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June 26, 2015

Constance C. Holland, AICP
Office of State Planning Coordination
Haslet Armory
122 William Penn Street
Dover, DE 19901

RE: **PLUS Response**
WHITEHALL HAMLET 7
New Castle, Delaware
2014163.00

As required, please find attached a copy of the PLUS report for the Whitehall – Hamlet 7 project with Becker Morgan Group's response to each comment.

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. With that said, we understand that this is the type of project our Office strongly supports in that, when completed, it will resemble the “complete communities” we promote. As such, we are very supportive of this project. **BMG Response – Noted.**

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, we estimate 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. **BMG Response – On the PLUS application, our proposed trip generation was based on ITE Land Use Code 270, Planned Unit Development, for which this project fits the description, and for which trip generation differs than when the uses of the proposed development are analyzed individually, i.e., single family detached and residential condominium townhouse. If trip generation is based on the individual uses, as described in the comment above, we concur with the generated figures.**

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

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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. We ask the applicant contact our Subdivision Manager for this part of the county, Mr. Pao Lin, with the exact number of dwellings of each housing type in Hamlet 7 so that he can calculate the amount of their contribution. Further, we understand that the applicant wants to build West Lorewood Grove Road for recoument credit. If so, they should submit their plans to Mr. Lin when they are ready so we can calculate their credit. Mr. Lin may be reached at [760-2157](tel:760-2157). **BMG Response – A pre-application meeting was held with DelDOT and the requested information has been provided.**

- 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>. In that regard, the plans accompanying the PLUS application include four right angle turns that appear to be inconsistent with the standards in Chapter 5 of the Manual. This aspect of the plan should be discussed at the Pre-Submittal Meeting mentioned below. **BMG Response – The site access to Lorewood Grove Road has already been designed as part of the Whitehall – Village 1. With respect to the right angle turns, we have coordinated with DelDOT to provide a design modification which includes radii at 3 of the 4 turns and a new three legged roundabout.**
- 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. **BMG Response – A pre-submittal meeting has been held with DelDOT.**
- Whitehall Hamlet 7 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 submits a "Proposed Construction/Alteration in Airport Zones Notification Form" in accordance with Delaware Code (2 Del. C. § 602). All phases of the Whitehall development will be located in the airport zones of Summit Airport (EVY), therefore DelDOT requires a separate notification form for each individual phase as site plans enter the review/approval process.

The notification forms can be submitted during the plan approval process with the local land use jurisdiction, but DelDOT'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 **BMG Response – The form mentioned above has been prepared and submitted to DelDOT.**

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

- **Wetlands**

State regulated wetlands ARE possibly located on this property based on a review of the State wetland maps. According to the application, the Army Corps of Engineers has signed off on a wetland delineation. If there are impacts to state regulated wetlands, state wetland delineation should be requested from DNREC.

State regulated subaqueous lands ARE likely to be located on this property based on a review of aerial photographs, SWMP maps, Soil Surveys and/or USGS topographic maps. A stream runs through the parcel and adjacent to the western portion of the parcel. Impacts to these streams would need a permit from DNREC.

State regulated wetlands are those wetlands identified on the State's official State Regulated Wetland Maps. 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. Additional information about State regulated wetlands and subaqueous lands is available by contacting the Wetlands and Subaqueous Lands Section at (302) 739-9943 or on line at: <http://www.dnrec.delaware.gov/wr/Services/Pages/WetlandsAndSubaqueousLands.asp>

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/or USGS topographic maps. The application states there has been a delineation signed off on by the Army Corps of Engineers. Be sure to comply with county wetland buffers, as well. **BMG Response – A full wetland delineation has been completed and is reflected in the plan set.**

- 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. **BMG Response - Noted**
- 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. 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>. **BMG Response – Wetland features at the site are pronounced due to the topography of the site and have been delineated by three separate firms over the last 10 years with very similar results. Additionally, a permit will be obtained from the Corps for the entrance road crossing at which time the Corps will review and approve the latest wetland delineation.**

