

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

November 30, 2015

Mr. James Curran  
Karins and Associates  
17 Polly Drummond Center, Suite 201  
Newark, DE 19711

RE: PLUS review 2015-10-07; Whitehall Hamlet 4

Dear Mr. Curran:

Thank you for meeting with State agency planners on October 28, 2015 to discuss the proposed plans for the Whitehall Hamlet 4 development. According to the information received, you are seeking review of a 324 unit subdivision on 100 acres in New Castle 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 New Castle 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 Level 3 according to the *Strategies for State Policies and Spending*. 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.

## **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 plan accompanying the PLUS application, DelDOT estimates that the development would generate 2,046 vehicle trip ends per day on a typical weekday. This number differs significantly from the volume shown on the PLUS application. For the weekday morning and evening peak hours, we calculate 158 and 215 vehicles per hour, respectively. Based on any of these volumes, this project would warrant a TIS.

However, per Section 2.2.2.4 of the Manual, if a development is located within a Transportation Improvement District (TID) and is consistent with the Land Use and Transportation Plan for that TID, then under certain conditions DelDOT may require participation in the TID in lieu of conducting a TIS and making improvements based on the TIS. This project is located in the Southern New Castle County TID, is consistent with the plan for that TID and the conditions in Section 2.2.2.4 are met.

- The Southern New Castle County TID pre-dates Section 2.4 of the Manual, so its administration is somewhat different from what is described there, but the applicant has already signed an agreement applicable to all of Whitehall.
- The site access on Lorewood Grove Road and the subdivision streets must be designed in accordance with DelDOT's Development Coordination Manual (formerly the Standards and Regulations for Subdivision Streets and State Highway Access), which is available at <http://www.deldot.gov/information/business/subdivisions/changes/index.shtml>.
- Referring to Section 3.4.1 of the Development Coordination Manual, because the proposed development would generate more than 200 vehicle trips per day, a Pre-Submittal Meeting is required before plans are submitted for review. The form needed to request this meeting is available [http://www.deldot.gov/information/business/subdivisions/Meeting\\_Request\\_Form.pdf](http://www.deldot.gov/information/business/subdivisions/Meeting_Request_Form.pdf).
- Whitehall Hamlet 4 is located within the regulated airspace zones of Summit Airport (EVY), which is a public-use facility. Federal Aviation Regulation (FAR) Part 77 imposes height restrictions on any structures within these zones. DelDOT requires that the applicant for this project submit a "Proposed Construction/Alteration in Airport Zones Notification Form" in accordance with Delaware Code (*2 Del. C. § 602*). This notification form can be submitted during the plan approval process with the local land use jurisdiction.

- Additionally, DeIDOT's Office of Aeronautics is willing to test hypothetical height numbers to prevent any future project complications. Please contact Josh Thomas with the Office of Aeronautics at (302) 760-4834 with any questions or concerns. A copy of the notification form can be found at this address:  
[http://www.deldot.gov/information/community\\_programs\\_and\\_services/airports/pdfs/aviation\\_obstruction\\_review\\_form.pdf](http://www.deldot.gov/information/community_programs_and_services/airports/pdfs/aviation_obstruction_review_form.pdf)

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

**Wetlands**

- State regulated subaqueous lands ARE likely to be located on and/or adjacent to this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. Upon review of the GIS layers, a stream, Joy Run is located on the edges of the property. A permit will be required for any potential impacts to this area.

