



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

May 15, 2007

Mr. Randy DuPlechain  
Davis, Bowen & Friedel  
23 N. Walnut Street  
Milford, DE 19901

RE: PLUS review – PLUS 2007-04-02; Evans Property

Dear Mr. DuPlechain:

Thank you for meeting with State agency planners on April 25, 2007 to discuss the proposed plans for the Evans Property project to be located on the East side of Route 113, north of Route 16. According to the information received, you are seeking site plan approval for 148 residential units on 74.93 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 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.

This proposal is located in Investment Level 4 according to the *Strategies for State Policies and Spending*, and is in a Low Density area according to the Sussex County Comprehensive plan. **The comments in this letter are technical, and are not intended to suggest that the State supports this development proposal. This letter does not in any way suggest or imply that you may receive or may be entitled to permits or other approvals necessary to construct the development you indicate or any subdivision thereof on these lands.**

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

**Office of State Planning Coordination – Contact: Bryan Hall 739-3090**

This project represents a major land development that will result in 148 residential units in an Investment Level 4 area according to the *2004 Strategies for State Policies and Spending*. This project is also located within the Low Density Area according to the Sussex County comprehensive plan. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 362 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of the cost of police protection in the unincorporated portion of Sussex County where this development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases.

Because the development is inconsistent with the *Strategies for State Policies and Spending*, the State is opposed to this proposed subdivision.

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

We are not in favor of this development in Level 4. It will lead to the destruction of the early 20<sup>th</sup> c. farmstead (S-8576) and the historic agricultural landscape in this area. There are areas of medium potential for prehistoric archaeological resources as well, which will be destroyed by this development.

There is some potential for a family cemetery here. Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the one here, usually a good

distance behind or to the side of the house. The developer is aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out, and the developer may want to hire an archaeological consultant to check for the possibility of a cemetery here if this development is approved. We would have to have a copy of any archaeological report done for this purpose. We will be happy to discuss these issues with the developer.

If this development goes forward, we would appreciate the opportunity to document the farmstead prior to any demolition activities. We request that the developer include sufficient landscaping to protect any nearby historic agricultural properties as much as possible from the visual and noise intrusion of this development.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

Because most of the land for this development is proposed for a Level 4 Area, it is inconsistent with the *Strategies for State Policies and Spending*. As part of our commitment to support the *Strategies*, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 Areas while avoiding the creation of isolated development areas that cannot be served effectively or efficiently by public transportation, emergency responders, and other public services.

DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.

If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide further technical review and comments.

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

**General Comment**

Unless this property is annexed by the Town of Ellendale, the following Level 4 (State Strategies for Policies and Spending) comments apply.

**Investment Level 4 Policy Statement**

This project is proposed for an Investment Level 4 area as defined by the *Strategies for State Policies and Spending* and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the *Strategies* this project is inappropriate in this location. In Investment Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. We encourage the use of transfer of development rights where this growth management tool is available.

This particular development certainly compromises the integrity of the State Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are potential impacts to two out of three layers of the Green Infrastructure map (natural resource and recreation priorities and forests), the loss/fragmentation of forest (18 out of 34.5 acres or 52%), proximity to the Redden State Forest and Mispillion River Natural Area, and tax ditch rights-of-way. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As

such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with our State growth strategies.

### **Green Infrastructure**

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest.

Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

### **Soils**

According to the Sussex County soil survey, Rosedale, Woodstown, Klej, and Hurlock were mapped in the immediate vicinity of the proposed construction. Rosedale is well-drained upland soil that, generally, has few limitations for development. Woodstown is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Klej is a somewhat poorly-drained soil transitional soil likely to contain both wetland and upland soil components; limitations for development are likely to range from moderate to severe. Hurlock is a poorly-drained wetland associated (hydric) soil that has severe limitations for development.

### **Wetlands**

According to the Statewide Wetland Mapping Project (SWMP) mapping, palustrine forested riparian wetlands were mapped in the immediate vicinity of an unnamed

headwater tributary which ultimately discharges to Cedar Creek. The headwater wetlands and associated stream channel make up a significant portion of the eastern portion of subject parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. PLUS materials indicate that 0.49 are on site and the developer does not anticipate wetland impacts.

