



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

March 23, 2010

Mr. Jeffrey C. Williams
Kercher Engineering
254 Chapman Road, Ste. 202
Newark, DE 19702

RE: PLUS review – 2010-02-01; White Oak Road Subdivision

Dear Mr. Williams:

Thank you for meeting with State agency planners on March 24, 2010 to discuss the proposed plans for the White Oak Road Subdivision to be located on the south side of White Oak Road, 1340 ft. west of Long Point Road, within the City of Dover.

According to the information received, you are seeking a rezoning of 12.78 acres from R-20 to R-8 for 17 single family homes.

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

Strategies for State Policies and Spending

This project is located within a Level 2 and Level 3 according to the Strategies for State Policies and Spending and within the City of Dover. Investment Level 2 and 3 generally reflect areas where growth is anticipated by local, county, and State plans in the near to long term future. However, the project's location East of Route 1 is a particular concern. It is the State's policy to discourage new growth East of State Route 1. Starting with the historic Coastal Zone Act, State actions have encouraged natural resource and agricultural preservation rather than growth and development in this area of Kent County.

When the State purchased the Garrison Oak tract for the City for the development of an employment center, it came with the understanding that the development of the tract would not encourage or enable further development East of Route 1. In the intervening years the State has modified this position by supporting the development of Evergreen Acres (PLUS 2009-06-03) as a unique opportunity for workforce housing tied to the development of the Garrison Oak Technology Park. In our letter about that project, dated July 22, 2009, we conditioned our support by stipulating that “There is a clear understanding by all parties that this development is a special circumstance which addresses both economic development and land conservation objectives, and does not in any way represent a policy shift which would allow or encourage other land developments E. of Route 1.”

The proposed White Oak Road Subdivision will require a rezoning from R20 to R8, representing an increase in residential density. The current zoning designation is consistent with Dover’s certified comprehensive plan and is more in keeping with our longstanding policy of encouraging land preservation and conservation activities East of Route 1. The State does not support the rezoning of this parcel for these reasons.

Code Requirements/Agency Permitting Requirements

- It is important that the developer be aware of the Delaware Unmarked Human Remains Act of 1987, outlined in Chapter 54 of Title 7 of the Delaware Code, which pertains to the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out.
- **Sediment and Stormwater Program.** A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. It is strongly recommended that the owner and consultant contact the Kent Conservation District to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre- and post-development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion. The plan review and approval as well as construction inspection will be coordinated through the Kent Conservation District. Contact Jared Adkins, Program Manager, at the Kent Conservation District at (302) 741-2600, ext. 3 for details regarding submittal requirements and fees.

The property does not appear to extend to the tax ditch. Please discuss the proposed use of Prong B of the White Oak Tax Ditch as an outlet for the stormwater on this site at the project application meeting.

- **TMDLs.** Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Leipsic River watershed. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish

harvesting. Although TMDLs are required by federal law, states are charged with developing and implementing standards to support these desired use goals. In the Leipsic River watershed, “target-rate-nutrient reductions” of 40 percent will be required for nitrogen and phosphorus. Additionally, “target-rate-reductions” of 75 percent will be required for bacteria. More on TMDLs is included in the “Recommendations” category.

- 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. *Ricardo Rios - (302) 739-9944, Ricardo.Rios@state.de.us*

Recommendations/Additional Information

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

Department of Agriculture

- *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.

- *Do Not Plant List:* Due to the high risk of mortality from insects and disease, the Delaware Forest Service does not recommend planting any of the following species:

Callery Pear
Leyland Cypress
Red Oak (except for Willow Oak)
Ash Trees

Please contact the Delaware Forest Service for more information at (302) 698-4500.

State Historic Preservation Office

- According to observations and evaluation, there are no known historic or cultural resources in this project area, such as archaeological sites or National Register-Listed property on or near this proposed project site.
- However, since Delaware has a strong agricultural and rural heritage, there is a possibility that could be a historic-period or prehistoric-period archaeological site historically associated with Delaware's agricultural or rural heritage, which have not been found, but may contain important information about Delaware's history.
- Prior to any demolition or ground-disturbing activities, the developer may want to consider hiring an archaeological consultant to examine the parcel for archaeological sites, including a cemetery or unmarked human remains. If you have any questions or concerns, please contact Terence Burns at 302-736-7404.