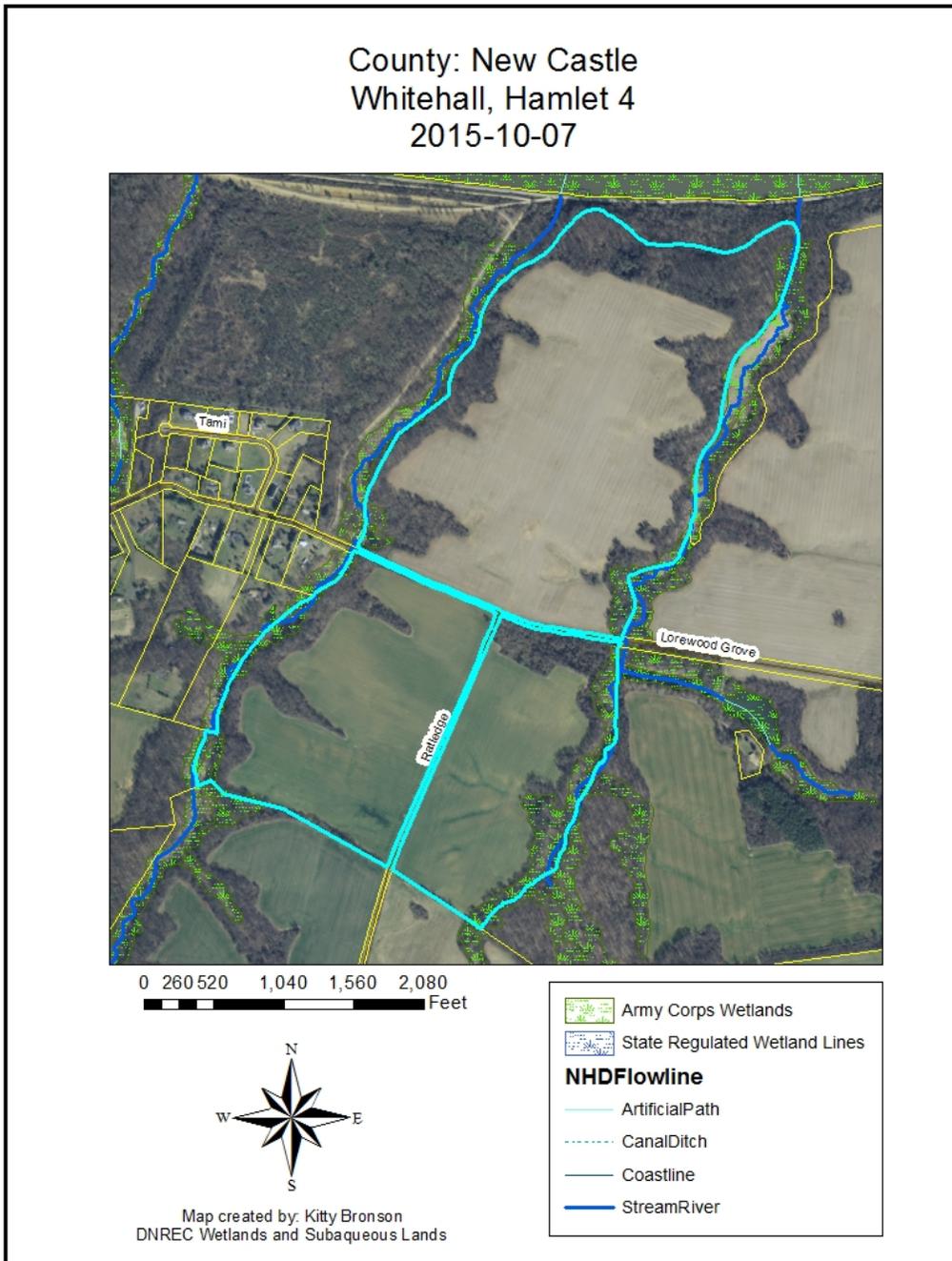
State subaqueous lands include all tidal waters (up to the mean high water line), most non-tidal rivers, streams, lakes, ponds, bays and inlets (up to the ordinary high water line), most perennial streams and ditches and many intermittent streams and ditches. An on-site inspection by a representative of the Wetlands and Subaqueous Lands Section or an environmental consultant is recommended to determine the limits of jurisdictional State subaqueous lands. Upon review of the GIS layers, unnamed streams are on this property. Additional information about State regulated subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or online at <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.aspx>.

- Waters of the U.S. regulated by the U.S. Army Corps of Engineers ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and USGS topographic maps. According to our GIS SWMP maps, there are wetlands regulated by the Army Corps of Engineers on this property. The extent of Federal jurisdiction over Waters of the United States is determined by the U.S. Army Corps of Engineers and is based on site specific conditions. Therefore, an on-site inspection by an environmental consultant is recommended to determine if Waters of the U.S. are located on the property and the limits of Federal jurisdiction. The U.S. Army Corps of Engineers can be contacted at (215) 656-6728 or online at <http://www.nap.usace.army.mil/cenap-op/regulatory/regulatory.htm>.

Waters of the United States include the following: navigable waters of the United States; wetlands; tributaries to navigable waters of the United States, including adjacent wetlands and lakes and ponds; interstate waters and their tributaries, including adjacent wetlands; and all other waters of the United States not identified above, such as isolated wetlands, intermittent streams, and other waters that are not part of a tributary system to interstate

waters or to navigable waters of the United States, where the use, degradation or destruction of these waters could affect interstate or foreign commerce.

