

To BOA Vice-President & Open Space Committee Member Katjana Ballantyne :

**I am writing as a citizen of Somerville for 21 years and also as a mother of active 10-year old twin boys, to request your support for grass fields at Lincoln Park and to oppose the installation of a synthetic turf field, as currently planned in [all 3 design alternatives](#) (p21-23) for Lincoln Park.**

My 10-year-old sons are passionate (fanatic!) about playing soccer and other sports in Somerville. However, I take the long view here: Replacing grass with turf is a poor precedent for Somerville, a City that prides itself on sustainability efforts. Perhaps some of you have heard recently from other parents and community members who feel the same way.

I understand that Alderman Heuston and Alderman LaFuentes are supporting our efforts to keep the grass fields at Lincoln Park, instead of the U12 synthetic turf field currently in the 3 design alternatives for the Park. I commend them for joining us in our efforts to preserve the little green space in Somerville that we have left to preserve.

I commend the City for its commitment to sustainability and the excellent goal of reducing our net carbon emissions to zero by 2050 through recycling, composting, greenhouse gas emissions through energy conservation, hybrid and electric vehicle usage, green space development, urban agriculture, providing incentives for solar panel installation and weatherization, and facilitating a shift from our reliance on cars by developing public transit and pedestrian and bicycle infrastructure.

Given all of this, what a disconnect for the City to then consider trading cooling, living, real grass (true green space) for green plastic!

**Here are some considerations in support of natural grass over synthetic turf:**

**1. Cost**

While cost is not my primary consideration for me, I understand that that the bottom-line for the City and the BOA is often, well, the bottom line = costs.

So, in the absence of any cost estimates made public by the City, I compiled this cost summary, so you can see that grass turf can be as cost-efficient, or even more so, than synthetic turf:

## Cost Estimates: Grass vs. Synthetic Turf

These tables show that, with or without maintenance, estimated cost ranges for grass turf are comparable to or much less than synthetic turf. Tables here use 45,000 sq ft, the approximate size of the proposed ~1 acre U12 field at Lincoln Park.

<b>Table 1: Installation<sup>1</sup></b>					
<b>Natural Grass Turf</b>					<b>Synthetic Turf</b>
<b>Cost Range during 8 to 10 year cycle</b>	<b>Natural with On site Native Soil</b>	<b>Natural with Native Soils</b>	<b>Natural with Sand Cap</b>	<b>Natural with Sand and Drainage</b>	<b>Synthetic Infill</b>
<b>Installation</b>					
Lower cost	\$40,500.00	\$101,250.00	\$180,000.00	\$315,000.00	\$292,500.00
Upper cost	\$67,500.00	\$236,250.00	\$292,500.00	\$450,000.00	\$495,000.00
	<i>One-time costs for grass natural turf</i>				<i>Replacement needed for synthetic turf every 8-10 years</i>

<sup>1</sup> Based on square footage costs from the Sports Turf Managers Association (STMA)  
[http://www.stma.org/sites/stma/files/STMA\\_Synthetic\\_Guide\\_2nd\\_Edition.pdf](http://www.stma.org/sites/stma/files/STMA_Synthetic_Guide_2nd_Edition.pdf), p3,5

<b>Table 2: Maintenance, Disposal, and Replacement<sup>2</sup></b>					
<b>Average cost during 10 year cycle</b>			<b>High Quality Grass Turf*</b>	<b>Stadium Quality Grass Turf</b>	<b>Synthetic Turf</b>
<b>Maintenance</b>	Data not available		\$75,000	\$250,000	\$50,000
<b>Replacement</b>			\$17,500	\$25,000	\$270,000
<b>Disposal</b>			\$0	\$0	\$45,000
<b>Total</b>			\$92,500	\$275,000	\$365,000

<sup>2</sup> Based on <http://www.redhenturf.com/pdfs/TheTruthAboutArtificialTurf.pdf>, p7. These estimates were not available from STMA.