TMDLs

- The project is located in the greater Delaware River and Bay drainage areas, specifically within the C & D Canal and Red Lion Creek watersheds. In the Red Lion Creek watershed, 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. The TMDL for the Red Lion Creek watershed calls for a 40 percent reduction in nitrogen and phosphorus from baseline conditions. The TMDL also calls for a 38 percent reduction in bacteria from baseline conditions. Although a TMDL has not been developed for the C&D Canal watershed to date, the existing TMDL developed for the Red Lion Creek should apply to the entirety of the project area. **BMG Response – Noted. Stormwater Management Controls will designed to meet the water quality and quantity standards set forth by DNREC and enforced by New Castle County.**

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. **BMG Response - Noted**

Sediment and Stormwater Program

- 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 Town of Middletown. Contact the Town of Middletown at (302) 378-9120 for details regarding submittal requirements and fees. **BMG Response – The project is located within the jurisdiction of New Castle County. A pre-application meeting has already been held with the New Castle County Engineering Department.**

Hazardous Waste Sites

- 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. **BMG Response - Noted**

Tank Management Section.

- 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. **BMG Response - Noted**
- There are no confirmed leaking underground storage tank (LUST) projects located within a quarter mile from the proposed project area **BMG Response - Noted**
- 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 Branch by calling 302-395-2500**BMG Response - Noted**

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:

| Table 1: Potential Regulatory Requirements | |
|---|---|
| Regulation | Requirements |
| 7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling | <ul style="list-style-type: none"> • Use dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads. • Use covers on trucks that transport material to and from site to prevent visible emissions. |
| 7 DE Admin. Code 1113 – Open Burning | <ul style="list-style-type: none"> • Prohibit open burns statewide during the Ozone Season from May 1-Sept. 30 each year. • Prohibit the burning of land clearing debris. • Prohibit the burning of trash or building materials/debris. |
| 7 DE Admin. Code 1135 – Conformity of General Federal Actions to the State Implementation Plan | <ul style="list-style-type: none"> • 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) |
| 7 DE Admin. Code 1141 – Limiting Emissions of Volatile Organic Compounds from Consumer and Commercial Products | <ul style="list-style-type: none"> • Use structural/ paint coatings that are low in Volatile Organic Compounds. • Use covers on paint containers when paint containers are not in use. |
| 7 DE Admin. Code 1144 – Control of Stationary Generator Emissions | <ul style="list-style-type: none"> • Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO₂), carbon monoxide (CO), and carbon dioxide (CO₂) from emergency generators meet the emissions limits established. (See section 3.2). • Maintain recordkeeping and reporting requirements. |
| 7 DE Admin. Code 1145 – Excessive Idling of Heavy Duty Vehicles | <ul style="list-style-type: none"> • Restrict idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes. |

For a complete listing of all Delaware applicable regulations, please look at our website: <http://www.awm.delaware.gov/AQM/Pages/AirRegulations.aspx>. **BMG Response – This project will meet all applicable laws and regulations.**

State Historic Preservation Office – Contact Terrence Burns 736-7404

- There is a known archaeological site on this parcel (N-3797) and another near the parcel (N-3738). There is a small parcel within this parcel, which has a 20th-century dwelling (N14346) on it. The developer should consider putting sufficient landscaping or barrier between this dwelling (N14346) and the development, in order to protect it from the adverse sounds or visual effects. **BMG Response – We will contact Mr. Burns to coordinate.**

With this in mind, the developer should also be aware of the Unmarked Human Burials and Human Skeletal Remains Law, which is in Chapter 54 of Title 7, of the Delaware Code (7 Del. C. Ch. 54). **BMG Response - Noted**

- 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 and www.history.delaware.gov/preservation/cemeteries.shtml.

