STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF STATE PLANNING COORDINATION

January 19, 2016

Mr. Mark Ziegler
McBride & Ziegler, Inc.
2607 Eastburn Center
Newark, DE 19711

RE: PLUS review 2015-12-03; New Castle Foundry Apartments

Dear Mark:

Thank you for meeting with State agency planners on December 16, 2015 to discuss the proposed plans for the New Castle Foundry Apartments project. According to the information received, you are seeking review of a 27 unit apartment complex on .974 acres in the City of New Castle.

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 the City of New Castle is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by both the City.**

Strategies for State Policies and Spending

- This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. Investment Level 1 reflects areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy.

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. Preliminarily, we estimate the trip

generation at 180 vehicle trip ends per day and 18 trips per hour in the weekday evening peak hour. Based on these volumes, this project would not warrant a TIS.

- The site access on West 7th Street (Delaware Route 9) 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.

- Section 3.2.4.2 of the Manual addresses the placement of right-of-way monuments (markers) along the roads on which a property fronts, in this case West 7th Street. Monuments sufficient to re-establish the permanent rights-of-way after the dedication discussed below should be shown on the plan and provided in the field in accordance with this section.

- As necessary, in accordance with Section 3.2.5 and Figure 3.2.5-a of the Development Coordination Manual, DelDOT will require dedication of right-of-way along the site's frontage on West 7th Street. By this regulation, this dedication is to provide a minimum of 40 feet of right-of-way from the road centerline on West 7th Street. The following right-of-way dedication note is required, "**An X-foot wide right-of-way is hereby dedicated to the State of Delaware, as per this plat.**" Preliminarily, it appears that, with the proposed dedication along West 7th Street, this requirement is met but we cannot tell; the right-of-way must be dimensioned on the plan.

- In accordance with Section 3.2.5.1.2 of the Development Coordination Manual, DelDOT will require the establishment of a 15-foot wide permanent easement across the property frontage on West 7th Street . The location of the easement shall be outside the limits of the ultimate right-of-way. The easement area can be used as part of the open space calculation for the site. The following note is required, "**A 15-foot wide permanent easement is hereby established to the State of Delaware, as per this plat.**"

- Referring to Section 3.4.2 of the Development Coordination Manual, the Initial Stage review fee shall be assessed to this project.

- In accordance with Section 3.4 of the Development Coordination Manual, a record plan shall be prepared prior to issuing "Letter of No Objection". The following information will be required for the "Letter of No Objection" review:

    - Initial Stage Fee Calculation Form
    - Initial Stage Review Fee
    - Gate-Keeping Checklist – Site Plan
    - Design Checklist - Record Plan
    - Sight Distance Spreadsheet
    - Owners and Engineers' name and e-mail address
    - Record Plan
    - Conceptual Entrance Plan

  - Submission of the Area-Wide Study Fee (If applicable)

- Referring to Section 3.4.2.1 of the Development Coordination Manual, the following items, among other things, are required on the Record Plan:

  - A Traffic Generation Diagram. See Figure 3.4.2-a for the required format and content.

  - Depiction of all existing entrances within 300 feet of the proposed entrances.

  - Notes identifying the type of off-site improvements, agreements (signal, letter) contributions and when the off-site improvements are warranted.

- Section 3.5.4.2 of the Development Coordination Manual addresses requirements for shared-use paths and sidewalks. Projects located in Level 1 Investment Areas are required to install a shared-use path or sidewalk along the State-maintained road frontage. While a sidewalk is proposed on the plan, it does not go far enough; it must extend to the west property line.

- In accordance with Section 3.8 of the Development Coordination Manual, storm water facilities, excluding filter strips and bioswales, shall be located a minimum of 20 feet from the ultimate State right-of-way along West 7th Street.

- Referring to Section 4.3 of the Development Coordination Manual, the Construction Stage review fee shall be assessed to this project.

- Referring to Section 4.3 of the Development Coordination Manual, an entrance plan shall be prepared prior to issuing entrance approval. The following information will be required for Entrance Plan review:

  - Construction Stage Fee Calculation Form
  - Construction Review Fee
  - Gate-Keeping Checklist – Entrance Plan
  - Design Checklist - Entrance Plan
  - Auxiliary Lane Spreadsheet
  - Entrance Plan
  - Pipe/Angle Spreadsheet (If applicable)
  - SWM Report and Calculations (If applicable)

- In accordance with Section 5.2.5.6 of the Development Coordination Manual, Turning Movement Diagrams shall be provided to verify vehicles can safely enter and exit the site entrance. As per Section 5.2.3 of the Manual, the entrance shall be designed for the largest vehicle using the entrance.

