

APPENDIX T

MATERIALS IN SUPPORT OF RESPONSE TO GEE REDUCED-IMPACT ALTERNATIVE



Summary of Environmental Issues for
The Hills at Southampton
Proposed Equine Alternative
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Introduction

The Group for the East End (GFEE) proposed alternative development consists of 88 single-family residential homes with equestrian facilities. The proposed alternative has potential for significant environmental impacts to land use, groundwater and the Weesuck Creek watershed.

The alternative has not been refined to a detailed site plan. This assessment is therefore a preliminary overview of its equine component offered as a replacement to the Hill's proposed golf course. The alternative use proposed 88 residential dwellings, a conservative number using 1.5 horses per residential unit is used for this evaluation. Under Town Code the number of horses permitted for the site is legislated by lot size. However the subject site is 591 acers with proposed development within the compatible growth area (CRA) of the Central Pine Barrens, and the site is within the Town's 5-acre residential zoning district. For this evaluation it is assumed the horse facility is the primary attraction to potential residents.

Based on the minimal information provided, it is assumed a large number of horses are permitted to occupy the site under the Town Code. However for this assessment, a more conservative estimate of the herd was used based on a conservative number of proposed residential units. It was assumed that for each residential dwelling, a factor of 1.5 horses per household. This factor was selected because equestrian use is a variable sport. Riders may choose a wide variety of sport including, dressage, jumping, hunting, western trail, barrel etc. with one common denominator; the horse. Residents therefore may have need for multiple horses for specialty riding skills or more than one household may have multiple horse riders requiring more than one horse. The factor of 1.5 horses per household is assumed a reasonable number as the proposed alternative was not specific to the number of horses or type of equestrian facility it proposed.

This evaluation is not a comprehensive impact assessment as would be required of the proposed alternative pursuant to SEQRA, because the presenters did not provide information necessary for a full SEQRA review. Using the Town Code, other government and university published resources this evaluation addresses the potential impacts of equine use(s) as a replacement recreational amenity to the applicant's proposed golf course.

Site Area Requirements

Horses are a free range animal and require sufficient area for daily exercise. Lands used for equine purpose must conform to local municipal codes as well as agricultural needs associated with horses.

The Town of Southampton Town Code governing equine related facilities is described under 330-162.1 *Horse farms; horse stabling facilities; horseback riding academies*. The Town Code provides guidance for evaluation, compliance and management methods regarding the proposed equestrian alternative. The Town Code general requirements are summarized below with the complete Code provided in Appendix I.

- A. The minimum lot size shall be 10 acres, except where the Planning Board determines that the general standards of § 330-122 and the following special conditions and safeguards can be met using lesser acreage. In considering sites of less than 10 acres, the Planning Board shall also find that the site is an existing pastoral or farmland setting that will be preserved in perpetuity or that there are less than 10 horses for private use.

The site exceeds the requirements for minimum lot size.

- B. There shall be a minimum of 30,000 square feet of open land area for each horse kept, raised or stabled on parcels up to 15 acres, and for any parcel over 15 acres, there shall be a minimum of 20,000 square feet of open area for each horse kept on the portion of the land exceeding 15 acres. Such open land area shall be exclusive of any area occupied by buildings and/or structures.

The site exceeds 15 acres and must provide a minimum of 20,000 SF of open area for each horse. Based on interpretation of the Town Code, 120 horses would require a minimum of 55-acres of open land area, exclusive of any buildings or structures.

Suffolk County's Equestrian Task Force Report (June 2011) recommends 2-acres of pasture land (grass) with cool season grasses maintained at 6-8 inch height and not less than 2-4-inches after animal grazing (to prevent turf die off; or 2- 4-acres of dry lot land (non-vegetated) for each horse. This equates to approximately 240-acres (min.) of either pasture land or dry lot land or 480-acres if each is provided.

There is a significant difference between the County's recommended areas for proposer horse management and the Town Code. Total area dedicated to site development is restricted by clearing limits set forth by the Central Pine Barrens regulations.

