

# MEMORANDUM

FROM: Dornoch Group

TO: Chatham County Planning Board  
c/o Mr. Keith Megginson  
Box 54  
Pittsboro, North Carolina 27312

RE: Subdivision Request by Dornoch Group for "Lystra Road Subdivision"

DATE: April 27, 2007

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In an attempt to clarify certain information and address certain concerns that have been presented to the Board, we respectfully submit the following information:

## Zoning and Density

- Concern:** The number of housing units proposed

**Response/Action:** The property is zoned RA-40. Pursuant to this zoning classification, the maximum density of development for this property is 1 lot / 40,000 sf. We are proposing 69 lots on  $\pm$ 143 acres. The density of our proposal is 1 lot / 2.08 acres, or less than one-half the density permitted by the zoning classification. We believe our proposal is well within the legal requirements of the ordinance and consistent with the character of the surrounding community.

## Compliance with Ordinance

- Concern:** That the project does not comply fully with the subdivision ordinances in effect at the time of this application.

**Response/Action:** We believe this proposed subdivision meets or exceeds in all respects both the "spirit and letter" of the requirements of the subdivision ordinances in effect at the time of this application. We have made every reasonable effort to accommodate both County and citizen concerns with our application. The County's Planning Staff has recommended for approval our proposal, acknowledging our compliance with the legal requirements of the ordinances.

## Streams

- Concern:** Streams purportedly not shown on our plan

**Response/Action:** In addition to our experts reviewing their analysis, we have had the NCDENR DWQ representative visit the site. As a result of a thorough inspection and analysis of the site, they have determined the streams that are shown on the enclosed map (Exhibit A) accurately reflect the intermittent and perennial streams on the site and that no other intermittent or perennial streams exist on the site other than those shown on this map.

**Action:** Also in addition to our experts reviewing their analysis, we have had the US Army Corps of Engineers (USACE) representative visit the site for a second time. As a result of a thorough inspection and analysis of the site, they have determined the wetlands areas that are shown on the enclosed map (Exhibit A) accurately reflect the existing wetlands on the site and no other wetlands exist on the site other than those shown on this map. The USACE representative also concurred with the stream assessment as shown on the enclosed map and determined that no other feature on the site constituted an intermittent or perennial stream other than those shown on this map.

4. **Concern:** We are not adequately protecting the streams

**Response/Action:** We have configured the lots so that no lot is within 225 feet of the centerline of Herndon Creek. We will agree to increase that to 250 feet. No street will be constructed by the developer within 400 feet of Herndon Creek and no other land-disturbing activity done or caused to be done by the developer will occur within 300 feet of Herndon Creek. We are willing to dedicate up to 250 feet along Herndon Creek to the Triangle Land Conservancy (or other acceptable group) for the protection of Herndon Creek.

**Response/Action:** We will agree to increase the stream buffers on all perennial streams as the same are shown on the enclosed map from 50 feet to 100 feet.

### Soils and Septic Fields

5. **Concern:** Septic fields at higher elevation than the home site

**Response/Action:** We have consulted our soil and construction experts and confirmed that the elevation of the septic field relative to the home is not a construction or operational factor. The home will be equipped with a small pump (or similar mechanism) and the waste will be pumped the short distance from the house to the origination point of the septic field and the septic field will then operate in a normal manner. Although concern has been expressed about this situation at the public hearing, this is a common engineering practice and there is no scientific or practical reason that this situation with respect to small portion of the lots should be a concern or problematic for any reason.

6. **Concern:** The grade of our community septic field closest to Herndon Creek

**Response/Action:** The grade on the community septic field closest to Herndon Creek (by Lots 60 and 61) ranges from  $\pm 6\%$  to slightly greater than 18%. Virtually all of this community field is less than 18% with a significant portion being less than 10%. Only a very small portion of the community field is greater than 18%. With the septic field drain lines running in large part across the

grade, rather than straight down the grade, the grades are well within conventional parameters. The distance of this community field is greater than 300 feet from Herndon Creek, six times farther from the Creek than the 50 foot setback required by the guidelines of NCDENR.

7. **Concern:** The difference in the soils maps, early study and later study  
**Response/Action:** The difference in the first study and the second study is based upon or caused by the fact that the first study was performed for a different purpose and with only limited physical testing on the site. The second study entailed some additional specific physical testing of the soils on the site primarily for conventional subsurface systems. We have had the soil scientist perform a third more detailed study of the lots that were not specifically tested in the earlier studies. This study entailed some additional testing of the soils for alternative systems. A copy of his findings is enclosed (Exhibit B). The soil testing company is a well respected and highly competent firm, familiar with this type soil, and experienced in this type of testing, review and analysis.
8. **Concern:** The closeness of the rear community septic field closest to Herndon Creek.  
**Response/Action:** This community septic field is a minimum of 300 feet from the centerline of Herndon Creek, six times farther from the Creek than the 50 foot setback required by the guidelines of NCDENR. We believe that provides more than adequate protection for Herndon Creek.
9. **Concern:** A portion of some of the community septic fields is within the 25 foot "tree save" perimeter buffer  
**Response/Action:** A portion of the community septic field is within the 25 foot "tree save" perimeter buffer. But that fact does not negate the requirement that we "save the trees". The requirements of the "tree save" perimeter buffer are still applicable. The "tree save" buffer can function a dual role, buffer between properties and the required setback of the septic fields from a property line.  
  
