



4 MAY 2023

Position Paper

How a large Synthetic Turf Sports Field was approved near an ecologically sensitive environment at Norman Griffiths Oval West Pymble, and the dangerous health, safety, and environmental consequences of synthetic turf fields in general



Presented To

Community members who are interested in the truth about synthetic turf fields, alternatives and proper governance

Written by

Kristyn Haywood
Community Independent Candidate for
the seat of Wahroonga
NSW March 2023 Election
enquiries@kristyn4wharoonga.com

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Introduction

Construction is underway for a 3.5-million-dollar synthetic turf oval on top of a major water catchment area that flows into the Lane Cove River at Norman Griffiths Oval West Pymble. There is a clear environmental risk of plastic and chemical run-off into Quarry Creek and into the Lane Cove River. Additionally, the critically endangered ecological community of Sydney Turpentine Ironbark Forest (STIF) [Annexure 1] is above and around the oval. The microplastics and cork infill from the synthetic turf are a threat to this endangered flora and fauna. There are also health and safety concerns for players, many of whom are children. The science against synthetic turf is mounting and our State and Local Governments appear to be ignoring this evidence and indeed withholding it.

In November 2021 the (then) Minister for Planning and Public Spaces the Hon. Rob Stokes MP was sufficiently concerned enough to request the NSW Chief Scientist & Engineer conduct an independent expert review into the use of synthetic turf in public open spaces in NSW. It is a most comprehensive expert review we have to date about the various impacts of synthetic turf on humans, climate, waterways, and the environment more broadly. It is being withheld from the public. The NSW Government must release this report immediately so we are aware of the impacts of synthetic turf and can make informed decisions.

During my 2023 campaign as the Community Independent candidate for the seat of Wahroonga, I was incredibly disturbed by what I'd learned about the Norman Griffith Oval Synthetic Turf project, and synthetic turf in general. Unfortunately, residents who share my concern about the potential environmental, health and safety issues had their legitimate issues met with "Don't you want children playing sports outside instead of being on screens?" I heard this whenever I raised concerns about synthetic turf.

I also heard these types of comments from the mountain biking community when I objected to them riding through critically endangered ecosystems at the proposed Westleigh sporting development. I find this leading question overly simplistic, somewhat manipulative, and lacking viable alternatives. It is just as objectionable to me when 'women's increasing participation', in mostly male-dominated sports, is used as a valid reason to use synthetic turf, or for sporting organisations to take over community land.

The news coverage on this issue has only touched the surface. There is a bigger story. A story about withholding critical information to the community about the health, safety, and environmental risks of synthetic turf; how money from sporting grants is allocated before proper due diligence is undertaken; the dangerous disregard of local government to protect flora and fauna on the brink of extinction; the contempt displayed to community voices who challenged the October 2020 decision to proceed with synthetic turf at Norman Griffith Oval.

In the March 23 NSW Election, there was a swing against Liberal MP Alister Henskens in the electorate Wahroonga where the Norman Griffith Oval is located. I received 9.3% of the votes. Tina Brown from The Post wrote "This is a significant dent in the Liberal hold for Wahroonga. She also wrote "I was struck by Kristyn's strong stand for Wahroonga, her voice for women, and her passion for the environment.[1]"

My passion for the environment has not subsided because I did not win the election. I simply cannot let this issue go until all the facts are available to the community for them to judge whether this project and others like it should proceed in our community. Therefore, I have compiled a list of facts that the public may never have had access to before now.

Let me be crystal clear. This is not about kids' sports. We should be doing all we can to provide adequate playing fields. The lack of sporting infrastructure isn't limited to playing fields. We have over-developed in Kuring-gai without proper planning for extra infrastructure like more playing fields.

I'm more than willing to amend this position paper with additional sound facts, just not 'alternative' facts.

[1] <https://www.hkpost.com.au/a-labor-state-government-still-liberal-stronghold-on-the-north-shore>

Grant Accepted Without Environmental Assessment

Shockingly no environmental assessment was commissioned before two grants totalling \$520,000 were awarded by the NSW Sports Minister, Stuart Ayres, to Ku-ring-gai Council specifically for a synthetic turf playing field in 2019, even though the playing field chosen is next to Sydney Turpentine Ironbark Forest (STIF) listed as a critically endangered ecological community under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and Biodiversity Conservation Act 2016.

Natural Turf Not Considered

Misinformation has been circulated that natural turf can only provide 25 hours per week of playing hours. This falsehood appears to have been propagated by synthetic turf suppliers and is the reason natural turf was not considered. Interestingly, these discussions must have taken place with the Sports Minister and the football clubs before he awarded a grant tied to synthetic turf.