- C. All horses shall be kept within an area which shall be completely enclosed by a fence sufficient in height and strength to prevent their escape. Notwithstanding the provisions of § 330-109 of this chapter, such fencing may, at the discretion of the Planning Board, be a maximum of six feet in height within the required front yard. The fencing shall be open in nature, such as a wood board or split rail fences. Chain link and wooden stockade-type fences shall not be permitted.

Pasture and dry lot "turn out areas" will require fencing.

The Suffolk County Equestrian Task Force Report (June 2011) recommends horse barn design based on a minimum of 110 square feet (SF) per horse. According to the County's design standards for 132 horses, the proposed alternative's minimum barn size is estimated at a minimum 14,520 SF.

In addition to the barn, the facility will require additional building areas for run-ins, tack rooms, feed, storage shavings/hay storage and other accessory needs.

An indoor riding ring varies with use and may be 20-40,000 SF and outdoor rings are unlimited in size and varies with the type of equestrian sport. Various forms of sport riding (show, jump, dressage, western, etc.) require different training and event areas. The potential for a large number of horseman utilizing the facilities increases the demand for training areas specific to their type of equine sport. The alternative provided no specifics on the total area required to facilitate the equestrian needs.

Equine Waste & Management

According to university studies¹, a one-ton horse generates an average of 50 pounds of wet manure (urine/feces/beddings) per day. An analysis of this waste product determined the composition based on 1 ton of manure, and an average of 9.1 tons of manure per year for a 1,000 pound horse. One ton of horse manure typically contains 11 pounds of nitrogen; 2 pounds of phosphorous and 8 pounds of potassium (1):

Annual Nutrient Load per Horse (9.1 tons of manure per year)¹

100.1 pounds	nitrogen (N)
18.2 pounds	phosphorous (P)
72.8 pounds	potassium (K)

Using the factor of 1.5 horses per household, and 88 residential dwelling units:

Annual Waste Generation for 132 Horses:

1,201.2 tons of wet manure per year (2,402,400 pounds of manure waste/year)

Annual Nutrient Load for 132 Horses:

13,213.2 pounds	nitrogen (N) per year
2,402.4 pounds	phosphorous (P) per year
9,609.6 pounds	potassium (K) per year

Typical horse stalls are comprised of dirt floors overlain with either 10-20 pounds of bedding per day comprised of hay or wood shavings, used as absorbent materials for the equine urine and feces. Mucking the stall removes this wet manure waste, but the earthen floor can permit waste stream leachate to migrate to the soil. Disposal of the wet manure is a more significant issue. The material may contain parasites associated with equine health problems. The proposed alternative of equestrian use does not identify the number of horses or equine waste management impacts. Nitrogen from horses is released to the environment as urine and manure in the outdoor setting, with some nitrogen released from stalls depending on management practices. Efforts were made to quantify the amount of nitrogen removed from stalls; however, no definitive references were located. For conservative analysis, it is assumed that 75% of the manure generated is removed

¹ Sources: *Managing Horse Manure for Environmental Benefits*, Louisiana Ag Center and Sea Grant- Sheffield, R. et tal Publication 3128-F (500)7-09); (*Horse Stable Management*, College of Agricultural Science, Penn State University, Graves, R. et tal.)

through management practices. It is further assumed that 15% of this leaches to groundwater as a result of weathering and surface application. This is consistent with other references for surface application of pet waste.²

A typical east end golf course, that is part of the Peconic Estuary Nitrogen Reduction Challenge for Golf Course program including the Hills proposed golf course will apply an annual nitrogen in the amount of 2.5-3.0 pounds per 1000 SF of turf (say 2.8 pounds per 1000 SF); or approximately 122 pounds of nitrogen per acre of managed turf.

Equestrian-Managed Turf Nitrogen Equivalency Factor

The *Equestrian-Managed Turf Nitrogen Equivalency Factor* is a mathematical constant derived from the nitrogen generated by the equine wet manure per unit of time per horse, and the amount of applied nitrogen (as fertilizer) needed by managed turf per unit of time per acre. It is arrived by dividing the pounds of nitrogen generated a horse (pounds of N/horse/year) by the pounds of nitrogen required by managed turf (pounds of N/acre turf/year).

