



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

April 15, 2005

Mr. Keith Cordrey
JKC, LLC
17 Fairway Avenue
Georgetown, DE 19947

RE: PLUS review – PLUS 2005-03-07; Ingram's Point

Dear Mr. Cordrey:

Thank you for meeting with State agency planners on March 30, 2005 to discuss the proposed plans for the Ingram's Point project to be located on County Road 412, west of Millsboro. According to the information received, you are seeking site plan approval through Sussex County for 133 residential units on 150 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.

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 Office of State Planning Coordination notes that this proposal is located in an Investment Level 4 area according to the Strategies for State Policies and

Spending. In these areas, State policies encourage agricultural preservation and the conservation of natural resources, not development. The State will not participate in any infrastructure upgrades necessary to support this proposal.

Street Design and Transportation

- Sidewalks should be provided on all internal streets to encourage walking.
- DelDOT recommends that the plan be reconfigured to eliminate the cul-de-sacs on Nature's Way, the south end of Mallard Drive and both ends of Deer Run Court.
- DelDOT recommends that one or more stub streets be provided to the Merrill J. & Betty L. Parker property to the west.

Natural and Cultural Resources

- Because there is evidence that wetlands exist on the subject parcel, we strongly recommend that an Army Corps of Engineers (ACOE) approved wetlands delineation be conducted before commencing development.
- Recommended vegetated buffers of no less than 100 feet (increasing the buffer to 300 feet along the eastern side of the site, adjacent to Ingram's Pond, is recommended) should be employed from the edge of the wetland complex and other waterbodies on site.
- Lot lines should be moved to avoid impact to the mature forested area on the northeastern portion of the parcel.
- The PLUS application indicates that only 13 acres of forest will be removed. This seems unrealistic in order to accommodate the necessary roads, houses, septic systems, and other disturbance that would be necessary to construct the proposed plan.
- The PLUS application indicates that Ingram's Pond is going to be used as the outlet for stormwater collected from the site. The Division of Fish and Wildlife has spent a large amount of time and funding to improve the water quality of this pond and is opposed to its use as an outlet. In addition, there are records of rare plant and animal species within the pond and its tributaries that would be detrimentally affected by changes in water quality.
- It is strongly recommended that all stormwater management pond(s) be at least 100 feet away from all wetlands and/or streams.

- Portions of the property lie within the 100-year floodplain. Long Drain Ditch has never had 100-year flood elevations determined by FEMA. The applicant is required to calculate 100-year flood elevations if the floodplain is not left as open space.

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

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

The Office of State Planning Coordination notes that this proposal is located in an Investment Level 4 area according to the Strategies for State Policies and Spending. In these areas, State policies encourage agricultural preservation and the conservation of natural resources, not development. The State will not participate in any infrastructure upgrades necessary to support this proposal.

This proposal is adjacent to Longwood Lakes, a project to which the State voiced concerns, similar to the concerns over this project. Detail on the State concerns can be found below in the State agency comments, but we are particularly concerned about the loss and fragmentation of the forest on-site and the impact that the proposed development will have on water quality in the Inland Bays watershed.

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

While nothing is known on the parcel, it is on a mill pond, and appears to have the tail race within the parcel. Beers Atlas of 1868 notes the location of the Dr. J. Martin House, an unlabelled building, and a saw mill in the general area. There may very well be a mill site within this parcel next to the pond. The probability for prehistoric archaeological sites is relatively low.

SHPO would be happy to work with the owner/developer to delineate any areas of archaeological sensitivity. If the tail race/pond is used as a storm water management pond, they would like to have a record of the bottom contours made before it is modified for that use.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Because the development is proposed for a Level 4 Area, it is inconsistent with the Strategies for State Policies and Spending. Therefore DelDOT will not participate in the cost of any road improvements needed to support this development. The comments that follow are technical, and are not intended to suggest that DelDOT supports this development proposal.

