Admin. Code 1144 – Control of Stationary Generator Emissions</p>	<ul style="list-style-type: none"> • Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements.
<p>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</p>	<ul style="list-style-type: none"> • Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

Hazardous Waste.

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

There are no Site Investigation and Restoration Section (SIRS) sites or salvage yards found within a half mile radius of the proposed project.

Tank Management.

If a release of a Regulated Substance occurs at the proposed project site, compliance with 7 Del.C., Chapter 60; 7 Del.C., Chapter 74; and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.

There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area.

No environmental impacts are anticipated; however, per the UST Regulations: Part E, § 1. Reporting Requirements:

Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:

- The Department’s 24-hour Release Hot Line by calling (800) 662-8802; and
- The DNREC Tank Management Section by calling (302) 395-2500.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- **Fire Protection Water Requirements:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
 - Where a water distribution system is proposed for an educational site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

- **Fire Protection Features:**
 - All structures over 10,000 sqft aggregate will require automatic sprinkler protection installed.
 - Buildings greater than 10,000 sqft, 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
 - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
 - Show Fire Lanes and Sign Detail as shown in DSFPR

- **Accessibility:**
 - All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus.
 - Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
 - The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
 - The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

- **Gas Piping and System Information**
 - Provide type of fuel proposed, and show locations of bulk containers on plan.

- **Required Notes:**
 - Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
 - Proposed Use
 - Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
 - Square footage of each structure (Total of all Floors)

- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Recommendations/Additional Information

This section includes a list of site specific suggestions that are intended to enhance the project. These suggestions have been generated by the State Agencies based on their expertise and subject area knowledge. **These suggestions do not represent State code requirements.** They are offered here in order to provide proactive ideas to help the applicant enhance the site design, and it is hoped (**but in no way required**) that the applicant will open a dialogue with the relevant agencies to discuss how these suggestions can benefit the project.

Delaware Department of Transportation – Contact Bill Brockenbrough 760-2109

- Subject to further review, DelDOT anticipates requiring that the site entrance be located opposite Brohawn Avenue.
- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, shall now be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via credit card or electronic check (ACH). The design firm making the submittal must create the project in the PDCA and upload all the required items to allow DelDOT to start the review process. Guidance on how to do this is available on our website at http://deldot.gov/information/business/subdivisions/pdfs/upgrades/DelDOT_DevCoord_PDCA_User-Account-Requests_User-Login_Project-Creation_and_Uploads.pdf
- Be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of July 31, 2015. The notes can be found at http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc
- Please check to determine whether any utilities will need to be relocated as part of this project.

Department of Natural Resources and Environmental Control – Contact Michael Tholstrup 735-3352

Soils Assessment.

- Based on soils survey mapping update, the soil mapping units of most concern for development within this parcel - are Hurlock (HvA), Longmarsh/ Indiantown (LO), and Lenape (Lk) and Longmarsh/Indiantown are poorly to very poorly-drained wetland associated (hydric) soils that have severe limitations for development and should be avoided (Figure 1).

