

Kingswood Turf Field Proposal

Governor Wentworth Regional School Board Hearing
Tuftonboro Central School; February 3rd, 2025

Background of Original Turf Installation

Current Field Condition & Wear



Turf Fields At Other New Hampshire High Schools

Division I

Bedford
Bishop Guertin/Nashua
North/Nashua South
Exeter
Goffstown
Manchester Central
Manchester Memorial
Pinkerton
Portsmouth
Salem

Division II

Kingswood
Hollis Brookline
Souhegan
Oyster River
Trinity
Saint Thomas
Hanover
Manchester West
Laconia
Derryfield

Division III

Inter-Lakes

Other Schools

Brewster
Holderness
New Hampton
KUA
Phillips Exeter
Proctor Academy
St. Paul
Tilton School

Turf Field Usage: Athletics



Scope of use:

- ❖ Six Kingswood Programs
 - Soccer, Boys & Girls
 - Field Hockey
 - Football
 - Lacrosse, Boys & Girls
- ❖ Fall 2024: Boys Soccer 11, Girls Soccer 13, Field Hockey 12, Football 10 HS, 3 MS
- ❖ Spring 2024: Boys Lacrosse 18, Girls Lacrosse 16
- ❖ Total of 83 games
- ❖ 15 x 80 = 1,200

Usage: Sports Clinics, Camps, Youth Programs, and More

- ❖ GRADUATION
- ❖ Phys Ed Classes: Grades 7-12
- ❖ Kingswood Youth Soccer
- ❖ Junior Knights Football
- ❖ JV Boys Lacrosse Tournament
- ❖ Kingswood Football Camp
- ❖ Kingswood Summer Soccer League
- ❖ Tom Lovette Jamboree
- ❖ Middle School Girls Soccer Tournament
- ❖ Dig Pink Flag Football
- ❖ Dry Land Training: Alpine Ski and Ice Hockey
- ❖ Abenaki Lacrosse



Community Support

Athletic Trainer Safety Review

Artificial Turf has a more uniform surface, reducing the incidence of inversion type ankle injuries

Artificial turf is less yielding for sudden planting or direction change, increasing incidence of non-contact injury.

- Equal or lower non contact injury compared to sod

Artificial turf offers a more consistent playing surface in a wider range of weather conditions.

Cold weather can cause compaction and hardening of natural grass, causing increased incidence of non-contact injury and repetitive stress injuries.

No consistent data on safety of one surface over the other due to the wide variety of types of turf and inability to determine if an injury was related to the playing surface.

- Dr. Brindle

Many studies do not differentiate between practices and games on different surfaces. Studies show an increased incidence of injury during games over practices similar to the incidence of injury on artificial turf over natural grass.

A proper training regimen can reduce the likelihood of non-contact injuries greater than the incidence of slip injuries

- Developing Quad and Hamstring strength, balance, and body position



Facilities & Maintenance

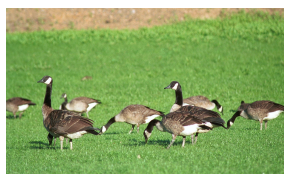
GWRSD Facilities: Maintenance of current field

- ❖ **Daily Maintenance** — Inspect the field daily for tears to seams and inlays or other damage, and for foreign objects or liquids on the playing surface. Complete repairs as needed.
- ❖ **Edges**— leaf blower to remove debris like sunflower seeds, leaves, trash, and growth along the concrete edge
- ❖ **Grooming** — This will be performed at a minimum of once per month or more frequently as the number of hours dictate. The manufacturer requires that this field be groomed at a maximum interval of 100 hours of use. General sweeping and cleaning, to remove foreign objects such as dirt, leaves, bird droppings, gum and other debris that may collect on the field surface
- ❖ **Monthly Maintenance** — Measure the depth of infill and replenish the infill to the required depth as needed.
- ❖ **Yearly Maintenance** — Performed deep grooming and infill replenishment once a year completed by FieldTurf.

Facilities & Maintenance

Implications of sod

- Removing turf, concrete curb
- Landscaping, irrigation, treatment
- Geothermal



Athlete, Parent, and Coach Support



Proposed Replacement

Turf Materials
Shock Pad
Tufting vs Cut in Lines

Josh Rocconi
Territory Manager - New England

Shaw Sports Turf
shawsportsturf.com

Shaw Sports Turf

- NXTPLAY Padding
- GMAX Test Guarantee
- Game On Tufting Machine: prints the carpet
- Disposal
- RAD Sports (located in MA): Installation
- Timeline
- Completion
- Cost

Shock Padding

Most turf field companies now offer a shock pad as a base layer of the field. Shaws specifically offers NXT Play padding.