- 1) The developer should expect to be required to improve Lakeview Road to DelDOT's local road standards from Phillips Hill Road (Sussex Road 472) to

- Country Living Road. Those standards are 11-foot lanes and 5-foot shoulders. We are aware that several smaller developments have been built along this section of road and each has presumably made at least some road improvements. Therefore DelDOT has not yet determined specifically what improvements will be required of the developer to meet those standards.
- 2) Lakeview Road is classified as a local road. Local roads in rural Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore they will require right-of-way dedication to provide any additional width needed from this project.
 - 3) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site. If right-of-way permits, DelDOT may require that the path be extended to provide safe pedestrian access to the millpond located southeast of the development on the opposite side of Lakeview Road.
 - 4) The response to Item 40 on the PLUS form indicates that sidewalks are not proposed. It is recommended that sidewalks be provided on all internal streets to encourage walking.
 - 5) DelDOT recommends that the plan be reconfigured to eliminate the cul-de-sacs on Nature's Way, the south end of Mallard Drive and both ends of Deer Run Court, possibly by extending the north one to the property line as a stub street. Doing so would enhance the grid street pattern and provide more of a sense of community through additional interconnections.
 - 6) DelDOT recommends that one or more stub streets be provided to the Merrill J. & Betty L. Parker property to the west.
 - 7) The developer's site engineer should contact the DelDOT Subdivision Manager for Sussex County, Mr. John Fiori, regarding their specific requirements for the design of the road improvements and site entrance. Mr. Fiori may be reached at (302) 760-2260.

**The Department of Natural Resources and Environmental Control – Contact:
Kevin Coyle 739-3091**

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 soil survey update Evesboro, Pepperbox-Rosedale, Longmarsh-Indiantown, and Pits and gravel were mapped in the immediate vicinity of the proposed construction. Evesboro is an excessively well-drained upland soil that has limitations associated with rapid permeability. Pepperbox-Rosedale is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Longmarsh-Indiantown is a very poorly-drained wetland associated (hydric) soil that has severe limitations for development. Pits and gravel is a soil mapping unit that has been subjected to extensive clearing, grading, or filling activities. Most of the disturbance impacts on this mapping unit are likely to be associated with soil compaction and alterations in the existing soil surface and subsurface hydrology.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on site.

Impacts to Palustrine wetlands are regulated by the Army Corps of Engineers 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. **It is strongly recommended that an Army Corps of Engineers (ACOE) approved wetlands delineation be conducted before commencing development.**

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) 739-4691 to schedule a meeting.

Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Lots should be removed in their entirety from the wetland, wetland buffers and the forested areas. Recommended vegetated buffers of no less than 100 feet (increasing the buffer to 300 feet along the eastern side of the site, adjacent to Ingram's Pond, is recommended) should be employed from the edge of the wetland complex and other waterbodies on site. It is important to note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands and associated buffers, to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

It should also be noted that headwater riparian wetlands associated with Long Drain Ditch and Shoal's Branch immediately border the northern and southern boundaries of said parcel. Headwater streams are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or waterbodies (Inland Bays) downstream. **In recognition of this concern, the Department strongly recommends that the applicant preserve the existing natural forested buffer adjacent to said wetlands in their entirety. Efforts to maximize or expand (beyond the recommended 100-foot minimum) the existing natural buffer width with native herbaceous and/or woody vegetation, is strongly recommended.**

ERES Waters

This project is located adjacent to receiving waters of Inland Bays 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

With the adoption of Total Maximum Daily Loads (TMDLs) as a "nutrient-runoff-mitigation strategy" for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. 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 authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware's Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as "pollution control strategies."

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent. **This project is proposed within the high nutrient reduction zone. Removal of forested areas on the site will make the nutrient reductions difficult, if not impossible, to meet.**

Since the TMDL for the Inland Bays mandates reducing nutrient loading to waters of the Inland Bays significant nitrogen and phosphorus loading must be realized from all sources, including onsite/community wastewater systems. The Department has developed performance standards based on research by Departmental staff and Dr. Mike Hoover (North Carolina State University) for on-site wastewater treatment and disposal systems. Due to the size of a development's system, the performance standard dictates that the effluent concentration levels can not exceed average annual nitrogen and phosphorus concentration levels of 5 and 2 mg/l, respectively. The phosphorus standard only applies when applicable.