As noted previously, the palustrine headwater water riparian wetlands comprise a significant portion of the far eastern portion of subject parcel. Headwater riparian wetlands serve to protect water quality which helps maintain the ecological integrity and functions throughout the length of the stream, including the floodplain system and/or water bodies further downstream. Since headwater riparian wetlands serve as natural buffers that protect the water and habitat quality of streams from sediment and nutrient-laden runoff, their protection deserves the highest priority. **Therefore, the Watershed Assessment Section recommends that the applicant maintain a minimum 100-foot upland buffer from the landward edges of all wetlands and water bodies.** A literature review of existing buffer research by Castelle et al. (1994) has documented consensus among researchers that a 100-foot upland buffer is the minimum buffer width necessary, under most circumstances, to protect water quality.

### **Wetland Permitting Information**

Impacts to palustrine wetlands are regulated by the U. S. Army Corps of Engineers (USACE, or “the Corps”) through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process. The wetland delineation should be verified by the Corps through the Jurisdictional Determination process.

Please be advised that the new Nationwide Permits from the Corps became effective March 19, 2007. The Delaware Coastal Management Program (DCMP) has not completed their Federal Consistency review of the new permits; therefore, contrary to past practices, Coastal Zone Management approval cannot be assumed. Individual certifications must be granted from the DCMP office for each project intending to utilize a Nationwide Permit. For more information on the Federal Consistency process, please contact the DCMP office at 302.739.9283.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by

federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-9943 to schedule a meeting. The developer should note that both DNREC and the Corps discourage allowing buildings and associated infrastructure to contain wetlands to minimize potential cumulative impacts.

### **Impervious Cover**

Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.

Based on a review of the PLUS application, post-development surface imperviousness is estimated to be about 40 percent. However, given the scope and density of this project, this assessment is likely an underestimate. The use of stormwater management areas and/or wetlands as open space artificially lowers this project's calculated amount of surface imperviousness, ultimately leading to a significant underestimate of its actual environmental impacts. Therefore, the parcel's calculated amount of surface imperviousness should use as its basis a calculated open space figure that reflects the omission of all delineated wetlands (i.e., USACE-approved) and stormwater management areas. Additionally, all created forms of constructed surface imperviousness (i.e., rooftops, sidewalks, and roads) should be comprehensively accounted for and included in the calculation for surface imperviousness. It was not clear from the information submitted whether this was done or not. In summary, the finalized calculation for surface imperviousness should address or correct all of the above-mentioned concerns so that an accurate assessment of this project's impacts can be made.

### **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Cedar Creek 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. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Cedar Creek watershed, "target-rate-nutrient reductions" of 45 percent will be required for

nitrogen and phosphorus. Additionally, “target-rate-reductions” of 96 percent will be required for bacteria.

### **TMDL Compliance through the PCS**

As indicated above, Total Maximum Daily loads (TMDLs) for nitrogen and phosphorus have been proposed for the Cedar Creek watershed. The TMDL calls for a 45 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 96 percent reduction in bacteria. A pollution control strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of Best Management Practices such as wider vegetated buffers along watercourses, increasing passive, wooded open space, and the use of green-technology stormwater management treatment trains. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

### **Water Supply**

The information provided indicates that Tidewater Utilities will provide water to the proposed projects through a public water system. Our files reflect that Tidewater Utilities does not currently hold a certificate of public convenience and necessity (CPCN) to provide public water in these areas. They will need to file an application for a CPCN with the Public Service Commission, if they have not done so already. Information on CPCN requirements and applications can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. 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 permit must be obtained prior to constructing any well(s).

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**

The design must include an adequate level of management to prevent impacts to downstream areas. As such, a downstream analysis may be required for this project. It is strongly recommended that you contact Sussex Conservation District to schedule a pre-application meeting 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.

### **Drainage**

1. This project is partially within School House Tax Ditch, which has existing tax ditch rights-of-way. Please contact the Drainage Program in Georgetown at (302) 855-1930 as soon as possible to request a review of the tax ditch and to discuss the release of stormwater into the tax ditch.
2. The Drainage Program recommends consulting with the School House Tax Ditch and the Drainage Program on tree and shrub plantings in the tax ditch right-of-way. Trees and shrubs should be native species, spaced to allow for mechanized drainage maintenance at maturity. Tree and shrub planting in this manner will provide a shading effect promoting water quality while allowing future tax ditch maintenance. Trees and shrubs should not be planted within 5 feet of the top of the tax ditch to avoid future blockages from roots. The tax ditch right-of-way, as well as the tax ditch banks should be planted with herbaceous vegetation to aid in the reduction of sediment and nutrients entering into the tax ditch. Grasses, forbs and sedges planted within the tax ditch right-of-way should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities.
3. The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water. The Drainage Program requests that the engineer check existing downstream ditches

