Beverly Eaves Perdue, Governor

Dee Freeman, Secretary
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

January 16, 2009

DWQ Project # 2008-0880
Buncombe County

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. Don Nickell
The Cliffs Communities
3598 Highway 11
Travelers Rest, SC, 29690

Subject Property: **The Cliffs at High Carolina**
Ut to Swanannoa River [040302,6-7-8, C]
Ut to Licklog Branch [040302,6-7-8, C]
Ut to Flat Branch [040302,6-7-8, C]
Rocky Fork [040302, 6-57-4, C, TR]
Ut to Ellison Branch [040302, 6-57-4, C, TR]
Ut to Cane Creek [040302, 6-57-4, C, TR]

REQUEST FOR MORE INFORMATION

Dear Mr. Nickell:

On November 18, 2008, the Division of Water Quality (DWQ) conducted a Public Hearing related to your application to impact 0.219 acres of wetlands, 0.03 acre of open water and 6,149 linear feet of streams in order to construct the proposed subdivision and golf course. Based upon technical review of your application materials, along with concerns relayed during the Public Hearing, DWQ has determined that the information itemized below will be necessary in order for us to continue to review your project. Please provide five copies of the additional information requested below, and be advised that your application will remain on hold as incomplete until we receive this information. If we do not receive the requested information, your project will be formally returned as incomplete.

Additional Information Requested:

General Questions/Comments

Temporary/Construction Impacts
The impacts, as presented in the application, appear to be focused on the post construction impacts, but fail to elaborate on the impacts that will occur during construction. As an example, all of the post construction road crossings describe the amount of fill that will occur in the streams. However, there is no discussion on the anticipated impacts that may occur during construction from activities such as how to gain access to the stream, need for equipment in stream buffers or the stream itself, construction techniques, the placement of bridge footers in the stream, stream diversions during construction, etc. Please provide any additional information on impacts that may occur during construction. At a minimum, we will need to see any impacts that may occur due to: 1) the need for equipment access to streams, stream buffers, wetlands, or any other waters of the State (including any temporary stream crossings), 2)

any grading or clearing of stream, stream buffers, wetlands, or any other waters of the State beyond the proposed impact areas (including clearing of vegetation), 3) any stream diversions or temporary in-stream dams, and 4) any other activity that may occur during construction that could result in impacts to streams, stream buffers, wetlands or any other waters of the State.

Downstream Protection (Instream Rip Rap & Cross Vanes)
At present, the proposed impacts for the project (including all the road crossings as well as the golf course) appear only to include the impacts from the placement of the culvert. They do not appear to include the impacts that will be required for energy dissipation downstream of installed culverts. Please revise your impacts to include: 1) the previously requested construction-related impacts, 2) the post construction (i.e. permanent) impacts due to the placement of the culvert, and 3) any downstream channel protection such as in-stream rip rap placement or in-stream cross vanes.

Pond Management & Irrigation
It is not clear from the review of the application how the pond located on site will be used for irrigation. It appears that the pond will be used as a source for irrigation of the golf course. However, there appears to be no provision in the application for maintaining a minimum pool depth in the pond. The pond is a classified surface water with corresponding water quality standards. Moreover, the streams that drain into the pond support known existing uses including active populations of brook trout. Thus, any use of the pond for irrigation will have to be performed in such a manner so as to maintain those existing uses. A minimum pool requirement along with other protective measures to ensure that the existing uses of the streams and pond are protected will be required. Please explain how you intend to use the pond for irrigation purposes.

Cumulative Impact Analysis

The qualitative analysis presented in your application states that the project will not result in any impacts from induced growth. However, at the public hearing those supporting the development indicated that their support was, at least, partially due to the positive economic effects that the project would have for the area. Thus, your application seems to be incongruent with comments presented at the public hearing. Given the size of the project, it seems reasonable to expect increased economic activity in the area to support those living in the development and using the golf course. Thus, DWQ feels that additional information relating to the potential for cumulative impact should be presented. It should be noted that DWQ does not believe that a quantitative analysis of the potential impacts is necessary. However, an expanded qualitative analysis that discusses the water resources and their corresponding classifications in the general (local) area around the development is needed. In addition, a review of any proposed or new building permits (for the local area around the development) for industries planned for the area to support the increased population (such as supermarkets/strip malls, gas stations, etc.). If specific examples of additional proposed developments are not available, then a more generalized discussion on the types and amounts of ancillary development that might occur in the area would be appropriate. Finally, a discussion of the multitude of existing federal, state, and local laws, statutes, and regulations that are presently in place to protect the water resources of the area should be presented. If you have any questions or require in assistance in developing this analysis, please feel free to contact John Hennessy at 919-807-6377, or email him at john.hennessy@ncmail.net.

