

# GMB

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March 11, 2009

Office of State Planning  
122 William Penn St.  
Haslett Armory, Ste 302  
Dover, DE 19901

Attn: Ms. Constance C. Holland, AICP  
Director

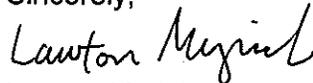
Re: Response to 1/15/09 PLUS Review Comments  
PLUS Review 2008-12-04  
Arbors of Cottagedale  
GMB No. 2008030

Dear Ms. Holland:

Please find enclosed a copy of the PLUS dated January 15, 2009. We responded to the comments within the body of the letter using a red font. Hopefully you will find this format convenient.

We would like to thank you, your staff, and the participating agencies for their time and effort spent in reviewing this project. Please feel free to contact me with any questions.

Sincerely,



Lawton Myrick  
Site Designer

RLM/cl

Enclosure – PLUS Comment Letter with Responses

cc: Mid Atlantic Development Ventures, LLC  
Attn: Rick Banning (w/enclosure)

Sussex County Planning and Zoning Department  
Attn: Mr. Shane Abbot, Asst. Director (w/enclosure)

JAMES R. THOMAS, JR., PE  
PETER A. BOZICK, JR., PE  
JUDY A. SCHWARTZ, PE  
CHARLES M. O'DONNELL, PE  
JOHN E. BURNSWORTH, PE  
W. BRICE FOXWELL, PE  
JAMES H. WILLEY, JR., PE

A. REGGIE MARINER, JR., PE  
JAMES C. HDAGESON, PE  
MICHAEL G. KOBIN, PE  
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JERRY KOTRA  
C. RICHARD ROHM

F.W. WHITE, CPA



**STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET  
Budget Development, Planning and Administration  
State Planning Coordination**

January 15, 2009

Mr. Lawton Myrick

George, Miles & Buhr, LLC

206 W. Main Street Salisbury, MD 21801

RE: PLUS review – 2008-12-04; Arbors at Cottagedale Apartments

Dear Mr. Myrick:

Thank you for meeting with State agency planners on December 17, 2008 to discuss the proposed plans for the Arbors at Cottagedale Apartments project to be located on the east side of plantation road, 760 ft. south of the intersection with Shady Road in Sussex County.

According to the information received, you are seeking a conditional use for 9 apartment buildings with a total of 216 apartments.

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 proposed project calls for a conditional use for 9 apartment buildings with 216 units within an Investment Level 2 according to State Strategies for Policy and Spending off Plantation Road near Lewes.

### **Street Design and Transportation**

- It may not be possible to obtain a formal pedestrian connection to the Eagle Point townhouse development, which adjoins the north side of this property. However, DelDOT encourages the developer to work with the County and the homeowners association in Eagle Point to allow for less formal connections, so that residents can walk between the two developments safely.
- Similarly, a stub driveway should be provided to the 26.36-acre Thompson Property (Tax Parcel 3-34-6.00-503.00) for future use when that property is developed.

### **Natural and Cultural Resources**

- The site plan appears to show construction over known buried solid waste on the site property. Question 36 on the PLUS application form notes Brownfield remediation and capping, and that the southeasterly portion of the site portion of the site will be remediated. Any construction without removal of the solid waste would likely lead to methane problems as experienced from other developments constructed in the 1960s over debris pits, primarily in New Castle County. Other problems which could develop include sinkholes, soil subsidence, and structural damage to buildings. These problems, if encountered, could pose a danger to health and human safety. The solid waste needs to be partially or entirely removed from the property, or a plan to cap the waste along with a gas extraction system needs to be included and approved by the DNREC.

This office has received the following comments from State agencies:

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

This office has no objection to the proposed project that calls for a conditional use for nine apartment buildings with 216 units within an Investment Level 2 according to State Strategies for Policy and Spending off Plantation Road near Lewes. However, this office encourages the developer to work closely with DNREC and Sussex County to address the environmental concerns associated with this site and to improve connectivity to adjacent developments.

The developer continues to coordinate remediation efforts with DNREC and Sussex County. A written request will be made to the Eagle Point HOA, located north of the proposed site, to request one or more pedestrian connection points. This will provide a link between the two neighborhoods and the commercial uses beyond.

**State Historic Preservation Office (SHPO) – Contact: Terrence Burns 739-5685**

No comments received.

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

Mid Atlantic Development Ventures, LLC, seeks to develop 216 apartments on an approximately 18.33-acre parcel (Tax Parcel 3-34-6.00-504.02). The parcel is located on the east side of Plantation Road (Sussex Road 275) about 760 feet south of Shady Road (Sussex Road 276). The land is zoned AR-1 and a conditional use approvals are needed to permit the proposed apartments. The project is proposed to be subject to the newly approved moderately priced rental housing provisions in the County Code.

