



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

December 13, 2004

Mr. Bruce M. Buker
Karins & Associates
17 Polly Drummond Center, Ste. 201
Newark, DE 19711

RE: PLUS review – PLUS 2004-11-06; Barrett Farm

Dear Mr. Buker:

Thank you for meeting with State agency planners on November 23, 2004 to discuss the proposed plans for the Barrett Farm project to be located on both sides of Briarbush Road, northwest of Banning Road.

According to the information received, you are seeking site plan approval for 342 single-family detached houses.

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 Kent 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.

This office has received the following comments from State agencies:

Office of State Planning Coordination – Contact: David Edgell 739-3090

This project is located in Investment Level 2 according to 2004 State Strategies for Policies and Spending. This site is also located in the Kent County Growth Zone. Investment Level 2 reflects areas where growth is anticipated by local, county, and State plans in the near term future. State investments will support growth in these areas. Our

office has no objections to the proposed development of this project in accordance with the relevant County codes and ordinances.

State Historic Preservation Office (SHPO) – Contact: Anne McCleave 739-5685

There is an existing house and sheds on the subject property, which are to be demolished. The house, or at least parts of it, could date to the mid 1800s, as it is shown on the 1868 Beers Atlas. The State Historic Preservation would prefer that the house be preserved and incorporated into the residential development. However, if it is not preserved, please contact Anne McCleave at 302-739-5685 to schedule a time she could visit the property to document the house and outbuildings before their demolition.

There is a medium probability for prehistoric archaeological sites.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

- 1) A traffic impact study (TIS) was scoped for this project on October 5, 2004. DelDOT will comment to Kent County on the results of that study when it is complete and we have reviewed it. At a minimum, the developer should anticipate being required to improve Briarbush and Banning Roads.
- 2) DelDOT commends the developer for providing the proposed stub street from Barrett Farm South to the Joseph Jackewicz property and they recommend that a second stub street be provided to the Glen Cypress property.
- 3) It is also recommended that a stub street be provided from Barrett Farm North to the Doris Thompson property. DelDOT recognizes that there is a large pond on the Thompson property, apparently created as part of a borrow pit operation. There is the potential for that property to be redeveloped residentially.
- 4) Briarbush and Banning Roads are classified as local roads. From the sketch plan, they appear to have existing right-of-way widths of about 40 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication to provide the additional 10 feet (or 20 feet where the development would front both sides of the road) from this project.
- 5) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site.
- 6) It is recommended that you change the site design to eliminate some of the proposed cul-de-sacs, in order to enhance the grid street pattern and provide more of a sense of community. On Barrett Farm South, the circle proposed west of the entrance should be reconfigured as a stub street.

- 7) The developer's engineer should contact the DelDOT project manager for Kent County, Mr. Brad Herb of Johnson, Mirmiran & Thompson, regarding their requirements for streets and access. Mr. Herb may be reached at (302) 266-9080.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-3091

Soils

According to the Kent County soil survey, Sassafras, Rumford, Othello and Mixed Alluvial were mapped in the immediate vicinity of the proposed construction. Sassafras and Rumford are well-drained upland soils that have few limitations for development. Othello is a poorly-drained wetland associated (hydric) soil that has severe limitations for development. Mixed alluvial is a very poorly-drained wetland associated (**hydric**) soil of floodplains.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine forested wetlands in the northern portion of the parcel. Impacts to these wetlands which are adjacent to Cypress Branch are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process. Impacts to streams and associated riparian wetlands, including road crossings, are regulated by the DNREC Wetlands and Subaqueous Lands Section, and by the Corps of Engineers.

Site plans show 16 lots within the wetland complex. Impacts to the degree shown on the site plan are unlikely to receive permit approvals. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Lots should be removed in their entirety from the wetland, wetland buffers and the forested areas. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

It should also be noted that this parcel immediately adjacent to sensitive headwater riparian wetlands associated with a headwater creek. Headwater riparian wetlands and their associated streams are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system downstream. Since headwater streams are a major avenue for nutrient-laden stormwater and sediment runoff their protection deserves the highest priority. **In recognition of this concern, the Department strongly recommends that the applicant preserve, in its entirety, the existing natural forested buffer in the northwest corner of subject parcel. Efforts to maximize or expand the existing natural buffer width via planting of native woody or herbaceous vegetation beyond the recommended 100-foot buffer width is also strongly recommended.**

TMDLs

Although Total Maximum Daily Loads (TMDLs) as a “pollution runoff mitigation strategy” to reduce nutrient loading have not yet been developed for most of the tributaries or subwatersheds of the Delaware Bay watershed to date, work is continuing on their development. TMDLs for the St. Jones River subwatershed, of which this parcel is part, are scheduled for completion in December 2006.