<b>Table 3: Full Life Cycle<sup>3</sup></b>					
<b>Life Cycle Cost Range for 10 years</b>			<b>Natural with Sand Cap/High Quality Grass Turf</b>	<b>Natural with Sand and Drainage/Stadium Quality Grass Turf</b>	<b>Synthetic Turf*</b>
Lower			\$272,500	\$590,000	\$657,500
Upper			\$385,000	\$725,000	\$860,000

<sup>3</sup> Combining Tables 1 and 2

## 2. Other benefits of Grass Turf compared with Synthetic Turf

	<b>Grass Turf</b>	<b>Synthetic Turf</b>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Cooling Effect counteracts global warming</li> <li>• Habitat for underground life, microbes, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• “Heat island” effect contributes to global warming</li> <li>• Kills all life below ground; takes years to reinvigorate if grass is reinstalled.</li> </ul>
<b>Community Preservation Act (CPA) funding</b>	<ul style="list-style-type: none"> <li>• CPA funding is intended for grass.</li> <li>• In 2015, only <a href="#">12% of Somerville’s CPA funding was used for open/green space.</a></li> <li>• Annual CPA funding can fund grass maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>• CPA Funding is not intended for Synthetic Turf</li> </ul>
<b>Green Space</b>	<ul style="list-style-type: none"> <li>• Maintains green space</li> <li>• Consistent with <a href="#">Somervision Neighborhood Character goals, p39</a></li> </ul>	<ul style="list-style-type: none"> <li>• Loss of green space and open natural park land</li> <li>• Loss of Lincoln Park Neighborhood Character</li> </ul>
<b>Long-term Health Risks</b>	na	<ul style="list-style-type: none"> <li>• <a href="#">Cancer risk</a></li> <li>• <a href="#">Breaks down when old, over-used, weather-beaten, potential for lead exposures</a></li> </ul>
<b>Injury Risks</b>	na	<ul style="list-style-type: none"> <li>• Much hotter than grass in the summer, more risk of dehydration/overheating</li> <li>• Turf burns/abrasions, skin cuts, infections</li> </ul>
<b>Park Function</b>	<ul style="list-style-type: none"> <li>• Athletic use can be ideally limited to Somerville residents and groups</li> </ul>	<ul style="list-style-type: none"> <li>• Athletic users will be from all around the Boston area.</li> </ul>

### **3. Keeping the Little Grass that Somerville Has**

This is not just a park and green space preservation issue, but also a public health issue. I recommend that the City consider strategize to find alternatives to replacing our grass fields with synthetic turf, such as these:

- **Creating a Comprehensive City-wide Field Strategy: Maintenance and Scheduling.**

The City needs a Comprehensive plan and scheduling system for equitable, smart field use and maintenance.

While grass fields cannot support as many scheduled events as artificial turf, the city can and should commit itself to doing a better job of maintaining the grass fields it has. We need to put end to this cycle of what some in the community call a self-fulfilling prophecy that grass fields cannot be maintained.

The City needs a DPW that properly maintain the parks.

The City also needs to distribute park use wisely, by considering carrying capacity of our parks and prioritizing the ability of all Somerville residents to use the parks. There are an inequitable number of uses at Lincoln Park and the City has not adequately explored alternatives to the proposed artificial turf field.

In the absence of a comprehensive City-wide strategy to meet current and future demand for field space, the large number of permitted events at Lincoln Park, creates the appearance of a need for a synthetic turf field at Lincoln Park that has not been justified, including reallocating uses to the other parks in the City.

- **Hiring a City Director Park and Field Maintenance.** The City might consider hiring someone who is well trained in care, maintenance, preventive measures, and scheduling use of grass fields and can properly oversee them.
- **Issuing a City directive to favor natural surfaces and materials** over synthetic ones, to designers.

I am concerned that Weston & Sampson, the Lincoln Park Design contractor, is the same team that planned the foam rubber and synthetic turf elements into the new Cedar-to-Lowell Community Path section. Disappointingly, although the Friends of the Community Path made several requests to the City to replace all artificial elements on that Path segment

with natural element (grass, plantings, trees, wood chips, and community gardens), those recommendations by the Friends were unheeded.

- **Partnering with Tufts** on Grass field Use and Maintenance. Perhaps there are more fields at Tufts (in addition to the Triangle Fields) that Somerville can use.

Also, since Tufts University does a good job a maintaining their grass fields, perhaps there is way that Somerville could partner in a grass maintenance contract with Tufts.

- **Contract Language and Enforcement.** City RFPs and contract specifications for grass fields and maintenance need to ensure high-quality work and best practices, and the City needs to aggressively enforce fulfillment of contract obligations and warranties before it releases the contractor. While it has the authority, the City should require contractors remediate all substandard work and project systems that fail. It is penny-wise and pound foolish not to do so.