DelDOTs comments are as follows:

- 1) A traffic impact study has been done for this project and is now under review. DelDOT expects to complete their review and comment to the County in late January. DelDOT understands that the project will be receiving expedited review from the County because of the proposed moderately priced rental units. If a faster review time is necessary to have comments on the study considered by the County, please let DelDOT know.

The TIS review and negotiation of required improvements is on-going. Orth-Rodgers & Associates is coordinating this effort for the developer.

- 2) Presently, the plan shows a 20-foot required wooded buffer around the perimeter of the property. It may not be possible to obtain a formal pedestrian connection to the Eagle Point townhouse development, which adjoins the north side of this property. However, DelDOT encourages the developer to work with the County and the homeowners association in Eagle Point to allow for less formal connections, so that residents can walk between the two developments safely. The proposed sidewalk along Mackenzie Way to Plantation Road will be necessary for pedestrian safety, but they do not expect it to be heavily used.

As stated above, the opportunity for connectivity exists, but it is yet to be seen if both parties can agree upon the logistics of location.

- 3) Similarly, a stub driveway should be provided to the 26.36-acre Thompson Property (Tax Parcel 3-34-6.00-503.00) for future use when that property is developed.

A stub driveway will be provided for future use and reflected on the proposed site plans.

- 4) Plantation Road is classified as a collector. DelDOT's policy is to require a standard right-of-way width of 40 feet from the centerline on collector roads. Therefore DelDOT will require dedication of additional right-of-way along the property frontage as necessary to obtain that width.

The required amount of right-of-way will be provided and coordinated as part of the DeIDOT entrance permit.

- 5) The developer's site or traffic engineer should contact Mr. John Fiori, they subdivision Manager for eastern Sussex County, regarding our specific requirements for access if they have not already done so. Mr. Fiori may be reached at (302) 760-2260.

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

DNREC commends the developer for his intention to place needed multi-family housing on a Brownfield site. However, the nature of the site and the proposed use requires continued approvals and monitoring from DNREC, as outlined below. DNREC hopes to continue to work closely with the developer to facilitate the use of this site.

### **Soils**

According to the Sussex County soil survey update, Downer (DoA & DoB) and Udorthents (UbB) were mapped in the immediate vicinity of the proposed construction. Downer is a well-drained upland soil that, generally, has few limitations for development. Udorthents are soils that have been extensively modified through filling or grading activities and are likely to have variable or "site-specific" limitations for development (See figure 1).

Soils have been considered during the design phase, and some building relocations have been recommended by JCM Environmental, and implemented, to accommodate soils and known areas of construction debris.