- and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
4. The Drainage Program encourages the elevation of rear yards to direct water towards the streets where storm drains are accessible for maintenance. However, the Drainage Program recognizes the need for catch basins in yards in certain cases. Therefore, catch basins placed in rear and side yards will need to be clear of obstructions and be accessible for maintenance. Decks, sheds, fences, pools, and kennels can hinder drainage patterns as well as future maintenance to the storm drain or catch basin. Deed restrictions, along with drainage easements recorded on deeds, should ensure adequate future maintenance access.
  5. An increase of the side yard setback to 15 feet may be needed on all properties with a drainage easement on the side. The increase will allow room for equipment to utilize the entire easement and maneuver free of obstructions if the drainage conveyance requires periodic maintenance or future re-construction. The side yard setback would only increase on the side with the drainage easement.
  6. All catch basins in rear or side yards should have a 10-foot drainage easement around them on all sides. Place restrictions on fences, sheds, and other structures within the easement to prevent obstructions from being placed next to the catch basin. Record the easement on the deed.
  7. Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.
  8. Preserve existing riparian buffers on this site to aid in the reduction of nutrients, sediment, and other pollutants entering the watershed. Please explore methods to filter excess nutrients in stormwater runoff from this site before releasing the stormwater into the watershed.

For questions or clarifications, please contact Jim Sullivan at 739-9921.

## **Open Space**

Site plans show an area of community open space within the middle of this development. In many cases, large open space areas abutting back yards are not well used by the community and are expensive to maintain. The developer is encouraged to not disturb the trees located in this open space area (between lots 71-87 and 120-123, 137-142). It is further recommended that most open space be relocated to areas adjacent to Redden State Forest. In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Doing so will provide wildlife habitat and it will create recreational opportunities for residents. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces. Natural habitat could consist of increasing tree canopy density, reforesting portions of open space or establishing meadow grasses. The developer is encouraged to review "Community Spaces, Natural Places: A guide to restoration, management, and maintenance of community open space". This document provides a reference of practical and successful open space management techniques that emphasize natural landscape alternatives other than turf grass management. The guidebook is available online at: <http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/dcmp/>.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

## **Rare Species**

DNREC has never surveyed this site; therefore, it is unknown if state-rare or federally listed plants, animals or natural communities occur at this project site. DNREC does have records of species on adjacent properties that could occur within the project area as suitable habitat exists. Those species include the following rare species:

*Melanerpes erythrocephalus* (Red-headed Woodpecker), *Scincella lateralis* (ground skink), and *Helonias bullata* (swamp-pink)

Red-headed Woodpecker, a State-Endangered bird, forages and nests in forested areas, especially those with large, mature trees. Ground skink, a state-rare reptile, inhabits a variety of forest types and sometimes can be found in open areas such as fields and small piney woodlots. Swamp pink, a Federally-listed plant, occurs downstream from the project site and because this species is very sensitive to sedimentation and changes in

water quality, it is especially important that adequate wetland buffers be maintained within the project area. Forested areas near or along water courses are especially important from a wildlife management standpoint as this type of habitat is important as a wildlife travel corridor, as breeding areas for wetland dependent species, and also aide in the survivability of aquatic organisms by protecting water quality in a variety of ways.

### **Site Visit Request**

In order to provide more informed comments and to make recommendations, our program botanist and zoologist request the opportunity to survey the forested and wetland resources which could potentially be impacted by the project. This would also allow the applicant the opportunity to reduce potential impacts to rare species and unique habitats and to ensure that the project is environmentally sensitive. In addition, a survey of the project site will give staff an opportunity to document the biodiversity of the property and add to the State database. The site visit would be at no cost to the applicant/landowner. Our scientists have many years of experience using rare species survey methods. Please contact Bill McAvoy or Kitt Heckscher at (302) 653-2880 to set up a site visit.

### **Forest Preservation**

According to the application, this project will result in the clearing of at least 17.88 acres out of 34.48 (likely more when residents clear additional land for sheds, play areas, dog kennels, swimming pools and other amenities). DNREC encourages the applicant to consider omitting some of the lots and associated infrastructure within this wooded area, or rearrange the site plan so that most of the open space is connected and forest loss is minimized. Many incentive-based programs for wildlife management are available to private landowners through our agency. Please contact our office (302) 653-2883 if the landowner(s) is interested in more information.