For instance, when contractors restored the Lincoln Park fields after rebuilding the Argenziano School, the contractors did a poor job that the city should not have accepted, and we are living with the result.

- **Adding “Green Space” to the BOA Special Committee on Open Space, Environment and Energy.** Having a “Green Space, Open Space, Environment and Energy” BOA Committee will help Somerville to maximize the value of grass, trees and vegetation in our open and recreational spaces, and to help the City preserve and maintain these spaces.
- **Future versions of Somervision/City Comprehensive Planning** should have clear acreage goals for green space – and not just acreage goals for open space.
- **Basic Prevention.** The City can post signs on the fences at grass fields discouraging play there when fields are wet, during and after a good rain, etc. Some fields like Nunziato can be locked under wet conditions, and unlocked when field play will not damage the fields.
- **Common Sense.** City DPW trucks should not be allowed to drive on grass fields. This summer at Dilboy, on July 23 at 9am, there 4 DPW trucks on the grass fields at Dilboy field. I’d wonder if this were an isolated incident.

#### **4. Limited Use of Synthetic Turf**

Given Somerville's dearth of green space, I cannot support the conversion of existing grass fields or other in Somerville to synthetic turf.

These are the limited circumstances in which I can support a synthetic turf field:

- 1) Synthetic turf fields must not use pellets made from potentially carcinogenic crumb rubber tires. Instead, the **pellets must be made from safer natural materials**, like coconut fiber and cork.
- 2) **Ideally, synthetic turf fields (with natural pellets) would be indoors**, to avoid heating to dangerous temperatures on hot, sunny days.
- 3) **It may be reasonable to convert of pre-existing non-natural surfaces to synthetic-turf-with-natural-pellets for recreational use**
- 4) **New developments** may provide ground level or rooftop (perhaps under bubbles, with air filtration) synthetic turf fields (with natural pellets) as a community amenity that developers would provide.
- 5) **Look to create a City Recreation Center** in Somerville's transformative areas. Assembly Square, Union Square, Boynton Yards, and BrickBottom/Inner Belt are expected to generate 20-30,000 new jobs in the next several decades, plus over 5000 units of mixed income housing.

These areas offer great opportunity for on-going public-private partnerships for construction and maintenance of a Recreation Center in Somerville.

Recreation Centers are common in other cities. In a City like Somerville with limited open and green space, a Rec Center would be an amazing boon and resource. This could have a synthetic-turf-field-with-natural-pellets

#### **5. Personal notes**

**Community Process.** I have been to several of the Lincoln Park Community meetings, where many community members voice a preference for all-grass fields there. The fact that all 3 design alternatives have synthetic fields demonstrates that the City and the design team not listening to what community is saying.

*I hope that synthetic turf at Lincoln Park is not a done deal!*

**Turf Burns** are no joke. We saw a large bandage on one the Somerville HS Soccer player's legs, from a synthetic turf burn. Some think that because these plastic fields do not get washed, cuts and abrasions on synthetic turf fields are more likely to get infections.

**Long Term Risk.** My kids come home from the synthetic turf fields with lots of crumb rubber tire pellets in their shoes and socks. Crumb rubber is made up of chopped up bits of scrap tire, which can contain carcinogens and chemicals such as benzene, carbon black and lead, among other substances. These darn crumb rubber pellets are all over our house during soccer season. I am concerned about exposure both on the field and in our home.

**Heat Island effect.** The environmental "Heat Island" effect of synthetic is real and visible. My sons play on the synthetic turf fields in Somerville. On sunny days, you can actually see the heat waves rising off of the fields. Temperatures on synthetic turf can get 10 to 60 degrees hotter than grass fields.

**Heat Stress.** Not only can this hot turf lead to overheating/dehydration, but also the high temperature may release unwanted off-gassing from the plastic and crumb rubber in the synthetic turf.

Given all this, the U.S. woman's World Cup soccer team has protested that they have to play on synthetic turf fields, while the men's teams get to play on grass. <http://www.usatoday.com/story/sports/soccer/2014/10/15/alex-morgan-us-women-artificial-turf-world-cup/17295011/>

In light of all of these considerations, I hope the City and the BOA sees the urgency of keeping all of the grass fields at Lincoln Park instead of installing the U12 synthetic turf field currently in the 3 design alternatives for the Park.

Thank you for your consideration. I look forward to hearing from you on this matter.

Respectfully,  
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