



BALLENTINE
ASSOCIATES, PA

1 Apr 2022

Mr. Marty Roupe
Development Review Administrator
Town of Carrboro
301 W Main St
Carrboro, NC 27510

Subject: Jade Creek Subdivision
8522 Old NC 86
Carrboro, NC
Response to Joint Advisory Board Meeting Comments

Dear Marty,

This letter was written in response to Concept Plan comments received for the referenced project following the Joint Advisory Board Meeting on January 6th, 2022. We received these comments between January 21st, 2022 and February 22nd, 2022. Below are the comments, each followed by our response in bold type.

Comments from Namdi Brandon (Carrboro Environmental Advisory Board) received February 22nd:

- Soccer field area: Instead of an open soccer field, consider

1. Building a community garden or natural garden

Response: The formal soccer field shown on the Concept Plan has been replaced with an informal play field, which is required by Carrboro's LUO.

2. A more naturalized play space with trees, such as a disc golf course

Response: The formal soccer field shown on the Concept Plan has been replaced with an informal play field, which is required by Carrboro's LUO.

3. Community solar

Response: While a ground-mounted community solar plant is not feasible for this property, KB Home will include rooftop solar as an available option for individual home buyers.

- Power lines

4. Be aware of any health concerns of locating housing next to power lines

Response: Acknowledged.

- Affordability, Density

5. We feel that the current housing being considered is not affordable for the community

Response: KB Home will provide affordable housing options as required by the Town's LUO and believes that the remaining "market rate" homes to be offered in this community will help fill the "missing middle", the demand for which is high in this market.

6. We recommend making the housing more affordable by diversifying the types of homes offered

Response: KB Home will provide affordable housing options as required by the Town's LUO and believes that the remaining "market rate" homes to be offered in this community will help fill the "missing middle", the demand for which is high in this market.

7. Consider utilizing duplexes instead of townhomes to address affordability and environmental concerns

Response: KB Home will pursue only single-family homes for this subdivision. The subdivision design proposed is compact and concentrates development on the least sensitive portions of the site.

- Transportation

8. We recommend working with Chapel Hill Transit to include a transit stop in the development

Response: There is currently no Chapel Hill Transit service in this area, but we are willing to work with Chapel Hill Transit to include a transit stop if one is required.

9. Ensure the development is accessible for bicyclists

Response: Bicycle connectivity to the site is provided via the multi-use paths proposed along the southern and western edges of the site.

10. Consider adding EV charging infrastructure to homes or add publicly-accessible EV charging stations

Response: If the ultimate owner of the house is interested in adding an EV charging station to their house, then the developer is willing to work with the owner to have an EV charging station installed. A public EV charging station can be installed at the mail kiosk location if required.

- Solar

11. Consider solar when designing the homes; ensure they are oriented in a manner that would maximize ability to utilize solar panels

Response: KB Home will include rooftop solar as an available option for individual home buyers.

- Recycling

12. Consider adding a community recycling site with educational materials for residents

Response: To help minimize impervious cover and total development footprint, we are not proposing a separate community recycling center. Recycling will be provided by individual homeowners.

13. Consider retaining as many canopy trees as possible throughout the site

Response: The design of the subdivision is centered around preserving as much natural space as possible, while creating a yield that works for the developer. We will be preserving as many canopy trees as we can and will be planting additional canopy trees to supplement.

14. Consider performing an environmental assessment before site development

Response: Wetlands and cultural resources evaluations have been performed for the site and those reports are included in the CUP application materials. The project's conceptual layout was based on the four-step process laid out by Carrboro, which is aimed at preserving as much primary and secondary constraint areas as possible.

15. Avoid encroaching on wetlands

Response: Our impact to existing wetlands will be very minimal and will be limited to the construction of a low impact boardwalk across the northern wetland to access the play field.

16. We recommend utilizing native plants for landscaping

Response: Our proposed landscaping plan calls for native plants.

- Bolin Creek Watershed

17. We recommend collecting baseline data regarding flow rate, rain/storm event impact on the wetlands, and water quality in order to determine how sedimentation may affect the dam

Response: The project's stormwater management system will meet or exceed the Town of Carrboro's minimum requirements.