Therefore, prior to any demolition or ground-disturbing activities, the developer may want to hire an archaeological consultant to examine the parcel for any potential archaeological site or archaeological resources, such as cemetery, burial site, or unmarked human remains.

Furthermore, 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. **BMG Response – The property has been actively farmed for some time and survey of the site has not indicated any potential presence of abandoned cemeteries. If any are discovered during construction, we will proceed in accordance with Delaware Law.**

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:**
 - Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. In the area where Town Homes are present, fire hydrants with maximum 800 feet spacing on centers. Fire hydrants spacing may be extended to 1000 feet on center where the hydrants are adjacent to only stand-alone, detached, single-family homes.
 - Where a water distribution system is proposed for dwelling sites, the infrastructure for fire protection water shall be provided, including the size of water mains. **BMG Response – The above fire protection requirements will be met.**

- **Fire Protection Features:**
 - For townhouse buildings and semi-detached (duplex) dwelling units, provide a section / detail and the UL design number of the 2-hour fire rated separation wall on the Site plan. **BMG Response – We will provide the required detail during the construction plan review stage.**

- **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.
 - 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. **BMG Response – The above fire protection requirements will be met.**

- **Gas Piping and System Information:**
 - Provide type of fuel proposed, and show locations of bulk containers on plan. **BMG Response – Natural gas is proposed. Plans will show such locations.**

- **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
- 2-hr separation wall details for townhouses and duplex dwellings shall be shown on site plans
- Provide Road Names, even for County Roads

BMG Response – The above information will be included on the final plans.

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 7 shows adequate connectivity, having a Connectivity Ratio of 1.5, but as proposed there is only one street in and out of Hamlet 7.

While there are wetlands to the north and west, steep slopes to the east and the right-of-way for the future US Route 301 to the south, possibilities for interconnection are limited, but we suggest that connections to the south may be possible as follows. The proposed dead end streets at the south end of the property should be noted as a temporary condition on the record plan and should be signed and barricaded in accordance with Section 5.1.5.2 of the Manual. The land to which these streets would lead is zoned BP and is presently owned by the Welfare Foundation but it is residual land left over from the right-of-way acquisition for US Route 301 and it cannot readily be developed under BP zoning. With a rezoning, however, it could be residentially developed and either a street connection or, more likely, a bicycle and pedestrian connection through it from Hamlet 7 to Village 6 seems feasible. **BMG Response – In the future if the residual land is developed and rezoned, we will consider a possible interconnection from Hamlet 7 to Village 6.**

Recognizing that all of the Town of Whitehall, including Hamlet 7, has been planned for some time and that the connections we suggest are predicated on a purchase and a rezoning, neither of which is within the control of the applicant, we do not require them, but we do ask that they be pursued.

Department of Natural Resources and Environmental Control – Contact Kevin Coyle 735-3495

Soils Assessment

- Based on soils survey mapping update, Fallsington (FgA) and Sassafras (SaD) are the soil mapping units with the most limitations for development. Fallsington is a poorly-drained wetland associated (hydric) soil mapping unit that has severe limitations for development (considered unsuitable) because of the presence of a high water table. The Sassafras soil mapping unit has limitations because of steeply-sloping topography (10-15 percent slopes). We strongly advise against building on

