



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

May 16, 2005

Mr. Scott E. Lobdell
Key Engineers, Inc.
5 north Broad Street
Middletown, DE 19709

RE: PLUS review – PLUS 2005-04-06; Dover Gardens

Dear Mr. Lobdell:

Thank you for meeting with State agency planners on April 27, 2005 to discuss the proposed plans for the Dover Gardens project to be located on Central Church Road. According to the information received, you are seeking site plan approval for 244 units on 154 acres located inside the Kent County growth zone.

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 Kent 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

This project is located in Investment Level 3 according to the Strategies for State Policies and Spending. State investments will support growth in these areas, but please be advised that the State may have other priorities in the near term future.

Street Design and Transportation

- The developer should expect to be required to improve Central Church Road to DelDOT's local road standards from Kenton Road to the west end of the site frontage.
- There is a substandard curve in Central Church Road within the frontage of the subject development and just east of the proposed entrance location. Preliminarily, DelDOT will require the developer to improve the curve to meet DelDOT standards for horizontal curves as part of the improvements mentioned above.
- It is recommended that other stub streets be provided to the east, by extending the streets that currently separate Lots 141 and 142 and Lots 153 and 200.
- It is recommended that three of the five proposed cul-de-sacs be eliminated.

Natural and Cultural Resources

- To avoid impacts to the Coastal Plain Ponds, the site plan should be redesigned and the lots within the northwestern quadrant should be either relocated or eliminated. According to the application, only a 25-foot buffer is planned around these wetlands. This is extremely inadequate, and will result in detrimental impacts to the water quality and ecology of these sensitive wetlands. At the very least, a 300-foot buffer should be left intact around the coastal plain ponds. This buffer should not contain lot lines or stormwater management ponds.
- In addition, at least a 100-foot buffer should be left intact around other wetlands on the parcel as well as along the stream. This buffer should not contain lot lines as subsequent landowner activities (clearing, construction, lawn fertilizer application) could reduce the width and function of the buffer. Stormwater management ponds should also not be constructed within this buffer zone.
- This parcel is bordered to the north and south by environmentally sensitive headwater tributaries to the Fork Branch. Since headwater streams/rivers and their associated wetlands 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 further downstream, their protection deserves the highest priority. DNREC strongly recommends that the applicant preserve the existing natural forested buffer adjacent to the Fork Branch in its entirety. Efforts to maximize or expand the existing natural forested buffer width via planting of native woody or herbaceous vegetation is also strongly recommended.

- A drainage conveyance on the east side of the property is depicted as a blue line stream on the latest United States Geological Survey Topographic Quadrangle Map and requires a 100-foot buffer according to the Kent County Subdivision and Land Development Ordinance.
- The applicant should keep in mind that their project may be subject to future regulatory nutrient load reductions under TMDLs, which may significantly impact the project's current scale and design.
- Portions of the site are within the 100-year floodplain. Kent County prohibits the subdivision of land within the 100-year floodplain.
- According to 2002 aerial photos there is a large forested area within this parcel that 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. Fragmentation of this forest can have irreversible effects to the regional ecosystem. Equally beneficial to the region is the forest tract surrounding Fork Branch as it is mapped as a critical natural area. Therefore, construction activities should be avoided in forested areas.
- Site plans show that structures are proposed within the forested area. PLUS materials indicate that 10-15 acres will be removed to accommodate approximately 70+ lots. There are 68 lots that lie within the forested area that is mapped as a Natural Resource Area by the Green Infrastructure Committee. Because of this designation, the developer and County should relocate all lots within this area and preserve this forest. 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.

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

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

This project is located in Investment Level 3 according to the Strategies for State Policies and Spending. This site is also located in the Kent County Growth Zone. Investment Level 3 reflects areas where growth is anticipated by local, county, and state plans in the longer term future, or areas that may have environmental or other constraints to development. State investments will support growth in these areas, but please be advised that the State may have other priorities in the near term future. We encourage you to design the site with respect for the environmental features which are present.