DelDOT

- DelDOT recognizes that that the internal streets would be City streets and therefore outside their jurisdiction. Nonetheless, they offer the following advisory comments regarding them. The proposed stub street leading to the Bay Village of Dover property is laudable, but it may not be in the best place. There is an existing stub street in the adjoining Oak Shadows subdivision that aligns with Lot 5 and the proposed stub street. If the subject development can only be connected to Oak Shadows or Bay Village, DelDOT would recommend that the connection be made to Oak Shadows because the stub exists and the connection can be made now. By comparison, there is no approved plan for Bay Village of Dover and no definite date for its construction. If possible, the subject development should be connected to both Oak Shadows and Bay Village of Dover and the stub street to Bay Village should be shifted south, perhaps to the cul-de-sac bulb, so as to discourage through traffic between Oak Shadows and Bay Village.
- If the rezoning is approved, DelDOT recommends that the developer have their engineer contact the DelDOT Subdivision Manager for the north part of Kent County, Mr. Julio Seneus, for more detailed comments on the site plan as they develop it further. Mr. Seneus may be reached at (302) 760-2145.

DNREC

Fish and Wildlife - Please contact Edna Stetzar at (302) 653-2880 ext. 101 or at Edna.Stetzar@state.de.us

- **Site Survey Request.** The forest on the project parcel is potentially more than 70 years of age, which may be late successional to early mature depending on the composition of the plant community and development of the understory. According to 1937 aerial imagery the forest was in a stage of young growth at that time. Our community ecologist is interested in mapping the vegetation communities at this site as part of a state-wide effort to evaluate forest communities and map wildlife habitat. The survey would be conducted at no expense to the landowner. A report of the survey and vegetative community map would be generated for the applicant's use in the planning of this project. If unique vegetative communities are observed during the survey, recommendations to reduce impacts will be offered for consideration. Please contact Edna Stetzar if the landowner will grant a site visit.

Recommendations:

- It is important to maintain connections between areas of habitat across the landscape. These areas provide cover and space for wildlife to travel during daily, seasonal, and migratory activities. This project is basically surrounded by parcels also being considered for development. Open space that occurs in small disconnected areas next to lots or that occurs as a narrow strip between developments is not as useful to wildlife as those areas of open space that are larger and connect to other undeveloped areas of open space. We recommend the applicant consider coordinating with adjacent landowners so that habitat connections can be maximized. DNREC further recommends that open space be permanently preserved so that future clearing is less likely.
- Stormwater management methods that do not require tree removal should also be discussed with the district engineer or stormwater approval agency to determine if implementing them is feasible at this site.
- Clearing should not occur between April 1st and July 31st to reduce impacts to birds and other wildlife that utilize forested areas for breeding. This recommendation would only minimize impacts to those species during one breeding season, because once trees are cleared the habitat will be lost to use by those species.
- DNREC recommends native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within an adequate buffer (15-30 feet in width) around the ponds to discourage nuisance waterfowl such as geese (to be planted in accordance with the Sediment and Stormwater Plan approval agency requirements). When the view of the surrounding area from the pond is blocked, geese can't scan for predators and are less likely to reside and nest in the area of the pond.

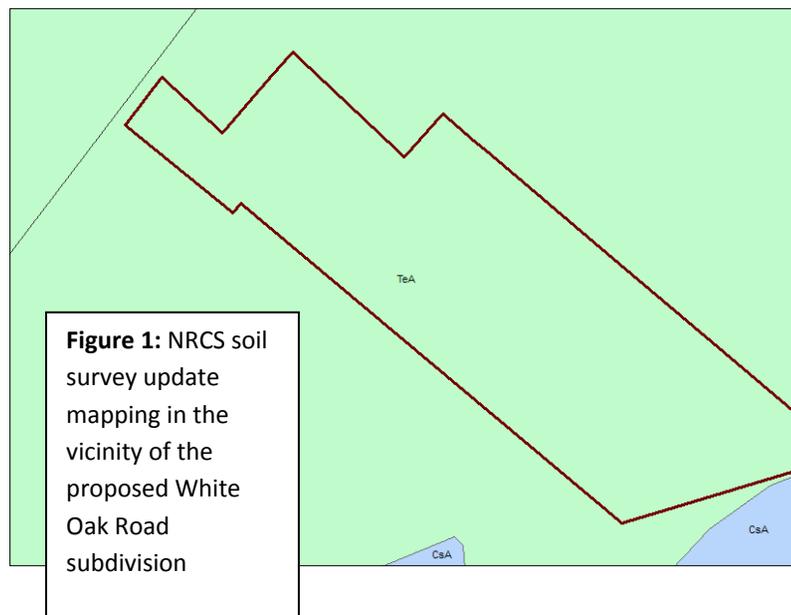
- At this time, DNREC does not recommend using monofilament grids due to the potential for birds and other wildlife to become entangled if the grids are not properly installed and maintained. In addition, the on-going maintenance (removing entangled trash, etc.) may become a burden to the homeowners association or land manager.