Golf Course Design Questions/Comments

Hole #1
Based on your meeting with the Division of Water Quality (hereby known as DWQ) on January 9, 2009, we better understand the reasons why the applicant desires the stream fill around the first hole tee and practice tee area. While the discussion from the meeting was helpful in DWQ's understanding, we will need a more detailed discussion, submitted in writing that explains the applicant's rationale for the impacts. Please include in your discussion an examination of potential engineering practices that might be used to reduce impacts such as soil lifts, etc. In addition, please describe why a rerouting of hole #9 could not be performed to minimize impacts to impact sites 27 and 32.

Hole #4
See previous comments on the proposed bridge crossing of the stream about identification of construction impacts for cart path crossings. Please identify, quantify, and discuss the need for any proposed impacts for the construction of the bridge project. The list of potential impacts include, but may not be limited to, any impacts from construction-related access (equipment or haul roads), temporary placement of fill in the stream, stream diversions, slope stabilization practices, or impacts to stream buffers.

Hole #6
See comments on Hole #4 about identification of construction impacts for golf cart crossings of streams with bridges. While the discussions we had on January 9, 2009 were helpful in our understanding, we will need a detailed explanation as to why this fill is necessary. Please submit a written explanation that recants what was discussed at the meeting and details the need for this impact.

Hole #7
Please describe the rationale for the proposed fill on this hole. While the discussions from the meeting on January 9, 2009 were helpful in DWQ's understanding, DWQ will need a detailed explanation as to why this fill is necessary. Please describe the rationale for this proposed impact. In particular, please describe the ramifications to your design, as well as the resulting changes to impacts elsewhere on the project, if this impact were not allowed by the 401 Water Quality Certification.

Hole #8
The application lacked any explanation for the proposed impact. It appears that the proposed design can be changed to reduce impacts to the pond. Please discuss the need for this impact, or alter your design to eliminate or reduce the impacts.

Hole #9
See comments on Hole #4 about identification of construction impacts for golf cart crossings of streams with bridges.

Hole #10
See comments on Hole #4 about identification of construction impacts for golf cart crossings of streams with bridges. In addition, please explain why the impacts to the stream on this hole are necessary. It appears that the stream in question could be used played over and still not interfere with the integrity of the hole. Also, please explain why the impacts to site #30 are necessary.

Hole #11
Review of the application reveals the potential for moving the cart path and the tees toward Hole #17 to reduce potential impacts. While the discussions from the meeting on January 9, 2009 were helpful in DWQ's understanding, DWQ will need a detailed explanation as to why this fill is necessary. Please submit a written explanation that recants what was discussed at the meeting and details the need for this impact.

Hole #12
While the discussions we had on January 9, 2009 were helpful in our understanding, we will need a detailed explanation as to why this fill is necessary. Please submit a written explanation that recants what was discussed at the meeting and details the need for this impact. In your explanation, please provide a discussion that explains the need for the impacts for this hole and corresponding cart path if the 15th hole is ultimately relocated north to minimize stream impacts (see comments for the 15th hole below).

Hole #15
While the discussions we had on January 9, 2009 were helpful in our understanding, we will need a detailed explanation as to why this fill is necessary. Please submit a written explanation that recants what was discussed at the meeting and details the need for this impact. Please include in your explanation why the hole could not be shifted north to avoid or minimize impacts to streams. It appears that the northern boundary of the "golf course envelope" bounds the hole to the north with potential lots located to the north. Please be advised that DWQ views that boundary as an artificial construct that could potentially be relocated if needed to minimize stream impacts. However, if other design or construction constraints are limiting the possible movement of the hole to the north, then please provide that detailed explanation.