Comments from Carrboro Planning Board received February 22nd:

1. Strongly encourage the inclusion of affordable housing units, especially for lower AMIs.

Response: KB Home will provide affordable housing options as required by the Town's LUO and believes that the remaining "market rate" homes to be offered in this community will help fill the "missing middle", the demand for which is high in this market.

2. Appreciate the increased density and smaller lot sizes. We encourage the applicant to consider additional increases in density or types of housing, including townhomes, condominium units, or duplexes. Because this development would be an AIS, it provides the opportunity for much more creativity. One consideration would be to build denser, multi-family housing closer to Old NC 86 and scale down the density as the site moves closer to the existing houses along Shadow Ridge Place.

Response: KB Home would prefer to construct single-family homes on this property and we believe the number of units shown, while not the maximum allowed by the Carrboro LUO, is the number of units that creates a successful project while allowing us to minimize disturbance to sensitive portions of the site.

3. Ask if there is the ability to increase the buffer between the lots shown within the concept plan and the existing homes on Shadow Ridge Place.

Response: Although a buffer is not required by Carrboro's LUO, we are proposing a 6' tall opaque wooden fence and a 10' wide vegetated buffer between the existing lots along Shadow Ridge PI and the proposed lots.

4. Ask that the traffic impacts analysis consider:
 - The impacts to morning school traffic,
 - Whether or not a signal is warranted at the entrance to Old NC 86,
 - The feasibility of dedicated turn lanes on Old NC 86 turning into the site and within the site turning onto Old NC 86, and
 - Study both options for connectivity into the current neighborhood (with and without connection).

Response: A traffic impact analysis was performed by VHB and is included with the CUP application. A traffic signal is not warranted at the entrance on Old NC 86 and the CUP drawings reflect the turn lanes recommended by the study. The study did not evaluate a scenario where no connection is made to Blocker Street the Town requires that this connection be made.

5. Request that the traffic impact analysis be independent of the applicant/application.

Response: The Town staff and NCDOT both confirmed that a traffic study was not required based on the size of this project. However, the applicant indirectly retained the transportation firm of VHB to perform a TIA, which is included in the CUP application.

6. Prefer that connectivity with the current neighborhoods remain per the ordinance. We feel pedestrian safety is better served by including traffic calming measures on the new road and/or Shadow Ridge Place.

Response: A connection to Shadow Ridge PI via Blocker Rd is proposed, as it is required in the Carrboro ordinance. We are open to installing traffic calming measures on the new roads. As these roads will be public and maintained by Carrboro, we would look to the Town for guidance on specific measures that would be acceptable.

7. Encourage the preservation of trees to maintain the existing cover, including preserving larger trees that would provide increased canopy sooner rather than replanting new trees.

Response: The design of the subdivision is around preserving as much natural space as possible. We will be preserving as many canopy trees as we can and will be planting more canopy trees on the site.

8. Suggest that the eventual HOA charter accurately describe to owners how Carrboro's environmental buffers govern their use of the lot.

Response: The HOA documents will address these issues, as applicable.

1. The developer should retain the tree canopy in the center portion of the proposed subdivision and create a landscaping buffer between proposed new subdivision and existing houses/lots within Lake Hogan Farms Subdivision.

Response: The design of the subdivision is centered around preserving as much natural space as possible and we will be able to retain much of the center portion of the site to create a gathering space. Unfortunately, there are no significant canopy trees in this area, so we are proposing to selectively thin the area and preserve any quality understory trees in the area. New canopy trees will be planted in this area.

Although a buffer is not required by Carrboro's LUO along the eastern edge of the property, we are proposing a 6' tall opaque wooden fence and a 10' wide vegetated buffer between the existing lots along Shadow Ridge Pl and the proposed lots.

2. The Appearance Commission has concerns regarding the dimension/size of the lots (i.e., narrow width and length). In essence, the footprint of the house in regard to the size of the lots leaves little area for yards and landscaping on each individual lot.

