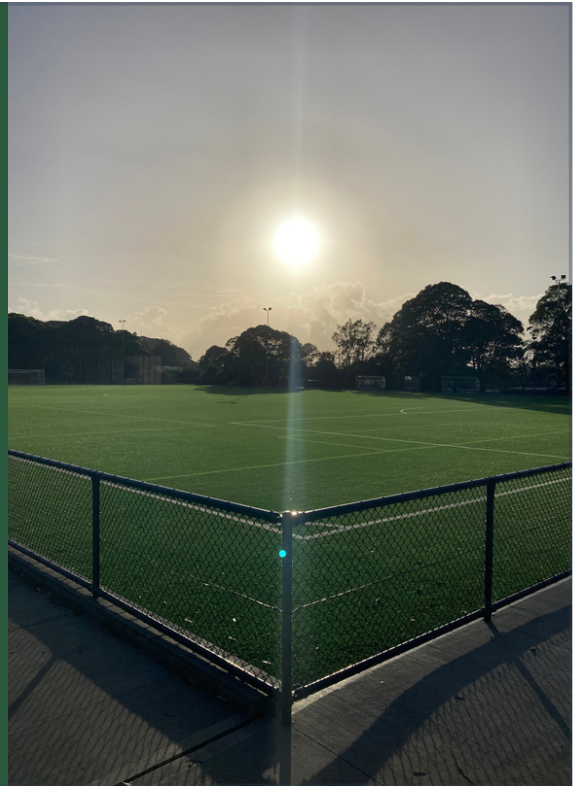


How to submit  
**Draft Guidelines  
for Synthetic Turf**



Before we start recording. If you are mindful of privacy, can I suggest the follow.

1. Turn your video off
2. Change your screen name to initials

Welcome to the first of our series on submitting to the Draft Guidelines.

Thanks  
Brief intro

If there is something you can take away from tonight, it that anyone can submit, and it's incredibly important we get the range and the volume of both experts and regular residents to respond.

It is said there are 180 synthetic parks in NSW, not ever the CSE report could finalise the number and 95% of those are rubber crumb filled.

It's what is existing that is the problem as much as the future for our open spaces.

## Studies & Reports

These are the reports that background the guidelines

NSW Public Open Space Strategy

Synthetic Turf Review

NSW CSE Initial Report

NSW CSE Report

ETHOS  
URBAN

OTIUM  
SPORT + LEISURE

SYNTHETIC TURF STUDY IN  
PUBLIC OPEN SPACE  
Report

Prepared for the Department of Planning,  
Industry and Environment  
August 2021 | 2210189



In 2020 three communities (Greenwich, Banksia and West Pymble) found a common issue, their local parks were being turned in waste tyre filled synthetic soccer fields. We spoke to Mosman, who had convinced their council to engage a soil scientist and kept their grass. We had proof that natural turf fields could deliver the usability at a better cost than synthetic.

We pressured the then Minister for Planning, Rob Stokes and he commissioned a review into Synthetic Turf. This was released in August 2021, the Draft reports guidelines came out and then the report was finished in October 2022, but not released to the public until June 2023

### Public open spaces are beneficial for:

- Organised and informal recreation.
- Healthy lifestyles and happier people.
- Community participation and engagement.
- Connection with Country.
- Cultural values.
- Economic activity.
- Labour productivity.
- Business outcomes.
- Biodiversity.
- Urban amenity.

## Public Open Space

From the NSW Public Open Spaces Strategy

No mention of artificial or synthetic surfaces

2022, by Minister Antony Roberts

### Flexibility

Reduced usage as soccer prefers this sport above all others.

Public space needs to cater for current and future needs.

