STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF MANAGEMENT AND BUDGET
STATE PLANNING COORDINATION

November 16, 2005

Mr. Ring Lardner
Davis, Bowen & Freidel
23 North Walnut Street
Milford, DE 19963

RE: PLUS review – PLUS 2005-10-12; Mears 2

Dear Mr. Lardner:

Thank you for meeting with State agency planners on October 26, 2005 to discuss the proposed plans for the Mears 2 project to be located on Herring Run Road in Seaford.

According to the information received, you are seeking site plan approval for 159 units on 25 acres.

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 the City of Seaford is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the City.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office***

notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.

State Strategies/Project Location

- The proposed project is located within an Investment Level 1 area according to the *Strategies for State Policies and Spending* and within the City of Seaford. In these areas, State policies support development that is consistent with the character of the area.

Street Design and Transportation

- DelDOT will require a traffic impact study (TIS).

- DelDOT recommends a street connection to the Nanticoke Memorial Hospital property, if possible.

- DelDOT recommends that the developer consider either changing the layout to provide less direct path through the development or, if that is not possible, then designing in traffic calming along the straight stretches of north-south street shown on the PLUS plan which could encourage speeding.

Natural and Cultural Resources

- Implementation of BMPs that help reduce the impacts from impervious cover is recommended. Such BMP's include the planting and/or preservation of trees and the use of pervious paving surfaces ("pavers") in lieu of asphalt or concrete.

- The site falls partially within a wellhead protection area for City of Seaford. The western part of the parcel is covered by the wellhead protection area (see attached map). The DNREC Water Supply Section recommends that the portion of the new development within the wellhead protection area not exceed 50% impervious cover.

- It is recommended that at least a 100-foot wide buffer be planted around the perimeter of this project to protect water quality and rare species within Herring Creek (and associated wetlands).

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

The proposed project is located within an Investment Level 1 area according to the *Strategies for State Policies and Spending* and within the City of Seaford. In these areas, State policies support development that is consistent with the character of the area.

We are pleased to see that the site plan shows connection to the initial phase of the Mears proposal and to the vacant adjacent parcel. We agree with DelDOT that if possible, a connection (if not vehicular, then bicycle and pedestrian) should be sought with the adjacent Nanticoke Memorial Hospital site.

Additionally, based on the number of units proposed between the two phases of the development, additional active open space should be incorporated for use by residents.

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

There are no known historic properties in the portion of the development parcel being reviewed. It has a medium potential for prehistoric-period archaeological sites, but only a low potential for historic-period sites. It is adjacent and to the rear of Lawrence (S-194), located on Bridgeville Rd. (Rt. 13A) and which is listed in the National Register of Historic Places. The Hearn and Rollins Mill (S-213) is located to the north of this parcel, also on Bridgeville Rd. While this development is out of sight from the mill, it will increase traffic and noise in the areas of both of these National Register-listed properties.

The Division of Historical and Cultural Affairs would appreciate the opportunity to check this area for an archaeological site, to learn something about its location, extent, and nature prior to any ground-disturbing activities here. The rear of Lawrence is already well screened by trees from this parcel, but some additional landscaping in this corner would be appreciated.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

1) As mentioned in the PLUS application, the subject land is the remainder of a parcel from which the Mearfield subdivision is being developed. Mearfield has 213 lots, which is two lots less than the minimum number needed to meet one of DelDOT's warrants for requiring a traffic impact study (TIS). Because Mearfield did not meet that warrant, DelDOT did not require a TIS. Now, however, with the same developer proposing 159 townhouses on the remainder of the property, DelDOT is requiring a TIS. This requirement is consistent with their

responsibility to account for the traffic impact of all developments on the roads that serve them. DelDOT would ask that the City support them in this regard by withholding plan approval until the TIS is complete and any road improvements that the TIS identifies as necessary are addressed through notes on the record plan. DelDOT recommends that the developer have their traffic engineer contact Mr. Todd Sammons of our Development Coordination Section to obtain a scope for this study. Mr. Sammons may be reached at (302) 760-2134.

2) If there is any potential for a street connection to the Nanticoke Memorial Hospital property, DelDOT recommends that one be provided. If a street connection is not possible but a bicycle and/or pedestrian connection is possible, it should be provided. DelDOT understands that the City may be planning to connect this project and the hospital property through the parcel to the south when it is annexed. Because they are not familiar with what the City may have planned in this regard, they recommend a direct connection.

3) The long straight stretches of north-south street shown on the PLUS plan could encourage speeding. The potential would be particularly great on Sassafrass Drive if it were extended south in the future. For this reason, DelDOT recommends that the developer consider either changing the layout to provide less direct path through the development or, if that is not possible, then designing in traffic calming. This would not only help to slow traffic but would also provide a more interesting and safer community. One relatively simple change would be to shift the stub street from Sassafrass Drive to Homefarm Road.