In order for the applicant to verify compliance with the TMDL mandate, a full nutrient accounting process known as nutrient budget should be prepared. The developer/consultant should contact Lyle Jones in the Department's Watershed Assessment Section for further information regarding the acceptable protocol for calculating a nutrient budget. He can be reached as 739-4590.

Water Supply

The project information sheets state that individual on-site wells will be used to provide water for the proposed project. Our records indicate that the project is not located in an area where public water service is available. 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 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 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 302-739-3665.

Sediment and Erosion Control/Stormwater Management

1. Please submit a sediment control and stormwater management plan to the Sussex Conservation District for review. No construction (i.e. clearing, filling, grading, etc.) shall take place on-site until a sediment control and stormwater management plan has been approved by the Conservation District.
2. Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after.
3. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.
4. During the design of the stormwater management facility please note that both stormwater quantity and quality must be addressed.
5. If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.
6. Specify First Floor elevations for all lots.
7. All ponds are required to be constructed per pond code 378.
8. Please demonstrate to the Conservation District that you have an adequate outfall for the proposed stormwater facilities.

9. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address this.
10. It is the District's understanding that the designer intends to utilize the existing pond as a stormwater management facility. You will be required to demonstrate that the existing natural area can provide water quality as well as management of the 2 and 10 – year storm events and a safe conveyance for the 100-year storm. In addition, the existing facility will have to be modified to comply with the DNREC Health and Safety Memo of 2000, which specifies that all wet ponds are required to have a 10-foot safety bench one foot below the permanent pool with top side slopes of 4:1 or flatter.
11. Due to the proximity to sensitive areas, the Conservation District will require reinforced and super silt fence to adequately protect wetland areas during the construction of the site.
12. A CCR is required for this development since the gross acreage for the project exceeds 50 acres.
13. Please contact us when design of stormwater management facility is initiated, as we would like to work closely with you in its design.
- 14. It is also strongly recommended that all stormwater management pond(s) be at least 100 feet away from all wetlands and/or streams.**

Floodplains

Portions of the property lie within the 100-year floodplain. Long Drain Ditch has never had 100-year flood elevations determined by FEMA. The applicant is required to calculate 100-year flood elevations if the floodplain is not left as open space.

Forests

According to 2002 aerial photos, the site is extensively forested; however, PLUS materials indicate that 13 acres of the forested area will be removed. 1937 maps indicate mature forest still present on majority of the north eastern portion of the parcel. Lot lines should be not impact the mature forested area, therefore any lines within this area should be removed. Preservation of the mature forested area should be given the highest priority. Because this parcel is mapped as a Natural Resource focus area under the Green Infrastructure initiative, and contains mature hardwoods, the developer and County should relocate all lots within this area and preserve this forest.

The forested area within this parcel is a component of a contiguous stretch of forest. Large contiguous stretches of forest like this not only provide important water and air quality benefits, but provide important habitat for many wildlife species that depend on

interior forest. Clearing portions of the forest within the parcel may reduce the habitat value of the entire forest stretch. Therefore, the developer is strongly encouraged to preserve, and where possible, enhance forested resources on site. This includes removing lot lines and infrastructure (such as storm water management ponds) from forested areas to the extent possible and minimizing any clearing activities. The forested areas on-site should be viewed as a community asset and managed appropriately.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

More of this forested area could be preserved by reducing the number and size of lots or by arranging the open space so that it is a continuous area rather than small disconnected areas. Larger, connected areas of forest are more beneficial to wildlife than narrow buffer strips or small disconnected areas of forest. As mentioned above, at least 100 feet of forested buffer should be left intact along the tributaries of Ingram's Pond and around any associated wetlands.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure be pulled out of the forest and areas of community open space be designated along the forest and wetland areas. Doing so will create recreational opportunities for residents by allowing them access to and views of the forest and streams.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. 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.

Due to the fact that the adjacent property is a Protected State Resource Area the developer is encouraged to place the forest and/or wetlands into permanent conservation easement. Conservation areas should also be demarked to avoid infringement by homeowners.