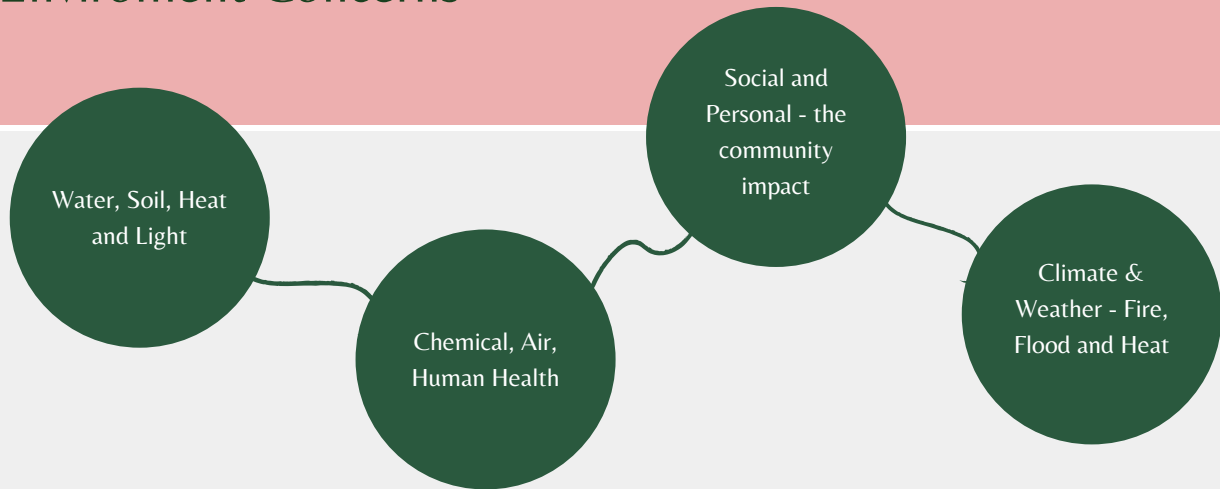
We are losing our cricket, which means we are losing the chance for the next generation to form.

Arncliffe Park

Gardiner Park

anyone else?

# Human Health & Environment Concerns



Pick your issues.

There are multiple human health and environmental issues

My suggestion is to pick one or more and concentrate your submission on these.

Reference pages 6 to 9 of the Ethos Report & the contents list of the NSW CSE report

# Urban Ethos Study - pages 6 to 9



## 1.2 Key Findings

A summary of the key findings related to the application of synthetic turf as an alternative to natural grass turf is provided below. This summary draws upon the findings uncovered across the Study, which included community feedback, stakeholder workshops, case studies, and a literature review.

Theme	Issues
<b>Best practice natural turf management can improve field capacity</b>	<ul style="list-style-type: none"> <li>Best practice natural turf design and maintenance has the potential to improve the capacity of existing natural turf fields to support increased sporting use.</li> <li>Loss of available information on best practice construction and maintenance of natural turf fields influences and constrains council decision making.</li> <li>Information about recent innovations and best practice for natural turf are not well known or commonly used.</li> <li>Advances in technology are enabling more targeted maintenance and management of natural turf to reduce energy consumption and costs and maintain capacity.</li> </ul>
<b>Partial/total use of synthetic grass can increase durability</b>	<ul style="list-style-type: none"> <li>Hybrid turf combines blades of synthetic grass with natural grass to increase durability of fields while reducing use of synthetic materials.</li> <li>Synthetic materials can be incorporated in the root zone to reinforce the soil profile.</li> <li>Synthetic turf can be used selectively in high wear areas of a sports field such as the goal area.</li> </ul>
<b>Synthetic turf design is evolving</b>	<ul style="list-style-type: none"> <li>Recent technological advances in synthetic design address some of the environmental impacts associated with earlier generations of synthetic turf.</li> <li>Replacing rubber infill with cork granules is an environmentally friendly option however it is more costly and deteriorates faster.</li> </ul>
<b>Innovative management practices can support greater use</b>	<ul style="list-style-type: none"> <li>Strategic lighting to encourage evening use of particular areas of fields and shifting line markings are an effective way to distribute usage across a playing field surface.</li> <li>New technologies and approaches are offering facility owners improved data on the status and usage of sports fields, enabling councils to better target maintenance, manage peak use and quiet periods, scheduling, and planning for use.</li> </ul>
<b>Sports field planning and siting</b>	<ul style="list-style-type: none"> <li>Siting considerations exist for both natural and synthetic turf. For example, many sites that contain optimal utilization of natural turf fields are identified when they are located in poor drainage or flood prone areas, in landfill sites, or where they have a dual purpose as stormwater retention basins.</li> <li>Where synthetic or natural turf fields are located in areas prone to flooding, or subject to overland flows during extreme weather, there can also be issues related to pollution of local waterways or pollution with litter, plastics or pesticides. Further discussion of potential pollution arising from both natural and turf fields, and the contamination of the surrounding local environment, is discussed below.</li> <li>Better consideration of siting and planning for the whole open space network can alleviate some pressure on the network, including siting of facilities across USA boundaries and with different land uses such as schools, purpose-built facilities and sites, synthetic fields in non-environmentally sensitive areas.</li> </ul>
<b>Constrained capacity of sports fields</b>	<ul style="list-style-type: none"> <li>The existing network of sporting facilities is pressured by some stakeholders as unable to meet growing demand and some clubs turn away potential participants due to a lack of capacity.</li> <li>Existing fields in already populated areas, with high levels of sporting participation may not have the capacity to meet very high levels of demand, regardless of the quality of the field. It can be challenging to acquire new land for sportsfields due to development pressure and lack of available space particularly in inner city areas. Some councils therefore choose to increase local capacity by converting natural turf sportsfields to synthetic turf.</li> </ul>

