

February 5, 2016

Dear Ms. Drake:

I am writing to provide my initial comments regarding the Marin Catholic High School Use Permit and Design Review application, Project ID P1123, as described at [http://www.marincounty.org/depts/cd/divisions/planning/projects/kentfield/marin-catholic-high-school\\_dr\\_up\\_p1123\\_kf](http://www.marincounty.org/depts/cd/divisions/planning/projects/kentfield/marin-catholic-high-school_dr_up_p1123_kf)

and the documents linked from that page. As a Greenbrae (Vista Grande) resident for over 25 years, my concerns mirror those expressed by many of my neighbors.

In summary, I believe that the documents provided in support of the application fall far short of providing a complete and accurate description of the adverse impacts of the project. I make this statement both as an affected resident and as an environmental engineer/scientist with 45 years' experience. My concerns include two specific areas – the actual impacts of field lighting, and the increases in nighttime noise. I also question the need for the project, as it proposes to move most games and practices to weekday nights, with minimal planned field use on weekday afternoons, and eliminate almost all field use on Saturdays. Finally, I believe that the proposal is in direct conflict with the Kentfield/Greenbrae Area Plan<sup>1</sup> referenced on the above web page. The second paragraph of this Plan's executive summary states:

“The vast majority of the land in this study area is zoned single family residential and is used for housing. In general, the intent of the plan is to protect those qualities of the community which enhances it as a predominately single family residential area.”

Based on the Plan's intent, I believe that the use permit amendment application can and should be denied without further review.

### **Impact of Lights**

The consultant report on lighting appears to address only direct “glare” from the lights, which apparently refers to lighting fixtures shining directly into residential areas. It completely ignores several other impacts. As the coauthor of a number of reports addressing visual range and other visibility impacts for the U.S. Environmental Protection Agency and the National Park Service<sup>2</sup>, I am familiar with the physical processes by which the field lights could adversely affect nearby neighborhoods. These processes include

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<sup>1</sup> Link to Community Plan:

[http://www.marincounty.org/~media/files/departments/cd/planning/currentplanning/publications/communityandareaplans/kentfield\\_greenbrae\\_community\\_plan\\_1987.PDF](http://www.marincounty.org/~media/files/departments/cd/planning/currentplanning/publications/communityandareaplans/kentfield_greenbrae_community_plan_1987.PDF)

<sup>2</sup> These reports include:

“Workbook for Estimating Visibility Impairment” (USEPA publication # EPA-450/4-80-031)

“Visual Impacts in Integral Vistas--Projections for Selected Development Scenarios,” prepared for the National Park Service (1984)

“Workbook for Plume Visual Impact Screening and Analysis” (USEPA publication # EPA-450/4-88-015)

1. Light reflecting from the field and stands toward residences within sight of the field  
As shown in the artist renderings included in the project description, the project clearly would add an additional and undesirable feature visible to those residents on the hillsides facing the field.
2. 'Air light' glow caused by scattering of the light that is directed toward or reflected from the field and stands by fine particles in the air (a.k.a. Mie scattering)  
The artist renderings fail to show this effect, which would scatter light directly toward an observer and cause a perceptible glow in the air above the field. It would also decrease the perceived contrast of features behind the field (e.g., Mt. Tam and the ridgeline), obscuring some features and reducing visual range. This effect would be observable from nearly all areas of Greenbrae, Kentfield and Larkspur with views toward Marin Catholic, even if the field itself is not visible. The proposed usage schedule indicates that this would occur on every weekday night between mid-August and late May.
3. Light reflection or backscatter from clouds or haze layers above the field  
Although the light scattering process involved is effectively identical to that which causes the 'air light' referenced in item 2, its effects are different. It would cause an overhead glow that could obscure or severely reduce the visibility of stars overhead and the glow itself would adversely impact the character of our neighborhoods.

The Marin Catholic proposal and analyses fail to address these issues.

### **Impact of Noise**

As noted by other commenters, those of us who live on the hill north of Marin Catholic already hear clearly the play-by-play press box announcements and crowd noise during Saturday afternoon football games. I don't find this unacceptable on a Saturday afternoon, but would find it quite objectionable during evening hours. It is unclear that there is any compelling rationale for moving these events to night time events, since it appears that under the proposal, there is little or no planned use of the field on Saturday afternoons. I can speculate that this is intended to provide opportunities for revenue generation by renting the field and facilities to outside groups, but this is not discussed.

The consultant report addressing "leakage" of the public address sound system provides a few limited measurements, but the conditions under which these tests were conducted are poorly documented. The report also appears to address only the direct impact of the public address system, but fails to assess the effects of crowd noise and other activities (e.g., bands).

The report alludes to the possible effects of atmospheric conditions on nighttime noise, but restricts itself to ambient temperature. A more significant factor is likely to be the vertical temperature profile. During fall and winter, temperature inversions (warmer air above a cooler surface layer) are common in the Ross Valley. These events are a key driver of the Bay Area Air Quality Management District's "Winter Spare the Air Day" declarations, since these inversions trap wood smoke and cause higher pollutant concentrations in the valleys. Inversions also cause

sound waves to refract, or bend back toward the ground. As a result, for a given sound intensity, the perceived noise level or sound pressure at a specific distance away from the field will increase. That is, crowd and other noise either marginally heard by residents throughout the area on Saturday afternoons will be louder during many nights. It is worth noting that the traffic analysis seems to anticipate that existing crowd sizes for football games will increase by approximately 50% for night games, with a presumably commensurate increase in crowd noise.

The Marin Catholic proposal and analyses fail to address these issues.

### **Is the Project Really Needed?**

The proposal indicates that

- All varsity football games would be moved to weekday nights with the possible exception of some playoff games
- Many JV and freshman football games and practices would move to weekday evenings
- Half of boys' varsity and JV and girls' varsity and JV soccer games would move to weekday evenings
- All boys' JV and girls' varsity and JV soccer practices would move to weekday evenings
- About half of all boys' and girls' JV and varsity Lacrosse games and practices would move to weekday evenings.

The proposal shows no planned use of any fields on Saturday except for perhaps half of soccer and Lacrosse games. There is minimal weekday afternoon use of fields (girls' varsity and JV Lacrosse practices). This calls into question whether there is any compelling reason for the project.

### Summary

Based on my own knowledge and observations, I believe that the field lights proposal and planned uses are not in character with Greenbrae and Kentfield neighborhoods, and would adversely affect the quality of life of a large number of residents. As such, I believe it to be in direct conflict with the stated intent of the Kentfield/Greenbrae Area Plan. I find the project description itself and its supporting analyses to be incomplete and intentionally misleading in their statements of absence of adverse impacts. The beneficiaries of the proposed project are Marin Catholic High School, due to its presumed intent to generate field rental revenue from the field time freed up by the proposed use of lights, and students and families from outside the Greenbrae/Kentfield area. The project application should be deemed incomplete. The application to amend the use permit can and should be denied due to the project being inconsistent with the applicable Community Plan for the area.

Sincerely,

Robert G. Ireson, Ph.D.