Combine with the infill material the shock pad provides a safer and more consistent playing surface.

Turf fields with a shock pad require less infill. Additionally the the ratio of the infill material changes

Without shock pad: two inches of infill, 75% crumb rubber and 25% Sand

With Shock Pad: 1.5 inches of infill, 60% sand and 40% crumb rubber

- Shaws will provide a custom blend of infill material that best meets the need of our turf field
- For new or replaced turf fields for schools districts, shock pads are very common to install



The Next Level of Performance Shock Pad



GMAX Test

A GMAX test measures how well the surface absorbs impacts. An acceptable GMAX score should be below 165 G's for a turf athletic field.

Natural grass GMAX score is typically between 95-135.

In the past, our field has not been officially tested to measure its GMAX score.

With a shock padding, NXT Play, Shaws Sports Turf guarantees an acceptable GMAX score for 25 years, the score would not exceed 135 G's.



Game On



Game On- prints the field instead of cutting and glueing all hash marks, lines, letters, and logos. Two sports will be tufted onto the field

Additional sports would have a combination of tufted and cut lines into the carpet.

- Football and Girls LAX 100% tufted lines
- Soccer 95%, 80-90% of Boys Lax and Field Hockey
- Shaws Sports Turf provides a lifetime guarantee on in cut in lines. At this point the only company that has this guarantee.

Infill Materials: Natural & Artificial

Artificial turf fields typically have a blend of infill materials. Our current field has an infill made of crumb rubber and sand.

Natural Infill

Geofill: Coconut Fiber

Naturalplay: Coconut and Walnut Shell

Core Max: Olive Pits

Infill that is made of natural materials provides a good playing surface. However the fibers absorb water. As a result of living in Northern New England, specifically, the ground freezing. Our programs ability to use the field would be impacted.

Artificial

Crumb Rubber Infill and Sand

A turf field with crumb rubber infill is typically made of recycled tires. The crumb tires also provides a high quality playing surface. From a field usage perspective, because the crumb rubber wicks water the field is playable year round.

Chemical Makeup of Materials

Current Materials

- Why PFAS is expected in current field
- Materials determined unsafe by EPA
- PFAS in air and water

Current Testing per GWRSD School Board

- Samples have been taken
- Lab will return in 1-2 weeks

New Materials

- Shaw Sports Turf
- Pledges to not use PFAS
- Parts per trillion - no PFAS
- In Depth testing of materials
- Implications of plastic
 - Overtime, blades wear down
 - Catch basin and filtration mediates
 - Unlike landfills

Installation & Timeline: Installation and Disposal

Installation

- ❖ Removal of existing turf and infill
- ❖ Fine grade the stone base
- ❖ Install new shock pad
- ❖ Roll out new turf and add infill
- ❖ Begin after graduation

Disposal or Recycle

- ❖ Infill: we can reuse the crumb rubber on the current field
- ❖ Shaws Sports Turf does recycle turf carpet, other options in New England will be less expensive (shipping)
- ❖ The price difference between disposal vs recycling is minimal
- ❖ Recycling is slightly less costly than disposal

Installation & Timeline: Completion and Cost

Completion

- ❖ Once we provide final plans and a purchase order, Shaw will start their process
- ❖ Installation can begin once the school no longer needs the turf
 - End of Spring Sports
 - Graduation
 - End of School Year

Estimate Cost for Artificial Turf

- **\$758,205**
 - Includes tufting, shock pad, rubber and sand infill
 - Includes recycling
 - Includes performance and payment bond
- Infill Alternatives:
 - Natural play infill additional \$118,175 (coconut/walnut)
 - Second alternative: coremax additional \$126,125 (olive pits/sand)
- Regular disposal additional \$10-15K.

GWRSD School Board

- Primex will review the contract and project
- Omnia Contract: Purchasing Cooperative (i.e. TRANE)
- **Fund balance as of 12/30/24: \$882,542**
- **Request 10% typical contingency**
- **Total request for expenditure: “up to \$830,000”**

Questions?

Thank you for your support!