The application says that a delineation has been done but that the Army Corps has not signed off on it and that there will be no impacts.



### **TMDLs**

- The project is located in the greater Delaware River and Bay drainage area, specifically within the C & D Canal Watershed East. The State of Delaware has 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 Federal Clean Water Act). 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. However, a TMDL for the C & D canal east has not been developed to date. However, the applicant should still implement BMPs.
- A nutrient management plan is required under the *Delaware Nutrient Management Law (3 Del. Chapter 22)* for all persons or entities who apply nutrients to lands or areas of open space in excess of 10 acres. This project’s open space may exceed this 10-acre threshold. Please contact the Delaware Nutrient Management Program at (302) 739-4811 for further information concerning compliance requirements, or view the following weblink 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. Our 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 97-CPCN-01.
- 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 Superfund site associated with the Micucio Brothers property, located within 1000 feet of the proposed project.

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

**Sediment and Stormwater Management.**

- A sediment and stormwater plan will be required for the site. Contact the reviewing agency to schedule a project application meeting to discuss the sediment and erosion control and stormwater management components of the plan as soon as possible. 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 New Castle County Department of Land Use Engineering Section. Contact Department of Land Use at (302) 395-5470 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 2 – Potential Regulatory Requirements may apply to your project:

<b>Table 2: Potential Regulatory Requirements</b>	
<b>Regulation</b>	<b>Requirements</b>
<b>7 DE Admin. Code 1106</b> - Particulate Emissions from Construction and Materials Handling	<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</b> – Open Burning	<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</b> – Conformity of General Federal Actions to the State Implementation Plan	<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>

<p><b>7 DE Admin. Code 1141</b> – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products</p>	<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>
<p><b>7 DE Admin. Code 1144</b> – Control of Stationary Generator Emissions</p>	<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>
<p><b>7 DE Admin. Code 1145</b> – Excessive Idling of Heavy Duty Vehicles</p>	<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 Sites

- If it is determined by DNREC 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 are two DNREC Site Investigation and Restoration Section (SIRS) sites found within a ½-mile radius of the proposed project.
  - Micucio Property is located adjacent west of the proposed project.
    - Drums were reported to be buried on the property in 1992, and a drum removal was performed in 1993 by the Chrysler Corporation under a consent order with the U.S. Environmental Protection Agency (EPA).
    - The U.S. EPA status for the site is "No Further Action." A Facility Evaluation was performed in 1997 to determine if there was any impact to groundwater.

- In December 1997, DNREC-SIRB issued a No Further Action designation due to the available information from the Facility Evaluation and the EPA Closure Report, dated September 1993.
- The Site has been administratively closed.
- Summit Landfill is located 0.45 west of the proposed project.
  - The Site was operated as a quarry from 1969 and later permitted as a solid waste landfill and received refuse from Chrysler. The landfill closed in 1979
  - A Phase I was conducted in August 1992 followed by a Phase II in March 1993. A Facility Evaluation was conducted in 1996.
  - An Environmental Covenant was placed on the property and allowed the property to be used for hunting and non-residential used. A Groundwater management zone to restrict the installation of groundwater wells was also placed on the property.
  - The Site was given a Certificate of Completion of Remedy (COCR) in April 2014.

## **Tank Management**

- If a release of a Regulated Substance occurs at the proposed project site, compliance of 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.
- There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area.
- No environmental impacts are anticipated; however, 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.

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

- There are no known archaeological sites or National Register-listed property on this parcel. However, if any development or construction project proceeds, the developer should be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is 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 check 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 might want an archaeological consultant, to examine the parcel for archaeological resources, including a cemetery or unmarked human remains.

- If there is any federal involvement with the project, in the form of licenses, permits, or funds, the federal agency, often 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.

- Furthermore, 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).

### **Delaware State Fire Marshall's Office – Contact John Rudd 739-4394**

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:

#### **Fire Protection Water Requirements:**

- Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 800 feet spacing on centers are required.
- Where a water distribution system is proposed for townhouse type dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains.

#### **Fire Protection Features:**

- For townhouse buildings and "twin dwelling" type buildings, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan

#### **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.
- Verify that the alleyways on the south end of the subdivision that intersects with Road "A" and the small "U" shaped roadway on the northeast corner of the subdivision that intersects with Road "J" are of sufficient width so as to permit fire apparatus access.
- 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.