- In accordance with Section 5.2.9 of the Development Coordination Manual, the Auxiliary Lane

Worksheet should be used to determine whether auxiliary lanes are warranted at the site entrance and how long those lanes should be. The worksheet can be found at http://www.deldot.gov/information/business/subdivisions/auxiliary_lane_worksheet.xls.

- Section 5.3.1 of the Development Coordination Manual addresses placement of sidewalks and states that a five-foot buffer between the sidewalk and the curb is preferred. Due to the urban nature of the site, we would accept a 3-foot buffer. Presently none is shown.

- In accordance with Section 5.4 of the Development Coordination Manual, sight distance triangles are required and shall be established in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. A spreadsheet has been developed to assist with this task. It can be found at http://www.deldot.gov/information/business/subdivisions/Intersection-Sight-Distance.xls.

- In accordance with Section 5.14 of the Development Coordination Manual, all existing utilities must be shown on the plan and a utility relocation plan will be required for any utilities that need to be relocated.

- Section 7.7.2 of the Manual addresses the need to provide 20-foot wide drainage easements for all storm drainage systems, open or closed, that fall outside the existing right-of-way or the drainage/utility easement. In accordance with this section, metes and bounds and total areas need to be shown for any drainage easements. The easements should be shown and noted on the record plan.

- This project is located within the regulated airspace zones of New Castle Airport (ILG), 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).

    - This notification form 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.

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

Upon reviewing the New Castle Foundry Apartments project, DNREC has identified that the proposed project is located within the floodplain and is adjacent to sensitive habitat. Opportunities exist to apply flood adaptation techniques while preserving natural habitat,

reducing the environmental impact on-site and providing additional energy efficiency alternatives on-site.

DNREC has identified that the project is within the AE Zone floodplain and the 1.0 meter sea level rise scenario. It is also adjacent to a wetland habitat of conservation concern, and DNREC recommends utilizing bio-retention and other green infrastructure along with native plantings, which would benefit wildlife. Another recommendation, first offered during the December 16th, 2015, Preliminary Land Use Service (PLUS) meeting, is to provide a pedestrian link to the New Castle Riverwalk. This may not be feasible by a direct route to the East, however a completed sidewalk connection to the West, through Dobbinsville, would be a viable alternative. Finally, we would encourage inclusion of infrastructure for electric plug-in vehicles in the project's parking design, to promote clean sustainable energy and reduce greenhouse gas emissions.

DNREC generally recommends high energy efficiency building standards (with consideration for alternative energy sources), and the use of green infrastructure, wherever practicable, to protect water quality, in all development. DNREC further recommends an abundant use of native vegetation and shade trees throughout the landscape.

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

TMDLs.

- The project is located in the greater Delaware River and Bay drainage area - specifically within the C & D Canal and Red Lion Creek watersheds. For 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. The specific TMDL nutrient and bacterial load reductions for the Red Lion creek watershed can be viewed in the following web link:

http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessmentTMDLs.aspx

Flood Management.

- The entire parcel is located in the Zone AE floodplain. This proposed structure will have to comply with the City of New Castle's floodplain ordinance. Flood mitigation measures may need to be added to the lobby to comply. All equipment will need to be addressed as well. FEMA has a Technical Bulletin for designing the installation of elevators in the floodplain. Placing fill on this lot to elevate the lobby floor above the base flood elevation may not suffice. The City has specific requirements for fill and compliance with all of the floodplain regulations.

Water Supply.

- The project information sheets state that the City of New Castle will be used to provide water to the proposed project. Our records indicate that the project is located within the public water service area granted to NCC Water & Light under Certificate of Public Convenience and Necessity 88-WS-05. DNREC recommends that the developer contact NCC Water & Light to determine the availability of public water. Any public water utility providing water to the site must obtain a certificate of public convenience and necessity (CPCN) from the Public Service Commission. Information on CPCN's and the application process can be obtained by contacting the Public Service Commission at (302) 739-4247. Should an on-site Public/Miscellaneous well be needed, a minimum isolation distance of 150 feet is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area. The DNREC Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

  Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

  All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications 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 are two (2) landfill sites associated with: (1) ABEX, and (2) Deemer Steel, located within 1,000 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 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 preliminary 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 New Castle Conservation District. Contact the New Castle Conservation District at (302) 832-3100, Ext. 3 for details regarding submittal requirements and fees.