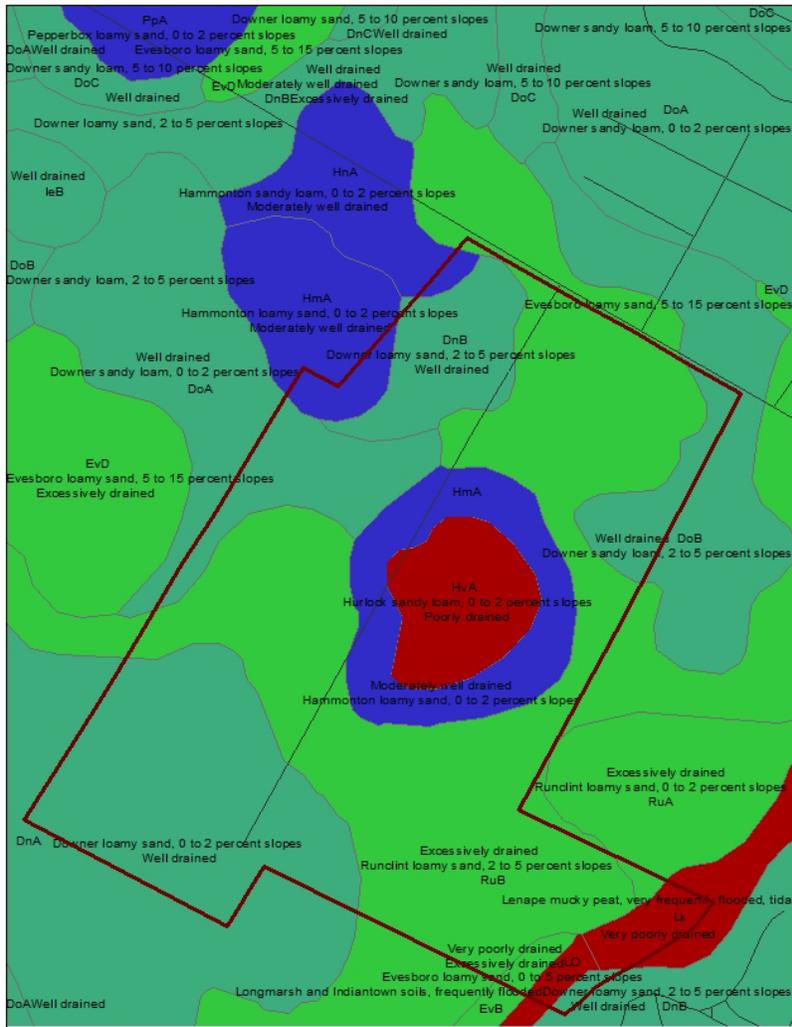
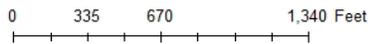


Figure 1: NRCS soil survey mapping update in the immediate vicinity of the proposed construction



Key Wildlife Habitat.

- The forest along the southwest border of the property is documented as Key Wildlife Habitat in the Delaware Wildlife Action Plan. It is DNREC's recommendation that buffers be retained and perhaps expanded along Martin Branch to ensure that activities on the property do not affect the function and integrity of the wetlands. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms.

High Performance School.

- DNREC encourages the school district to use High Performance School standards in planning, design, and construction of the proposed school project. High performance schools provide high quality learning environments, conserve natural resources, consume less energy and are easier to maintain, while providing an effective tool for teaching about environmental responsibility.

Creating a high performance school is not difficult, but it requires an integrated, "whole building," team approach to the design process. Key systems and technologies must be considered together, from the beginning of the design process, and optimized based on their combined impact on the comfort and productivity of students and teachers. High performance schools take advantage of recent advances in energy efficiency and incorporate heating, cooling, and lighting systems that produce the highest comfort levels for the least cost. Daylight is brought into the school to enhance the learning environment and decrease the need for electrical lighting. The building shell integrates the most effective combination of insulation, glazing, and thermal mass to ensure energy efficiency and occupant comfort. Modern plumbing fixtures and innovative water use strategies combine to reduce water consumption and buildings are commissioned to ensure building performance. Furthermore, in high performance schools, Best Management Practices (BMP) in site design and stormwater management such as constructed wetlands, vegetated buffers, vegetated roofs, and rain gardens offer resources for hands on educational opportunities.

In order to achieve a high performance school, consider following recommendations:

1. Design with the "Whole Building" in mind,
2. Set performance goals early,
3. Choose and develop the site wisely utilizing optimum orientation, maximizing natural resource preservation and reducing heat island effect,
4. Protect indoor air quality,
5. Optimize acoustics,
6. Incorporate daylighting,
7. Incorporate high performance electric lighting and controls,
8. Install high performance HVAC strategies,
9. Incorporate water conservation measures, and

10. Commission the school after construction.

The DNREC Division of Energy and Climate is interested in working with the Cape Henlopen School District to provide assistance and facilitate resources in design and planning of the proposed school project.

