CITY OF NEWTON
SUSTAINABLE MATERIALS MANAGEMENT COMMISSION

1000 Commonwealth Avenue
Newton Centre, MA 02459-1449
Ruthanne Fuller, Mayor

November 27, 2023

Newton City Council
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449

RE: Waste, Toxicity, and GHG Considerations in Artificial Turf Installation and Disposal at Newton North High School

Dear Honorable Members of City Council,

On August 25, 2023 we sent the Council and the Mayor a letter opposing the use of artificial turf (AT) on the City's athletic fields. The Commission recognizes that the City has competing considerations in its decision to use AT or natural grass. However, we are concerned that the City is again not giving proper weight to the longer term issues of waste generation, hazardous chemical proliferation, and greenhouse gas(GHG) emissions compared to the issue of adequate playing capacity, as it meets on November 28 to allocate funding for the replacement of the Newton North High School AT field.

In the August letter, we recommended that the City not use any AT, but that if it did, an organic infill such as cork be used instead of thermoplastic elastomers(TPE). Organic infill has considerably lower GHG emissions while TPE has the highest of any infill product on the market. Against recommendations, Newton Parks, Recreation & Culture Department(NPRCD) chose to remain with its decision to use TPE.

In light of the administration's upcoming request to the Program and Services and Finance Committees for the authorization to appropriate $2.4 million for artificial turf replacement at NNHS, we would like you to once again consider the recommendations from our earlier letter. Two reports that the SMMC used in its deliberations can be viewed **here** and **here**. Below is a summary of our concerns:

- **The life cycle Greenhouse Gas Emissions (GHG) of an AT field using TPE is 5-6 times higher than one that uses a cork infill (with a shock pad)** regardless of whether it is landfilled, incinerated or recycled. A natural grass field, especially if organically managed, can be carbon neutral or even an effective carbon sink.

  To put this into perspective, assuming a 10 year lifespan, the life cycle carbon emissions of the proposed NNHS AT field replacement with a TPE infill (with recycling) would be *the same amount of carbon as that generated by the use of 65 million black plastic takeout containers,* or 200 containers per Newton household per year for 10 years. We *would need to plant and raise 49,000 tree seedlings for 10 years* to sequester that amount of carbon–an unsustainable effort. The City has recognized the ill environmental and health effects of these wasteful containers and have banned them from use in the city. The use of AT fields is no different. The City's support of AT fields might be different if their use were included in the City's GHG Inventory.

- **The Massachusetts State legislature is concerned enough about the use of AT to have four bills pending in this legislative session that would restrict the use of AT for health, safety, and environmental reasons.** Two of the bills have already passed out of committee. Of those four bills, two propose to ban the use of AT fields outright while the other two stipulate that a moratorium be put in place until further studies can be conducted.

- **Further proof is needed regarding the recyclability and reuse of the old infill and turf.** The information used by the city to determine the recycling and reuse of the old material was given by the contractor. The Commission is aware that 'greenwashing' is a common occurrence in the plastics industry and recommends third party verification of recycling and reuse. Our research has provided very little evidence to support that AT materials are being effectively recycled or reused. To rest on the belief–and not fact–that a material will be recycled is imprudent.

- **The specific costs of AT installation should be elucidated and compared to the costs of a sustainable natural grass management program prior to any decision making.** There was no breakdown of costs made public in the recent Newton South High School AT replacement. That project resulted in a substantial contract overrun that required additional ARPA funding. There was also no comparison to the costs of converting to and maintaining a natural grass field. Such opacity makes it difficult to understand the

decision to choose AT over natural grass. Now with the NNHS decision, we are again no clearer on the detailed costs of an AT replacement and have no way of adequately evaluating the choice between AT and grass.

Thank you in advance for your attention to this situation. Please contact me for any additional discussion.

Sincerely,

Sunwoo Kahng
Chair, Newton Sustainable Materials Management Commission

CC: Mayor Ruthanne Fuller