Therefore, until the specified TMDL reductions and pollution control strategies are adopted, it shall be incumbent upon the developer to employ best available technologies (BATs) and/or best management practices (BMPs) as “methodological mitigative strategies” to reduce degradative impacts associated with development.

Water Supply

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

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-3665.

Stormwater Management

Stormwater management is an integral part of the site development infrastructure. The planning and design for stormwater management should begin early. The applicant is

encouraged to contact the Kent Conservation District as soon in the planning process as possible in order to receive their preliminary comments. Contact Jared Adkins at (302) 741-2600, ext. 3, for plan submittal and review requirements.

The areas affected by the storm water management facility may require a State of Delaware Subaqueous Lands Permit. Please contact the Wetlands and Subaqueous Lands Section at 302.739.5726.

Drainage

The Drainage Section is not aware of any existing drainage problems associated with the proposed project; however, the Drainage Section requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

The Drainage Section further requests for any area designated as a drainage/utility easement be left as open space and not owned by the individual landowners. Structures, decks, buildings, sheds, kennels, fences or trees should not be placed within the drainage easement to allow for maintenance.

Forests

According to 2002 aerial photos there is a forested area in the northern portion of this parcel; site plans show that this forest will be removed. Lot lines should be redesigned to avoid all impact to the forested area. This area provides important water quality, air quality and habitat benefits both to the site itself and the region. Therefore, the developer is strongly encouraged to preserve, and where possible, enhance forested resources on site. This includes removing lot lines and infrastructure (such as storm water management ponds) from forested areas to the extent possible and minimizing any clearing activities. The forested areas on-site should be viewed as a community asset and managed appropriately.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as storm water management ponds) be pulled out of the forest and that areas of community open space be designated along the forested areas.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

Rare/Threatened/Endangered Species

A review of our database indicates that there is a record of *Argia bipunctulata* (seepage dancer) in the wetland area that extends from an adjacent parcel into the project parcel. Impacts to this state rare damselfly can be avoided by leaving the wetland area intact and maintaining the forested area in the upper quadrant of the project parcel. At the very least, a 100ft (preferably 300ft) forested buffer should be maintained around any wetlands and along Cypress Branch. Buffers are an integral component of aquatic and wetland habitats, reducing the amount of sediments, pollutants, and other non-point source material that may affect the function and integrity of habitat and the condition and survivability of aquatic organisms. Forested buffers also serve as habitat for many terrestrial species that are dependent on aquatic and wetlands habitats for a portion of their annual life cycle.

In addition, because of the existence of this species, the wetland area within this project parcel lies within a State Natural Heritage Site. However, it does not lie within a Delaware National Estuarine Research Reserve. This is one of the criteria used to determine the presence of Critical Resource Waters. The final decision regarding Critical Resource Waters – if this is an issue – will be made by the U.S. Army Corps of Engineers (ACOE). The information above will aid the ACOE in their determination

Revegetation/Landscaping

It is requested that no invasive species be used in the revegetation of disturbed or landscaped areas. A list of species considered invasive in Delaware can be found on the DNHP web site, www.dnrec.state.de.us/fw/invasive.htm. The DNHP further encourages the use of native plants, where possible/feasible, for habitat restoration projects on-site and their Botanist, Bill McAvoy can be contacted at (302) 653-2880 to assist you in developing a plant list.

Nuisance Species

The ponds within the subdivision will likely attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. Although small

numbers of these species are enjoyed by residents, geese and swans can quickly multiply and overwhelm the area. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Ponds that remain in the subdivision plan should be landscaped to deter nuisance species. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around ponds, are not as attractive to geese because they do not feel as safe from predators and other disturbance when their view of the area is blocked. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recreation

It is recommended that sidewalks be built fronting every residence and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, public mass transit stops, schools, stores, work, etc.

If a trail system is planned, it is recommended that a series of stacking trail loops be designed with access points along the trail and connections to adjacent properties. Community trail systems with long continuous trails, perimeter-only trails, and systems with few access points, often go unused and neglected. For trail design/construction specifications, contact Susan Moerschel at (302) 739-5285.

Underground Storage Tanks

There are two inactive LUST site(s) located near the proposed project:

Ed's Auto Repair, Facility # 1-000018, Project # K9408207
Del Dot Magnolia, Facility # 1-000304, Project # K9907147

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel in the contaminated areas.