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

There is an existing farmhouse within the parcel that the State Historic Preservation Office has no records for. They have requested the opportunity to document this property prior to any construction. There may be archaeological remains associated with this house as well.

There are two known prehistoric period archaeological sites within the wooded area. They strongly encourage the owner/developer to maintain as much of the wooded area as possible and would be happy to work with the owner/developer to locate these sites more precisely and perhaps preserve them within the development's open space. There are two adjacent historic houses, and we request that the developer include appropriate landscaping to screen the view of this development from them.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) The developer should expect to be required to improve Central Church Road to DelDOT's local road standards from Kenton Road to the west end of the site frontage. If, as our records indicate, the road has 11-foot lanes, the improvement would consist of widening the shoulders to as much as 5 feet (right-of-way permitting), paving the shoulders and overlaying the road.
- 2) There is a substandard curve in Central Church Road within the frontage of the subject development and just east of the proposed entrance location. Preliminarily, DelDOT will require the developer to improve the curve to meet DelDOT standards for horizontal curves as part of the improvements mentioned above. Regardless of whether they require that improvement, the developer's engineer will be required to demonstrate that adequate sight distance exists at the proposed entrance location and the developer will be required to make any improvements necessary to achieve adequate sight distance if it does not exist.
- 3) Central Church 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 we will require right-of-way dedication to provide any additional width needed from this project.
- 4) DelDOT appreciates the stub street to the west, proposed between Lots 9 and 10 but because of the permanent Agriculture Preservation District to the west, that stub is not useful. It is recommended that other stub streets be provided to the east, by extending the streets that currently separate Lots 141 and 142 and Lots 153 and 200.

- 5) It is recommended that three of the five proposed cul-de-sacs be eliminated. Specifically, the one south of Lot 157 should be turned east to connect to another street and the pair between Lots 207 and 217 should be joined together. DelDOT understands that cul-de-sacs are necessary in some instances to make efficient use of the land; however, they are not conducive to good traffic flow or a sense of community. Where possible they should be eliminated.
- 6) The response to item 37 on the PLUS form indicates that “a Boulevard style entrance with four lanes” is proposed. Other than turning lanes at intersection, DelDOT generally requires subdivision streets be 22 to 32 feet wide and unstriped. Where striping is necessary, they generally stripe subdivision streets as being two lanes wide. Their concerns are that a four-lane section is unnecessary for capacity, would encourage speeding, could be difficult for pedestrians to cross safely, and means unnecessary impervious surface. While DelDOT is willing to review the matter further, the developer’s engineer will need to demonstrate the need for this non-standard typical section.
- 7) The developer’s engineer should contact our project manager for Kent County, Mr. Brad Herb of Johnson, Mirmiran & Thompson, regarding our requirements for streets and access. Mr. Herb may be reached at (302) 266-9080.

**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 Kent County soil survey, Sassafras, Woodstown, Fallsington, and Johnston were mapped in the immediate vicinity of the proposed parcel. Sassafras is a 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. Fallsington is a poorly-drained wetland associated (**hydric**) soil that has severe limitations for development. Johnston is a very poorly-drained wetland associated (**hydric**) floodplain soil that has very severe limitations for development.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence palustrine forested wetlands and farmed palustrine wetlands on the property. Because there is strong evidence that federally regulated wetlands exist on site, a wetland delineation, in accordance with the methodology established by the Corps of Engineers Wetlands Delineation Manual, (Technical Report Y-87-1) should be conducted. Once complete, this delineation should be verified by the Corps of Engineers through the Jurisdictional Determination process.

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.

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.

It is further recommended that the Farm Services Agency of the USDA be contacted to assess whether the farmed wetlands on subject parcel meet the recognized criteria for classification as "prior converted wetlands." Prior converted wetlands are farmed wetlands that have drained or altered before December 23, 1985, and no longer meet the wetland criteria established under the 404 program. Such wetlands are considered exempt from regulatory protection provided that there is no proof of a continuous "fallow period" of five years or greater in that parcel's cropping history. Parcels converted after said date regardless of cropping history are considered jurisdictional by

the Army Corps of Engineers (ACOE). The contact person for assessing a parcel's cropping history is Sally Griffin at the USDA – she can be reached at 678-4182.