4) The developer's site engineer should continue to coordinate with Mr. John Fiori, DelDOT Subdivision Manager for Sussex County, regarding their specific requirements for access. He may be reached at (302) 760-2260.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Soils

According to the Sussex County soil survey, Evesboro and Sassafras were mapped on subject parcel. Evesboro is an excessively well-drained upland soil that has moderate limitations on account of its rapid permeability. Sassafras is a well-drained upland soil that, generally, has few limitations for development.

ERES Waters

This project is located adjacent to receiving waters of Chesapeake Bay designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/ or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

TMDLs

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Nanticoke River watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a "water quality limited water body" can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. In the Nanticoke River watershed, "target-rate-reductions" of 30 and 50 percent will be required for nitrogen and phosphorus, respectively.

Compliance with TMDLs through the PCS

The proposed pollution control strategy will also require the completion of a nutrient budget for the proposed project in order to estimate how TMDL nutrient loads will change with the development of this parcel. The protocol for this nutrient budget is a computer-based model that allows one to model a variety of land-use change scenarios in combination with various BMPs. We suggest that the applicant verify their project's compliance with the specified TMDL loading rates by running the model themselves. Please contact Lyle Jones of the Watershed Section for the acceptable model protocol – he can be reached at 739-9939. The applicant should be made aware that the inclusion of stormwater management, wastewater treatment, upland buffers and wetlands as metrics for open space calculations - may understate the actual TMDL nutrient loading and, subsequently, the actual nutrient runoff as calculated from the nutrient budget protocol. The applicant should keep this in mind when calculating the budget.

Impervious Cover

Research finding have consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline below their predevelopment level. Moreover, increases in a watershed's surface imperviousness have been shown to reflect proportional decreases in water and habitat once this threshold is exceeded. Information compiled by the University of Delaware through analysis of 2002 aerial photography indicates that the Nanticoke watershed, as of that year, had about 8.5 percent impervious cover. Therefore, the Watershed Assessment Section strongly encourages the implementation of BMPs that help reduce the predictable impacts from the creation of surface imperviousness. The planting and/or preservation (i.e., existing riparian buffer) of trees (especially when adjacent to wetlands/water bodies), and the use of pervious paving surfaces ("pavers") in lieu of asphalt or concrete – are examples of practical BMPs to reduce such impacts.

Water Resource Protection Areas

The DNREC Water Supply Section has determined that it does fall partially within a wellhead protection area for City of Seaford. The western part of the parcel is covered by the wellhead protection area (see following map and attached map). Wellhead protection areas are surface and subsurface areas surrounding a public water supply well where the quantity and quality of groundwater moving toward such wells may be adversely affected by land use activities or impervious cover.

The DNREC Water Supply Section recommends that the portion of the new development within the wellhead protection area not exceed 50% impervious cover. Further, some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies.