Response: The proposed lot layout does create a fairly dense residential development. However, this has allowed us to preserve the central portion of the site, limit the overall disturbance to the property, and provide recreational amenities like a central gathering space, multi-purpose paths, natural paths, playground, and a play field.

3. Formalize the greenways more to work in coordination with the existing greenways of Lake Hogan Farms Subdivision.

Response: The proposed greenway path will tie into the existing greenway path along Lake Hogan and continue west and then north along Old NC86.

Comments from Carrboro Stormwater Advisory Commission received January 21st:

1. Keep the disturbed area and all lots out of the water quality buffers. If necessary, remove units 1-6 to preserve buffers, or make modifications to stay out of buffers.

Response: We will be building retaining walls along the backside of lots to help minimize impact to the water quality buffers.

2. Sizing on SCMs. Perform preliminary sizing on SCMs to ensure there is adequate space such that the SCM will not enter or incur into the buffer.

Response: The two proposed SCMs will both be stormwater wetlands and both have been sized per Carrboro and DEQ standards. Small impacts to the buffers will be required in order to install outlet structures.

3. Recreation requirement (soccer fields replacing forested areas). Waive the ordinance requiring the developer to put in a soccer field or any other developed feature on the north end of the site. Maintain the natural area with a walking trail that connects to the development via a boardwalk that crosses the wetland. Provide signage along the way to educate people on the importance of wetlands for stormwater and wildlife.

Response: The 28,800 sf. playfield show is required by the LUO. We will explore the inclusion of educational signage on the proposed boardwalk.

4. Access to SCMs, easement. Provide a platted easement or maintenance access to the SCMs.

Response: Access easements will be provided for the SCM's.

5. Ensure maintenance of SCMs in the future via documentation.

Response: Perpetual maintenance of SCMs will be required in the HOA documents.

6. Install signs for SCMs informing public of their purpose and requirements.

Response: Informative SCM signage will be explored.

7. No paved path through wetland – prefer elevated boardwalk or provide a nature trail.

Response: We are proposing a low impact elevated boardwalk where the proposed natural path crosses the existing wetland.

8. Appreciate smaller lots to preserve vegetated areas as long as they stay out of the stream buffer.

Response: Acknowledged.

9. Would like to see a commitment to using stormwater wetlands for SCMs.

Response: Both SCM's will be stormwater wetlands.

10. Would like to see Low Impact Development control with hydrograph matching in stormwater design.

Response: the proposed stormwater management system will be designed to Carrboro and DEQ standards.

Comments from Lake Hogan Farms Subdivision received February 22nd:

Environmental Impact Concerns

- Wetlands

1. The 36-acre parcel being developed contains several restricted wetland areas and drains directly into Bolin Creek and Lake Hogan. Since new housing can only be built in non-wetland areas, this drastically reduces the portion of the parcel that can be developed under Carrboro Town code and concentrates the development in one section.

Response: The proposed development will only be in the areas that are outside of wetlands and will not be exceeding the allowable density per Carrboro's ordinance.

2. The percentage of greenspace in the proposal is deceptive as "off-limits" wetlands areas are included in the preserved greenspace total, even though they cannot be developed.

Response: No deception is intended. The calculations provided represent the black and white math of what is proposed.

3. Current residents have expressed concern over the timing of the latest wetlands surveys and whether that has been taken into consideration with the proposed new development. Given the extensive local residential development and increased impervious surfaces within our watershed, runoff impact would likely render any wetlands survey that is over 5 years old outdated.

Response: The submitted wetlands study was performed in April 2021.

- Drainage

4. Homeowners on the western side of Shadow Ridge Place as well as homeowners on Whispering Oak Court have experienced significantly increased flooding over the past several years. Residents have had to undertake remediation efforts (installation of French drains and catch basins, re-grading, etc.) to manage the increased runoff which all back up to this plot being developed.

Response: See response to #6 below.

5. According to Dr. Douglas Tallamy, in his book *The Nature of Oaks*: “The water from a 2-inch downpour, for example—more than 54,000 gallons per acre—is captured almost entirely by [leaf litter and organic humus]. Litter and humus don’t hold this water indefinitely, but they do corral it on-site just long enough for it to seep into the ground, replenishing the water table...in areas with no leaf litter, the same 2-inch rainstorm causes a flood.”