Using the estimated 13,213.2 pounds of annual nitrogen generated by the equine operations; and dividing this quantity by the Hills golf course turf annual requirements of 108 pounds of nitrogen per acre (2.5 pounds per 1000 SF/year) , yields the equivalent area (expressed in acres) of fertilized turf.

$$\frac{12,012 \text{ pounds N/year equestrian use}}{108 \text{ pounds N/acre}} = 122.34 \text{ acres of managed golf turf}^3$$

In Suffolk County, applied fertilizer is restricted to 3.0 pounds of nitrogen per year per 1000 SF, with golf courses exempt from this section of the regulation. Each horse and wet manure generates 100.1 pounds of nitrogen per year.

The Suffolk County fertilizer law restricts the time periods for when fertilizer applications can be performed. The permitted dates are between April 1 and October 31, when turf is actively growing and is able to metabolize the applied nutrients. An equestrian facility cannot be seasonally restricted because the nitrogen is generated daily by the horse(s), 365 days per year. In contrast, nitrogen generated by horse manure is not per se controlled by specific County regulations.

Odors, Pests and Disease Concerns

Horses are susceptible to diseases and physical ailments and agricultural activities associated with livestock can generate problems with pests and odors.

Horse farms and stables can harbor pests including vectors such as mosquitoes, bot flies, horse flies, deer flies, face flies, lice, mange (itch mites), mice and rats⁴. Some of these organisms offer pathways for other pathogens and/or create nuisance problems for horses, riders and residents.

² See The Hills Final EIS, Section 5.7 and Appendix R-1 and R-5.

³ This is for a typical east end golf course Hills has an Integrated Turf Health Management Plan (ITHMP) that will reduce nitrogen load from nitrogen in fertilizer applied to turf. See The Hills Draft EIS, Appendix H and Final EIS, Section 5.7 for comparison of relative nitrogen loads between equestrian use alternative and The Hills.

⁴ Source: (*Pest Management Recommendations for Horses*, Daufman & Pitts, Departments of Entomology, Cornell University and Penn State University, respectively).

Controlling these pests and prevention of equine disease, especially with a projected 120 horses located in a single area, is crucial for the health, safety and welfare of the animals and humans.

Insecticides play an important role in fly management. However best management practices recommend cultural and physical controls using good sanitation and sticky tapes/ribbons. Chemical treatments are recommended during more extreme fly outbreaks.

Odors from manure piles may be of minor concern as most individuals involved in equine activities are accustomed to minor odors. The prevailing winds are generally from a southwesterly direction and location of the horse stables and onsite manure storage areas should be located upwind of the onsite and offsite residential areas.

Diseases including infectious upper respiratory disease (IURD), Triple-E (eastern equine encephalitis) virus, tetanus (lockjaw), equine influenza, equine herpesvirus (rhinopneumonitis, rhino, viral abortion), West Nile virus, rabies, strangles, equine piroplasmiasis (EP), a tick borne disease, equine protozoal myeloencephalitis (EP) spread by opossum, and Potomac horse fever (PDF) which is spread by mayflies, and may include bats and birds as carriers. Equine diseases can be best controlled by vaccinations, good sanitary practices to minimize environmental conditions that favor the pathogens and transmission to other animals.⁵ Worms may be a fairly common parasitic problem, and periodic worming can control severe health issues.

Although not all horse diseases can be transmitted to humans or other animals, several diseases can be easily transmitted to other horses. The major potential impact generated by the proposed alternative is concentrating a large number of horses in one local area, where communicable equine diseases may create major outbreaks. There is a high probability horses imported to the site for events and stabling, including animals from outside the State or country, may not be adequately vaccinated or closely monitored for equine health conditions.