Theme	Issues
<b>Poor quality of existing sporting facilities</b>	<ul style="list-style-type: none"> <li>Poorly maintained and constructed natural turf sports fields can struggle to support high levels of use due to poor condition and inadequate drainage, which limits their available hours of use for sport.</li> <li>Many natural turf fields are perceived to be in poor condition with inadequate drainage, poor construction and maintenance regimes resulting in low field capacity, high maintenance costs and reduced user experience. Synthetic surfaces can provide significantly higher levels of utilization than poor condition sites.</li> </ul>
<b>Sporting facility demand, equity and capacity in complex and uncertain</b>	<ul style="list-style-type: none"> <li>Natural turf fields cater for more diverse uses that includes organised sporting activities and passive recreation activities such as picnicking, walking, jogging, dog walking and more.</li> <li>The sporting capacity (calculated as hours of organised sports use per week) of synthetic surfaces is higher than natural turf and as such field operators can allocate more users to a synthetic field for organised sport training and competition.</li> <li>The use of sports fields can be concentrated to specific days and certain times of day for training and competition, impacting on synthetic turf surfaces can offer higher levels of participation during peak periods.</li> <li>Actual demand for sport use is not always modelled or well understood by authorities when considering converting surfaces to synthetic. The theoretical capacity provided by a synthetic surface may not be required to support actual demand for sports participation.</li> <li>Synthetic turf can increase the reliability and surface quality for sport use during wet and winter weather compared to natural turf. However, during summer, mulches on synthetic turf sports fields may need to be covered due to heat more frequently than natural turf sports fields.</li> <li>Highly surfaces are an emerging response to improving field capacity and combining the advantages and limiting the disadvantages of both pure natural and synthetic.</li> </ul>
<b>Amenity and enjoyment for public open spaces</b>	<ul style="list-style-type: none"> <li>Synthetic fields are generally subject to higher ambient temperatures than natural turf on hot days.</li> <li>The aesthetics of synthetic turf is very different to and perceived as much less attractive to natural turf.</li> <li>Synthetic turf does not provide the same benefits of connection to nature compared to natural turf open spaces.</li> <li>Natural surfaces provide greater levels of noise abatement, glare reduction and UV reflectivity.</li> <li>Fenced synthetic fields reduce informal use of open spaces while prioritising sporting use.</li> </ul>
<b>Impacts from the increased utilization enabled by the use of synthetic surfaces</b>	<ul style="list-style-type: none"> <li>Due to having an increased carrying capacity, synthetic fields can have: <ul style="list-style-type: none"> <li>Increased impact on surrounding residents from duration of field lighting at night.</li> <li>Congestion and pressure on parking and increases to local traffic.</li> <li>Increased impact and duration of noise due to greater intensity of use.</li> </ul> </li> <li>Diverted synthetic fields can impact on perceived services for adjacent residents.</li> </ul>
<b>Concerns associated with environmental impacts</b>	<ul style="list-style-type: none"> <li><b>Pesticides</b> for and other such from used on synthetic turf materials (i.e., rubber granules) is well documented in academic research. Pesticides, particularly of waterways and bays, and was a concern raised by community representatives.</li> <li><b>Chemical use:</b> Pesticides and Fertilisers are typically used for natural turf fields, while pesticides and fungicides are typically treated for synthetic fields.</li> <li><b>Waste:</b> Environmental and financial challenge of disposing synthetic turf at the end of its 10-15 year cycle.</li> <li><b>Heat:</b> Heat impacts to the surrounding environment caused by synthetic turf absorbing heat rather than reflecting.</li> </ul>