#### **Gas Piping and System Information:**

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

### **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
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Name of Water Provider
- Letter from Water Provider approving the system layout
- The 2-hr separation wall details for the townhouses and the “twin dwellings” type buildings shall be shown on site plans
- Provide Road Names, even for County Roads

### **Recommendations/Additional Information**

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

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

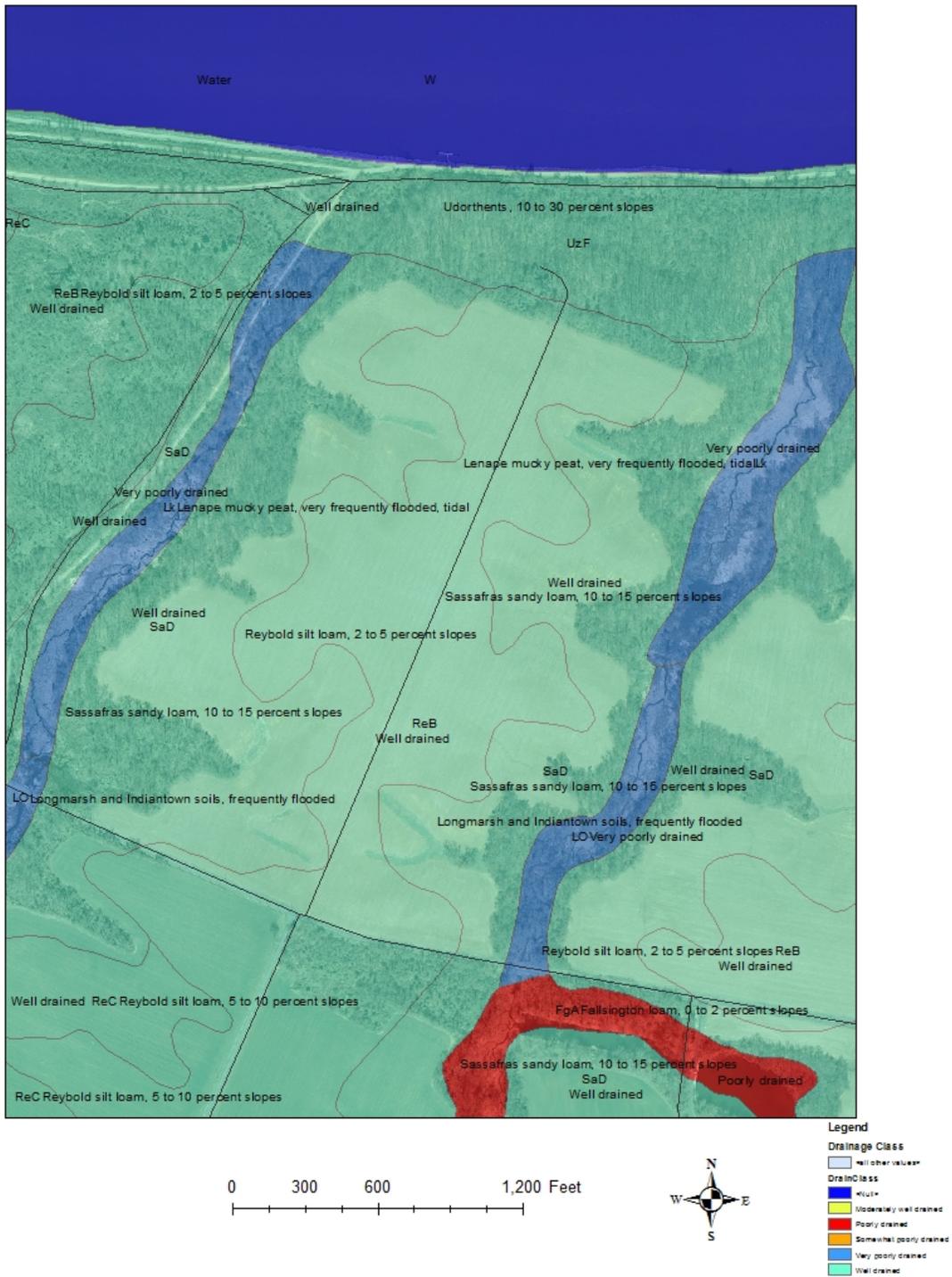
- Section 3.5 of the Manual addresses the subject of connectivity, both within proposed developments and between those developments and the surrounding built environment. The internal street layout of Hamlet 4 shows adequate connectivity, having a Connectivity Ratio of 1.4. The Whitehall master plan shows three streets connecting Hamlet 4 to Lorewood Grove Road but all three of those streets are in Village 5, for which plans have not been presented, and there is nothing to say when those streets will be built. We recommend that these streets and their associated rights-of-way be included in the Hamlet 4 plan if Hamlet 4 is to be developed ahead of Village 5.
- Further on the subject of connectivity, we offer two recommendations for pedestrian trails or Shared Use Paths. First, a path extending south through the community open space from the curve in Road C to connect to Road B appears desirable if there are to be any uses in that part of Village 5 that might attract pedestrians. If a formal path is not provided, residents may create an informal one.
- Second, it appears possible to build a path through the community open space, Whitehall’s Remaining Lands A and the Corps of Engineers’ land along the Chesapeake and Delaware Canal to connect from the intersection of Roads F and J to the unpaved