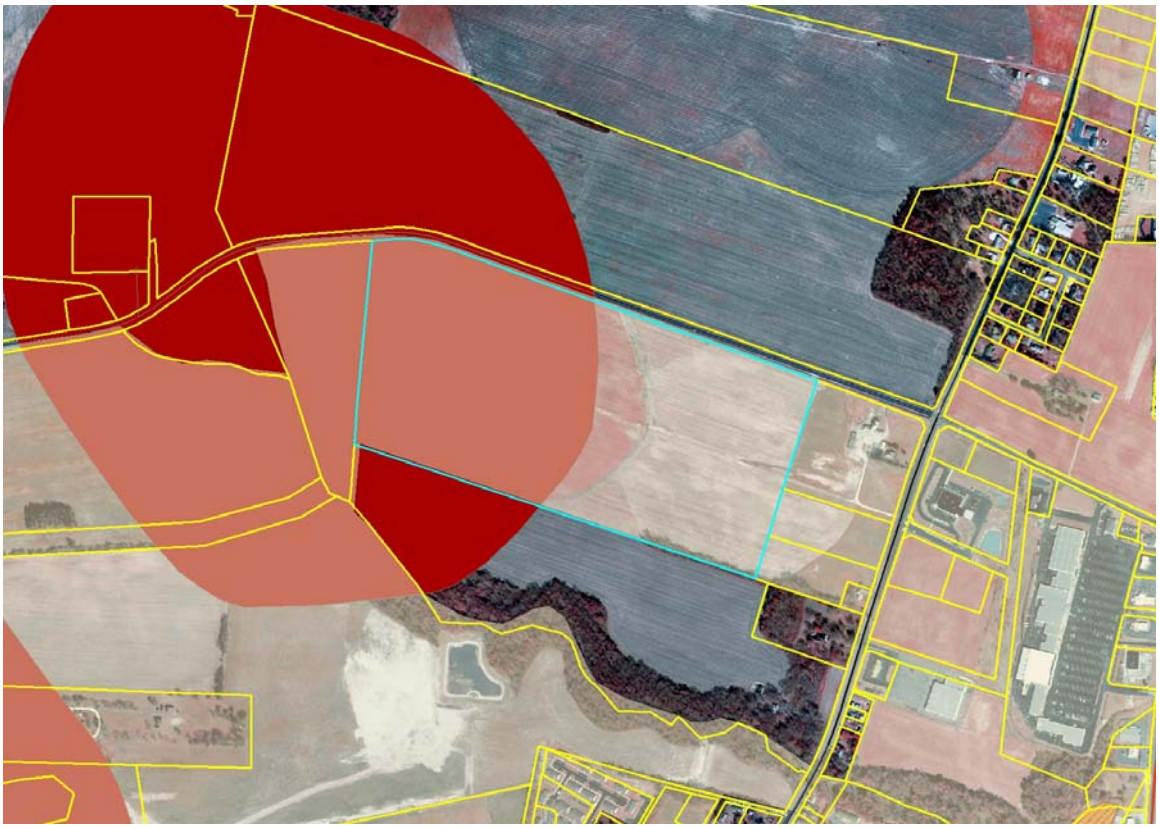
The proposed development would change the impervious over from 0% to approximately 28.03%. These numbers were provided by developer on the PLUS application. The development plan includes open space for passive recreation and storm water management. Ideally, relocating open space areas to the western part of the parcel would decrease the total impervious area in the wellhead protection area. Augmenting the groundwater recharge with clean rooftop run-off systems are another alternative to reducing the total impervious cover.

For more information refer to the Final Source Water Protection Guidance Manual for the Local Governments of Delaware
http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html

and

Ground-Water Recharge Design Methodology
http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf .

Map of proposed development as it impacts the wellhead protection area. The dark red area shows the wellhead protection area with affected parcel in light blue.



Water Supply

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 typically 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 Erosion Control/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 **Sussex Conservation District**. Contact Jessica Watson at (302) 856-7219 for details regarding submittal requirements and fees.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies.

Drainage

Though a portion of the project is within a tax ditch area, it does not involve any tax ditch rights-of-way.

Rare Species/Buffers

DNREC has not surveyed this project site; therefore, a review of their database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities on this project site. However, there are rare species associated with Herring Creek, so adequate buffers to protect water quality are important. Considering the number of additional projects in the vicinity, cumulative impacts to water quality from run-off are a real concern. They recommend that at least a 100-foot wide buffer be planted around the perimeter of this project to protect water quality and rare species within Herring Creek (and associated wetlands).

Nuisance Waterfowl

Stormwater management ponds that remain in the site plan may attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State’s limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 12.2 tons (24,404.8 pounds) per year of VOC (volatile organic compounds), 10.1 tons (20,205.6 pounds) per year of NOx (nitrogen oxides), 7.5 tons (14,908.0 pounds) per year of SO2 (sulfur dioxide), 0.7 ton (1,327.1 pounds) per year of fine particulates and 1,020.7 tons (2,041,433.8 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 4.9 tons (9,843.6 pounds) per year of VOC (volatile organic compounds), 0.5 ton (1,083.1 pounds) per year of NOx (nitrogen oxides), 0.4 ton (898.8 pounds) per year of SO2 (sulfur dioxide), 0.6 ton (1,159.9 pounds) per year of fine particulates and 20.0 tons (39,903.7 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 2.0 tons (3,901.3 pounds) per year of NOx (nitrogen oxides), 6.8 tons (13,569.7 pounds) per year of SO2 (sulfur dioxide) and 1,000.8 tons (2,001,530.2 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO_2	$PM_{2.5}$	CO_2
Mobile	12.2	10.1	7.5	0.7	1020.7
Residential	4.9	0.5	0.4	0.6	20.0
Electrical Power		2.0	6.8		1000.8
TOTAL	17.1	12.6	14.7	1.3	2041.5

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 2.0 tons of nitrogen oxides per year and 6.8 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, http://www.energystar.gov/:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment."

The energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. 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):

a. **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 townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.

b. **Fire Protection Features:**
   - For townhouse buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan

c. **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. This means that the access road to the subdivision from Herring Run Road must be constructed so fire department apparatus may negotiate it.
   - 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.
   - Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- 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.