Because this forest is part of a larger forest block, maintaining a larger connected area of forest is important as some species, especially interior forest breeding birds, depend on this type of habitat. Many of these species are sensitive to disturbance and will not persist in areas where the forest has been converted into a 'residential woods'. Species that are not as sensitive will persist and conflicts with residents can result, including interactions on the roadways. Clearing of forested areas also puts greater pressure on nearby public lands such as Wildlife Areas, State Forests, public parks etc.

Cumulative forest loss throughout the state is of utmost concern to our Division and because of an overall lack of forest protection, we have to rely on applicants and/or the entity that approves the project (i.e. counties and municipalities) to consider implementing recommendations that will aide in reducing forest loss. The Division of

Fish and Wildlife is responsible for managing and protecting many species which rely on forested habitat, some of which are endangered. Part of our mission statement is "...conserve and manage the fish and wildlife resources of the state..." and this is supported by Title 7, Section 6001 of the Delaware State Code.

### **Plant Rescue**

Because woodlands and wetlands are to be destroyed, filled, or disturbed, we recommend that the developer/landowner contact the Delaware Native Plant Society to initiate a plant rescue. Selected plants from the site of disturbance will be collected by Society members and transplanted to the Society's nursery. Plants will then be used in restoration projects and/or sold at the Society's annual native plant sale. This can be done at no expense or liability to the developer/landowner". Please contact Lynn Redding at (302) 736-7726, (lynn\_redding@ml.com) or William A. McAvoy at (302) 653-2880, (william.mcavoy@state.de.us).

### **Potential Hunting Issue**

Because the project parcel is part of a larger forest block, legal hunting activities may take place on adjacent properties. Hunting within 100 yards of a dwelling is prohibited and the applicant should contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100 yards of their property for hunting if there is not a buffer between lot lines and the adjacent property line. There is also noise associated with hunting, such as the discharge of firearms or dogs barking when pursuing game.

### **State Resource Areas/Natural Areas**

The forested lands on the Evans property is on the State Natural Area Inventory as part of the Mispillion River Natural Area and are also considered State Resource Area (SRA) lands.

Natural Areas involve areas of land or water, or of both land and water, whether in public or private ownership, which either retains or has reestablished its natural character (although it need not be undisturbed), or has unusual flora or fauna, or has biotic, geological, scenic or archaeological features of scientific or educational value.

State Resource Area lands include any open lands characterized by great natural scenic beauty, or whose existing openness, natural condition or present state of use, if retained, would maintain important recreational areas and wildlife habitat, and enhance the present or potential value of abutting or surrounding urban development, or would maintain or

enhance the conservation of natural or scenic resources, including environmentally sensitive areas.

That said, the Office of Nature Preserves requests that the site design be altered to maintain the integrity of the Mispillion River Natural Area and associated SRA by reducing the number of lots or rearranging the lot design. Specifically, lots 31 through 79, 98 through 110 and lot 142 should be removed from the Natural Area. Furthermore, removal of trees to provide active open space should be avoided.

### **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 11.4 tons (22,716.5 pounds) per year of VOC (volatile organic compounds), 9.4 tons (18,807.7 pounds) per year of NOx (nitrogen oxides), 6.9 tons (13,876.7 pounds) per year of SO2 (sulfur dioxide), 0.6 ton (1,235.3 pounds) per year of fine particulates and 950.1 tons (1,900,202.6 pounds) per year of CO2 (carbon dioxide).

***However, because this project is in a level 4 area, mobile emission calculations should be increased by 118 pounds for VOC emissions for each mile outside the designated growth areas per household unit; by 154 pounds for NOx; and by 2 pounds for particulate emissions. A typical development of 100 units that is planned 10 miles outside the growth areas will have additional 59 tons per year of VOC emissions, 77 tons per year of NOx emissions and 1 ton per year of particulate emissions versus the same development built in a growth area (level 1,2 or 3).***

Emissions from area sources associated with this project are estimated to be 4.6 tons (9,162.6 pounds) per year of VOC (volatile organic compounds), 0.5 ton (1,008.2 pounds) per year of NOx (nitrogen oxides), 0.4 ton (836.6 pounds) per year of SO2 (sulfur dioxide), 0.5 ton (1,079.6 pounds) per year of fine particulates and 18.6 tons (37,143.0 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.8 tons (3,631.4 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 6.3 tons (12,630.9 pounds) per year of SO<sub>2</sub> (sulfur dioxide) and 931.5 tons (1,863,059.5 pounds) per year of CO<sub>2</sub> (carbon dioxide).

