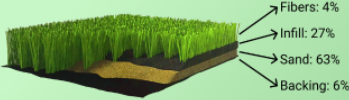


The Artificial Turf Revolution

What is the problem with artificial football pitches?

Football is the largest sport in Norway with over 370 000 active players. With help from artificial turf, children are able to play even in cold Norway, but this comes with an environmental cost. Rubber granules from football fields are polluting their nearby environment with microplastic, including the ocean. With several new artificial turfs built every year we have a growing problem which requires a solution and actions now.

How regular artificial SBR turf is built up



Did you know...

Wear from old car tyres is the **single biggest** contributor to microplastics?

...ironically

The second largest contributor to microplastic is artificial turfs.
Miljødirektoratet, 2020

Actually...

SBR granules on football fields may be forbidden by EU in the next few years. The need for new solutions is therefore urgent!

ECHE, 2020

...but

This is easier said than done for the new alternatives

Björn Aas, interview

Did you know...

In order to play official games on fields, you need an approval from FIFA.

Did you know...

That there exists almost 2000 artificial football fields in Norway?

Kulturdepartementet

Did you know...

There is the same amount of plastic in one football field as in 1,4 million plastic bags

SKUP

...and that

There is over 1,2 tonnes of zinc on a football field with artificial turf?

NTNU SIAT, 2018

Reuse and Recycle

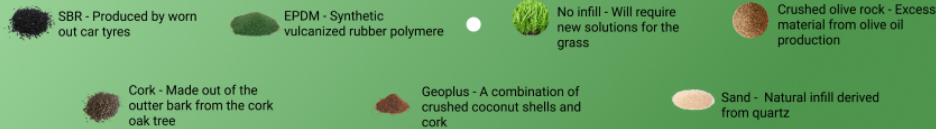
Besides finding a new type of sustainable football turf, the existing fields in Norway also have to be properly managed. There are several components in artificial turf that can be either recycled or reused, each with their own problems and solutions.

Reuse ensures that the same product gets used more than once, while recycling gives a new life to the old resources. Here are some pros and cons for both solutions.



	+	-
Recycle	Contributes to a circular economy Can make cheaper second generation fields	The capacity of recycling facilities is limited. Harder to be approved by FIFA's quality standards
Reuse	Multiple solutions for infill separation Reduces need for new infill Cheaper than to buy everything new	Can generally not reuse whole pitches No financial support for reused fields Granule infill degrades over time

Which alternatives have we considered?



Rating of Infills

Best Alternative

Olive Rocks has the highest total score and we believe this is the most attractive alternative today!

The organic alternatives generally scores higher on the environmental aspects. However, it is important that they improve on user friendliness if they are to be adopted on a large scale.

Category/infill	SBR	EPDM	No Infill	Olive Rocks	Cork	Geoplus	Sand
Total Cost	3	2	5	4	3	2	4
Microplastics	1	1	5	5	5	5	5
Environmental Footprints	2	2	5	4	4	4	4
FIFA Demands Politics	4	4	1	2	3	2	3
User Friendliness	4	5	2	4	3	2	2
Total Score	14	14	18	19	18	15	18

Conclusion

- FIFA demands makes it difficult to implement new solutions
- Hard to choose between environment and user friendliness
- The perfect solution for the future might not be on the marked yet

How much granules are needed for one pitch?