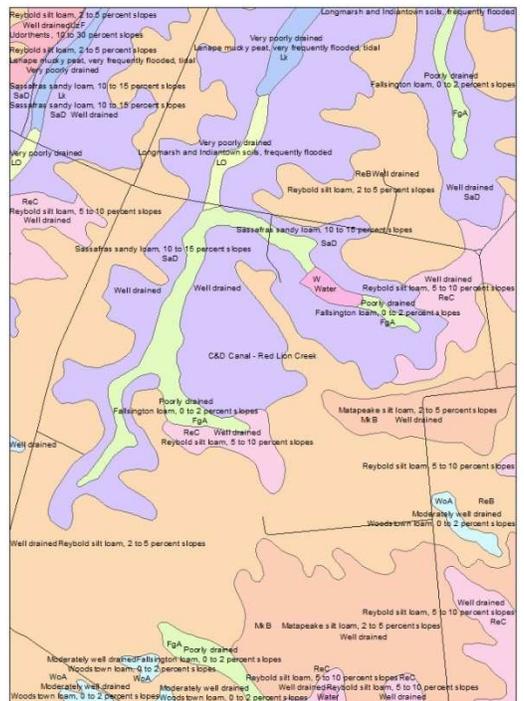


Figure 1. NRCS soil survey mapping update in the immediate vicinity of the proposed project

slopes greater than 10% slope.

BMG Response – We commissioned a detailed on site soil investigation. Based on that investigation, the soils encountered indicate potential for infiltration. In addition, the investigation yielded a water table in excess of 10 feet.

Species and Habitat

- In 2013, Phase 1 and where necessary, Phase 2, bog turtle surveys were completed within the project area identified as Hamlet 7. A review of the bog turtle survey report indicates that the Delaware Division of Fish Wildlife’s Endangered Species Review Requirements have been satisfied for this specific project area. Due the elusiveness of the species and the proximity of the site to historical records, a result of “No Bog Turtles Found” does not conclusively confirm their absence. Bog turtles can persist in low numbers or could move into to the habitat in the future. Therefore, we recommend that impacts to the habitat be minimized. Additionally, the results of this survey are valid for five years. If project is not completed within five years of the survey date another survey may be required. If you require further information,

please contact our Endangered Species Biologist, Holly Niederriter, at (302) 653-2880. **BMG Response – Noted.**

Furthermore, given that Hamlet 7 is one portion of a much larger development project that is bringing a great deal of impervious surfaces to support new homes and buildings, it would be it would be best to retain as much natural vegetation and woodlands as possible and certainly avoid fragmenting these areas. **BMG Response – the current design limits impact to wooded areas.**

Finally, although bog turtle surveys have been completed in this area, DNREC's Division of Fish and Wildlife scientists have not surveyed the project area for other State-rare plant and animal species. In order to provide more informed comments, we request the opportunity to conduct a survey to evaluate habitat and determine the potential for species of conservation concern. Please note that our scientists have extensive knowledge of the flora and fauna of the State. 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 if the landowner will grant a site visit. **BMG Response – We will be coordinating with Kate at Delaware Heritage Group as part of the entrance permit.**

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 Canal & Red Lion Creek watersheds to date. DNREC strongly encourage the applicant to reduce nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs:
 - A United States Army Corps of Engineers (USACE) approved field wetlands delineation is strongly recommended before commencing any development activities on this parcel(s). The USACE can be reached by phone at 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. **BMG Response – This will be addressed during the permitting process for the entrance.**
 - Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. *Wetland and Stream Buffer Requirements – A Review*. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish a minimum 100-foot upland buffer (planted in native vegetation) from all waterbodies (including ditches) and wetlands (field delineated and approved by the USACE). **BMG Response – Buffers have been provided in accordance with NCC requirements.**
 - Applicant should 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 for surface imperviousness. Omission of any of the above-stated forms of surface

imperviousness will result in an underestimate of the actual post-development surface imperviousness and their associated environmental impacts – thus the omission of any form of surface imperviousness is considered an unacceptable BMP. **BMG Response - Noted**

- Since this project will create additional impervious surface that will increase the probability for pollutant load runoff draining to the adjoining stream and wetlands, wherever practicable, use pervious paving materials (instead of conventional asphalt and concrete) for mitigating negative impacts associated with pollutant runoff. We especially recommend pervious pavers for all designated parking areas. **BMG Response – Green technology practices including infiltration are anticipated and will meet RPV requirements.**
- Use of green-technology storm water management structures (in lieu of open-water management structures) and raingardens as BMPs to reduce nutrient pollutant impacts. Please contact Lara Allison for further information on raingardens at 739-9922. **BMG Response – See above.**
- The Applicant should voluntarily 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) that result from the conversion of individual or combined land parcels to a different land use(s), while providing applicants with quantitative information about their 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 Jen Walls or John Martin at 302-739-9939 for more information on the protocol. **BMG Response - Noted**