	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	11.4	9.4	6.9	0.6	950.1
Residential	4.6	0.5	0.4	0.5	18.6
Electrical Power		1.8	6.3		931.5
TOTAL	16.0	11.7	13.6	1.1	1900.2

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.8 tons of nitrogen oxides per year and 6.3 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. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

DNREC also recommends 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:**

- Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **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 Route 113 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.

**c. Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

**d. 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”
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- 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](http://www.delawarestatefiremarshal.com), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Scott Blaier 698-4500**

The Department is opposed to development in areas designated as Investment Level 4 under the *Strategies for State Policies and Spending*. The *Strategies* do not support isolated development of these areas. The intent of this plan is to preserve the agricultural lands, forestlands, recreational uses, and open spaces that are preferred uses in Level 4 areas. The Department of Agriculture opposes development which conflicts with the preferred land uses, making it more difficult for agriculture and forestry to succeed, and increases the cost to the public for services and facilities.

More importantly, the Department of Agriculture opposes this project because it negatively impacts those land uses that are the backbone of Delaware's resource industries - agriculture, forestry, horticulture - and the related industries they support. Often new residents of developments like this one, with little understanding or appreciation for modern agriculture and forestry, find their own lifestyles in direct conflict with the demands of these industries. Often these conflicts result in compromised health and safety; one example being decreased highway safety with farm equipment and cars competing on rural roads. The crucial economic, environmental and open space benefits of agriculture and forestry are compromised by such development. The Department of Agriculture opposes the creation of

isolated development areas that are inefficient in terms of the full range of public facilities and services funded with public dollars. Public investments in areas such as this are best directed to agricultural and forestry preservation.

Section 1. Chapter 99, Code of Sussex Section 99-6 may apply to this subdivision. The applicant should verify the applicability of this provision with Sussex County. This Section of the Code states:

G. Agricultural Use Protections.

(1) Normal agricultural uses and activities conducted in a lawful manner are preferred. In order to establish and maintain a preference and priority for such normal agricultural uses and activities and avert and negate complaints arising from normal noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations, land uses adjacent to land used primarily for agricultural purposes shall be subject to the following restrictions:

(a) For any new subdivision development located in whole or in part within three hundred (300) feet of the boundary of land used primarily for agricultural purposes, the owner of the development shall provide in the deed restrictions and any leases or agreements of sale for any residential lot or dwelling unit the following notice:

“This property is located in the vicinity of land used primarily for agricultural purposes on which normal agricultural uses and activities have been afforded the highest priority use status. It can be anticipated that such agricultural uses and activities may now or in the future involve noise, dust, manure and other odors, the use of agricultural chemicals and nighttime farm operations. The use and enjoyment of this property is expressly conditioned on acceptance of any annoyance or inconvenience which may result from such normal agricultural uses and activities.”

(b) For any new subdivision development located in whole or in part within fifty (50) feet of the boundary of land used primarily for agricultural purposes no improvement requiring and occupancy approval for a residential type use shall be constructed within fifty (50) feet of the boundary of land used primarily for agricultural purposes.

The Department is also concerned about the northern boundary of the property, which borders along one of the tracts of Redden State Forest. Although State Forests are public lands for public use, there are rules and regulations governing their use (especially with regard to hunting, all terrain vehicle/cycle (ATVs/ATCs) and motorcycle use, dumping, etc.). The Department asks that the developer please make residents aware of the Forest's location and place markers or signs along the State Forest property boundary as a permanent reminder. The Department also requests the developer make a copy of the rules and regulations governing the use of State Forests available to all new residents at or before settlement. The rules can be found at:

<http://www.state.de.us/deptagri/forestry/forms/Final%20State%20Forest%20rules%20regulations%2003-2003.pdf>

The Department also asks the developer to consider donating the triangular portion of unused land on the eastern side of the site to the State Forest Service. These five to ten acres of land is contiguous to existing Redden State Forest land, and would make a welcome addition to the State Forests. There may also be a worthwhile tax benefit for the developer/landowner for such a donation. As the land will become public land if donated, the development community can still enjoy the benefit of using the land, and knowledge it will remain permanent "green space", without the burden of their future Homeowner's Association or Maintenance Corporation being responsible for its maintenance, taxes, insurance, etc. There is also the consideration of forest fires with the development being located adjacent to such a large tract of State Forest. Proper tree maintenance, firebreaks and dwelling setbacks, proper and adequate insurance, etc. are also important issues to consider at this site.