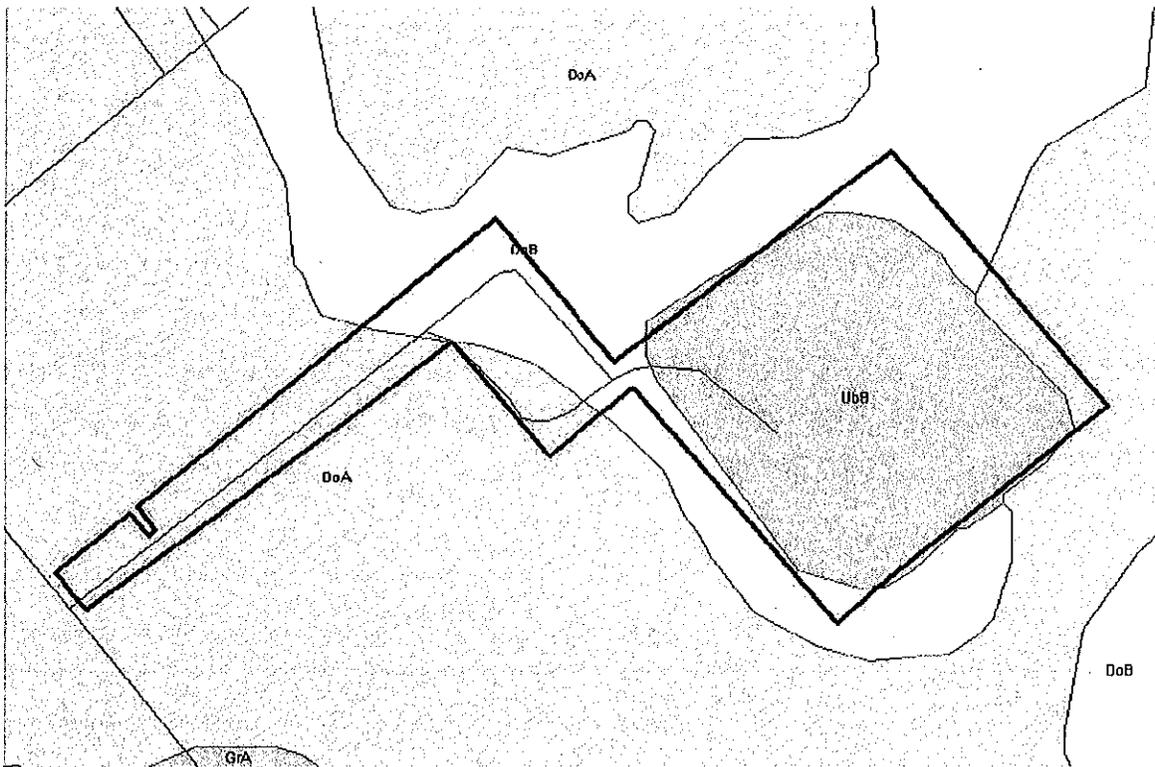
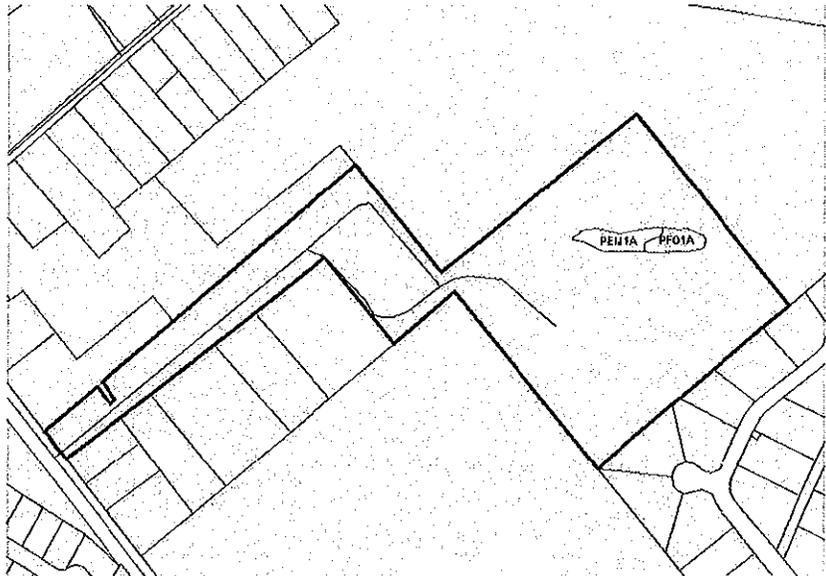


Figure 1: Soil survey mapping in the immediate vicinity of “The Arbors of Cottagedale apartments.”

## Wetlands

According to the State Wide Wetland Mapping Project (SWMP) maps, palustrine emergent (PEM1A) and palustrine forested wetlands (PFO1A) were mapped on subject parcel (See figure 2). Figure 2: SWMP mapping in the immediate vicinity of “The Arbors of Cottagedale apartments.”

The applicant is responsible for determining whether any State-regulated wetlands (regulated pursuant to 7 Del.C. Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources’ Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State’s official wetland regulatory maps, which depict the extent of State jurisdiction. The area regulated by State law may be very different from the area under federal authority. No activity may take place in State-regulated wetlands without a permit from DNREC’s Wetlands Section.



In addition, most perennial streams and ditches and many intermittent streams and ditches are regulated pursuant to the Subaqueous Lands Act (7 Del.C. Chapter 72) and the Regulations Governing the Use of Subaqueous Lands. Ponds which are connected to other waters are also regulated, while isolated ponds are not. Any work in regulated streams, ditches or ponds requires a permit from the Wetlands and Subaqueous Lands Section. An on-site jurisdictional determination is recommended in order to determine whether any regulated watercourses exist on the property. Contact the Wetlands and Subaqueous Lands Section at 302/739-9943 to schedule an on-site visit. Such appointments can usually be scheduled within 2 to 3 weeks.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are subject to regulatory jurisdiction under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is the acceptable basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware. The applicant is forewarned that the Corps views the use of the National Wetlands Inventory (NWI) mapping or the Statewide Wetlands Mapping Project (SWMP) mapping as an unacceptable substitute for field-based jurisdictional wetland delineation (i.e., 1987 USACE manual).

