



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF STATE PLANNING COORDINATION

September 22, 2015

Mr. Zac Crouch  
Davis, Bowen, & Friedel, Inc.  
23 N. Walnut Street  
Milford, DE 19963

RE: PLUS review 2016-08-03; Newdale Acres

Dear Zac,

Thank you for meeting with State agency planners on August 24, 2016 to discuss the proposed plans for the Newdale Acres project. According to the information received, you are seeking review of a rezoning of 141.09 acres from AR-1 & GR to MR & RPC and a site plan for a 296 unit residential subdivision along South Old State Road in Sussex County.

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.**

### **Strategies for State Policies and Spending**

This project is located in Investment Levels 2 and 3 according to the *Strategies for State Policies and Spending*. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. 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 may support future growth in these areas, but please be advised that the State has other priorities for the near future. We encourage you to design the site with respect for the environmental features which are present.

Below are complete list of State agency comments which should help determine any issues or regulatory requirements associated with building on this site.

## **Code Requirements/Agency Permitting Requirements**

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

- Per Section 2.2.2.1 of the Development Coordination Manual, Traffic Impact Studies (TIS) are warranted for developments generating more than 500 vehicle trip ends per day or 50 vehicle trip ends per hour in any hour of the day. From the PLUS application, DelDOT sees that the total daily trips are estimated at 2,689 vehicle trip ends per day. Based on that volume, this project would warrant a TIS and paying an Area-Wide Study Fee is not an option.
- In 2005, Davis, Bowen & Friedel completed and DelDOT reviewed a TIS for a slightly denser version (358 single-family detached houses on substantially the same acreage) of this same development under the name Walker Property. A copy of the review letter is available on request but that review identified a set of off-site improvements that subsequently were included as notes on the record plan and would be implemented by the entrance plans approved on May 13, 2016.
- The site plan meets DelDOT's current requirements with regard to access. While DelDOT could require an updated TIS, they believe the 2005 study is sufficient for the identification of needed off-site improvements and recommend that the County proceed on that basis.

### **Department of Natural Resources and Environmental Control – Michael Tholstrup 735-3352**

#### **Executive Summary.**

The proposed development will result in increased impervious surface and new sources of greenhouse gas emissions. Opportunities exist to preserve natural resources while reducing the environmental impact on-site. As discussed at the PLUS meeting, the Department is requesting a site survey for state-rare species and recommends minimizing the amount of tree clearing and increasing buffers adjacent to the wetlands to protect water quality and maintain wildlife habitat. The proposed wetland and wildlife buffers are insufficiently protective of this natural resource amenity.

Additionally, DNREC would like to see the storm water management areas currently planned within the forested area, relocated. DNREC discourages tree removal for the purpose of SWM ponds due to the natural flood abatement benefits provided by the established forest.

The State of Delaware is threatened by climate change and has a goal of reducing greenhouse gas emissions by 30 percent by 2030. Appropriate development and re-development that provides access to public transportation, opportunities to walk and bike to shopping and recreation, and that employs energy efficient building standards are among key strategies to meet these goals. DNREC encourages the use of high performance building standards and consideration of alternative energy sources to promote clean sustainable energy and reduce greenhouse gas

emissions. This could mean siting the buildings to take advantage of solar and geothermal systems, and/or including infrastructure for electric vehicle charging stations. DNREC further recommends an abundant use of native vegetation and shade trees throughout the landscape, as well as pervious pavement and green infrastructure, where practicable, to absorb carbon dioxide, protect water quality and provide relief to residents on hot days.

The following pages provide information about applicable regulations and detailed recommendations associated with this project, from various DNREC Divisions. DNREC would like to be a partner in creating appropriate development that protects and highlights the environment as a natural amenity of the landscape. The Department has resources and expertise that are available to help make this a reality, often at no expense to the landowner.