The Department would be glad to discuss such a donation with the developer/landowner and Sussex County. Please feel free to contact Austin Short (State Forester) or Scott Blaier at 698-4500.

### *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.

### *Tree Mitigation*

The Delaware Forest Service encourages the developer to implement a tree mitigation program to replace trees at a 1:1 ratio within the site and throughout the community. This will help to meet the community's forestry goals and objectives and reduce the environmental impacts to the surrounding natural resources. To learn more, please contact the DFS offices at (302) 349-5754.

### **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 Vicki Walsh 739-4263**

This proposal is for a site plan review for 148 residential units on 75 acres, located east side of Route 113, north of Route 16 near Ellendale. According to the State Strategies Map, the proposal is located in an Investment Level 2, 3, and 4 areas with the majority of the proposal located in Investment Level 4 and outside the growth zone. As a general planning practice, DSHA encourages residential development only in areas where residents will have proximity to services, markets, and employment opportunities, such as Investment Level 1 and 2 areas outlined in the State Strategies Map. Since, the proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development, DSHA does not support this proposal.

### **Department of Education – Contact: John Marinucci 739-4658**

This proposed development is within the Milford School District. DOE offers the following comments on behalf of the Milford School District.

1. Using the DOE standard formula, this development will generate an estimated 74 students.
2. DOE records indicate that the Milford School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2006 elementary enrollment.
3. DOE records indicate that the Milford School Districts' *secondary schools are not at or beyond 100% of current capacity* based on September 30, 2006 secondary enrollment.
4. The Milford School District has communicated to the DOE the district's lack of capacity at all grade levels given the number of planned and recorded residential sub divisions within district boundaries.
5. This development will create additional elementary and secondary student population growth which will further compound the existing shortage of space. The developer is strongly encouraged to contact the Milford School District Administration to address the issue of school over-crowding that this development will exacerbate.
6. DOE requests developer work with the Milford School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the local school district.

**Sussex County – Contact: Richard Kautz 855-7878**

As discussed at the meeting, the layout should be redesigned to minimize the impact on existing wetland/forestland adjacent to land of the State of Delaware and at the same time deal with the eastern triangular portion of the property fronting on Old State Road.

The GR zoning line should be shown on the plan and the area deleted from consideration in the AR-1 Cluster subdivision calculations.

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). For example, the reduction of 148 lots from 20,000 sq. ft. to an average lot size of 9,880 sq. ft. allows for more than 34 acres of open space yet only 25 acres of "useable" open space is provided. As a result, many of the lots do not have direct access to open space. The remaining open space is

that which would otherwise be required with or without the clustering (i.e. stormwater management, buffers, and utilities). Finally, the site is NOT within the Ellendale Developing Area "as shown on the Future Land Use Plan of the adopted Sussex County Comprehensive Plan." The site is required to be so located to avoid the 25% area reduction for AR-1 cluster subdivisions. The number of lots should be reduced accordingly. These issues can be addressed by including in the application an explanation of how the developer plans to mitigate them and the issues raised by the State agencies during this review.

The site plan should also show compliance with the Route 113 Highway Corridor Overlay as required by 115-194.1 of the County Code, where applicable.

The site is within the Ellendale Short Term Annexation area. Contact with the Town should be made in regard to that issue.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. The Sussex County Engineering Department opposes community systems in planning areas unless there are no other solutions.

The proposed project adjoins, but is not within the Ellendale Sanitary Sewer District. Sewer service is not available to the parcel at this time. The project is within a planning area for sewer service, and connection to the sewer system is mandatory. The project can be annexed into the sewer district and receive sewer service when the developer completes certain administrative procedures and construction of an extension of mainline sewers.

Sewer capacity is available for the project. As proposed at 148 units on 74.93 acres, the project is within planning area assumptions for sewer service. Sussex County has undertaken a study to recommend future treatment and disposal options for the sewer district. Until the study is complete and Sussex County adopts a schedule to provide additional treatment, it may be necessary to limit the projects annual connections. Sussex County can meet with the developer to develop a schedule and phasing plan for connections.

The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. The Sussex County Engineer must approve the connection point. The Sussex County Engineering Department requires that a Sewer Conceptual Plan be submitted for review and approval prior to requesting annexation. Attached is a listing of steps to be completed for

extending district boundaries. Also attached is a checklist for preparing conceptual plans. Include a proposed schedule and phasing plan with the concept plan.

One-time system connection charges will apply. Please contact Ms. Blair Johnson at 302 855-7701 for additional information on charges.

**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,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP  
Director

CC: Sussex County