To ensure compliance with said Corps regulatory requirements, it is strongly recommended that a field wetlands delineation using the above-referenced methodology be performed on this parcel before commencing any construction activities. It is further recommended that the Corps be given the opportunity to officially approve the completed delineation. In circumstances where

the applicant or applicant's consultant delineates what they believe are nonjurisdictional isolated (SWANCC) wetlands (as asserted by the applicant in the PLUS application form), the Corps must be contacted to evaluate and assess the jurisdictional validity of such a delineation. The final jurisdictional authority for making isolated wetlands determinations rests with the Corps; they can be reached by phone at 736-9763.

Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from the landward edge of all wetlands and water bodies (including all ditches).

On May 27, 2003, Ms. Evelyn Maurmayer, Ph.D., of Coastal & Estuarine Research, Inc. submitted a letter and Jurisdictional Determination Request to the U.S. Army Corps of Engineers. Ms. Maurmayer stated that based on field investigations of vegetation, soils, and hydrology conducted on March 11, 2002, there are no Federal 404 wetlands on the site.

#### **Impervious Cover**

The applicant estimates this project's post-construction surface imperviousness to reach only 56 percent. However, given the scope and density of this project (i.e., as viewed from the conceptual project layout) this estimate appears to be an underestimate. When calculating surface imperviousness it is important to include all forms of constructed surface imperviousness, such as all paved surfaces including rooftops, sidewalks, driveways, and roads; open-water stormwater management structures and/or ponds; and community wastewater systems; this will ensure a realistic assessment of this project's likely post-construction environmental impacts. Therefore, surface imperviousness should be recalculated to include all of the above-mentioned forms of surface imperviousness in the finalized calculation for surface imperviousness. Failure to do so will significantly understate this project's true environmental impacts. **Note:** wetlands should be excluded from the parcel's total open space area when calculating the parcel's total surface imperviousness.

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 this project's 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.

The actual confirmed percentage of impervious area is 50% of the site area. The site engineers are prepared to take advantage of any available open space areas that lend themselves to 'Green' technology BMPs. These include vegetated swales, filter strips, and bio-retention for stormwater quality.

## **TMDLs**

Total Maximum Daily Loads (TMDLs) for nitrogen and phosphorus have been promulgated through regulation for the Broadkill 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 Broadkill 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.

Reduction in nutrient levels can be achieved using the proper combination of storm water management BMP’s. Furthermore, the wastewater will go to a central collection and treatment facility, which means that nutrients from wastewater generated on-site will not be added to the site’s nutrient load. We will run the DNREC model to demonstrate compliance with the 40% nitrogen reduction goal.

## **TMDL Compliance through the PCS**

As indicated above, TMDLs for nitrogen and phosphorus have been proposed for the Broadkill watershed. The TMDL calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 75 percent reduction in bacteria from baseline conditions. A Pollution Control Strategy (PCS) will be used as a regulatory framework to ensure that these nutrient reduction targets are attained. The Department has developed an assessment tool to evaluate how your proposed development may reduce nutrients to meet the TMDL requirements. Additional nutrient reductions may be possible through the implementation of BMPs such as increasing the amount of passive, wooded open space (planted with native woody and herbaceous vegetation), use of pervious paving materials to reduce surface imperviousness, and the deployment of green-technology stormwater management treatment technologies. The Department has developed an assessment tool that will help evaluate whether your proposed development meets the required TMDL nutrient reduction requirements specified by the PCS. Contact Lyle Jones at 302-739-9939 for more information on the assessment tool.

We are familiar with DNREC assessment tool and many of the best management practices available. During the final design and approval of our stormwater management plan, we will seek to promote the use of BMP’s which provide for greater buffering and maximization of green technology.

## **Water Supply**

The project information sheets state water will be provided to the project by Tidewater Utilities via a public water system. DNREC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 83-W-15.

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.

Potential Contamination Sources exist in the area, and any well permit applications will undergo a detailed review that may increase turnaround time and may require site specific conditions/recommendations. In this case there is a Groundwater Management Zone associated with Jackson Pit located within 1000 feet of the proposed project.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Water will be provided to this project via an agreement with Tidewater Utilities, Inc. We understand that construction plans and specifications must be approved by the Office of Drinking Water prior to construction initiation. We will prepare and submit said plans after receipt of Preliminary Subdivision Approval. We also understand that as-built drawings of the construction will be necessary to obtain an "Approval to Operate" the water system.

We are also familiar with the dewatering well requirements, and anticipate that dewatering will be required for some utility installation, particularly the wastewater pumping station.

### **Sediment and Stormwater**

*Note:* If this site will require remediation under direction of DNREC/DAWM Site Investigation and Remediation Branch, the DNREC/DSWC Sediment & Stormwater Program will be the agency responsible for review and approval of the Sediment & Stormwater Management Plan for any land disturbing activity greater than 5,000 square feet associated with the remediation.