Additional Comments

In 2007 Suffolk County estimated there were 6200 horses in the County, ranking it 6th among New York's counties. The County recommends a horse barn with stalls be sized at 110 SF per horse, with an estimated size for the proposed 120 horse barn of 13,200 SF. However additional horse stalls may be required to accommodate horses owned by visiting guests, opportunities for boarding horses if a horse club is envisioned (without an onsite residential requirement, similar to golf memberships available to non-resident members), and potential boarding needs for special event boarding.

Parking will be required for guests, non-resident members, event participants, employees (handlers, veterinarians, groomers, handlers and farm workers) and spectators. Visitors and onsite residents will require additional areas for parking horse trailers, storing tack, and maintenance facilities associated with the property (tractor barns, feed storage, hay barn(s) etc.).

Sanitary facilities for the residents, equestrian facility users, and event needs will generate waste water flows.

Within Southampton exists a large number of small, moderate and large equestrian sites. This includes Laurel Crown Farms, located on Lewis Road, East Quogue. Once locally recognized as

⁵ Source: (USDA Animal and Plant Health Inspection Services).

“The Pony Farm” his facility has been significantly improved with upgraded barns and indoor riding facilities. The proposed alternative did not address the potential for local economic impacts generated by a competing or redundant equestrian facility, or the availability of the Laurel Crown Farm for residents of the proposed Hills at Southampton.

The proposed alternative as a residential development with an equestrian facility located on the subject site, would be classified a Type I action pursuant to 6NYCRR Part 617.4 (b) (6) (SEQRA), and based on preliminary assessment, has potential for significant adverse environmental impacts, receive a positive declaration and require preparation of a DEIS, whereby more precise understanding of the impacts can be studied.

According to Southampton Town Code 330-162. 1 Horse farms; horse stabling facilities; horseback riding academies;

The minimum lot size shall be 10 acres, except where the Planning Board determines that the general standards of § **330-122** and the following special conditions and safeguards can be met using lesser acreage. In considering sites of less than 10 acres, the Planning Board shall also find that the site is an existing pastoral or farmland setting that will be preserved in perpetuity or that there are less than 10 horses for private use.

B.

There shall be a minimum of 30,000 square feet of open land area for each horse kept, raised or stabled on parcels up to 15 acres, and for any parcel over 15 acres, there shall be a minimum of 20,000 square feet of open area for each horse kept on the portion of the land exceeding 15 acres. Such open land area shall be exclusive of any area occupied by buildings and/or structures.

C.

All horses shall be kept within an area which shall be completely enclosed by a fence sufficient in height and strength to prevent their escape. Notwithstanding the provisions of § **330-109** of this chapter, such fencing may, at the discretion of the Planning Board, be a maximum of six feet in height within the required front yard. The fencing shall be open in nature, such as a wood board or split rail fences. Chain link and wooden stockade-type fences shall not be permitted.

D.

No accumulation of manure or any other material or substance which causes any noxious or offensive odors or dust shall be allowed within 50 feet of any side or rear lot line and 100 feet of any front lot line. The disposal of animal wastes shall be provided for in such a manner as to prevent any nuisance or sanitary problem. The Planning Board may impose greater setbacks or requirements where the site is located in close proximity to wetlands or other environmentally sensitive features.

E.

The storage of grain shall be in such manner so as to prevent the proliferation of rodents and other vermin.

F.

An indoor riding training track, exercise ring and/or horse stabling facility may be permitted as an accessory structure, provided that the subject horse farm, horse stabling facilities or horseback riding academy is located on a parcel of 10 acres or greater and shall be set back a minimum of 150 feet from any street line and a minimum of 200 feet from any other property line. The Planning Board may allow such accessory structures to

meet the minimum setbacks of the applicable zone, subject to the requirements of the following Subsection **G**. The overall size of the track or ring structure shall be limited to 15,000 square feet for parcels less than 25 acres, and only one such structure shall be permitted for each 10 acres of lot area. On sites of more than 25 acres, the Planning Board may consider a structure larger than 15,000 square feet, which may include indoor stalls as part of the structure. In no case shall any such structure be larger than 24,000 square feet in size.