Air Quality.

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

Table 1: Potential Regulatory Requirements

Regulation	Requirements
7 DE Admin. Code 1106 - Particulate Emissions from Construction and Materials Handling	• 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	• 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	• 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	• 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	• Ensure that emissions of nitrogen oxides (NO_x), non-methane hydrocarbons (NMHC), particulate matter (PM), sulfur dioxide (SO_2), carbon monoxide

Emissions	(CO), and carbon dioxide (CO_2) 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	• 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.

Hazardous Waste Management.

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

There is one DNREC Site Investigation & Restoration Section (SIRS) site located on the project parcel, and five sites within a ½ -mile radius of the property in question:

New Castle Gas Co (DE-0167) is located on the project property.

- Two leaking storage tanks were removed from the Site in August 1994 and March 1995 under the Tanks Management Section and given No Further Action designations.
- The Site became a Certified Brownfield in July 2010 to further investigate Site conditions for redevelopment.
- The BFI report concluded that the Site soils were slightly impacted by the former uses of the Site however it did not pose any danger to human or environmental health.
- A Proposed Plan of Remedial Action was published in February 2013 followed by the Final Plan in March of 2013.
- The Site was given a Certification of Completion of Remedy (COCR) for Operating Unit 1 of the Site. The wetland portion is being addressed under another Site.

Seeds of Greatness Church (DE-1474) is located adjacent north of the project property.

- The site was operated as a foundry from at least 1912 to 1985.
- A Preliminary Assessment was conducted in December 1983 followed by a Toxicological Evaluation in March 1985.
- A Site Inspection was conducted in April 1985. The SI determined that the Site groundwater was not a concern and was in compliance with DNREC and was given a No Further Action designation from the EPA.
- The Site was certified as a Brownfield in July 2009 with the intention of redeveloping the Site into a church complex.

- The Site is currently being investigated under the Brownfields Program however construction has ceased until further notice.

ABEX Corp Amsco Landfill (DE-0065) is located adjacent north of the project property.

- The Site was the location of a small landfill that was used to dispose of foundry waste and casting sands.
- A Preliminary Assessment was conducted in December 1983 and it was found that the landfill was operating on an expired permit.
- In order to get the landfill back in to compliance, a Foundry Waste Landfill Management Plan was developed in June 1984.
- A Site Inspection was conducted in April 1985 and determined that the Site was not impacting the groundwater or any public or private wells.
- The EPA granted the site a No Further Action designation. The site is currently vacant and not used for more than equipment storage.

427 West 7th Street Site (DE-1574) is located 0.22 miles east of the project property.

- The Site consist of two Operating Units (OU-1, OU-2) that was a former car dealership with a showroom floor.
- The Site historically been vacant and undeveloped until 1992 when the property was developed for automotive sales.
- The Site was issued a NFA letter by the Tank Management Section in 1992 and in 1998.
- A Site Specific Assessment was conducted in August 2014 and a Proposed Plan was issued for soil on OU-1in September 2014. The Proposed plan required that the site remain non-residential, and no installation of groundwater wells. The Final Plan was issued in October 2014.
- OU-2 of the Site caught fire in January 2015. Damages were predominantly to the southern portion of the building and garage areas. Some oil products were released but were quickly cleaned up.
- OU-2 was entered in to the Voluntary Clean-up Program (VCP) in April 2015.
- A Proposed plan for OU-2 was issued in May 2015 and required that the site be capped with one foot of clean fill material in non-wetland areas, no groundwater wells and land use restrictions. Final Plan was published in June 2015.
- The Site is currently still under investigation

Deemers Steel New Castle Plant (DE-0045) is located 0.27 miles north of the project property.

- The Site is a former low alloy foundry that began operations in 1956.
- A Preliminary Assessment was conducted in October 1981 due to the disposal of ash from the furnace baghouse.
- A Site Inspection was conducted in July 1982 and determined there was no indication of an impact on human health or the environment.
- An Endangerment Assessment was conducted in May 1988 and concluded the Site posed no threat.

- Another Phase I was conducted in December 1990 to assess the parcels north and south of the Site (the Deemers foundry and landfill).
- Two, five year reviews were conducted in 1995 and 2001. The reviews were conducted to ensure that the remedial action is still protective to human health and the environment. The five years reviews were discontinued do to the closure of an active area on the Site.
- Additional soil and groundwater samples were collected during a Site Inspection in December 2002 followed by a Remedial Action in 2005.
- The Final Plan of Remedial Action was published in March of 2007 and required that the Site be capped with 2 feet of clean topsoil, the establishment of a Groundwater Management Zone and erosion controls.
- The Site was given a COCR in July 2012.