Wetland and Riparian Buffers

To avoid impacts to the Coastal Plain Ponds, the site plan should be redesigned and the lots within the northwestern quadrant should be either relocated or eliminated. According to the application, only a 25-foot buffer is planned around these wetlands. This is extremely inadequate, and will result in detrimental impacts to the water quality and ecology of these sensitive wetlands. At the very least, a 300-foot buffer should be left intact around the coastal plain ponds. This buffer should not contain lot lines or stormwater management ponds. In addition, at least a 100-foot buffer should be left intact around other wetlands on the parcel as well as along the stream. This buffer should not contain lot lines as subsequent landowner activities (clearing, construction, lawn fertilizer application) could reduce the width and function of the buffer. Stormwater management ponds should also not be constructed within this buffer zone.

The applicant is strongly encouraged to maintain a 100-foot minimum buffer width from the landward edge of all delineated wetlands and/or watercourses (including ditches). In cases where natural buffer vegetation has been removed or reduced by past development or farming activities, the developer is encouraged to restore/establish to said buffer width or greater with native herbaceous and/or woody vegetation. Efforts to maximize or expand the existing natural buffer width via planting of native woody or herbaceous vegetation beyond the recommended 100-foot buffer width, is also strongly recommended.

Further, this parcel is bordered to the north and south by environmentally sensitive headwater tributaries to the Fork Branch. Since headwater streams/rivers and their associated wetlands 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 further downstream, their protection deserves the highest priority.

In recognition of this concern, the Department strongly recommends that the applicant preserve the existing natural forested buffer adjacent to the Fork Branch in its entirety. Efforts to maximize or expand the existing natural forested buffer width via planting of native woody or herbaceous vegetation is also strongly recommended.

TMDLs

Although Total Maximum Daily Loads (TMDLs) as a “pollution runoff mitigation strategy” to reduce nutrient loading have not yet been developed for most of the tributaries or subwatersheds of the Delaware Bay watershed to date, work is continuing

on their development. TMDLs for the St. Jones River subwatershed, of which this parcel is part, are scheduled for completion in December 2005.

Therefore, until the specified TMDL reductions and pollution control strategies are adopted, it shall be incumbent upon the developer to employ best available technologies (BATs) and/or best management practices (BMPs) as “methodological mitigative strategies” to reduce degradative impacts associated with development. **The applicant should keep in mind that their project may be subject to future regulatory nutrient load reductions under TMDLs, which may significantly impact the project’s current scale and design.**

Water Supply

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

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-3665.

Sediment and Erosion Control/Stormwater Management

Requirements:

1. Land disturbing activities in excess of 5,000 square feet are regulated under the Delaware Sediment and Stormwater Regulations. A detailed sediment and stormwater management plan must be reviewed and approved by the Kent Conservation District prior to any land disturbing activity (i.e. clearing, grubbing, filling, grading, etc.) taking place. The review fee and a completed Application for a Detailed Plan are due at the time of plan submittal to the Kent Conservation District. Construction inspection fees based on developed area and stormwater facility maintenance inspection fees based on the number of stormwater facilities are due prior to the start of construction. Please refer to the fee schedule for those amounts.
2. The following notes must appear on the record plan:

- The Kent Conservation District reserves the right to enter private property for purposes of periodic site inspection.
 - The Kent Conservation District reserves the right to add, modify, or delete any erosion or sediment control measure, as it deems necessary.
 - A clear statement of defined maintenance responsibility for stormwater management facilities must be provided on the Record Plan.
3. Ease of maintenance must be considered as a site design component. Access to the proposed stormwater facilities must be provided for periodic maintenance. This access should be at least 12 feet wide to leading to the facility and around the facilities perimeter. Maintenance set aside areas for disposal of sediments removed from the basins during the course of regular maintenance must be shown on the Record Plan for the subdivision.
 4. All drainage ways and storm drains should be contained within drainage easements and clearly shown on the plan to be recorded by Kent County.
 5. A soils investigation supporting the stormwater management facility design is required to determine impacts of the seasonal high groundwater level and soils for any basin design.