[Amended 7-26-2011 by L.L. No. 25-2011]

G.

In consideration of the fact that such **horse** farm, **horse** stabling facility and/or horseback riding academy will be primarily located in residentially zoned areas, the architectural style of buildings and structures shall be consistent with other agricultural buildings and as compatible as possible with the surrounding neighborhood, and the buildings shall be of a style and construction satisfactory to the Planning Board. Screening shall be required where it is determined to be necessary to minimize any adverse visual effects on neighboring properties. In siting larger structures, such as an indoor training track or exercise ring, the Planning Board shall consider the topography of the subject property and adjacent sites to take advantage of any natural screening which may be afforded by the land itself and/or by existing vegetated areas. Notwithstanding any provisions to the contrary, the Planning Board may allow the use of structures that existed prior to the effective date of this section, provided that potential impacts upon surrounding residences are minimized to the maximum extent practical.

[Amended 7-26-2011 by L.L. No. 25-2011]

H.

All necessary parking areas shall be located a minimum of 50 feet from any side or rear lot line and 100 feet from any front lot line and shall be screened from view from surrounding properties.

I.

The **horse** farm, **horse** stabling facility and/or horseback riding academy may be used for the following purposes: the letting of **horses** for hire to individuals or groups, whether supervised or unsupervised; and/or horseback riding instruction/training, provided that these activities are sufficiently located away from neighboring residences and appropriate off-street parking and access is made available and there are no signs, other than a farm identification sign, on the premises. The Planning Board may further condition or limit the scope of these activities or uses depending on the amount of property available and the potential impact upon neighboring residences.

J.

The holding of horse shows, rodeos or any other equestrian spectator events shall be prohibited, except that on parcels of 10 acres or greater, three equestrian events per year lasting no longer than an accumulated total of nine days may be held subject to Town Board review and approval in accordance with the provisions of Chapter 283, Special Events, exclusive of the requirements in § 283-6B(1).

[Amended 2-13-2007 by L.L. No. 2-2007]

K.

No other commercial enterprise, either as a principal or an accessory use, such as a tack shop, shall be permitted.

[Added 2-13-2007 by L.L. No. 2-2007]

L.

The Planning Board may require covenants or other similar documents to assure the provisions of this section are adhered to.

[Amended 2-13-2007 by L.L. No. 2-2007]

330 Zoning

330-220 Development Compatible Grow Area

To ensure consistency with the Central Pine Barrens Comprehensive Land Use Plan, all development in the compatible growth area shall comply with the following standards:

(1)

All development subject to Article 6 of the Suffolk County Sanitary Code shall meet the applicable requirements of the Suffolk County Department of Health Services.

(2)

Where deemed practical by the county or state, sewage treatment plant discharge shall be outside and downgradient of the Central Pine Barrens.

(3)

To protect the water quality in the vicinity of surface waters or wetlands, projects within 200 feet of such features should be designed to minimize nitrate-nitrogen loading to the groundwater with the goal of achieving less than 2.5 parts per million nitrate-nitrogen.

(4)

All development shall comply with the provisions of Articles 7 and 12 of the Suffolk County Sanitary Code.

(5)

All development involving significant discharges to groundwater in close proximity to public water supply wells shall include adequate mitigation measures to protect the water quality as required under Article 17 of the New York State Environmental Conservation Law.

(6)

All development involving significant discharges to groundwater in close proximity to private water supply wells shall comply to the Suffolk County Department of Health Services' guidelines for wellhead protection.

(7)

Development proposals for sites containing or abutting wetlands shall be separated by a non-disturbance buffer area which shall be no less than that required under Chapter 325 of the Town Code and applicable state laws. Distances shall be measured horizontally from the wetland edge as defined in the applicable laws. Such buffer areas shall be delineated on the development plans, and adequate conditions shall be imposed to assure their preservation. Said conditions shall be set forth in a declaration of covenants, conservation easement or similar instrument.