### **TMDLs**

- The project is located in the greater Chesapeake Bay drainage area where the EPA and the State of Delaware have developed specific Total Maximum Daily Load (TMDL) pollutant reduction targets for nutrients (e.g., nitrogen & phosphorus) and bacteria (under the auspices of Section 303(d) of the Clean Water Act). The TMDL for nutrients and sediment in the Chesapeake Bay drainage have been recently revised and made more stringent by the EPA. The TMDL by EPA now requires a 60 percent reduction in nutrients (previously was 30 and 50 percent in N & P) and sediment from baseline conditions. The TMDL also calls for a 2 percent reduction in bacteria from baseline conditions. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited waterbody” can assimilate and still meet State water quality standards (e.g., dissolved oxygen, nutrients, and bacteria; State of Delaware Surface Water Quality Standards, as amended July 11, 2004) to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting.
- The applicant should be made aware that EPA is requiring that the State of Delaware develop a Watershed Implementation Plan and 2-year progress milestones for purposes of accelerating efforts to improve and restore waters of the Chesapeake Bay. The WIP and milestones will identify specific pollution reduction practices and programs to reduce nitrogen, phosphorus, and sediment from a variety of sources in the Chesapeake Bay drainage. Phase I and II WIPs are currently available for review at:  
[http://www.wr.dnrec.delaware.gov/Information/Pages/Chesapeake\\_WIP.aspx](http://www.wr.dnrec.delaware.gov/Information/Pages/Chesapeake_WIP.aspx).
- A nutrient management plan is required under the *Delaware Nutrient Management Law* (3 Del.C., Chapter 22) for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements, or view the following web link for additional information:  
<http://dda.delaware.gov/nutrients/index.shtml>

### **Water Supply**

- The project information sheets state water will be provided to the project by Artesian Water Company via a public water system. Records indicate that the project is located within the public water service area granted to Artesian Water Company under Certificate of Public Convenience and Necessity 07-CPCN-48. Should an on-site public/miscellaneous public well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal areas, and at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.
- Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.
- All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising. Should you have any questions concerning these comments, please contact Rick Rios, at (302) 739-9944.

### **Sediment and Erosion Control/Stormwater Management**

- 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. 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 the Sussex Conservation District at (302) 856-7219 for details regarding submittal requirements and fees.

### **Air Quality**

- The applicant shall comply with all applicable Delaware air quality regulations. Please note that the following regulations in Table 1 – Potential Regulatory Requirements may apply to your project:

<b>Table 1: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling</b>	<ul style="list-style-type: none"> <li>• Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</li> <li>• Use covers on trucks that transport material to and from site to prevent visible emissions.</li> </ul>
<b>7 DE Admin. Code 1113 – Open Burning</b>	<ul style="list-style-type: none"> <li>• Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</li> <li>• Prohibit the burning of land clearing debris.</li> <li>• Prohibit the burning of trash or building materials/debris.</li> </ul>
<b>7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan</b>	<ul style="list-style-type: none"> <li>• Require, for any “federal action,” a conformity determination for each pollutant where the total of direct and indirect emissions would equal or exceed any of the de minimus levels (See Section 3.2.1)</li> </ul>
<b>7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products</b>	<ul style="list-style-type: none"> <li>• Use structural/ paint coatings that are low in Volatile Organic Compounds.</li> <li>• Use covers on paint containers when paint containers are not in use.</li> </ul>
<b>7 DE Admin. Code 1144 – Control of Stationary Generator Emissions</b>	<ul style="list-style-type: none"> <li>• Ensure that emissions of nitrogen oxides (NO<sub>x</sub>), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>) from emergency generators meet the emissions limits established. (See section 3.2).</li> <li>• Maintain recordkeeping and reporting requirements.</li> </ul>
<b>7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles</b>	<ul style="list-style-type: none"> <li>• Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</li> </ul>

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>.

### **Hazardous Waste**

- If it is determined by the Department that there was a release of a hazardous substance on the property in question and the Department requires remediation pursuant to the Hazardous Substance Cleanup Act, the provisions of 7 Del.C., Chapter 91, Delaware Hazardous Substance Cleanup Act and the Delaware Regulations Governing Hazardous Substance Cleanup shall be followed.

#### **There is one SIRS site with in a ½ mile radius of the proposed project:**

- Former J&H Auto Salvage (DE-1469) is located 0.12 miles north of the proposed project property.
  - Between 1968 and 2002, approximately four acres of the Site were occupied by the Former J&H Auto Salvage Yard while the remaining one acre was occupied by the Ellendale Market, which was also a service station.
  - During the early 1990's, six underground storage tanks were removed under the Tank Management Section (TMS).
  - In February 2009, it was discovered the nearby private wells were being impacted with contamination from the Site. DNREC-SIRS conducted a Site Investigation in July 2009 and found metals, SVOCs, one pesticide, VOCs (groundwater only) were exceeding the limits.
  - The Site entered the Voluntary Clean-up Program (VCP) in March 2011 and three phases of a Remedial investigation were conducted along with off-site groundwater monitoring.
  - The Site continues to be investigated for groundwater contamination.