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

e. **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
   - Square footage of each structure (Total of all Floors)
   - National Fire Protection Association (NFPA) Construction Type
   - Maximum Height of Buildings (including number of stories)
   - Name of Water Provider
   - Letter from Water Provider approving the system layout
   - Townhouse 2-hr separation wall details shall be shown on site plans
   - Provide Road Names, even for County Roads

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.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture has no objections to the Mears 2 application. The site is located on a long-range designated development area. The *Strategies for State Policies and Spending* encourages responsible development in areas within a Investment Level 1 Area. In addition, this site is a part of a "good recharge" area. The Department of Natural Resources and Environmental Control (DNREC) has mapped all ground water potential recharge areas. A "good" rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in "Excellent" and "Good" recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of

land designated as "excellent" and "good" recharge areas adversely impacts the future prospects for agriculture in Delaware.

Forest Buffer Requirements

In addition, the Delaware Forest Service would ask the Developer to place a 30' forest/agricultural buffer along the rear of the property to lessen impact to the water resources and other properties adjacent to this site.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the "Right Tree for the Right Place" for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Public Service Commission - Contact: Andrea Maucher 739-4247

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

As a general planning practice, DSHA encourages residential development in these areas where residents will have proximity to services, markets, and employment opportunities. DSHA supports this proposal because it targets units for first time homebuyers. For informational purposes, the most recent real estate data collected by DSHA, the average home price in the Seaford area is $178,552. However, families earning 80% of Sussex

County's median income only qualify for mortgages of $142,040. The provision of units within reach of families earning at least 80% of Sussex County's median income would help increase housing opportunities for first time homebuyers.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

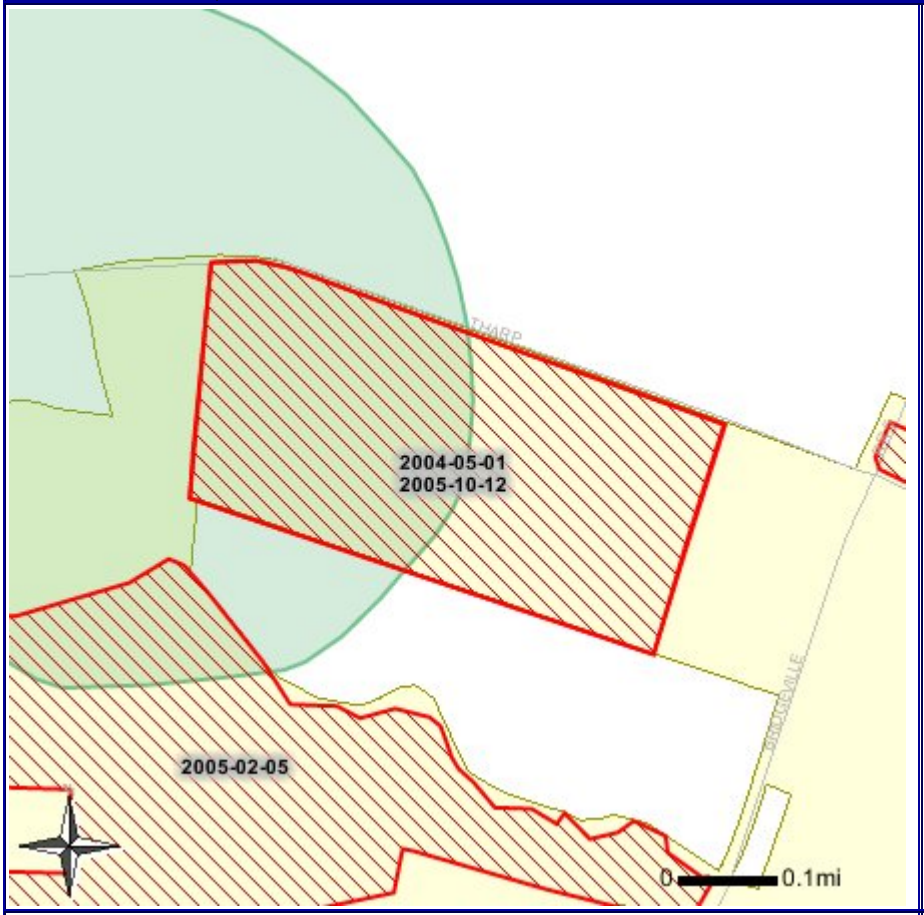
Sincerely,

Constance C. Holland, AICP
Director

CC: City of Seaford

Mears 2

2005-10-12



PLUS Projects
Sussex WHPA
All Roads
Towns

This map was produced by the Delaware
Department of Natural Resources and Environmental Control.