Additional information on TMDLs and water quality.

- In response to concerns about the need for reducing nonpoint source nutrient (nitrogen and phosphorus) and bacterial pollutants to levels sufficient to meet the TMDL reduction requirements prescribed for waters of the greater Broadkill River watershed, a multifaceted and comprehensive process known as a Pollution Control Strategy (PCS) was developed. Specifically, a PCS is a combination of best management practices and control technologies that reduce nutrient and bacterial pollutant runoff loading in waters of a given watershed to levels consistent with the TMDL reduction levels specified for that watershed. The PCS for the Broadkill River watershed consists of recommendations from the following three areas: agriculture, stormwater, and wastewater.

Additional information about Broadkill River PCS can be reviewed at the follow web link:

<http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedManagementPlans.aspx>

In further support of the PCS, the applicant is also strongly urged to reduce nutrient and bacterial pollutants through voluntary commitment to the implementation of the following recommended BMPs, which would:

- Preserve and/or maintain as much of the existing open space as possible; we further suggest additional native tree, shrub and/or native herbaceous vegetation plantings, wherever possible.
- Maintain a vegetated buffer of at least 100 feet from the adjoining wetlands and waterbodies. Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum aforementioned 100-foot vegetated buffer (planted in native vegetation) from all waterbodies (including ditches and ponds) and all non-tidal and tidal wetlands (i.e., a USACE approved field wetlands delineation for non-tidal wetlands and State approved wetlands delineation for tidal wetlands).
- Calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, ponds, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and the associated environmental impacts.

- Employ green-technology storm water management and rain gardens (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff. Please contact Lara Allison at (302) 739-9939 for further information about the possibility of installing rain gardens on this parcel.
- Use pervious paving materials instead of conventional paving materials (e.g., asphalt or concrete) to help reduce the amount of water and pollutant runoff draining to adjoining streams and wetlands. Pervious pavers are especially recommended for areas designated for parking.
- Assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) resulting from the conversion of individual or combined land parcels to a changed land use(s); thus providing applicants and governmental entities with quantitative information about the project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact John Martin or Jen Walls of the Division of Watershed Stewardship at (302) 739-9939 for more information on the protocol.

Additional information on tank management.

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Additional information on hazardous waste.

- DNREC strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.

Additional remediation may be required if the project property or site is re-zoned by the county.

Should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-

hour emergency number (800) 662-8802). SIRB should also be contacted as soon as possible at (302) 395-2600 for further instructions.

Additional information on air quality.

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, but we believe, however, that the air quality impacts associated with the project should be completely considered. New homes, businesses, and schools may emit, or cause to be emitted, air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:
 - Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
 - The emission of greenhouse gases which are associated with climate change, and
 - The emission of air toxics.

Air emissions generated include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the facility, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) could not be quantified. DAQ was able, however, to quantify the mobile emissions based on the proposed daily trip data presented in each application and data taken from the ITE Trip Generation Manual, 8th Edition. Each PLUS project anticipates 200 vehicle trips per day for a new school or an increase of 200 vehicle trips per day for a renovated school. Table 2 – Projected Air Quality Emissions represents the actual impact the Cape Henlopen School District may have on air quality.

Table 2: Projected Air Quality Emissions for Cape Henlopen School District					
Emissions Attributable to Cape Henlopen School District (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NO _x)	Sulfur Dioxide (SO ₂)	Fine Particulate Matter (PM _{2.5})	Carbon Dioxide (CO ₂)
Mobile Source emissions	0.66	0.88	*	*	*

(*) Indicates data is not available.

Note that emissions associated with the actual construction of the road, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

The DNREC Division of Air Quality (DAQ) encourages sustainable growth practices that:

- Control sprawl;
- Preserve rural and forested areas;
- Identify conflicting land use priorities;

- Encourage growth on previously developed sites and denser communities;
- Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
- Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

Additional measures may be taken to substantially reduce the air emissions identified above.