### **Tank Management**

- If a release of a Regulated Substance occurs at the proposed project site, compliance 7 Del.C. Chapter 60, 7 Del.C., Chapter 74 and DE Admin. Code 1351, State of Delaware *Regulations Governing Underground Storage Tank Systems* (the UST Regulations) is required.

#### **The following (LUST) projects are located within a quarter mile from the proposed project area:**

- ELLENDALE EXXON ID: 5-000186, Project: S9607125, (Inactive)
- Mt Zion AME Church Well Impact Facility ID: 9-000135 Project S0902016 (Active)

Potable well carbon treatment system and sampling for MTBE, Benzene and DCE; Contact [Elizabeth.Wolff@state.de.us](mailto:Elizabeth.Wolff@state.de.us) for more details

- ELLENDALE MARKET Facility ID: 5-000103 Project S9112298 (Active)  
1991-1994 gasoline and kerosene tanks removed: Ongoing sampling and monitoring and development of conceptual site model for the facility; Contact [Elizabeth.Wolff@state.de.us](mailto:Elizabeth.Wolff@state.de.us) for more details
- Pin Oak Street Residence, Facility: 9-000137, Project: S0903024 (Active)  
Carbon treatment system on residential well for ~3 ppb MTBE and TAME in the Influent sample. ND in the MID and ND in the Effluent. Qrtly sampling performed. Contact [Elizabeth.Wolff@state.de.us](mailto:Elizabeth.Wolff@state.de.us) for more details
- Per the UST Regulations: Part E, § 1. Reporting Requirements: Any indication of a Release of a Regulated Substance that is discovered by any Person, including but not limited to environmental consultants, contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within 24 hours to:
  - The Department's 24-hour Release Hot Line by calling (800) 662-8802; and
  - The DNREC Tank Management Section by calling (302) 395-2500.
- When contamination is encountered DNREC-TMS requires a Contaminated Materials Management Plan (CMMP)

**State Historic Preservation Office – Contact Terrence Burns 736-7404**

- There are no known archaeological sites or National Register listed property, on this parcel. However, the developer should still be aware of the Unmarked Human Burials and Skeletal Remains Law, in Chapter 54, of Title 7, of the Delaware Code.

Abandoned or unmarked family cemeteries are very common in the State of Delaware. They are usually in rural or open space areas, and sometimes near or within the boundary of an historic farm site. Even a marked cemetery can frequently have unmarked graves or burials outside of the known boundary line or limit. Disturbing unmarked graves or burials triggers the Delaware's Unmarked Human Burials and Human Skeletal Remains Law (7 Del. C. Ch. 54), and such remains or discoveries can result in substantial delays while the procedures required under this law are carried out. If there is a discovery of any unmarked graves, burials or a cemetery, it is very costly to have them archaeologically excavated and the burials moved. The Division of Historical & Cultural Affairs recommends that owners and/or developers have a qualified archaeological consultant investigate their project area, to the full extent, to see if there is any unmarked cemetery, graves, or burial sites. In the event of such a discovery, the Division of Historical &

Cultural Affairs also recommends that the plans be re-drawn to leave the full extent of the cemeteries or any burials on its own parcel or in the open space area of the development, with the responsibility for its maintenance lying with the landowner association or development. If you would like to know more information pertaining to unmarked human remains or cemeteries, please go to the following websites for additional information:

[www.history.delaware.gov/preservation/umhr.shtml](http://www.history.delaware.gov/preservation/umhr.shtml) and  
[www.history.delaware.gov/preservation/cemeteries.shtml](http://www.history.delaware.gov/preservation/cemeteries.shtml).

Prior to any demolition or ground-disturbing activities, the developer should hire an archaeological consultant, to examine the parcel for archaeological resources and plan to avoid those areas. The developer should also review a 2009 report by John Milner & Associates titled: Evaluation of National Register Eligibility for Architectural Properties in the Ellendale Study Area, U.S. 113 North/South Study, which pertains to the area and location of this parcel.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency through its client, is responsible for complying with Section 106 of the National Historic Preservation Act (36 CFR 800) and must consider their project's effects on any known or potential cultural or historic resources. Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of any permit or funds. If you need further information or additional details pertaining to the Section 106 process and the Advisory Council's role, please review the Advisory Council's website at [www.achp.gov](http://www.achp.gov).