Onsite Mitigation
The discussions on January 9, 2009, provided DWQ with a better understanding of your proposal for onsite stream mitigation by preserving stream buffers throughout the site. However, before we can approve any proposed buffer preservation, we will need to review and approve a conservation easement that protects those streams from encroachment in perpetuity. Moreover, the applicant (and/or present landowner if different), will need to place appropriate deed notifications and restrictions on the affected property to ensure the long term protection of those streams.

Offsite Mitigation

Shoal Falls Farm Mitigation Site
Wetland Area 2
In reviewing the application it was unclear what was being proposed for this site. Please provide a greater detail of explanation and perhaps mapping to clarify the proposed work at this site.

In-stream Structures
At present, the plan provides a discussion on the need and potential for in-stream structures such as cross vanes, j-hooks, and log vanes. However, there is no map that shows the location for the placement of these structures in the stream. While DWQ understands that modifications to these locations may need to occur during construction due to unforeseen problems, the application needs to show their anticipated location along with corresponding station numbers and stream profile. Please provide a plan that shows where all the in-stream structures are to be located for the proposed stream restoration plan, along with corresponding station numbers and stream profile. If the applicant wishes to include a proposed adaptive management proposal to allow for minor changes of design during construction, please include the proposed language in your submittal.

Sediment Transport Analysis
The proposed stream restoration included no sediment transport data for the proposed restored reach. Please provide a complete sediment transport analysis for the proposed reach. If you have any questions about what is required, please contact John Hennessy at 919-807-6377, or by email at john.hennessy@ncmail.net.

Stream Monitoring
The proposed monitoring regime is acceptable.

Success Criteria
The success criteria proposed in your application is vague. In your submittal of additional information, please add language to the application that requires written approval from DWQ and the Army Corps of Engineers before a site is deemed successful.

Conservation Easement
We could not find any proposed conservation easement for the proposed mitigation site. Please provide a proposed conservation easement for our review and approval.

Stream Enhancement I
The plan discusses the proposal for performing stream enhancements to Shoal Creek. The written application describes the plan as stream enhancement I, whereas the map (legend) describes the plan as stream enhancement II. Please clarify for it will affect the authorized mitigation ratios. In addition, the application does not provide any specific data about the proposed nature and location of the proposed stream enhancements. The application discusses alterations to the stream dimension and profile and changes in land practices. However, no further detail is given. Please provide additional information about the specific proposed enhancements. Please include a map showing the locations of the proposed enhancements, and a discussion that describes what is to be done at each enhancement location. As an example, if a particular meander bend is to have an in-stream structure added, reshaping of the stream bank is necessary, and riparian vegetation must be planted, then please locate that section of the stream on a site map and describe the work to be done at that location. This information is necessary to determine that the proposed work is acceptable and will result in a stable stream as well as allow for the proper calculation of mitigation ratios. The application, at present, proposes 1:1 credit for the stream enhancement sites. As you may be aware, 1:1 credits are usually reserved for complete stream restoration (pattern, dimension, profile, etc.). It is unlikely that the proposed 1:1mitigation credit proposed for the enhancement areas of this site will be allowed by DWQ. A higher ratio of 2:1 or even 3:1 may be used instead. After you provide the additional information, DWQ will be available to discuss those issues with you.

Please direct any questions you may have on the golf course related comments or the mitigation comments to John Hennessy at 919-807-6377, or email to john.hennessy@ncmail.net.

Geomorphologic Data
Review of the application for the proposed stream restoration site indicates much of the information required for approval was present. However, there was additional data for the existing and proposed stream reaches that DWQ will need to review in order to make a final decision on the site. In addition, no reference reach data was provided. Thus, in an effort to simplify the request and response process, we have provided a table below for you to complete. Please provide the following geomorphologic data (listed below) for the existing stream reach, the proposed stream reach, and an appropriate stream reference reach.