(8)

All stormwater runoff originating from development on the property shall be retained on-site, unless surplus capacity exists in an off-site drainage system. Where practical, natural recharge areas and/or drainage systems that cause minimal disturbance of native vegetation may be required. Ponds may be created if they are designed to accommodate stormwater runoff and not solely for aesthetic purposes. Where practical, drainage designs shall incorporate the use of natural swales and depressions, rather than excavated recharge basins. Adequate measures shall be taken to control soil erosion and stormwater runoff during construction.

(9)

Disturbance of natural vegetation shall comply with the minimum standards set forth under Article XIII, Aquifer Protection Overlay District, of this chapter. Development plans shall contain calculations for the amount of disturbance of natural vegetation and indicate the limits thereof. For the purposes of this section, the percentages of disturbance of the natural vegetation set forth in Article XIII shall include all areas previously disturbed.

(10)

Where applicable, subdivision and site design shall support preservation of natural vegetation in large unbroken blocks that allow contiguous open spaces to be established when adjacent parcels are developed. Where applicable, subdivision and site design shall be configured in such a way as to prioritize the preservation of native pine barrens vegetation.

(11)

Development projects shall place no more than 15% of the entire site in fertilized vegetation. The use of nonnative plant species shall be limited to the maximum extent

practicable and development designs shall consider the nonnative and native planting suggestions contained in **Figure 5-2** of the plan.

(12)

Where a development application may have a significant negative impact upon a habitat essential to those species identified on the New York State maintained lists as rare, threatened or of special concern, or upon the communities classified by the New York State Natural Heritage Program as G1, G2, G3 or S1, S2 or S3 or on any federally listed endangered or threatened species, appropriate mitigation measures shall be taken to protect these species.

(13)

Development projects shall minimize disturbance of the grade and/or natural vegetation where slopes exceed 10%. Construction in areas where slopes exceed 10% may be approved if the design incorporates adequate soil stabilization and erosion control measures so as to mitigate negative environmental impacts. Where applicable, clearing envelopes and/or non-disturbance buffers shall be placed on those portions of the development site where slopes exceed 10%. Development applications shall include a slope analysis depicting slopes in the ranges 0% to 10%, 11% to 15% and 15% and greater. Erosion and sediment control plans and, where applicable, details of retaining walls and erosion control structures shall be required for construction in areas where slopes exceed 15% and for roads and driveways traversing slopes of 10%.

(14)

Applications for development projects proposing open space and/or similar reserve areas shall specify the conditions of ownership and use of such lands, and such conditions shall be set forth in the deed of dedication, declaration of covenants, conservation/open space easement or similar instrument.

(15)

Where applicable, the use of a planned residential development or clustering pursuant to the provisions of Article I of Chapter 247 of the Town Code shall be encouraged to preserve open spaces. Where applicable, the use of a planned industrial park pursuant to the provisions of § 330-36 of this chapter shall be encouraged to preserve open spaces.

(16)

Where applicable, any new activity or any change or expansion to an activity involving agriculture or horticulture shall incorporate "best management practices" as set forth in Controlling Agricultural Nonpoint Source Water Pollution in New York State, Bureau of Technical Services and Research, Division of Water, New York State Department of Environmental Conservation 1991, as same may be amended from time to time.

(17)

Where applicable, development plans shall indicate established recreational and educational trails and trail corridors; active recreation sites; scenic corridors, including the Sunrise Highway; sites of historical or cultural significance; and sensitive archaeological areas, within 500 feet of the project site, and shall provide adequate measures to protect such cultural resources. The use of existing natural buffers or the restoration of degraded buffer areas, the use of signs or other man-made structures, consistent in style and scale with the community character, or other similar measures shall be taken to protect roadside areas and scenic and recreational resources.

(18)

All commercial or industrial development shall comply with the applicable provisions of the Suffolk County Sanitary Code and all other applicable federal, state or local laws.

B.

A land use in the compatible growth area that lawfully exists at the time of the effective date of this article or any amendment thereto may be continued in its present form, except that the aforementioned standards shall apply to any change, structural alteration, expansion, restoration or modification to said land use constituting development as defined herein.