Comments:

1. Proper drainage of all developed lots and active open space must be considered in the development of the grading plan for this subdivision due to the presence of poorly drained soils on the site. Portions of this site contains Woodstown (Ws, Wo), and Fallsington (Fs, Fa) soils based on the Soil Survey for Kent County prepared by the USDA Natural Resource Conservation Service. The Fallsington soil series consists of poorly of very poorly drained, slowly permeable silty soil and have severe limitations for most community development and recreational uses such as: basements, roads, lawns, and site septic tank disposal fields. Fallsington Loam is naturally poorly drained and has limitations to community development which may be overcome with careful planning and design if properly drained.
2. The preferred methods of stormwater management are those practices that maximize the use of the natural features of a site, promote recharge and minimize the reliance on structural components. The designer is encouraged to consider the conservation design approach and limit the amount of tree clearing required for the development of the site including the stormwater management facilities shown in the wooded areas.
3. Access to the proposed stormwater facility must be provided for periodic maintenance. This access should be at least 12 feet wide to leading to the facility and around the facility's perimeter.

4. It is recommended that the stormwater management areas be incorporated into the overall landscape plan to enhance water quality and to make the stormwater facility an attractive community amenity.
5. A letter of no objection to recordation will be provided once the detailed Sediment and Stormwater Management plan has been approved.
6. Based on the site characteristics, a pre-application meeting is suggested to discuss stormwater management and drainage for this site.
7. The Kent Conservation District recommends that no residential lot be recorded within a subdivision that contains wetlands. Placing wetlands in open space will aid in protecting those areas from disturbance and reduce individual property owner complaints regarding poor drainage of areas on their property.

Drainage

The Drainage Section requests that buffers along existing ditches be part of the development open space and not owned by individual landowners.

A drainage conveyance on the east side of the property is depicted as a blue line stream on the latest United States Geological Survey Topographic Quadrangle Map and requires a 100-foot buffer according to the Kent County Subdivision and Land Development Ordinance. The existing riparian buffer should be protected and the remainder of the required buffer be planted with native species of grasses, forbs, sedges, and shrubs.

The Drainage Section does not have a clear understanding where the stormwater management areas will be located on this project. The Drainage Section requests the location of the stormwater management areas and their outlet locations be clearly marked on preliminary site plans. The Drainage Section further requests that all precautions be taken 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 Section recommends all existing ditches on the property be checked for function and cleaned, if needed, prior to the construction of homes. Wetland permits may be required before cleaning ditches.

The Drainage Section strongly recommends that any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be planted as vegetated buffers and be of sufficient width to allow for future drainage maintenance or the reconstruction of drainage conveyances as described below.

- Along an open ditch or swale the Drainage Section recommends a maintenance equipment easement of 25' measured from the top of bank on the maintenance

side, and a 10' setback easement measured from top of bank on the non-maintenance side. These easements should be planted and maintained as vegetated buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these buffers should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance easement should be native species, spaced to allow for mechanized drainage maintenance at maturity. Trees should not be planted within 5 feet of the top of ditch to avoid future blockages from roots.

- Along a stormwater pipe the Drainage Section recommends a maintenance equipment easement of 15' each side of the pipe as measured from the pipe centerline. These easements should be planted and maintained as vegetated buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these easements should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance easement should be spaced to allow for mechanized drainage maintenance at maturity.

The above-mentioned easement widths are necessitated for the maintenance and/or reconstruction of drainage conveyances. For the further enhancement of water quality of the St. Jones River watershed the Drainage Section encourages additional widths of vegetated buffers on this project. This project is partially within an area designated as Green Infrastructure as decreed by Governor Minner's Executive Order 61.

Floodplains

Portions of the site are within the 100-year floodplain. Kent County prohibits the subdivision of land within the 100-year floodplain. Development should be limited to those areas outside of the floodplain and on grade above base flood elevations.