- A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. Contact the reviewing agency to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as practicable. 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 Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees.
- Because of the parcel's location in an impaired watershed and the amount of impervious surface, green technology BMPs and low impact development practices should be considered a priority to reduce stormwater flow and to meet water quality goals.

The stormwater management design will meet all current regulatory requirements. The system will be designed to adequately manage and treat the stormwater that originates on the property, and to handle any offsite water that migrates through the site. The design under consideration will preserve existing drainage patterns, and will not increase the peak quantity discharge for the two- or ten-year storm events. Where appropriate, we propose the use of Rain Gardens and Bioretention cells to mimic pre-developed site hydrology. A portion of parking lot drainage may be considered for infiltration with underground chambers, but may be limited based on the existing debris fields and remediation efforts being coordinated by JCM Environmental. We will attempt to incorporate buffers into the SWM plan. Quantity control will be achieved with a dry basin. We propose a wet meadow seed mix in the dry basin to integrate the basin into the adjacent forested buffers. All stormwater management and erosion/sediment control plans will be approved by the Sussex Conservation District. All management practices proposed for this project will be in accordance with the current Delaware Stormwater Design Manual

### **Drainage**

- 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.

We will consider upstream and downstream drainage conditions in the final engineering design of the stormwater management plan.

- 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.

All drainage easements will be shown on the Final Site Plans and the record plans.

### **Recreation**

Creating and connecting sidewalks between communities and commercial areas will encourage walking/biking and reduce the dependence on automobiles. It is recommended that the sidewalks included in this plan connect to adjacent residential developments (specifically to the Eagle Point subdivision just north of this proposed project).

DNREC supports the incorporation of a play area within the proposed complex, but recommend repositioning it to a more centralized location. By moving the play area to this location, you will:

1. Make the playground easily accessible and convenient to all residents of the community.

2. Increase the security of the play area- At its proposed location, the play area is isolated and indiscernible. This could create apprehension of parents to allow their kids to use this area. It also increases the incidence of vandalism.

The relocation of the playground area will be considered. The original goal was to provide a playground area adjacent to an open space area for field activities. To the rear of the site may prove to be the better option as vehicular traffic would be minimized, thus alleviating the need for a safety fence.

### **Solid and Hazardous Waste**

The site plan appears to show construction over known buried solid waste on the site property. Question 36 on the PLUS application form notes Brownfield remediation and capping, and that the southeasterly portion of the site will be remediated. Any construction without removal of the solid waste would likely lead to methane problems as experienced from other developments constructed in the 1960s over debris pits, primarily in New Castle County. Other problems which could develop include sinkholes, soil subsidence, and structural damage to buildings. These problems, if encountered, could pose a danger to health and human safety. The solid waste needs to be partially or entirely removed from the property, or a plan to cap the waste along with a gas extraction system needs to be included and approved by the DNREC.

Several staff from DNREC, including the Solid and Hazardous Waste Management Branch met with the developer Paul Robino and his consultant James C. McCulley IV on October 23, 2008. That meeting was held to answer the developer's questions regarding the disposal, removal, and consolidation of solid waste that had been landfilled on the property until the 1980s.

Any solid waste excavated from the property during construction will have to be disposed of in a permitted solid waste facility. The activity of moving solid waste from one buried location at the Jackson Pit site by excavating it and transferring it to another existing waste burial pit onsite will require a solid waste landfill permit. And as a matter of practicality, the site is not large enough to meet the design and siting criteria for the construction of an industrial waste landfill as shown in Section 6 of the Delaware Regulations Governing Solid Waste. Other viable options for management of the solid waste onsite, such as the re-use of clean fill composed of bricks and concrete, or grinding clean wood debris may be used but would require review by DNREC. If the developer requires additional assistance with solid waste management, contact the Solid and Hazardous Waste Management Branch at (302)739-9403.

JCM Environmental is continuing to shepherd the site through the DNREC remediation process. The developer and his consultant are fully engaged in a collaborative process with DNREC.

### **Under/Aboveground Storage Tanks**

There are two (2) inactive LUST sites with ongoing remediation located within a quarter mile of the proposed project:

Name: John Burton Residence Facility ID: 5-000598 Project: S9202042

Name: Diver Chevrolet Facility ID: 5-000530

Project: S9204102

No contamination is anticipated; however, should any underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

Should any contamination be encountered, PVC pipe materials would have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

We understand this comment and will follow the stated process if any LUST contamination is encountered.