road along the Canal. We understand that the applicant is working with the Corps in this regard.

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

**Soils Assessment**

- Based on NRCS soils survey mapping update, the following soil mapping units have the most limitations for development in this parcel: Lenape (Lk), Longmarsh (LO), and Sassafras (SaD). Longmarsh and Lenape are very poorly-drained wetland associated (hydric) soil mapping units that have severe limitations for development (considered unsuitable) because of the presence of a high water table. The Sassafras soil (SaD) mapping unit has limitations because of steeply-sloping topography (10-15 percent slopes). We strongly advise against building on both slopes greater than 10% slope, and on poorly or very poorly-drained soils (Figure 1).



### **Forested Wetlands**

- The drawing provided on the “Exploratory Major Subdivision Plan shows the location best, but it is still difficult to determine what potential impacts to natural resources may occur as a result of this project. The following comments about the Bog Turtle and State-Rare Species and Species of Greatest Conservation Need (SGCN) assume that there will be impacts to the forested wetlands on site.

### **Bog Turtle**

- Some Phase 1 and Phase 2 surveys for the federally listed bog turtle (*Glyptemys muhlenbergii*) have been completed in the project area. However, there remain potential habitats that have not yet been surveyed. To ensure that the project will not impact bog turtles or their habitat, Phase I surveys for bog turtle habitat should be conducted. Phase I surveys can be conducted any time of year when ice and/or snow cover is not present. If potential habitat is found, however, please note there is a time of year restriction during which Phase II surveys for bog turtles must be conducted. *A Delaware approved bog turtle surveyor must be used to conduct the surveys.* Please contact Holly Niederriter at (302) 735-8670 to obtain a list of contacts to conduct Phase I and, if necessary, Phase II surveys.

If potential bog turtle habitat is found during Phase I surveys, you are required to either:

- Completely avoid all direct and indirect project impacts to the wetland, in consultation with the U.S. Fish and Wildlife Service and Delaware Division of Fish and Wildlife;

*OR*

- Have Phase II surveys conducted to determine if bog turtles are present. In accordance with Delaware’s bog turtle site survey procedures, surveys must be conducted by a State-approved bog turtle surveyor between April 15 and June 15.

If you require further information, please contact our Endangered Species Biologist, Holly Niederriter, at (302) 735-8670.

**State-Rare Species and Species of Greatest Conservation Need<sup>1</sup> (SGCN).**

- According to our database, the following species occur within or adjacent to the project area and could potentially be affected by project activities:

Scientific Name	Common Name	Taxon	State Rank	State Status	SGCN Tier
<i>Hemidactylium scutatum</i>	Four-toed salamander	Amphibian	S1		Tier2
<i>Atlides halesus</i>	Great purple hairstreak	Butterfly	S1		Tier 2
<i>Agastache nepetoides</i>	Yellow giant hyssop	Plant	S2		n/a
<i>Regina septemvittata</i>	Queen Snake	Reptile	S1		Tier 2

State Rank: **S1**- extremely rare within the state (typically 5 or fewer occurrences); **S2**- very rare within the state (6 to 20 occurrences);

State Status: **E** – endangered, i.e. designated by the Delaware Division of Fish and Wildlife as seriously threatened with extinction in the state;

SGCN Tiers: **Tier 1** Species of Greatest Conservation Need (SGCN) are those that are most in need of conservation action on order to sustain or restore their populations. They are the focus of the Delaware Wildlife Action Plan (DEWAP), which is based on analyzing threats to their populations and their habitats, and on developing conservation actions to eliminate, minimize or compensate for these threats. **Tier 2** SGCN are also in need of conservation action, although not with the urgency of Tier 1 species. Their distribution across the landscape will help determine where DEWAP conservation actions will be implemented on the ground. **n/a-plants** are not addressed in DEWAP.