Soil and Water - Please contact James Sullivan at (302) 739-9921 or James.Sullivan@state.de.us

- **Drainage Program.** Existing woodland provides valuable wildlife habitat as well as soil erosion protection, water quality filtering, and surface water uptake. Unless managed for timber, wooded areas typically were areas that were unprofitable for farming due to poor drainage. Without trees to absorb the surface water these areas tend to require intensive drainage. Over the years there have been many drainage concerns with the adjacent subdivision that have not been able to be resolved. There is the strong potential for this site to experience drainage problems.
- The Drainage Program requests that the engineer take precautions to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of onsite storm water. The Drainage Program requests that the engineer check existing downstream ditches and pipes for function and blockages prior to the construction. Notify downstream landowners of the change in volume of water released on them.
- Have all drainage easements recorded on deeds and place restrictions on obstructions within the easements to ensure access for periodic maintenance or future re-construction. Future property owners may not be aware of a drainage easement on their property if the easement is only on the record plan. However, by recording the drainage easement on the deed, the second owner, and any subsequent owner of the property, will be fully aware of the drainage easement on their property.
- The Drainage Program does not support the removal of trees for the creation of stormwater management areas. However, the Drainage Program does recognize that tree removal is unavoidable in some cases. Where practical, plant native trees and shrubs to compensate for the loss of nutrient uptake and stormwater absorption the removed trees provided.

Water Resources - Please contact John Martin at (302) 739-9939 or John.Martin@state.de.us

- **Soils Assessment.** Tent is a poorly-drained wetland associated (hydric) soil with severe limitations for development; these soils are considered unsuitable for development and should be avoided (Figure 1).



- Studies have shown a strong relationship between increases in impervious cover to decreases in a watershed's overall water quality. It is strongly recommended that the applicant implement best management practices (BMPs) that reduce or mitigate some of its most likely adverse impacts. Reducing the amount of surface imperviousness through the use of pervious paving materials ("pervious pavers") in lieu of asphalt or concrete in conjunction with an increase in forest cover preservation or additional tree plantings are some examples of practical BMPs that could easily be implemented to help reduce surface imperviousness.
- **TMDLs.** The Pollution Control Strategy for the Leipsic watershed has not been formally completed to date. In the absence of a PCS during the intervening time period, the applicant is strongly encouraged to reduce nutrient and bacterial pollutants to help improve water quality through voluntary commitment to the implementation of the following recommended BMPs:
 - 1) Maintaining 100-foot buffers from all delineated wetlands (State and federally-regulated wetlands)
 - 2) Maximizing the amount of passive wooded open space (i.e., significantly reducing the amount of forest cover removal)

- 3) Employ the use of pervious paving materials instead of asphalt or concrete to reduce surface imperviousness, wherever practicable
- 4) Utilize green-technology stormwater management technologies in lieu of open-water stormwater management structures

The Department has also developed an assessment tool to evaluate how your proposed development may reduce nutrients and bacteria to help meet the TMDL requirements. Please contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

- **Water Resource Protection Areas.** DNREC Water Supply Section, Ground-Water Protection Branch (GPB) has determined that it falls entirely within a wellhead protection area for the City of Dover as delineated by DNREC. Although the City of Dover's Source Water Protection Ordinance meets the minimum standards of protection, this protection does not extend over all the scientifically delineated wellhead areas. This project is located in one of these areas.

- Given that this is a wellhead protection area, the City is strongly encouraged to apply impervious cover limitations on this development. The Developer states that the impervious cover for this project is approximately 19.3%. Impervious cover prevents precipitation from infiltrating through the soil to the water table aquifer. Impervious cover refers to structures including but not limited to roads, sidewalks, parking lots, and buildings. Any impervious cover within this wellhead protection area has the potential to have a negative effect on the quality and quantity of drinking water available to the City.

- The DNREC Water Supply Section recommends that the portion of the new development within the scientifically delineated wellhead protection area not exceed 20% impervious cover (DNREC, 2005). Some allowance for augmenting ground-water recharge should be implemented if the impervious cover exceeds 20% but is less than 50%. However, the development should not exceed 50%. A water balance calculation should be required to determine the quantity of clean water recharged via a recharge basin (Kaufmann, 2005). The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies.



- In addition, because the project is located within a wellhead protection area and the wellhead is a source of public drinking water, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

Air and Waste Management – Please contact Deanna Morozowich at (302) 739-9402 or Deanna.morozowich@state.de.us

- **Hazardous Waste Sites.** Based on the close proximity of the salvage yard and the previous agricultural use of the proposed project site, which may have involved the use of pesticides and herbicides, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. DNREC's Site Investigation and Restoration Branch (SIRB) has reviewed the proposed project. No SIRB sites were found within a ½-mile radius of the proposed development. One salvage yard, White Oak Salvage, is located 63 feet west of the proposed site. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions. *Krystal Stanley - (302) 395-2644, Krystal.Stanley@state.de.us*

Recommendations:

Additional air quality measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.
- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce

emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the White Oak Road development

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

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

Sincerely,



Constance C. Holland, AICP

Director, Ofc. Of State Planning Coordination

CC: City of Dover