Theme	Issues
<b>Concerns associated with environmental impacts continued</b>	<ul style="list-style-type: none"> <li><b>Carbon emissions:</b> Synthetic fields contribute to heightened CO2 emissions due to lack of carbon sequestration associated with natural turf.</li> <li><b>Soil deterioration:</b> Over-fertilisation of soil beneath the synthetic turf has an impact on ecosystems. Synthetic surfaces can bring systems.</li> <li><b>Water Usage:</b> Water consumption and irrigation requirements are lower for synthetic turf compared to natural turf, particularly in drought and dry conditions (due to reduced water evaporation).</li> <li><b>Variability:</b> Environmental impacts of synthetic fields vary substantially depending on what type they are. Older synthetic fields (generations 1 and 2) are associated with significantly higher carbon footprints and environmental pollution.</li> <li><b>Wildlife:</b> While natural turf sportsfields have limited biodiversity value they do provide some habitat for local flora and fauna that synthetic turf does not.</li> <li>It is noted that design of synthetic surfaces is technologically advancing in response to some of the impacts created by synthetic turf (e.g., microplastic pollution).</li> </ul>
<b>Potential human health impacts</b>	<ul style="list-style-type: none"> <li>Heat stress and the impact on player and user comfort associated with playing on synthetic fields in hot weather.</li> <li>Some generations of synthetic turf (Typically 1st, 2nd and 3rd) have a greater risk of air-borne or skin and higher heavy metals.</li> <li>Research has suggested that biological pathogens, toxic chemicals, and microplastic ingestion are all risks to human health that are associated with synthetic materials.</li> </ul>
<b>Cost and economic factors are not transparent</b>	<ul style="list-style-type: none"> <li>High initial capital cost of synthetic turf can be perceived as a barrier to installation.</li> <li>Synthetic playing fields have traditionally been perceived as requiring lower maintenance and hence lower operating costs compared to natural turf. However, synthetic surfaces have a prescriptive maintenance regime, and there is indication from recent studies in other jurisdictions, including New Zealand and Western Australia, that in practice synthetic turf can have recurring maintenance costs for repairs and clearing of surfaces that can be comparable to that of natural turf.</li> <li>Long term replacement of natural turf surfaces is often under-funded which can result in deteriorating condition facilities and limited capacity.</li> <li>Reused parts associated with the disposal and replacement of synthetic fields at the end of their life cycle is not always adequately considered.</li> <li>Best practice natural turf has ongoing maintenance requirements to maintain high levels of performance for all users, such as mowing, 'treating', and so surfacing the field.</li> </ul>

## 1.3 Preliminary Recommendations for Consideration

Consultation undertaken in preparation of this Study has demonstrated that there are often conflicting views between local authorities, user groups and the wider community over the suitability and benefits of synthetic turf as an alternative to natural turf.

While it is clear that both types of surfaces can provide positive outcomes in terms of access to public open space and participation in recreation and sporting activities, the absence of consistent guidelines, consultation with communities and transparent consideration of potential alternatives has led to distrust and concern over decisions to implement synthetic sporting fields.

For a good summary of the issues and responses, I can recommend pages 6 to 9 of the Urban Ethos Report.

Don't rely on these entirely, but use them as a guide.

"Best practice natural turf management can improve Field capacity"

Our Go-to person for information on Natural Turf is Dr Mick Battam, and we will be sharing those studies and resources.



## Water, Soil & Heat and Lights

Water contamination via rubber crumb leaching and plastic grass. (AusMap)

Soil - loss of soil & same issues as above (Dr Battam)

Heat - Urban Heat Island effect (Dr Pfautsch)

Lighting - light pollution as each field requests new lighting

The issues unique to ST are water, soil and heat. Lighting is for many fields, but is often increased when an ST is installed.

The experts we read and listen to are

1. AusMap
2. Dr Mick Battam
3. Dr Sebastian Pfautsch

All of them have produce reports and studies specific to Australian conditions. Again we can share these.

## Chemical, Air & Human Health

Chemical - unknown and unstable

Air - off gassing - loss of oxygen from real grass

Human Health - injuries - heat



### Chemicals of Concern in Turf

Carcinogens	Neurotoxicants	Reproductive Toxicants	Respiratory Irritants
<ul style="list-style-type: none"><li>• Benzene</li><li>• PAHs</li><li>• Styrene</li><li>• Cadmium</li><li>• Arsenic</li><li>• PFAS</li><li>• VOCs</li></ul>	<ul style="list-style-type: none"><li>• Lead</li><li>• Zinc</li><li>• Phthalates</li><li>• VOCs</li></ul>	<ul style="list-style-type: none"><li>• Phthalates</li><li>• Plasticizers</li></ul>	<ul style="list-style-type: none"><li>• VOCs</li><li>• Particulate matter</li><li>• Silica</li></ul>

Chemicals. The CSE review said there are known gaps.