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<sup>1</sup> Species of greatest conservation need (SGCN) are indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware. SGCN are identified in the Delaware Wildlife Action Plan (DEWAP) which is a comprehensive strategy for conserving the full array of native wildlife and habitats-common and uncommon- as vital components of the state's natural resources. Congress challenged the states to demonstrate comprehensive wildlife conservation. Delaware, along with all of the other states and provinces throughout the country are working to implement their wildlife action plans. This document can be viewed via the Division of Fish and Wildlife's website at <http://www.fw.delaware.gov/dwap/Pages/default.aspx>. DEWAP also contains a list of species of greatest conservation need, key wildlife habitat, and species-habitat associations.

*Herps:* The wetlands on this parcel are herp-rich, and in particular are known to provide habitat to state-rare reptiles and amphibians, including those listed in the table above: *Hemidactylium scutatum* (four-toed salamander) and *Regina septemvittata* (queen snake). The four-toed salamander typically breeds in forested wetlands, bogs, and spring seepage areas, but upland buffer areas around wetlands are equally important habitat. Additionally, the queen snake feeds solely on crayfish, which require unpolluted streams for survival. Stream degradation has been known to lead to the deterioration or complete elimination of crayfish populations. As such, efforts should be made to avoid direct impacts to wetlands (including forested 'isolated' wetlands) and to maintain as large an upland buffer as possible (300 feet is preferable). This buffer should be comprised of the existing vegetation not of maintained lawn areas. This is especially important given that Hamlet 4 is only a portion of a much larger project area that will certainly bring large amounts of impervious surfaces.

*Rare Plants:* The rare plant listed in the table above occurs on adjacent parcels and it is highly likely that one or more species also occurs in areas of the project parcel. To ensure that impacts are minimized or to determine if a plant rescue is possible (and feasible) the occurrence of these plants should be confirmed by a botanist knowledgeable with rare plant species identification. Our program botanist, Bill McAvoy has decades of experience and would like to survey for these plants. As we understand, the landowner is amenable to site visit and we will be reaching out to him to schedule.

*Altides halesus* (Great purple hairstreak): Our records indicate that this species has been detected in suitable habitat within the vicinity of this project and although unlikely, may be present within the proposed project area. Typically this state-rare butterfly inhabits wet woodlands and their edges, feeding on goldenrod, sweet pepperbush, and Hercules' club. Larvae feed exclusively on mistletoe. To minimize impacts to this species, efforts should be made to avoid disturbing supporting habitat where possible.

## **Impacts to Wetland and Forest Habitats**

- Wetlands and Forested areas. There are concerns regarding habitat loss as this development is quite large and will entail tree clearing, loss and fragmentation of open space habitat and the potential to negatively impact water quality with the amount of impervious surface/run-off one could expect from a development of this size. It is unclear what the current full scope of the Whitehall project is in its entirety because this project came in as one section, but the full project was proposed in 2011 and appears to be very large. Given the large scope of the project it seems reasonable that the project components could: 1) avoid forest clearing and fragmentation, 2) ensure that a minimum 100ft upland buffer is left intact *between* wetlands and lots/infrastructure (such as roadways and stormwater facilities). 3) leave connections intact between areas of habitat that provide cover and ample space for wildlife to move across the landscape during daily and migratory activities. These wildlife corridors are often along riparian areas or connect one forest block to another and can help reduce the negative effects of habitat

fragmentation by allowing dispersal of individuals between large patches of remaining habitat.

### **Northern Long-eared bat**

- Due to population declines largely caused by white nose syndrome, a fungal disease known only to affect bats, Northern Long-eared Bat (NLEB – *Myotis septentrionalis*) have been listed as federally threatened under the U.S. Endangered Species Act. Note that any project that proposes to clear  $\geq 1$  acre of trees in New Castle County will be subject to review by the U.S. Fish and Wildlife Service. For more information, please contact Julie Thompson at [Julie\\_Thompson@usfws.gov](mailto:Julie_Thompson@usfws.gov) or (410) 573-4595.