Response: the proposed stormwater wetlands will help replicate natural processes and will allow this project to meet the Town’s stormwater regulations.

6. High density development in the only non-wetland area of the 36-acre tract will remove trees/shrubs/humus and add impervious surfaces which will increase the flooding for existing property owners abutting the new development. See attached photos for recent examples of this flooding impact in yards on Shadow Ridge and Whispering Oak.

Response: It is unfortunate that previous development activity has resulted in drainage issues in this area. We are aware of this issue and appreciate the photos. KB Home has authorized us to design the stormwater wetland proposed for this area of the site such that the wetland will provide stormwater detention for storm events up to the 100-year storm. While the Town’s stormwater regulations require detention only up through the 25-year storm, the proposed stormwater wetland will reduce 100-year storm peak flows to below pre-development levels.

Safety Concerns

- Safety

7. Several new residential developments have been built and connected to Lake Hogan Farms over the past ten years including Ballentine, Legends (closer to the Old NC 86 entrance to LHF) and Burgundy Lane (closer to the Homestead Rd entrance to LHF). These developments have substantially increased traffic through the residential streets in LHF already. A cut-through to a new development would add to this burden.

Response: We are proposing a connection to the Blocker Rd stub-out as required by Carrboro's ordinance.

8. Regarding access to LHF, Ballentine's single point of access is via Hogan Hills Road. Legends has entry and exit points at Hogan Hills Road and Lake Hogan Farm Road (both extra wide, main LHF thoroughfares with speed bumps.)

Response: Acknowledged.

9. Both Ballentine and Legends have approximately 50 homes and townhomes. The proposed development would have over 70 homes (40% more residential traffic).

Response: KB Home has voluntarily commissioned a traffic impact analysis and the TIA is included in the CUP application.

10. While Ballentine and Legends connect to Hogan Hills Road (note: No homes in LHF have driveways that exit to Hogan Hills Rd.) the proposed plan would have the new development directly connect to the narrow side street of Shadow Ridge which is also accessed by driveways from 34 homes.

Response: KB Home has voluntarily commissioned a traffic impact analysis and the TIA is included in the CUP application.

11. Shadow Ridge Place is the main western access point for the entire LHF development for the walking trails around Lake Hogan.

Response: We will be extending the existing greenway trail system that runs along Lake Hogan to the southern portion of the new subdivision and west along Old NC 86.

12. There is grave concern for the safety of children (the corner of Shadow Ridge Pl serves as CHCCS bus stops for elementary, middle and high school students) and pedestrians on Shadow Ridge Pl if a cut through to the new proposed development is made. We would expect a traffic study be completed in advance of any plan approval. The traffic study should also consider the limited sight lines on Old NC 86 around the proposed location of the entrance given the proposed high residential volume.

Response: KB Home has voluntarily commissioned a traffic impact analysis and the TIA is included in the CUP application.

Other Concerns

- Noise Impact

13. The proposed development suggests lots that are a third of the size of the existing lot sizes in LHF with only a 10-foot buffer between the back of the new homes and the LHF lot lines. In addition to this compact spacing further exacerbating the existing drainage problems, we are concerned that this density combined with the elimination of current vegetation won't provide an adequate noise barrier.

Response: We are proposing a 6' high opaque wooden fence and a 10' wide vegetated buffer along the eastern property line along Lake Hogan Farms.

- Economic Issue

14. The development team stated these houses would address the “missing middle”, with home square footage 1500-2500 sq ft and sales prices estimated at \$350K-400K. The price/sq ft of these new homes is significantly higher than existing homes in the area. That seems to be more of an attempt to maximize profit than meet Carrboro residential market needs.

Response: While the overall size of these lots will be smaller than the average lot size of the surrounding subdivisions, KB Home believes this product will address the missing middle of the housing market in this area.

Yours Very Truly,
BALLENTINE ASSOCIATES, P.A.



George J. Retschle, PE
President