Dobbinsville Ball Field (DE-1150) is located 0.25 miles west of the project property.

- The Site is part of a 27.45 acre parcel located on both sides of Route 9 in which portions are used as open space, play areas and ball fields.
- During a visit to the Army Creek Marsh, located adjacent to the ball field, a white polymer was noted in several locations.
- The Facility Evaluation was performed to determine if waste materials generated by the Former Amoco Polymer Plant was disposed of on the Site.
- The results of the Facility Evaluation could not determine a link between the site and the Former Amoco Polymer Plant. The Site was given a No Further Action designation.

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.

The following (LUST) projects are located within a ¼ -mile from the proposed project area:

- ABEX Corp AMSCO Division Facility ID: 3-000183, Project: N8711055, (Inactive)
- Potts Welding & Boiler Repair Facility ID: 3-001310, Project:N9805080, (Inactive)
- Auto Collision Services Inc. Facility ID:3-001343, Project: N9504083, (Inactive)
- Gambacorta Motors Inc. Facility ID: 3-000045, Project: N9812209, (Inactive)

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

- Nothing is known on this parcel. Archaeological survey nearby did not find any resources eligible for the National Register of Historic Places. It appears from a 1926 aerial photograph to have been covered with fill material at that time. This indicates that the parcel has always been wet during historic times, and therefore no resources from that time period are expected. While there may be prehistoric resources, they are likely deeply buried by the effects of sea level rise.

- Owners and developers who may plan to apply for an Army Corps of Engineers permit or for federal funding, such as HUD or USDA grants, should be aware of the National Historic Preservation Act of 1966 (as amended). Regulations promulgated for Section 106 of this Act stipulate that no ground-disturbing or demolition activities should take place before the Corps or other involved federal agency determines the area of potential effect of the project undertaking. These stipulations are in place to allow for comment from the public, the Delaware State Historic Preservation Office, and the Advisory Council for Historic Preservation about the project's effects on historic properties. Any preconstruction activities without adherence to these stipulations may jeopardize the issuance of a permit or receipt of funding if it is determined that such opportunity to comment has been foreclosed. (For further information on Section 106 and the Advisory Council's role, please review the Advisory Council's website at: www.achp.gov)

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

- The subject land is bounded on three sides by New Castle's Battery Park, owned by the Trustees of New Castle Common. The park includes a trail along the Delaware River and other trails leading inland to the Dobbinsville neighborhood, located west of the proposed apartments. If the topography of the park permits, we recommend that the developer work with the Trustees to create a connection to the park's trail system so that residents can access the park without traveling on West 7th Street.

- The applicant should expect a requirement that any substation and/or wastewater facilities will be required to have access from the internal subdivision street with no direct access to West 7th Street.

- Please be advised that as of August 1, 2015, all new plan submittals and re-submittals, including major, minor and commercial plans, shall now be uploaded via the PDCA (Planning Development Coordination Application) with any review fee paid online via credit card or electronic check. Guidance on how to do this is available on our website at http://www.deldot.gov/information/business/subdivisions/

- Be advised that the Standard General Notes have been updated and posted to the DelDOT website. Please begin using the new versions and look for the revision date of July 31, 2015. The notes can be found at http://www.deldot.gov/information/business/subdivisions/DelDOT_Development_Coordination_Plan_Sheet_Notes.doc

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

Flooding and Sea Level Rise.

- The planned development area lies within an area that will be subject to direct and permanent inundation from sea level rise (http://de.gov/slrmap).

  Sea levels in Delaware have risen by about a foot over the past century (NOAA, 2014). This rate of sea level rise is likely to accelerate in the coming decades as a result of global climate change and local subsidence. Accelerated sea level rise will result in permanent flooding of low-lying coastal areas and increased risk of flood damage during storms (DNREC, 2012).

  DNREC Preliminary Land Use Service maps depicting future inundation risk from sea level rise indicate that approximately .97 acres of this site out of .97 acres or 100 percent could be inundated by sea level rise of 1.5 meters. Also, at 1 meter .81 acres out of .97 or about 83 percent could be permanently inundated. In addition the access from route 9 could be inundated. In the short-term, sea level rise on this parcel, combined with periodic coastal flooding events, may result in repetitive flood damage to roads and significant difficulties maintaining storm water, drainage and other infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of structures.