### **Chesapeake and Delaware Canal Wildlife Area**

- The proposed project is within ½ mile of the boundary of the State Wildlife Area managed by the Division of Fish and Wildlife, DNREC. To ensure that the quantity and quality of wildlife habitat in the State Wildlife Area is not negatively affected by development activities, please contact the Regional Wildlife Biologist, Eric Ludwig, at (302) 834-8433. Additionally, the developer should be aware that people using the property in question could be subject to the effects of legal hunting activities in the Wildlife Area, such as firearm noise or dogs barking when pursuing game

### **Site Visit**

- Portions of the Whitehall project have been surveyed for bog turtle (but not all as mentioned above), and our state agency staff have not conducted a site visit anywhere within the Whitehall project to evaluate the site for habitat that could support other species of conservation concern, confirm rare plant locations, and complete a mature tree survey. As indicated above, the landowner appears to be amenable to granting a site visit and we will be reaching out to him to schedule.

### **State Natural Heritage Site**

- Because state-rare species are present, this project is within a State Natural Heritage Site. State Natural Heritage Sites and Delaware National Estuarine Research Reserves are identified as "Designated Critical Resource Waters" by the United States Army Corps of Engineers (USACE), and as such are subject to the restrictions and limitations imposed through Nationwide Permit General Condition No. 22. A copy of this letter shall be included in any permit application or pre-construction notification submitted to the Army Corps of Engineers for activities on this property.
- If you propose to use Nationwide Permit No. 3, 13, 18, 29, 39 or 42 the State of Delaware has denied 401 Water Quality Certification (WQC) and Coastal Zone Federal Consistency Concurrence (CZM) for these Nationwide Permits in Designated Critical Resource Waters. In order to use any of these six Nationwide Permits at this site you must apply for a project-specific Water Quality Certification (WQC) and Coastal

Consistency Determination (CZM) from the appropriate offices at DNREC. To obtain the application materials and for all information regarding WQC, contact DNREC's Wetlands and Subaqueous Lands Section at 302/739-9943. For information pertaining to CZM, contact DNREC's Coastal Programs at 302/739-9283.

- If you propose to use Nationwide Permit No. 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, or 44, this Designated Critical Resource Water designation may require you to obtain authorization through some other nationwide or general permit, or an individual permit from the Army Corps of Engineers. You should review the Nationwide Permit General Conditions and Regional Conditions for Delaware (see, in particular, Nationwide Permit General Condition No. 19) to determine what notification requirements or restrictions might be applicable for your activity. Please contact the Army Corps of Engineers at 215/656-6728 if you have questions or require additional information regarding the Nationwide Permit Program.

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

- A Pollution Control Strategy (PCS) to achieve the required TMDL nutrient and bacterial load reduction requirements has not been established for the C&D East Canal. However, we strongly encourage the applicant to take responsibility for reducing nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs, which would:
  - Preserve and/or maintain as much of the existing open space as possible; we further suggest additional native tree, shrub and/or native herbaceous vegetation plantings, wherever possible.
  - Conduct a United States Army Corps of Engineers (USACE) approved field wetlands delineation before commencing any development activities on this parcel(s). The USACE can be reached by phone at (302) 736-9763. According to the PLUS application, a wetlands delineation was conducted but not approved by the USACE, nor was the delineation submitted to DNREC.
  - Maintain an adequate buffer width. 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, DNREC recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all waterbodies (including ditches) and wetlands (field delineated and approved by the USACE).
  - 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 a 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 instead of conventional paving materials (e.g., asphalt or concrete) 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, DNREC 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 of the Division of Watershed Stewardship at (302) 739-9939 for more information on the protocol.

#### **Additional information on hazardous waste sites**

- DNREC 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 at (800) 662-8802. SIRS should also be contacted as soon as possible at (302) 395-2600 for further instructions.

**Additional information on air quality**

- The existing property has no sidewalks, no bike paths, and no shoulders. The applicant indicates that sidewalks will be added as part of this project; however, all nearby destinations appear to be farmlands. At present, there are no DART bus stops within walking distance of the existing property, as it is outside the intended growth zone for Middletown.

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 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; Delaware currently violates federal health-based air quality standards for ozone. New Castle County, Delaware is classified as non-attainment for not meeting federal and state 8-hour ozone standards. Compared to Kent and Sussex Counties, short term 1-hour average peak ozone levels are usually highest in New Castle County, as well,
  - The emission of greenhouse gases which are associated with climate change, and
  - The emission of air toxics.
- Air emissions generated from new homes 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 Whitehall, Hamlet 4 may have on air quality.