### **Site Investigation and Restoration**

One Site Investigation & Restoration Branch (SIRB) site was found within a half mile radius of the proposed project: the Jackson Pit (DE-0149) site, which is located on the proposed development property.

Jackson Pit was a former borrow pit for sand and gravel. However, unpermitted domestic trash was disposed in the pit. The borrow pit closed in 1982. A Preliminary Assessment was conducted in 1986 with a Site Investigation (SI) in 1987. Due to the high levels of contaminants in the groundwater, the site was placed on the Hazardous Substance Cleanup Act (HSCA) list in 1991. A groundwater study was also conducted on the site in 1995, and it was found that monitoring wells on site had elevated levels of chromium and the pesticide p, p-DDD. A Final Facility Evaluation Report was completed in November 1997.

In October 2003, a deed restriction was placed on the site for the groundwater and the site was identified as being within a Groundwater Management Zone (GMZ). The site received a Certificate of Completion of Remedy (COCR) in September 2004 with the deed restriction. The site is currently in the Operations and Maintenance stage, following completion of the remedy.

No construction or debris-moving activities should be performed in the area with debris and/or solid waste, or within the GMZ without DNREC's prior approval and oversight, as well as necessary permitting, as applicable. Based on the previous use of the proposed project site, which involved the use of hazardous substances, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development of areas that have not been previously investigated. 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.

As stated above, JCM Environmental is work with DNREC for the remediation. We acknowledge the site is a former pit.

**Air Quality**

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Arbors of Cottagedale Apartments development may have.

Emissions Attributable to Arbors of Cottagedale Apartments Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Direct Residential	6.7	0.7	0.6	0.8	27.1
Electrical Power Generation	ND*	2.6	9.2	ND*	1,359.5
Mobile	16.6	13.7	10.1	0.9	1,386.6
<b>Total</b>	<b>23.3</b>	<b>17.0</b>	<b>19.9</b>	<b>1.7</b>	<b>2,773.2</b>

(\*) Indicates data is not available.

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

*Recommendations:*

The applicant shall comply with all applicable Delaware air quality regulations. These

regulations include:

<b>Regulation 6</b> Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• <b>Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</b></li> <li>• <b>Using covers on trucks that transport material to and from site to prevent visible emissions.</b></li> </ul>
<b>Regulation 1113 –</b> Open Burning	<ul style="list-style-type: none"> <li>• <b>Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</b></li> <li>• <b>Prohibiting the burning of land clearing debris.</b></li> <li>• <b>Prohibiting the burning of trash or building materials/debris.</b></li> </ul>
<b>Regulation 1145 –</b> Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• <b>Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</b></li> </ul>

Additional 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 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 Arbors of Cottagedale Apartments development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.

The comments are noted with regard to options to reduce emissions during the construction phase. The developer intends to utilize Energy Star appliances, and is considering other "green" processes for the building design. The developer is also planning to install a significant amount of landscaping which will provide major improvement over the existing site conditions.

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

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

- a. **Fire Protection Water Requirements:**
  - Water distribution system capable of delivering at least 1000 gpm for 1hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers.
  - Where a water distribution system is proposed for multi-family/apartment sites, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.
  
- b. **Fire Protection Features:**
  - All structures over 10,000 sq.ft. aggregate will require automatic sprinkler protection installed.
  - Buildings greater than 10,000 sq.ft., 3-stories or more, over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements
  - Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
  
  - Show Fire Lanes and Sign Detail as shown in DSFPR
  
- c. **Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from the main thoroughfare 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.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information**

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

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple building / units.
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered

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.statefiremarshal.delaware.gov](http://www.statefiremarshal.delaware.gov) technical services link, plan review, applications or brochures.

We agree with the SFMO review, and understand the quoted sections of the Delaware State Fire Prevention Regulation govern this project. The road widths and turning radii will be sufficient to accommodate emergency vehicle traffic, and the central public water supply system will provide adequate fire protection.

We will prepare a Major Site Plan for SFMO review and approval as part of the permitting process prior to the Final Plat.

**Department of Agriculture - Contact: Scott Blaier 739-4811**

The Delaware Department of Agriculture has no objections to the proposed development. The *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 2 areas.

*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.

**Arboriculture Considerations** – We will seek to preserve some of the larger existing trees on the site although this opportunity is minimal due to the existing site condition as a former borrow/debris pit. There may be some trees along the southerly and southeasterly borders which can remain. We also intend to plant a buffer, as shown on the preliminary site plans, which will result in more improvement than a tree retention plan. A Landscape Architect will be available to assist in the selection process for tree preservation. We agree to use the "right tree of the right place" to a practical extent.