  1. Lots within flood prone areas should be eliminated.
  2. Any structures that are built within an area mapped as both floodplain and sea level rise zone should be constructed with 18” of freeboard plus additional freeboard to accommodate future sea levels.
  3. Filling lots to elevate them to above base flood elevation is discouraged.

4. Access roads should be designed to be flood resilient for the entirety of your project's design life span. This includes ensuring that the roadway functions for the 1% chance flood plus anticipated future sea level rise.

References:

NOAA (National Oceanic and Atmospheric Administration). (2014). Mean Sea Level Trend, Lewes, DE. Retrieved from http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8557380.

DNREC Delaware Coastal Programs. (2012). Preparing for Tomorrow's High Tide: Sea Level Rise Vulnerability Assessment for the State of Delaware. Dover, DE: Department of Natural Resources and Environmental Control. Retrieved from http://de.gov/slrva.

Soils Assessment.

- The soil mapping units mapped in the immediate vicinity of the proposed construction is Urban land (Up) and Transquaking and Mispillion (TP). Urban land is a soil mapping unit that consists of areas that have been modified or disturbed (e.g., excavation, filling, and/or grading) so that they no longer have specific definable properties (e.g., drainage class, permeability, soil textures…etc) and cannot be classified properly. Longmarsh is a poorly-drained wetland associated (hydric) soil that has severe limitations for development and should be avoided.

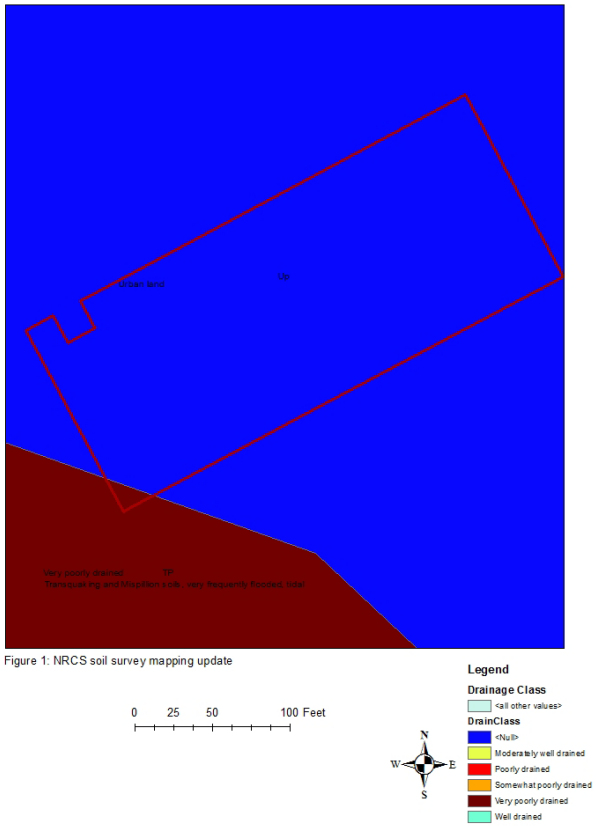


Figure 1: NRCS soil survey mapping update

Key Wildlife Habitat.

- There are mixed broadleaf fresh water tidal marshes adjacent to this property. These habitats are mapped as key wildlife habitat in the Delaware Wildlife Action Plan (http://www.dnrec.delaware.gov/fw/dwap/Pages/default.aspx) because it is part of a large wetland complex that can support an array of plant and animal species. To avoid impacts to this habitat, best management practices for storm water that might drain into the marsh should be employed.

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. Until a PCS strategy gains regulatory support, we strongly encourage the applicant to reduce nutrient and bacterial pollutants through voluntary implementation of the following recommended BMPs, which would:

    - Maintain as much of the existing open space as possible; we further suggest additional native tree and native herbaceous planting, wherever possible.

    - Establish a vegetated buffer of at least 100 feet from the adjoining wetlands and waterbodies. Based on a review of existing buffer research by Castelle et al. (Castelle, A. J., A. W. Johnson and C. Conolly. 1994. Wetland and Stream Buffer Requirements – A Review. J. Environ. Qual. 23: 878-882.), an adequately-sized buffer that effectively protects wetlands and streams, in most circumstances, is about 100 feet in width. In recognition of this research and the need to protect water quality, the Watershed Assessment Section recommends that the applicant maintain/establish this aforementioned 100-foot buffer width (planted in native vegetation) from all waterbodies (including all ponds) and all non-tidal and tidal wetlands (i.e., a USACE approved field wetlands delineation for non-tidal wetlands and State approved wetlands delineation for tidal wetlands).