<b>Table 2: Projected Air Quality Emissions for Whitehall, Hamlet 4</b>					
Emissions Attributable to Whitehall, Hamlet 4 (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	10.0	1.1	0.9	1.2	40.7
Power emissions	*	4.0	13.8	*	2,039.3
Mobile emissions	14.8	15.5	0.4	0.2	9,575.8

Total emissions	24.8	20.6	15.1	1.4	11,655.8
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(\*) Indicates data is not available.

Note that emissions associated with the actual construction of the residential 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. These measures include:
  - Constructing with only energy efficient products. Energy Star qualified products are up to 30% 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 lot 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.
- 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 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 submit a plan to the DNREC Division of Air Quality (DAQ) which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Whitehall, Hamlet 4 project. The DAQ point of contact is Deanna Morozowich, and she may be reached at (302) 739-9402 or [Deanna.Morozowich@state.de.us](mailto:Deanna.Morozowich@state.de.us).

#### **Delaware State Fire Marshall's Office – Contact John Rudd 739-4394**

- 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.

#### **Department of Public Health – Contact: Laura Saperstein 744-1011**

The Delaware Division of Public Health (DPH) is pleased to be able to participate in the PLUS application process. In keeping with its mission to protect and promote the health of all people in Delaware, DPH looks for opportunities to encourage and enhance our population's health behaviors that will result in healthy people and healthy communities.

Community design can impact the health of a population. Studies show that persons in lower-income communities, the elderly, and children often suffer more from consequences of inadequate land-use and transportation. Additionally, we know physical activity has a direct correlation to many chronic diseases, including hypertension, diabetes and obesity. In 2013, 33.6% of Delawareans reported a BMI of “overweight;” and an additional 31% reported a BMI as “obese.” To that end, DPH looks to make recommendations for land-use that can empower Delawareans to make good health behaviors a part of their daily lives. A recent study by Sallis, et.al., “Is your Neighborhood Designed to Support Physical Activity? A Brief Streetscape Audit Tool,” identified that modifiable microscale element of the environment may affect an individual’s physical activity levels. An example of a microscale environment factor might be including crosswalks, or curb cuts at crossings and intersections, and/or including streetscape characteristics like street lights, benches, sidewalk buffers, trees and overhead coverage as part of the community design.

DPH offers the following recommendations for consideration to the Whitehall, Hamlet 4 plan for development:

1. DPH is pleased to see the inclusion of proposed open space indicated, in part, for passive recreation. This will enable residents to incorporate leisure activity into their daily lives.
  - a. Because “passive recreation” was not clearly defined in the PLUS application, DPH would further recommend that Whitehall review the recreational needs and priorities identified through Statewide Comprehensive Outdoor Recreation Plan, or SCORP, for that specific area.  
<http://www.dnrec.delaware.gov/parks/information/Pages/2013Scorp.aspx>.
2. DPH recommends incorporating sidewalks and internal walkways including marked crosswalks.
  - a. The presence of these attributes could be particularly important for improving the experience of pedestrians, and according to recent research, are indicators of a broader pattern of activity-supportive design features.
  - b. Sidewalks are basic attributes for supporting pedestrian activity. Additionally, curb cuts improve this access for older adults, people with disabilities, and parents with baby strollers.
3. Consider including bike facilities into the land use plan, such as bike lanes, particularly across the frontage, turn lanes in/out at entrance, bike signage bike parking.
  - a. Bicycling is a low-cost and efficient means of active transportation that effectively improves the built environment by including non-motorized options to the transportation systems. Moreover, active transportation is of fundamental importance to healthy living.
4. Include lighting features such as streetlights, lit open spaces and low-level lighting for sidewalks and/or paths.
  - a. Street lighting is needed for safety during nighttime activity and increased feelings of security.
  - b. multi-use pathways and internal connections to adjacent land, proposed open spaces, or future land developments to accommodate pedestrians and bicycles

5. The Whitehall Hamlet 4 is within a one-mile distance of the C&D Canal. Any innovative access to this local park facility could offer home-owners opportunity for active recreation. Any recreational activity involving movement is important for individuals because of its fundamental importance to healthy living.

**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". The signature is written in black ink on a white background.

Constance C. Holland, AICP  
Director, Office of State Planning Coordination

CC: New Castle County