**Landscape Considerations** – Native Delaware plants and trees will be specified for the final landscaping plan.

**Public Service Commission - Contact: Andrea Maucher 739-4247**

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

We will follow Pipeline Safety guidelines for any expansion of natural gas or installation of a closed propane system.

**Delaware Economic Development Office – Contact: Jeff Stone 672-6849**

No comments received.

**Delaware Division of Public Health- Health Promotion Bureau- contact Michelle Eichinger (302) 744-1011**

Ensuring that new residential and commercial development incorporates pedestrian- and bicycle-friendly features allows people to travel by foot or by bicycle and promotes physical activity as part of daily routines. Regular physical activity offers a number of health benefits, including maintenance of weight and prevention of heart disease, type 2 diabetes and other chronic diseases.<sup>1</sup> Research shows that incorporating physical activity into daily routines has the potential to be a more effective and sustainable public health strategy than structured exercise programs.<sup>2</sup> This is particularly important considering about 65% of adult Delawareans are either overweight or obese.<sup>3</sup> This current obesity crisis is also affecting children. Approximately 37% of Delaware's children are overweight or obese,<sup>4</sup> which places them at risk for a range of health consequences that include abnormal cholesterol, high blood pressure, type 2 diabetes, asthma, depression and anxiety.<sup>1</sup>

In Delaware, as in other states across the nation, certain patterns of land use can act as a barrier to physical activity and healthy eating for children and adults alike. Examples of such barriers include neighborhoods constructed without sidewalks or parks and shopping centers with full-service grocery stores situated too far from residential areas to allow for walking or biking between them.

This proposed development is in a Level 2 area. Developing in such an area is consistent with the *Strategies for State Policies and Spending*. DPH is committed to the *Strategies* and therefore, does support development in the proposed area.

DPH supports new development in and around existing towns and municipalities where compact and mixed land use patterns facilitate physical activity. As a way to promote physical activity and access to healthy foods, we recommend that the following amenities be included in Arbors at Cottagedale Apartments plan:

**Amenities to encourage active transportation**

- Ensure that there are sidewalks, crosswalks and walking/bicycling paths connecting to the proposed clubhouse, ponds, and other amenities.
- Consider connectivity, via sidewalks or walk/bike paths, to neighboring residential and commercial properties.
- Designate bike paths to supplement the sidewalks so that residents can travel by foot or by bicycle to the plan's recreational amenities. In addition, install bike racks in convenient locations within the development.

Sidewalks and crosswalks will be provided throughout the development. Connection points to adjacent property will be considered. Bike racks will also be considered and could be placed adjacent to each building. Bike racks would be consistent with the developer's intention to incorporate "green" design features where appropriate.

#### **Amenities to encourage recreation**

- Designate open space for active recreation for the residents in this community. Consider including a picnic area or park benches, as well as, tennis courts, basketball courts, shuffleboard, horseshoe areas, or bocce courts.

Open space areas have been provided for active recreation. Designated court sports areas will be considered.

#### **Increase opportunities for healthy eating**

- Consider including a community garden in an area close to the clubhouse. Community gardens not only provide opportunities for community engagement and recreation, but they also provide access to fresh produce and, as well as an opportunity for physical activity.

The developer will consider the opportunity for a community garden with planned open space areas.

<sup>1</sup> Nemours Health and Prevention Services (2005). *Delaware Children's Health Chartbook*, Newark, DE.

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Active Living by Design. *Transportation Fact Sheet*. Retrieved May 17, 2007, from [http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation\\_Factsheet.pdf](http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pdf).

3

Delaware Health and Social Services (2008), *Division of Public Health, Behavioral Risk Factor Surveillance System (BRFSS), 1990-2007*.

<sup>4</sup> Nemours Health and Prevention Services (2007). *2006 Delaware Survey of Children's Health Descriptive Statistics Summary, Volume 1*.

#### **Delaware State Housing Authority – Contact Vicki Powers 739-4263**

This proposal is for a site plan review of 216 residential apartments on 18 acres, located on the east side of Plantation Road, and south of the intersection with Sandy Road near the Town of Lewes. According to the *State Strategies Map*, the proposal is located in an Investment Level 2 and Environmentally-Sensitive Developing area. DSHA supports this proposal because residents will have proximity to existing services, markets, and employment opportunities. Additionally, rental developments can be the most economical to construct, and are needed to meet the needs of low- and moderate-income families. Furthermore, rental communities give residents housing options and create a balanced housing stock for the community. DSHA's Statewide Housing Needs Assessment has identified a growing need for rental housing, particularly for the senior population.