**Response/Action:** Further, the property within the community septic fields will not be mass cleared or mass graded. The clearing and grading activity on these lots will be limited only to those areas necessary for the drain fields and related septic filed equipment and facilities and only to those areas outside the tree save buffer.
10. **Concern:** Community septic field B is partially within a stream buffer  
**Response/Action:** This is true. And as with the previous concern, that fact alone does not negate the requirements of the DWQ as to that stream buffer. Just because we show the good soils with in the stream buffer as a portion of the community septic field, does not mean we do not have to comply with the regulations of NCDENR – DWQ as to the stream buffer. We will comply with all those regulations.

11. **Concern:** How we will serve lots that must use the community septic fields with those fields when the lot is not adjacent or contiguous to the community septic field.  
**Response/Action:** We will accomplish that in the same way many other subdivisions accomplish it. This is done all the time all over the state. The waste will be kept in a septic tank on the lot for that portion of the process. Then the waste will be pumped from the house to a common collection system for conveyance to the community field. From that collection system, the waste will be distributed to the septic drain fields similar to systems on individual lots. It is neither complicated nor environmentally risky.
12. **Concern:** Are the community septic fields large enough to handle all the lots  
**Response/Action:** We have to comply with the health department and NCDENR - DWQ as to the septic fields, whether the fields are on the individual lots or a community field. If we do not have enough area for the septic fields as required by the appropriate governmental and regulatory authorities, then we will have to reduce our number of lots. We feel reasonably confident that we will be able to obtain regulatory approval of our waste disposal plans for the number of lots we are proposing. But if we are not able to do so, then we will have to reduce our number of lots. But we believe that should be a decision for the engineers and regulatory bodies that know the requirements and the science of systems such as this to be made at the appropriate time.
13. **Concern:** Some portions of the community septic fields are "extremely bouldery"  
**Action:** The property for the community septic fields will be minimally impacted, and will not be mass cleared or graded. The community septic fields will be disturbed only to the extent necessary to install the drain lines and the area for the common collection system. Furthermore, the drain lines will be designed to avoid, to the extent practicable, disturbance of any large boulders located on the property.

### Traffic

14. **Concern:** The traffic on Lystra Road will not handle the additional traffic generated by 69 single-family residential lots.  
**Response/Action:** As you know, a traffic study was performed regarding the traffic impact of this proposed subdivision. In response to concerns raised at a public hearing, we are in the process of having our traffic study up-dated with data representing not only morning peak hour traffic and afternoon peak hour traffic, but also afternoon school peak hour traffic. Based upon preliminary information from the study, the proposed subdivision with 69 lots will have no significant adverse impact upon the traffic in the immediate area. A copy of the revised traffic study will be forwarded when we receive it.

### Steepness of Slopes

15. **Concern:** The steepness of the slopes on this project  
**Response/Action:** We have redesigned the subdivision so that the development of the roads and housing footprints will be largely outside the areas of steeper terrain. To ensure that development of roads and houses will not occur in the areas of steeper slopes, undisturbed and open space areas will be maintained in select parts of the property with the steeper slopes. Therefore, any impact to the steeper slopes on the property will be minimal. Also, 15% to 18% slopes are well-suited for a walkout basement (i.e. 15% slope across a 60' long house is 9').

### Erosion and Run-Off

16. **Concern:** Erosion Control and Run-off  
**Response/Action:** We are not mass grading this site. The roads will be cleared and graded, areas for erosion control measures (sediment basins, etc.) and the small area for the entrance feature and landscaping. No other area will be cleared and graded by the developer until such time as the community septic fields need to be installed. At that time, we will do such clearing and grading, and only such clearing and grading, as may be necessary to install the community septic fields, and requisite easement areas, facilities and lines to said fields from the collection system. We do not anticipate doing any other grading, although some small additional clearing and grading may be required or necessary that is unforeseen at this point. Of course eventually builders will clear and grade the house pads, yard areas and septic field areas for the individual homes and erosion control measures will be installed as required and approved by the Chatham County Erosion Control Officer. But in large part this tract will be left relatively vegetated.

### Environmental Impact Analysis

17. **Concern:** Environmental Impact Analysis should be required  
**Response/Action:** We will agree to provide to the County an environmental impact assessment in accordance with the provisions of Section 5.2(A)(1) of the Subdivision Regulations, as the same are defined at the date of this Subdivision application.