Rare Species and Ingram's Pond

This site has never been surveyed; however, the DNREC database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities on the project parcel. Because DNREC has not visited the site previously, the Delaware Natural Heritage and Endangered Species Program botanist requests the

opportunity to survey the forested and wetland resources which could potentially be impacted by the project. His observations would allow him to make more informed comments on this project and would allow the applicant the opportunity to reduce potential impacts to rare species. Please contact Bill McAvoy at (302) 653-2880 to set up a site visit.

Ingram's Pond is a publicly owned pond managed by the Division of Fish and Wildlife, DNREC. The State is concerned that the water quality and fish habitats in the pond might be negatively affected by development activities. According to the application, Ingram's Pond is going to be used as the outlet for stormwater collected from the site. The Division has spent a large amount of time and funding to improve the water quality of this pond and is opposed to its use as an outlet. In addition, there are records of rare plant and animal species within the pond and its tributaries that would be detrimentally affected by changes in water quality.

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 100yds of a dwelling is illegal and the applicant may want to contact adjacent landowners to determine if this is going to be an issue. In effect, the adjacent landowner will be losing 100yds of their property for hunting if there is no buffer between lot lines and the adjacent property line.

Nuisance Waterfowl

Stormwater ponds constructed onsite will likely attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. 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. Ponds that remain in the subdivision plan should be landscaped to deter nuisance species. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50 feet) around ponds, are not as attractive to geese because they do not feel as safe from predators and other disturbance when their view of the area is blocked. 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 a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recreation

It is recommended that sidewalks be built fronting every residence and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking

facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, parks, public mass transit stops, schools, stores, work, etc. We recommend that a bike and pedestrian access be provided to both parcels to the north especially to the parcel owned by the Indian River School District.

The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high facility needs in Eastern Sussex County are Walking and Jogging, Bike Paths and Fishing Areas. The moderate facility needs are Picnic Areas, Skate Facilities, Canoe/Kayak Access, Hiking Trails, Swimming Pools, Playgrounds, Soccer Fields, Tennis Courts, Power Boat Access and Baseball/Softball Fields. Consideration should be given to incorporate some of these recreation opportunities into the project. For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-5285.

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects, diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

The Department of Natural Resources and Environmental Control is asking that local jurisdictions consider mitigation to help resolve this issue. Mitigation might involve limiting large new developments to growth zones, focusing development to urban areas capable of providing mass transit services, requiring more energy efficient homes which would lessen air quality impacts, and promoting walkability and bikability within and between developments and town centers.

Once complete, vehicle emissions associated with this project are estimated be 10.2 tons (20,414.1 pounds) per year of VOC (volatile organic compounds), 8.5 tons (16,901.5 pounds) per year of NOx (nitrogen oxides), 6.2 tons (12,470.2 pounds) per year of SO₂ (sulfur dioxide), 0.6 ton (1,110.1 pounds) per year of fine particulates and 853.8 tons (1,707,614.5 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated be 4.1 tons (8,233.9 pounds) per year of VOC (volatile organic compounds), 0.5 ton (906.0 pounds) per year of NOx (nitrogen oxides), 0.4 ton (751.8 pounds) per year of SO₂ (sulfur dioxide), 0.5 ton (970.2 pounds) per year of fine particulates and 16.7 tons

(33,378.5 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.6 tons (3,263.3 pounds) per year of NO_x (nitrogen oxides), 5.7 tons (11,350.8 pounds) per year of SO₂ (sulfur dioxide) and 837.1 tons (1,674,235.9 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	10.2	8.5	6.2	0.6	853.8
Residential	4.1	0.5	0.4	0.5	16.7
Electrical Power		1.6	5.7		837.1
TOTAL	14.3	10.6	12.3	1.1	1707.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.6 tons of nitrogen oxides per year and 5.7 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 DNREC 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.

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 estimate the amount of solid waste that will be generated as a result of construction and occupancy.

State Fire Marshal's Office – Contact: Duane Fox

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:**

- Since the dwellings of the subdivision are proposed to be served by individual on-site wells (No Central Water System), set back and separation requirements will apply.