Forests

According to 2002 aerial photos there is a large forested area within this parcel that 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. Fragmentation of this forest can have irreversible effects to the regional ecosystem. Equally beneficial to the region is the forest tract surrounding Fork Branch as it is mapped as a critical natural area. Therefore, construction activities should be avoided in forested areas.

Site plans show that structures are proposed within the forested area. PLUS materials indicate that 10-15 acres will be removed to accommodate approximately 70+ lots. There

are 68 lots that lie within the forested area that is mapped as a Natural Resource Area by the Green Infrastructure Committee. Because of this designation, the developer and County should relocate all lots within this area and preserve this forest. 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.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as storm water management ponds) be pulled out of the forest and that areas of community open space be designated along the forested/riparian areas. Doing so will accomplish two things: it will preserve and expand the existing riparian buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents by allowing them access to and views of the forest and Fork Branch.

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.

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/Threatened/Endangered Species

There is a high potential for rare plant and animal species on this parcel, especially in the northwestern quadrant. According to our database, aerial photographs, and state wetland maps, there are at least two wetlands known as Coastal Plain ponds, or Delmarva bays, within this area. These wetlands provide breeding habitat for a variety of animals, support a high diversity of species, and a unique and rare assemblage of plants. Upland forest buffers around these ponds are also critical, protecting the wetland from excess nutrients and invasion by non-native species. Forest buffers also provide critical habitat for salamanders during most of their annual life cycle. Several studies have shown that

salamanders spend most of their lives in forest buffer zones up to 300 m from wetland edges, using wetlands only during brief breeding periods.

Because of the high potential for rare species, DNREC staff would like the opportunity to survey the site prior to construction. Their observations would allow them to make more informed comments on this project and would allow the applicant the opportunity to reduce potential impacts to rare species. Please contact the DNREC botanist, Bill McAvoy and our zoologist, Kitt Heckscher, at (302) 653-2880 to set up a site visit.

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 prohibited 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 not buffer between lot lines and the adjacent property line.

Nuisance Waterfowl

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

Natural Areas

This project contains land currently listed on Delaware's Natural Areas Inventory. Natural Areas contain lands of statewide significance identified by the Natural Area Advisory Council as the highest quality and most important natural lands remaining in Delaware. Consideration should be given to protecting these resources along Fork Branch during design and construction of this project. The developer should investigate dedicating the Natural Area as a Nature Preserve through a conservation easement or donation of land. For more information, please contact the Office of Nature Preserves at 739-3423.

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.

For better non-motorized mobility, we recommend that a bike/pedestrian access be provided to the adjacent parcel on the east side.

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 and moderate facility needs in Kent County are listed below. 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.

High priorities are Walking or Jogging Paths, Bike Paths, Swimming Pools, Picnic Areas, Playgrounds and Fishing Areas. Moderate priorities are Skate Facilities, Hiking Trails, Baseball/Softball Fields, Campgrounds, Soccer Fields, Volleyball Courts, Basketball Courts and Canoe/Kayak Access.

Site Investigation and Restoration

There is one SIRB site located within a 0.5 mile radius of the proposed project. Coker Sand Pit (DE-0102) is a pit that DelDOT dug in 1967 to use the sand for construction projects. In the late 1960s to 1970s, liquid waste from the cleaning of oil tanks was dumped at the site by a private company. Around 1972, latex waste from a chemical company was also dumped in the pit. A Preliminary Assessment was completed in 1985, and a Site Investigation was completed in 1986. Sediment samples were found to contain high levels of organic contaminants. It was discovered, however, that the impacts of the organic compounds are localized in an onsite pond. SIRB does not foresee any adverse effects of this site to impact the proposed project.

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.