Yet despite claims synthetic turf provides more playing hours, there is demonstrable evidence that properly designed and constructed natural turf fields can achieve up to 50 hours per week utilisation throughout periods of high use. Mosman Council in Sydney rejected a development application for synthetic turf at Middle Head Oval, instead investing in complete turf redevelopment, at a cost of less than 500,000. The upgraded turf field receives 49 to 55 hours per week of sporting use during winter, as well as informal community use throughout the year, without significant loss of surface quality.

Dr. Mick Battam from Agenviro has completed an independent assessment of Norman Griffith Oval and confirmed that the field receives sufficient sun and, with appropriate construction and maintenance plans, could manage a high level of usage. It needs to be stated that synthetic turf playing fields allow sport to proceed in the rain which is often not possible with natural turf. This is one reason football clubs support synthetic turf. Lane Cove Council did not think it was a good enough reason to proceed with synthetic turf. They are about to put natural turf in a flood zone at Bob Campbell Oval at Greenwich after public outcry against synthetic. How is this any different from Norman Griffiths?

The key issue that impacts the resilience of natural turf is inadequate budgets to enable them to perform at high levels of performance, particularly after heavy winter use or wet weather. It's clear from talking with stakeholders that the key issues are (a) poor flood mitigation strategies (b) inappropriate subsoil and grass species used for the field and (c) a poor maintenance program. With proper construction and maintenance schedules, natural turf fields are a viable option for increased playing hours for football. Councils simply need to commit to appropriate budgeting for natural turf field construction and maintenance.

Funding Tied To Synthetic

At an October 2020 Council meeting the Director of Planning and Environment Andrew Watson stated, "it has got to be pointed out that the money that the soccer club has brought to the table is nearly \$1,000,000 and that is only available for a synthetic field so in the event the Council decides not to do a synthetic field their funding wouldn't be available for a turf upgrade." This statement by Andrew Watson appears to have put pressure on Councillors to proceed with the project without addressing legitimate concerns from the community.

Originally Rejected by the Community

After receiving the grant tied to synthetic turf, Ku-ring-gai Council considered Norman Griffiths Oval. This was promptly ruled out as recorded in Council's minutes of 9 April 2019: "due to site complexities it was determined the project was not viable. Major site constraints such as the oval being a flood detention basin, limiting space to achieve flood immunity whilst maintaining a full-size field, environmental factors and visual connectivity within the surrounding Bicentennial Park implicated prohibitive costs to achieve the conversion".

The Council then voted to proceed with synthetic turf at Mimosa Oval in South Turramurra. However, in Councillor Jeff Pettett's words in the October 2020 meeting it was "soundly opposed by the residents." It was found to be an unacceptable fire risk, detrimental to the environment and not accommodating to other forms of recreation. Therefore, in November 2019 there was a motion not to proceed with Mimosa and to proceed once again with Norman Griffiths, which is on a flood basin surrounded by endangered forest and close to a national park.

Petition against Synthetic Turf at Norman Griffiths

At the October 2020 meeting, Councillor Pettett remarked that "All of us decided to proceed and have a good look at it" and "We are there to provide as much sporting facilities as possible." And the reason for the synthetic turf option is "the increase in football participation in the area." Councillor Pettett also remarked that in addition to the footballers crying out for it, that "the residents are crying out for it too." At this Council meeting all Councillors agreed to 'proceed with investigations of a synthetic field at Norman Griffiths.' It seems that Cr Pettett was rather optimistic about the community's views as the petition against the synthetic turf field in West Pymble received over 1700 signatures.

Predetermined Consultation

It appears that a pseudo-predetermined consultation process was masked as genuine consultation. Parts of the community were presented with a concept plan with no detail of the design. The question posed was 'do you want synthetic turf because it will increase playing hours?' Remarkably, there was no mention that the oval would no longer be accessible to the community. The Chief Executive Officer of Northern Suburbs Football Association (NSFA), Kevin Johnson, assured the community that 95% of the 706 respondents during the official community consultation before the 20 October 2020 Council meeting wanted the synthetic turf at Norman Griffiths Oval. He also stated, "The community overwhelmingly want it and it's the best environmental outcome increasing sports field capacity at a suitable site without cutting down a single tree." Yet, the survey methodology was flawed.

The alternative of a properly constructed natural turf oval was not suggested. The local football club galvanised its membership to provide positive feedback on the proposal. There was no community consultation with local bush care or environmental groups. A subsequent independent petition has attracted 2,217 supporters of a natural turf field at Norman Griffiths Oval. How can an ill-informed community know what they are in favour of? It is now apparent the community did not know about potential environmental impacts, health and safety risks or that the field would be cordoned off and not be accessible for recreation.