Air Quality

Air pollution threatens the health of human beings and other living things on our planet. While often invisible, pollutants in the air create smog and acid rain, cause cancer or other serious health effects, diminish the protective ozone layer in the upper atmosphere, and contribute to the potential for world climate change. Breathing polluted air can have numerous effects on human health, including respiratory problems, hospitalization for heart or lung disease, and even premature death. Some can also have effects on aquatic life, vegetation, and animals.

Once complete, vehicle emissions associated with this project are estimated to be 26.2 tons (52,493.4 pounds) per year of VOC (volatile organic compounds), 21.7 tons (43,461.0 pounds) per year of NO_x (nitrogen oxides), 16.0 tons (32,066.3 pounds) per year of SO₂ (sulfur dioxide), 1.4 ton (2,854.5 pounds) per year of fine particulates and 2,195.5 tons (4,391,008.6 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 10.6 tons (21,173.0 pounds) per year of VOC (volatile organic compounds), 1.2 ton (2,329.7 pounds) per year of NO_x (nitrogen oxides), 1.0 ton (1,933.3 pounds) per year of SO₂ (sulfur dioxide), 1.2 ton (2,494.8 pounds) per year of fine particulates and 42.9 tons (85,830.6 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.2 tons (8,391.4 pounds) per year of NO_x (nitrogen oxides), 14.6 tons (29,187.6 pounds) per year of SO₂ (sulfur dioxide) and 2,152.6 tons (4,305,178.1 pounds) per year of CO₂ (carbon dioxide).

	VOC	NO _x	SO ₂	PM _{2.5}	CO ₂
Mobile	26.2	21.7	16.0	1.4	2195.5
Residential	10.6	1.2	1.0	1.2	42.9
Electrical Power		4.2	14.6		2152.6
TOTAL	36.8	27.1	31.6	2.6	4391.0

The Department of Natural Resources and Environmental Control is asking that local jurisdictions consider mitigation to help resolve this issue. Mitigation might involve limiting large new developments to growth zones, focusing development to urban areas capable of providing mass transit services, requiring more energy efficient homes which would lessen air quality impacts, and promoting walkability and bikability within and between developments and town centers.

With that said this State notes that this proposed development is within a Level 2 Investment. Therefore, the State would ask that you consider the development of energy efficient homes and interconnectivity with the neighboring developments to promote walkability and bikeability.

State Fire Marshal's Office – Contact: John Rossiter 739-4394

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

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:

a. **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 1000 feet spacing on centers are required.
- The infrastructure for fire protection water shall be provided, including the size of water mains.

b. **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 Briarbush Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- If the use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.

c. **Gas Piping and System Information:**

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

d. **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”

- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

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.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Public Service Commission - Contact: Andrea Maucher 739-4247

This project is in a certificated area for Artesian Water Company.

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

Delaware State Housing Authority – Contact Karen Horton 739-4263

This proposal is to develop 342 residential units on 130 acres northwest of Magnolia on both sides of Briarbrush Road and it is located in Investment Level 2, according to the *State Strategies Map*. DSHA supports this proposal because it is located in an area where the state is encouraging development and some of the units will be targeted for first-time homebuyers. The provision of these units will help address the need for affordable homeownership that was identified in the 2003 Statewide Housing Needs Assessment.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the large number of residential units being proposed, a significant impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Kent County, to keep them apprised of all development activities. Routes 13 and 113A are coastal storm evacuation routes and this development will be affected by traffic volume on these routes during a coastal storm event.

Department of Education – Contact: Nick Vacirca 739-4658

342 dwelling units could generate an estimated 171 additional students for the Caesar Rodney School District.

Kent County does not have school concurrence legislation at this time; however, it is recommended that the developer submit a package to the school district for informational purposes.

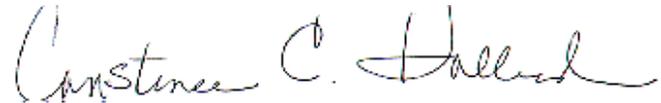
If the development is approved and build, please use the following information for school transportation planning. If there are homes more than 1/2 mile from the nearest public road (outside the development), developers should plan wide enough streets so that large school buses can access and turn around (without backing) from the furthest areas within the development while picking up and dropping off students. Should there not be any sites more than 1/2 mile from the nearest public road, provisions for appropriate pick-up and drop-off at the development entrance should be included. The developer should work closely with the school district transportation supervisor.

In addition if any development is planned adjacent to school property, the developer should provide walking or bike paths for the use of multi modes of transportation.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

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

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP
Director

CC: Kent County
Intersect Development