We understand and agree with this comment, and believe that the Arbors of Cottagedale's participation in the Sussex County Rental Program is in exact alignment with the stated goal.

**Department of Education – Contact: John Marinucci 735-4055**

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

1. Using the DOE standard formula, this development will generate an estimated 108 students.
2. DOE records indicate that the Cape Henlopen School Districts' *elementary schools are at or beyond 100% of current capacity* based on September 30, 2008 elementary enrollment.
3. DOE records indicate that the Cape Henlopen School Districts' *secondary schools are at or beyond 100% of current capacity* based on September 30, 2008 secondary enrollment.
4. Furthermore, the Cape Henlopen School District *does NOT* have adequate student capacity to accommodate the additional students likely to be generated from this development given the number of planned and recorded residential sub divisions within district boundaries.
5. Continued development will cause significant burden to the Cape Henlopen School District without the provision for additional educational infrastructure.
6. The developer is strongly encouraged to contact the Cape Henlopen School District Administration to address the issue of school over-crowding that this development will exacerbate.
7. DOE requests the developer work with the Cape Henlopen School District transportation department to establish developer supplied bus stop shelter ROW and shelter structures, interspersed throughout the development as determined and recommended by the school district.

The developer will contact the Cape Henlopen School District to discuss opportunities to address educational issues. Areas for a bus stop will be available and shown on the Final Site Plan after consultation with the School District.

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

Under current procedures, Sussex County will not accept a MPHU-Rental Program Multi-family Conditional Use application until the project has been declared eligible by the Sussex County Department of Community Development and Housing.

The developer has been waiting for the County to finalize their moderately priced housing rental program in order to participate. The County has now issued its first RFP for moderately priced rental housing and the developer is submitting for inclusion into the program.

The submitted plan should reflect any Sussex County Engineering Department or DNREC Brownfield or other remedial related actions required to mitigate any hazardous or non-hazardous waste found on the property.

The developer's plan does contain modifications pursuant to the continued work by JCM with regard to the remediation plan. This work is continuing.

The site appears to contain wetlands but the 2003 unsigned documentation is in conflict with Delaware SWMP maps. Because the previous application included a determination that there are no wetlands on the property and that determination is in conflict with the Delaware SWMP maps, then the applicant should provide with this application a certified and sealed report from the "experienced qualified professional" making the determination. The report should include the basis for the determination and the professional qualifications of the person making the determination.

As noted in response to a previous comment, Dr. Evelyn Maurmayer submitted a Jurisdictional Delineation request to the U.S. Army Corps of Engineers stating that there are no 404 wetlands on the site based on a detailed field investigation.

The Sussex County Engineer Comments:

The Sussex County Engineering Department is concerned that dewatering wells needed for the installation of pipelines and the installation of the actual pipelines will require special consideration in light of the parcels (504.07 and 504.03) use as a barrow pit and waste disposal site. Sussex County will provide additional comments during the concept plan and construction plan review process.

The developer concurs that dewatering for utility installation may be an issue. However, the main dewatering effort will be for the proposed wastewater pumping station which is located outside the main area of pit activities.

The project is within the boundary of the West Rehoboth Expansion Area and connection to the sewer system is mandatory. The site of the proposed project was previously approved by the Engineering Department for 80 town homes. No portion of that project has been constructed. The current proposal exceeds system design and planning study assumptions of 4.0 EDUs per acre. However, if the project bypasses portions of the existing system and connects at a location prescribed by the Sussex County Engineer, and following completion of other upgrades there will be adequate capacity for the project. Until upgrades are completed, initial construction will be limited to a total of 80 units.

On March 6, 2008, the developer requested permission from the County Engineering Department to undertake a preliminary engineering study to determine the most efficient upgrade of the existing wastewater infrastructure. Based on a January, 2009 email from Mr. John Ashman, Director of Utility Planning, the County agrees that upgrade options appear to be feasible and that a scope for a detailed investigation may be determined in the near future.

Sussex County requires design and construction of the collection and transmission system to meet Sussex County Engineering Department's requirements and procedures. The Sussex County Engineer must approve the connection point. A sewer concept plan must be submitted for review and approval prior to any sewer construction. A checklist for preparing sewer concept plans was given to the applicant at the PLUS meeting. All costs associated with extending sewer

service will be the sole responsibility of the developer. One-time system connection charges will apply. Please contact Mrs. Christine Fletcher at 302 854-5086 for additional information on charges.

The developer understands and concurs.

Sussex County recently adopted new road standards. The standard becomes effective January 1, 2009 and will apply to this project.

The developer understands and concurs.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

**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, State Planning Coordination

CC: Sussex County