These measures include:

- **Constructing with only energy efficient products.** Energy Star qualified products are up to 30% more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.
- **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
- **Providing shade for parking lot areas.** Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
- **Encouraging the use of safe multimodal transportation.** This measure can significantly reduce mobile source emissions. **For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.**
- **Using retrofitted diesel engines during construction.** This includes equipment that is on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas.** Native trees reduce emissions by trapping dust particles and replenishing oxygen. Trees also reduce energy emissions by cooling

during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the project. The applicant should submit a plan to the DNREC DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Wilmington Country Club project. The DAQ point of contact is Deanna Cuccinello, and she may be reached at (302) 739-9402.

Delaware State Fire Marshall's Office – Contact Duane Fox 739-4394

- Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.statefiremarshal.delaware.gov technical services link, plan review, applications or brochures.

State Historic Preservation Office – Contact Terrence Burns 736-7404

- Nothing is known on this parcel. There is a headwater of the Lewes-Rehoboth Branch within the parcel, so there is high potential for a prehistoric archaeological site here. There is also some potential for a family cemetery. We recommend that prior to any construction of a school on this parcel, an archaeological survey be performed.

Abandoned and unmarked family cemeteries are common on farms in Delaware. Burials have also been found associated with prehistoric-period archaeological sites. Disturbing unmarked burials triggers Delaware's Unmarked Human Burials and Human Skeletal Remains Law of 1987 (7 Del. Code Ch. 54). Such discoveries can result in substantial delays while the procedures required under this law are carried out. DHCA recommends that owners and/or developers have a qualified archaeological consultant investigate their project area for the presence of such a cemetery. If one is discovered and delineated, it is very costly to have it archaeologically excavated and the burials moved. DHCA recommends that in the event of such a discovery, the plans be redrawn to leave the cemetery on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with a homeowners association or development owner. (For further information, see <http://history.delaware.gov/preservation/umhr.shtml> and <http://history.delaware.gov/preservation/cemeteries.shtml>)

Department of Agriculture – Contact Scott Blaier 698-4529

- As a general rule, the Department of Agriculture favors replacing or expanding schools on current sites or within a town or city boundary if possible. Developing working farmland in predominantly rural areas would be our least favorable option, as is the case here. If farmland must be used, the Department would encourage the school to acquire the least amount of farmland possible to meet its needs.

Department of Education-Contact Karen Field Rogers 857-3392

- The DOE will continue to work with the district, architect, site engineer, municipal government and various state agencies regarding the project. The DOE reserves the right to provide continued and on-going comments and input as the project develops.

Sussex County – Contact Janelle Cornwell 855-7878

- A wastewater service provider has not been identified in the PLUS application. The parcel adjoins the West Rehoboth Expansion of the Dewey Beach Sanitary Sewer District and may be annexed into the sewer district following completion of certain administrative procedures. The parcel has the potential to connect to the sewer district as long as the school's EDU assessment does not exceed 78.4 EDU. In order to connect, it will be necessary for the district to construct offsite infrastructure to an approved connection point. System upgrades, at the expense of the school district may be necessary prior to the school connecting to the County sewer district. System Connection Charges will apply. The current rated through June 30, 2016 is \$5,775.00 per equivalent dwelling unit.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

School sites must be approved by the Secretary of Education, the Director of OMB, and the Director of the Office of State Planning Coordination. The *Strategies for State Policies and Spending*, the information contained within this PLUS letter and other factors will be considered when the Secretary and the two Directors make the determination about whether or not to approve a school site.

Once a school site has been selected and approved, and the site plan for the school has been designed, a new PLUS review will be required prior to submission of the plan to the local government.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,



Constance C. Holland, AICP
Director, Office of State Planning Coordination

CC: Sussex County