Variables	Existing Channel	Proposed Reach	Reference Reach
1. stream type			
2. stream length			
2. drainage area			
3. bankfull width (Bkfw)			
4. bankfull bench width			
4. bankfull mean depth			
5. width/depth ratio			
6. bankfull cross-sectional area			
7. bankfull mean velocity			
8. bankfull discharge, cfs			
9. bankfull max depth			
10. width of floodprone area			
11. entrenchment ratio			
12. meander length			
13. ratio of meander length to Bkfw			
14. Radius of curvature			
15. Ratio of radius of curvature to Bkfw			
16. Belt width			
17. Meander width ratio			
18. Sinuosity (stream length/valley length)			
19. Valley Slope			
20. Average slope			
21. Pool slope			
22. Riffle Slope			
23. Ratio of pool slope to average slope			
24. Maximum pool depth			
25. Ratio of pool depth to average bankfull depth			
26. Pool width			
27. Ratio of pool width to Bkfw			
28. Pool to pool spacing			
29. Ratio of pool to pool spacing to Bkfw			
30. riffle length			
31. pool length			
32. Minimum Bankfull Bench Width			
33. Ratio of lowest bank height to bankfull height (or max bankfull depth)			

Groundwater Related Comments

1. Submit a map of sufficient scale to identify all water supply wells and springs located within 1500 feet of the perimeter of The Cliffs property line. The map should provide topographical information and be keyed to a table providing information concerning the property owner and mailing address.

2. Identify the types and quantities of chemicals to be used on the golf course and surrounding grounds such as fertilizers, herbicides, fungicides and pesticides. If this information is not currently known, provide a list of chemicals and quantities used at other facilities owned by the applicant that are used for the purpose of maintaining the course and grounds as well as typical rates of application of these products. Provide information regarding the proposed subsurface drainage systems for the course specifically including information regarding onsite retention and storage of drainage (stormwater, irrigation, etc.) water from the course.

   Please identify and discuss the location of any outfall structures associated with any subsurface under drain system that might be included as part of the golf course. Specifically, if there are any outfall structures from a subsurface drainage system, their location and construction should be built to allow for nonerosive discharges that could result in sediment deposition in streams.

3. Provide information concerning the geological and hydrogeological factors affecting the movement of groundwater at the site. This information can be collected through the installation of test borings and monitor wells and should include the following:

   a. depth to the groundwater (specifically the seasonal high water table),
   b. thickness of overburden or saprolite,
   c. depth to bedrock,
   d. orientation and dip of predominate fractures, joints and bedding planes, and
   e. the rate or velocity of groundwater movement (vertically and horizontally).

4. Depth of bedrock below finished grade of all fairways and greens.

Please note that some of the information specified in No. 3 above may have been collected as part of the hydrogeological evaluation required as part of the Nondischarge permit application. While this information may be used, sufficient additional information must be collected from across the site to be representative of site conditions.

Please direct any questions you may have on groundwater issues to Jay Zimmerman at 919-791-4200, or to jay.zimmerman@ncmail.net.

Please respond in writing within 30 calendar days of the date of this letter by sending five copies of your response to the Hearing Officer Jay Zimmerman, care of Cyndi Karoly, 2321 Crabtree Blvd., Suite 250, Raleigh, NC, 27604. If you will not be able to provide the requested information within that timeframe, please provide written confirmation that you intend to provide the requested information, and include a specific timetable delineating when the requested materials will be provided. If we do not hear from you in 30 calendar days, we will assume that you no longer want to pursue this project and we will consider the project as returned.

This letter only addresses the application review and does not authorize any impacts to wetlands, waters or protected buffers. Please be aware that any impacts requested within your application are not authorized (at this time) by the DWQ. Please call Ms. Cyndi Karoly at 919-733-9721 if you have any questions regarding or would like to set up a meeting to discuss this matter.

Sincerely,

Cyndi Karoly

for Coleen H. Sullins

cc: Roger Edwards, DWQ Asheville Regional Office
Jay Zimmerman, DWQ Raleigh Regional Office
John Hennessy, DWQ, NPSACOU, Supervisor
Amanda Jones, USACE Ashville Regulatory Field Office
Gray Hauser, Division of Land Resources
Jennifer Robertson, WNR, PO Box 882, Canton, NC, 28716
Shannon Deaton, NC Wildlife Resources Commission
David Gantt, Buncombe County Commissioner, 82 Church St., Asheville, NC, 28801
Nathan Ramsey, Chairman, Buncombe County Commissioners,
60 Court Plaza, Asheville, NC, 28801
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File Copy
Interested Parties from Public Hearing

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