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 18.7 tons (37,451.5 pounds) per year of VOC (volatile organic compounds), 15.5 tons (31,007.3 pounds) per year of NO_x (nitrogen oxides), 11.4 tons (22,877.7 pounds) per year of SO₂ (sulfur dioxide), 1.0 ton (2,036.5 pounds) per year of fine particulates and 1,566.4 tons (3,132,766.4 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated be 7.6 tons (15,105.9 pounds) per year of VOC (volatile organic compounds), 0.8 ton (1,662.1 pounds) per year of NO_x (nitrogen oxides), 0.7 ton (1,379.3 pounds) per year of SO₂ (sulfur dioxide), 0.9 ton (1,779.9 pounds) per year of fine particulates and 30.6 tons (61,235.8 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 3.0 tons (5,986.9 pounds) per year of NO_x (nitrogen oxides), 10.4 tons (20,823.9 pounds) per year of SO₂ (sulfur dioxide) and 1,535.8 tons (3,071,530.6 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	18.7	15.5	11.4	1.0	1566.4
Residential	7.6	0.8	0.7	0.9	30.6
Electrical Power		3.0	10.4		1535.8
TOTAL	26.3	19.3	22.5	1.9	3132.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 3.0 tons of nitrogen oxides per year and 10.4 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.”

Our 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.

State Fire Marshal’s Office – Contact: John Rossiter 739-4394

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 Central Church Road must be constructed so fire department apparatus may negotiate it.

- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

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

Department of Agriculture - Contact: Mark Davis 739-4811

The Delaware Department of Agriculture and the Delaware Forest Service (DFS) has no objections to this site at this time. However, the developer is encouraged to contact the DFS concerning tree removal and/or tree preservation within the site during the construction phase. The developer is further advised that the 97-acre permanently preserved Spence Yoder Agricultural Preservation District is adjacent to this site on the west. The fifty-foot setback and 300-foot notification zones apply.** (See Below) The

Delaware Forest Service also offers its assistance with the selection of “The Right Tree for the Right Place”.

Right Tree for the Right Place

The Delaware Department 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.

§ 910. Agricultural use protections.

(a) Normal agricultural uses and activities conducted in a lawful manner are preferred and priority uses and activities in Agricultural Preservation Districts. 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 use adjacent to Agricultural Preservation Districts shall be subject to the following restrictions:

(1) For any new subdivision development located in whole or in part within 300 feet of the boundary of an Agricultural Preservation District, 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 an established Agricultural Preservation District in 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."

(2) For any new subdivision development located in whole or in part within 50 feet of the boundary of an Agricultural Preservation District, no improvement requiring an occupancy approval shall be constructed within 50 feet of the boundary of the Agricultural Preservation District.

(b) Normal agricultural uses and activities conducted in accordance with good husbandry and best management practices in Agricultural Preservation Districts shall be deemed protected actions and not subject to any claim or complaint of nuisance, including any such claims under any existing or future county or municipal code or ordinance. In the event a formal complaint alleging nuisance related to normal agricultural uses and activities is filed against an owner of lands located in an

Agricultural Preservation District, such owner, upon prevailing in any such action, shall be entitled to recover reasonably incurred costs and expenses related to the defense of any such action, including reasonable attorney's fees. (68 Del. Laws, c. 118, § 2.)

Public Service Commission - Contact: Andrea Maucher 739-4247

The application notes that “Artesian Water will service this parcel; however, the project is within the certificated area of Tidewater Utilities, Inc.

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 the project connects to public wastewater services from the County, and the project lies outside of the service territory established in October 2004, then the County must update the information it filed with the Commission.

Delaware State Housing Authority – Contact Karen Horton 739-4263

While the prices of the units are not known at this time, the State Housing Authority encourages the applicant to include prices that are affordable to low- and moderate-income households. This proposal is in the Dover County Census Division (CCD) and has housing needs. The 2003 Statewide Housing Needs Assessment indicates that of the 24,830 occupied housing units in this CCD, 278 are substantially substandard and 8,994 are occupied by low-income households earning less than 80 percent of the area median income (\$45,350 for a family of four in Kent County). The provision of units affordable to low- and moderate-income households will help address the area’s needs.