#### **Sussex County – Contact Janelle Cornwell 855-7878**

- The proposed project is within the boundary of the Sussex County Unified Sanitary Sewer District and connection to the sewer system is mandatory. The project is within planning study and design assumptions for sewer service. Sussex County recommends the developer contact the Town Of Ellendale for annexation into the town.
- The proposed development will require a developer installed collection system in accordance with Sussex County standard requirements and procedures. Conformity with the Ellendale Treatment and Disposal Options report is also required. 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. Attached is a checklist for preparing conceptual plans.

- One time system connection charges will apply. Please contact Mrs. Blair Lutz at 302 855-7701 for additional information on charges.
- For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

### **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 the suggestions can benefit the project.

### **Department of Natural Resources and Environmental Control – Michael Tholstrup 735-3352**

#### **Soils Assessment**

- Based on soils survey mapping update, Hurlock (HuA) and Mullica (MmA) are the primary soil mapping units mapped on subject parcel that have significant limitations for development. Hurlock and Mullica are poorly-drained and very poorly-drained wetland associated hydric soils, respectively, that exhibit severe limitations for development due to a seasonal high water table typically occurring, depending on rainfall and drainage at or near the soil surface. It should also be noted that the Klej (KsA) soil mapping unit is a transitional soil mapping unit from uplands and wetlands that may contain inclusions of hydric soils as well (Figure 1).

DNREC strongly discourages building on hydric soils because they are functionally important source of water storage (functions as a “natural sponge”); the loss of water storage through excavation, filling, or grading of intact native hydric soils increases the probability for more frequent and destructive flooding events. The probability for flooding is further compounded by increases in surface imperviousness as building density increases over time. Moreover, destruction of hydric soils increases the amount pollutant runoff (i.e., hydric soils sequester and detoxify pollutants) which contributes to lower observed water quality in regional waterbodies and wetlands.

- You should conduct a United Army Corps of Engineers (USACE) approved wetlands delineation before commencing any construction activities. According to information presented in the PLUS application, a wetland delineation was conducted and approved (although the wetland delineation report was not submitted to DNREC). Based on personal communication with Michael Yost (8/09/16) with the Corps, a wetland delineation was conducted and approved by the USACE in 2009, however, it is no longer

considered valid because the 5-year permitting period has expired. According to Mr. Yost, the applicant will need to resubmit a request for renewal of their USACE jurisdictional wetlands determination to renew/revalidate their permit.

- A list of licensed Class D soil scientists can be obtained here:

<http://www.dnrec.delaware.gov/wr/Information/GWDInfo/Pages/GroundWaterDischargesLicensesandLicensees.aspx>

### **Site Survey Request**

- DNREC has never surveyed the project area; therefore it is unknown if there are state-rare or federally listed plants, animals or natural communities at this project site. However, state-rare species occur in a forest block just east of this site and could occur within the project area as well. DNREC has requested a site visit for this location on numerous occasions and are submitting a request again. In order to provide informed comments, program scientists request the opportunity to conduct a survey of the property to evaluate habitat and determine the potential for species of conservation concern. Please note that DNREC scientists have decades of experience in comprehensive rare species survey methods. They have extensive knowledge of the flora and fauna of the state and are qualified in making rare species identifications. The survey will be conducted at no expense to the landowner. Please contact Kate Fleming, at (302) 735-8658 or at [Kate.Fleming@state.de.us](mailto:Kate.Fleming@state.de.us), to schedule a site visit.

### **Forest Preservation**

- DNREC recommends that efforts to minimize the amount of clearing needed for the footprint of homes and infrastructure be employed. Landowners will likely desire amenities such as dog kennels, swimming pools, sheds, play areas etc. If feasible, mechanisms should also be put in place to reduce future clearing by landowners.
- Given the benefit of trees in erosion control and flood abatement, tree removal for stormwater management should be avoided, and they certainly should not be placed in wetlands. The site plan should be reconfigured to locate stormwater management facilities to non-forested areas, reduce the number and/or size of ponds, or employ alternative methods that do not require tree removal. Options should be discussed with project engineers or with the appropriate Sediment and Stormwater Plan approval agency.

### **Nuisance Waterfowl**

- Also note that wet ponds created for stormwater management purposes may attract resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns surrounding ponds provide attractive habitat for these species.

To deter waterfowl from taking up residence in these ponds, DNERC recommends planting the surrounding open space with a mix of native wildflower plantings (to be planted in accordance with the Sediment and Stormwater Plan approval agency requirements). It is best to mow the open space area surrounding the pond only once a year, either in February or March. If mowing must occur more often, it would be helpful to leave a minimum buffer of 15-30 feet in width to be mowed annually. This area would be necessary to adequately deter the waterfowl from inhabiting the area (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). In addition to deterring nuisance waterfowl, the native wildflower mix will also serve to attract bees, butterflies, and other pollinators, and reduce run-off, which can contain oil and other pollutants that homeowners may use on their lawns and driveways. The program botanist, Bill McAvoy would gladly assist in drafting a list of plants suitable for this site. Bill can be contacted at (302) 735-8668 or [William.McAvoy@state.de.us](mailto:William.McAvoy@state.de.us).