Additional information on hazardous waste sites

- DNREC 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) and a Phase II or Facility Evaluation in accordance to Section 9105(c) (2) of the Delaware Hazardous Substance Cleanup Act (HSCA) and the HSCA Guidance Section 2, part 2.3 (page 2-1). 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. **BMG Response – A Phase I Environmental Assessment has been performed at the site.**

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). SIRS should also be contacted as soon as possible at 302-395-2600 for further instructions. **BMG Response – Noted**

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. **BMG Response noted.**
- 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. **BMG Response – No above Ground tanks are anticipated.**

Additional information on air quality. New homes may emit, or cause to be emitted, air contaminants into Delaware’s air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

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

Air emissions generated from commercial spaces 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 needed to support the commercial space, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for the development were quantified. Table 2 represents the projected impact the 229 homes in the Whitehall Hamlet #7 may have on air quality.

| Emissions Attributable to Whitehall Hamlet #7 (Tons per Year) | Volatile Organic Compounds (VOC) | Nitrogen Oxides (NOx) | Sulfur Dioxide (SO ₂) | Fine Particulate Matter (PM _{2.5}) | Carbon Dioxide (CO ₂) |
|---|----------------------------------|-----------------------|-----------------------------------|--|-----------------------------------|
| Direct Area Source | 7.1 | 0.8 | 0.6 | 0.8 | 28.7 |
| Electrical Power Generation | * | 2.8 | 9.8 | * | 1,441.4 |
| Mobile | 10.5 | 11.0 | 0.3 | 0.1 | 6,768.1 |
| Total | 17.6 | 14.6 | 10.7 | 0.9 | 8,238.2 |

. (*) Indicates data was not available to calculate emissions.

Note that emissions associated with the actual construction of the road, 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 excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions. For every vehicle trip that is replaced by the use of a sidewalk, a bike path or mass transit, 7 pounds of VOC and 11.5 pounds of NOx are reduced each year.
- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees in vegetative buffer areas.** Trees reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, thereby 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 DAQ which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into this project. **BMG Response - Noted**

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, technical

services link, plan review, applications or brochures. **BMG Response – We will meet with the Fire Marshal.**

State Housing Authority – Contact: Karen Horton 739-4263

- DSHA supports the proposal to develop 229 residential units on 84 acres located on Lorewood Grove Road just north of Middletown. This phase of the larger Town of Whitehall community will be compact, well-designed and have a broad range of housing types. Combined with substantial open space and connected streets and sidewalks to rest of Whitehall and its on-site amenities, DSHA believes this development is line with a market shift that no longer supports large suburban homes that dominated development in Delaware for several years. The Delaware Population Consortium (DPC) projections for the next ten years indicate that not only will there be a large amount of suburban homes placed on the market by baby boomers, but that there will be a *decline* in households in age ranges that typically seek large homes. These same DPC projections show growth in the younger age ranges most likely at stages in their life and income to support entry-level homes.

The combination of excess suburb housing supply currently on the market, additional supply being added by aging baby boomers, more stringent lending standards, along with a changing market indicate that it is *critical* that communities move away from large lot single family-detached housing and *proactively* provide a variety of housing options to meet market demand. This development provides an excellent opportunity for New Castle County to do this. **BMG Response – Noted.**

If you have any questions, or if we can provide any additional information, please don't hesitate to contact me.

Sincerely,

BECKER MORGAN GROUP, INC.



J. Michael Riemann
Associate Principal

CDD

Cc: Janet Vinc, New Castle County
Rich Julian, Whitehall Ventures, LLC
Larry Tarabicos, Tarabicos Grosso, LLP