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

Due to the large number of residential units being proposed, a significant 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 Kent County, to keep them apprised of all development activities. The northern portion of this property, along Fork Branch, is located in the Special Flood Hazard Area inundated by the 100 and 500-year flood, (FIRM Map 153).

Department of Education – Contact: Nick Vacirca 739-4658

244 dwelling units could generate an estimated 122 additional students for the Capital School District. Kent 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.

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

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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.

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".

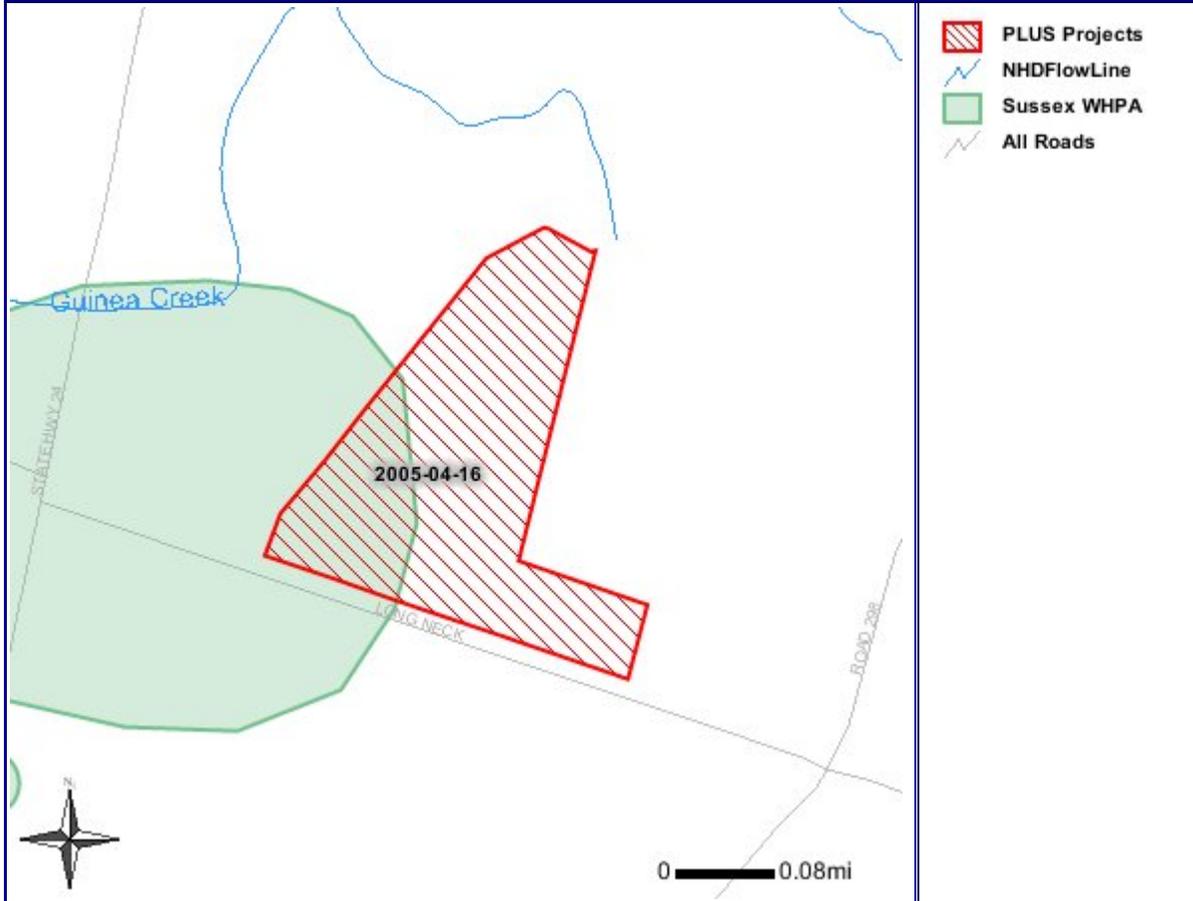
Constance C. Holland, AICP
Director

CC: Kent County



Baywood Town Center

2005-04-16



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