### **Open Space and Wetland Buffers**

- The wetlands buffers included in the project plans are inadequate to protect the function and integrity of adjacent wetlands. A minimum 100-foot buffer should be left intact around the perimeter. This recommendation is based on peer reviewed scientific literature that shows an adequately-sized buffer that effectively protects wetlands and streams - in most circumstances - is about 100 feet in width. Upland buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle. Lot lines, roadways, and infrastructure should not be placed within this buffer zone. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms.
- Larger, connected areas of open space should be left intact rather than fragmenting the forest. Larger, connected areas are more beneficial to wildlife and may be more useful to the residential community as well. Forest fragmentation separates wildlife populations, increases road mortality, and increases "edge effects" that leave many forest dwelling species vulnerable to predation and allows the infiltration of invasive species.

### **Additional information on TMDLs and water quality.**

- Compliance with the TMDL nutrient and bacterial reduction requirements specified for the Chesapeake Bay drainage watershed can be facilitated through implementation of the following recommended BMPs:
  - Establish a vegetated buffer of at least 100 feet from the adjoining wetlands and waterbodies. 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 this buffer from all waterbodies, including all ponds and all wetlands (i.e., a USACE approved field wetlands delineation for non-tidal wetlands and State approved wetlands delineation for tidal wetlands).

- Calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, ponds, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and the associated environmental impacts.
- Employ green-technology storm water management and rain gardens (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff. Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing rain gardens on this parcel.
- Use pervious paving materials (when compatible with local ordinances such as source water protection, fire marshal codes, and/or sediment and stormwater regulations) instead of conventional paving materials to help reduce the amount of water and pollutant runoff draining to adjoining streams and wetlands. Pervious pavers are especially recommended for areas designated for parking.
- Assess nutrient and bacterial pollutant loading at the preliminary project design phase. To this end, the Watershed Assessment Section has developed a methodology known as the “Nutrient Load Assessment protocol.” The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) resulting from the conversion of individual or combined land parcels to a changed land use; thus providing applicants and governmental entities with quantitative information about the project’s impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact John Martin or Jen Walls in the Division of Watershed Stewardship, at (302) 739-9939 for more information.

#### **Additional information on tank management**

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.
- If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMS. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS. For more information, please visit online: <http://www.dnrec.delaware.gov/tanks/Pages/default.aspx> or contact Ross D. Elliott at DNREC-TMS with further questions at (302) 395-2500.

**Additional information on hazardous waste sites**

- SIRS strongly recommends that the land owner perform environmental due diligence of the property by performing a Phase I Environmental Site Assessment (including a title search to identify environmental covenants) in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA). While this is not a requirement under HSCA, it is good business practice and failure to do so will prevent a person from being able to qualify for a potential affirmative defense under Section 9105(c) (2) of HSCA.
- Additional remediation may be required if the project property or site is re-zoned by the county.
- 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.

**Additional information on air quality**

- DNREC is pleased to see that the inclusion of proposed sidewalks in the plan. There is an opportunity to connect to a larger bicycle and pedestrian network and it is recommended that both DelDOT and the applicant pursue the opportunity to connect missing links in the existing bicycle/pedestrian and sidewalk network in the near future in order to promote alternative travel methods in the area that reduce dependency on vehicular travel and encourage multi-modal transportation efforts.
- DNREC encourages developers and builders to consider all sustainable growth practices in their design, and we believe that the air quality impacts associated with the project should be completely considered. New homes and businesses may emit, or cause to be emitted, additional 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; Sussex County is in violation of the 2008 ozone standard.
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.
- Air emissions generated from new homes and businesses include emissions from the following activities:

- Area sources such as painting, maintenance equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact the Newdale Acres development may have on air quality.

Emissions Attributable to Newdale Acres (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> )
Area source emissions	9.2	1.0	0.8	1.1	37.1
Power emissions	*	3.6	12.6	*	1,863.1
Mobile emissions	13.6	14.2	0.4	0.2	8748.3
Total emissions	22.8	18.8	13.8	1.3	10,648.5

(\*) Indicates data is not available.