The European Chemical Agency, known as ECHA has placed a ban on 8 of these chemicals.

We urge the precautionary principal of human and enviromental safety

Articles virtally daily on chemical containimation of humans and the enviroment.

pic of Northbridge Oval with 'topping up' bags of rubber crumb



## Social Impacts - It's just not cricket

Loss of Community Space

Fencing and ownership

Use for only one sport

Add your own

### Flexibility

Reduced usage as soccer prefers this sport above all others.

Public space needs to cater for current and future needs.

We are losing our cricket, which means we are losing the chance for the next generation to form.

Arncliffe Park  
Gardiner Park

anyone else?



## Climate Change & Top Three Issues, that can't be mitigated

Fire



Flood



Heat



These are the top three issues that should preclude many sites from being converted to Synthetic.

1. Fire - this has recently come into our top three issues and mainly because it's an Australia issue.

\*Highly Flammable

\*Wrong standard applies

\*No further research conducted

We recommend no ST in Bushfire zone areas.

2. Flood

Mitchelton FC in Brisbane. Flooded with all infill washed away.

We recommend no ST in Flood zones. Councils will have this data.

3. Heat. As demonstrated by Dr Pfautsch, ST is super hot.

The blades and the infill contribute to the heat

Please add any personal stories to your submission

# The Personal

How has it changed your community

Do you, your family or friends play on plastic turf?

Add your experience



## The Personal

How has it changed your community

Your use of the park

Use by other activities, both active, passive and

Eg, no more birthday parties at the park

## Where to Submit

Either enter your response in the text box or upload a file (we recommend)


The best response is clear, with a combination of paragraphs and bullet points with clear topics in bold.

Quotes and references are highly recommended.

Finish with benefits of Natural Turf

No more than five pages

### Synthetic Turf in Public Open Space Guidelines



[Home](#) > [Draft Plans and Policies](#) > On Exhibition

We are exhibiting the draft Synthetic Turf in Public Open Space Guidelines for Decision-Makers until Monday 29 April 2024.

The guidelines focus on synthetic turf for sporting purposes and offer strategies and case studies to inform decision-makers. The guidelines do not cover synthetic turf in private or residential settings, streetscapes or play spaces.

The guidelines will help decision-makers, planners and sports field managers who may be considering synthetic turf as an alternative to natural grass. They will also support designers, delivery agents and open space managers to plan and deliver the best outcome for their community.

[View the draft guidelines](#)

[View 'Frequently asked questions' document](#)

**Have your say by 29 April 2024**

We welcome all feedback on the draft guidelines, which will inform the final document to be published in 2024. You can submit your feedback via the submission form on this page until Monday 29 April 2024.

#### Submission

**Make a submission**

To make an online submission, please fill in the following fields. Those marked with an asterisk "\*" are mandatory.

Submission Type \*

I am making a personal submission

I am submitting on behalf of my organisation

First name \*

Last name \*

#### Timeline

- On Exhibition  
The consultation is open for public comment.
- Under Consideration  
We'll be reviewing what you told us.
- Made and Finalised  
The final outcomes of this consultation will be documented here.

#### Consultation period

From: 17/03/2024  
To: 29/04/2024

#### More information

[www.planningportal.nsw.gov.au](http://www.planningportal.nsw.gov.au)

Exhibiting agency or agencies: DPH  
Exhibition location: NSW Planning Portal

Google  
'synthetic turf guidelines'

Located on the Dept Planning

<https://www.planningportal.nsw.gov.au/draftplans/exhibition/synthetic-turf-public-open-space-guidelines>

Either enter your response in the text box or upload a file (we recommend)

The best response is clear, combination of paragraphs and bullet points with clear topics in bold.

Quotes and references are highly recommended.

## Where to go for more information

Natural Turf Website

Agenviro - Dr Mick Battam's webpage

Follow us on Facebook, Twitter/ X

Share your submissions

#gorealgrass  
#fliptheturf  
#grassisgreener

Grass helps clean the air, trap carbon dioxide, reduce erosion from stormwater runoff, improve soil, decrease noise pollution, and reduce temperatures.

Natural Turf Website

Dr Mick Battam/ AgEnviro

Thank you so much

Please tell your friends, neighbours and  
community to submit