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 Sussex County Road 412 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”
- 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, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Mark Davis 739-4811

Overall Comments

The Delaware Forest Service does not support the development of this parcel within an Investment Level 4 area. This development as proposed will lessen the value of the environmental resources found within and adjacent to this site. Noted within the plans it says that 13 acres of forested land will be removed. Upon inspection of the site we found that the removal of the 13 acres will not be possible if it includes the road system and housing area. The Forest Service strongly encourages the developer to work with all agencies to address such concerns as preservation of the forested since this area is almost all forested. The Delaware Department of Agriculture Forest Service offers it services to the developer in the re-design of this project, to learn more please contact our office at (302) 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 Department of Agriculture 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 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.

Road Design and Construction

The Delaware Department of Agriculture Forest Service encourages the developer to design a road system that better suites the development and its future residents. Designing a better road system will allow the developer to better utilize the land, while at the same time create a unique road system for the residents and surrounding areas.

Forest Buffers

The Delaware Department of Agriculture Forest Service recommends that the developer use 30' forest buffer along all properties that boarder the subdivision. The Forest Service encourages the developer to seek the assistance of a certified arborist to aid in this design process. A forest buffer also offers great opportunities to increase property values within the subdivision.

Public Service Commission - Contact: Andrea Maucher 739-4247

Project is not in a certificated area. If water is requested from a private utility, that utility will need to apply to the Commission for a Certificate of Public Convenience And Necessity.

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.

If wastewater services are requested from a non-governmental entity, and there would be 50 or more customer served, the provider will need to apply to the Commission for a Certificate of Public Convenience and Necessity (CPCN). Additional requirements may apply if the provider has not previously been awarded a CPCN by the Commission.

Delaware State Housing Authority – Contact Karen Horton 739-4263

As a general practice, DSHA encourages residential development 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. The proposal is located in an area targeted for agricultural activities and natural resource protection, and therefore inconsistent with where the State would like to see new residential development.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the number of residential units being proposed, an impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities. Routes 20 and 113 are coastal storm evacuation routes and this development will be affected by traffic volume on these routes during a coastal storm event.

Department of Education – Contact: Nick Vacirca 739-4658

133 dwelling units could generate an estimated 66 additional students for the Indian River School District. Sussex County does not have school concurrence legislation at this time. We recommend that the developer submit a package to the school district for informational purposes.

This development is planned in a level 4 area of the State Strategies map. Development in this area is not recommended nor is the allocation of State resources to support development in this area. In an effort to not promote development in level 4 area, the Indian River school district was not approved to build a school on a parcel of land they own along Ingram's Pond. The proposed school (Sussex Central HS) was moved to an area that best met the needs of the district and the States Strategies. State spending strategies recommend no development in level 4 areas, or if development occurred, there would be little or no State funding utilized. Development that is approved in level 4 areas will require student transportation support, a State financed program.

If the development is approved and built, please use the following information for school transportation planning.

If there are homes more than 1/2 mile from the nearest public road (outside the development), developers should plan wide enough streets so that large school buses can access and turn around (without backing) from the furthest areas within the development while picking up and dropping off students. Should there not be any sites more than 1/2 mile from the nearest public road, provisions for appropriate pick-up and drop-off at the development entrance should be included. The developer should work closely with the school district transportation supervisor.

Sussex County – Contact: Richard Kautz 855-7878

Because the Concept Plan is not in sufficient detail, the developer should make sure that the subdivision layout can meet the cluster design requirement of having all lots completely outside of all wetlands.

The developer should provide the stub road access to adjacent property as requested by DelDOT.

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). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate the issues raised by the State agencies.

The Sussex County Engineer Comments:

- This proposed subdivision is not within a current County wastewater planning area.
- For questions regarding above comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7839.
- The north side of Lakeview drive is listed by the State Historic Preservation Office archaeological probability maps as an area of particular interest. It is highly likely that archaeological sites are present on the property. If any federal permits are required for the project, the contractor is required under section 106 of the National Historic Preservation Act to bring this up with the Delaware State Historic Preservation Office for their review.
- For questions regarding above comments, contact Brian Page, Sussex County Engineering Department at (302) 856-6138.

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