    - Calculate post-construction surface imperviousness with all forms of created (or constructed) surface imperviousness (e.g., rooftops, driveways, parking lots, sidewalks, open-water storm water management structures, ponds, and roads) included in the calculation. Omission of any of the above-stated forms of surface imperviousness will result in an underestimate of the actual post-development surface imperviousness and the associated environmental impacts.

    - Employ green-technology storm water management and rain gardens (in lieu of open-water management structures) as BMPs to mitigate or reduce nutrient and bacterial pollutant runoff. Please contact Lara Allison at (302) 739-9939 for further information about the possibility for installing rain gardens on this parcel.

    - Use pervious paving materials 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, the Watershed Assessment Section has developed a methodology known as the "Nutrient Load Assessment protocol." The protocol is a tool used to assess changes in nutrient loading (e.g., nitrogen and phosphorus) resulting from the conversion of individual or combined land parcels to a changed land use, thus providing applicants and governmental entities with quantitative information about the project's impact(s) on baseline water quality. We strongly encourage the applicant/developer use this protocol to help them design and implement the most effective BMPs. Please contact John Martin or Jen Walls of the Division of Watershed Stewardship, at (302) 739-9939 for more information on the protocol.

Additional information on Hazardous waste.

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

Additional information on tank management.

- When contamination is encountered, PVC pipe materials should be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

  If any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the DNREC Tank Management Section (TMS). If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMS.

Additional information on air quality.

- DNREC encourages developers and builders to consider all sustainable growth practices in their design, but we believe, however, that the air quality impacts associated with the

project should be completely considered. New homes, businesses, and schools 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 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 facility, and
- All transportation activity.

Based on the information provided, the three air emissions components (i.e., area, electric power generation, and mobile sources) for this project were quantified. Table 2 – Projected Air Quality Emissions represents the actual impact the New Castle Foundry Apartments may have on air quality.

Table 2: Projected Air Quality Emissions for New Castle Foundry Apartments

Emissions Attributable to New Castle Foundry Apartments (Tons per Year)	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO_2)	Fine Particulate Matter ($PM_{2.5}$)	Carbon Dioxide (CO_2)
Area Source	0.8	0.1	0.1	0.1	3.4
Electric Power Generation	*	0.3	1.2	*	169.9
Mobile Source	1.2	1.3	*	*	798.0
Total Emissions	2.0	1.7	1.3	0.1	971.3

(*) *Indicates data is not available.*

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 percent more energy efficient. Savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of energy efficiency translates into a percent reduction in pollution. The Energy Star Program is an excellent way to save on energy costs and reduce air pollution.

- Offering geothermal and/or photo voltaic energy options. These systems can significantly reduce emissions from electrical generation and from the use of oil or gas heating equipment.

- Constructing with high albedo, high solar reflectance materials. This includes roofing and hardscape. These materials help to reduce heat island impacts and, by extension, help to minimize the potential for localized ground-level ozone formation. These materials also help reduce demands on air conditioning systems and save on energy costs.

- Providing infrastructure for plug-in vehicles. Such measure may entice a potential apartment owner/renter to purchase an electric vehicle if the electrical outlets are available as this will help minimize vehicle emissions.

- 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 project. 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 New Castle Foundry Apartments. The DAQ point of contact is Deanna Cuccinello and may be reached at (302) 739-9402 or Deanna.Morozowich@state.de.us

Delaware State Housing Authority – Contact Karen Horton 739-4263

- DSHA supports the proposal to develop 27 residential units on 1 acre located on West 7th Street in the City of New Castle. This site is in close proximity to existing services, markets, and employment opportunities. In addition, DSHA's recently completed 2015-2020 Housing Needs Assessment identified a growing demand for rental housing as more households wait to purchase a home, or have transitioned into the rental market due to the recent foreclosure crises.

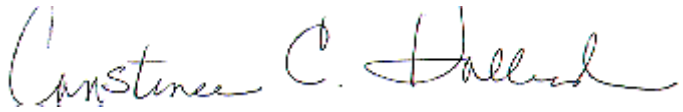
- It is also important to note that while large suburban homes have dominated development in Delaware for several decades, a growing body of research indicates that we are in the midst of a significant market shift. The baby boomers that once drove suburban development are now aging and are looking to downsize into something more manageable. 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 younger age ranges most likely at stages in their life and income to support apartments, condominiums and entry level homes.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning

Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

Sincerely,



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

CC: New Castle County
City of New Castle