\*\*Note that emissions associated with the actual construction of the apartment community, 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.\*\*

- DNREC encourages sustainable growth practices that:
  - Control sprawl;
  - Preserve rural and forested areas;
  - Identify conflicting land use priorities;
  - Encourage growth on previously developed sites and denser communities while at the same time protect our diminishing land base;
  - Coordinate transportation, housing, environment, and climate protection plans with land use plans; and
  - Demonstrate that communities can achieve the qualities of privacy, community, and contact with nature without degrading the natural environment or generating

unacceptable environmental costs in terms of congestion, use of natural resources, or pollution.

- Additional measures may be taken to substantially reduce the air emissions identified above:
  - **Constructing with only energy efficient products.** Energy Star qualified products are up to 30 percent more energy efficient. 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 energy efficiency translates into a percent reduction in pollution. The Energy Star Program is an 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.
  - **Constructing with high albedo, high solar reflectance materials.** This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.
  - **Providing shade for parking areas.** Approaches may include architectural devices, vegetation, or solar panels. Providing shade for parking areas helps to reduce heat island impacts, and, by extension, helps to minimize the potential for localized ground-level ozone formation. Such measures can also have the additional benefit of channeling or infiltrating stormwater.
  - **Providing charging stations for plug-in electric vehicles.** This measure helps to reduce localized air pollution by supporting the use of non-gasoline powered vehicles. Please refer to the US Department of Energy's website for electric vehicle readiness information: [http://www1.eere.energy.gov/cleancities/electric\\_vehicle\\_projects.html](http://www1.eere.energy.gov/cleancities/electric_vehicle_projects.html). Several charging stations exist nearby in Millsboro, Lewes, and Rehoboth Beach.
  - **Encouraging the use of safe multimodal transportation.** This measure can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk or bike path, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
  - **Using retrofitted diesel engines during construction.** This includes equipment that is 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 native trees in vegetative buffer areas.** Native trees reduce emissions by trapping dust particles and 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. The applicant should contact the DNREC Division of Air Quality (DAQ) to discuss the above listed measures, and the specific emission mitigation measures that can be incorporated into the Newdale Acres development project. The DAQ point of contact is Lauren DeVore, and she may be reached at (302) 739-9437 or [lauren.devore@state.de.us](mailto:lauren.devore@state.de.us).

In addition to the comments above our, the Office of State Planning Coordination has received a letter from Brandy Nauman, Sussex County Housing Coordinator & Fair Housing Compliance Officer. A copy of that letter is enclosed with this letter.

**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 PLUS 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, Office of State Planning Coordination

CC: Sussex County  
Town of Ellendale

Enclosure

BRANDY BENNETT NAUMAN  
HOUSING COORDINATOR &  
FAIR HOUSING COMPLIANCE OFFICER

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**Sussex County**

DELAWARE  
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August 23, 2016

Mr. Zac Crouch  
Davis, Bowen, and Friedel, Inc.  
23 N. Walnut Street  
Milford, DE 19963

RE: PLUS Review (PLUS 2016-08-03)

Dear Mr. Crouch,

Sussex County endeavors to promote non-discrimination and affordable housing whenever possible throughout the County. In this regard, the developer and associated financial institutions are encouraged to provide and finance affordable housing opportunities to Sussex County residents in all new developments, and affirmatively market those affordable housing units to diverse populations.

For questions about opportunities available for affordable housing projects within Sussex County, please consult Sussex County's "Affordable Housing Support Policy". The policy along with other resources are available on the County's Affordable & Fair Housing Resource Center website: [www.sussexcountyde.gov/affordable-and-fair-housing-resource-center](http://www.sussexcountyde.gov/affordable-and-fair-housing-resource-center). The County's Community Development & Housing Department can advise about existing affordable housing opportunities in Sussex County and the appropriate County Department to contact regarding specific development issues concerning future affordable housing projects within Sussex County.

The Community Development & Housing Department can also explain and assist with any financial support or incentives that may be available to a project from federal, state and county sources, as well as private funding sources that also promote affordable housing in Sussex County.

Newdale Acres was previously granted preliminary approved by Sussex County Council in December 2008 as a project in the Moderately Priced Housing Unit (MPHU) Program. Though the Developer would need to re-apply to the Program, the County looks forward to working with the Developer in participating with the MPHU Program again.

Please understand that all residential projects, including Affordable Housing Projects are subject to the applicable provisions of the Sussex County Subdivision and Zoning Codes, and the approval processes set forth in those Codes.



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