Misleading Statements

It appears the community was misled by the Director of Planning and Environment Andrew Watson during the Council Meeting in October 2020 when, after Councillor Szatow raised environmental concerns, he reassured her “but that's the idea of going to design and construct and an environmental review so that some of the other issues raised by some of the other submissions can be positively addressed and fed into that process.” When the community tried to access the ‘preliminary impact statement’ identified in Council minutes, they were told that such a document did not exist. A formal environmental review of the suitability of the site WAS NOT conducted before the contract was awarded to Turf One. In fact, it was Turf One who was contracted to complete the Review of Environmental Factors.

National Parks and Wildlife Advice Ignored

Councillors rely on being well informed by Council staff and whilst Council staff did write to the National Parks and Wildlife Service for advice, they did not share their return letter dated 21/09/2020 (Appendix 1) with the Councillors before they voted on the synthetic turf upgrade. Here are some key points in the letter outlining their concerns and requirements:

The NPWS stated that they are “in support of the upgrade of the sports field but do have concerns regarding the construction and operation of the synthetic turf field.” And “We are supportive of a plant-based turf option, whilst ensuring all materials are sustainably sourced.”

The NPWS asked for a detailed analysis of a whopping **17 factors** prior to committing to a synthetic turf option. “These issues need to be considered when considering the full environmental impact of each surface.” The NPWS warned:

- “Of concern is the release of chemicals from the synthetic turf, into the surrounding environment. Further details are required detailing the stormwater capture and treatment from the synthetic field to prevent the leaching of chemical compounds into the environment and into Quarry Creek.”
- “Synthetic Turf results in increased temperatures, the impact of the increased temperature on surrounding fauna and flora needs to be considered as well as consultation with Birdlife Australia regarding the potential impact on the local Powerful Owl population. We request that impacts to powerful owls and other birds within the National Park are considered and managed appropriately as a part of this development application.”
-
- The NPWS warned that “Sydney Turpentine Ironbark Forest and rare floral species ground orchid species are present on site and should not be impacted upon. The proposal should not result in any further impact on the floral species and ecological communities in the surrounding area, no result in a larger footprint of impact.”

During the October 2020 meeting where approval was given to proceed with the synthetic turf option, the only mention of involvement from the National Parks and Wildlife Service came in the form of a motion by Councillor Donna Greenfield who proposed that “National Parks and Wildlife, as a stakeholder, are consulted throughout the development of the project.” Councillor Greenfield further remarked; ***“This is an example of Council working with National Parks to ensure that we don’t have any environmental impacts as we move forward with putting these synthetic fields into our LGA.”***

Lack of Transparency

This is a damning indictment on Council staff responsibility for ensuring the important contents of this letter were known to Councillors and the public. Furthermore, in a recent letter from National Parks and Wildlife to Ku-ring-gai Council the author stated, "I feel that Ku-ring-gai Council has not undertaken the agreed consultation and as a result NPWS cannot offer support to the design in its current form."

Cork Infill will still Migrate

At the October 2020 Meeting Councillor Cheryl Szatow addressed environmental concerns from Friends of Ku-ring-gai Environment (FOKE) to Director Andrew Watson about the plastic and infill. She asked what solutions there were to the problem that "synthetic turf is plastic and over time it breaks down into smaller particles allowing runoff." He assured her that there will "be other pits and traps to collect any solid material that might move across or off the site." He also reassured Councillor Szatow that cork infill will be used instead of tire crumb. He remarked "you might get a bit of relocation of some of the infill material within the site but certainly we're not proposing that it will go off the site."



ELS Hall Park at Ryde constructed a similar synthetic turf field with cork infill. There have been enormous bags of cork infill collected. Cork particles are everywhere. Photos have been taken of the gooey sludge from the cork infill lying in the creek bed (see inset). All of which have environmental consequences. This is the result of not doing a thorough assessment before choosing the surface of the playing field. Whilst some mitigation strategies can be implemented, Director Andrew Watson cannot reasonably claim that the cork can be prevented from floating away. There are going to be issues with cork infill, especially given the likely occurrence of extreme weather events. In addition, there has been no formal maintenance program submitted as part of the assessment of the suitability of the synthetic turf field.

Note: Of great concern is that there is a tire-crumb synthetic oval at the North Turramurra recreation centre. Crumb rubber is manufactured from recycled automobile tires and contains potentially toxic and carcinogenic substances. The tire crumb has migrated and is scattered around the oval posing a deadly threat to local wildlife, not to mention a danger to the health of players.

Exempt Development

Norman Griffith Oval is surrounded by land zoned C2. It is zoned C2 as it "contains high ecological, scientific, cultural or aesthetic values which in this case is the critically endangered Sydney Turpentine Ironbark Forest. The objective of the C2 Zoning is to protect those resources and to prevent development that could destroy, damage or otherwise have an adverse effect on those values." (NSW Planning). It is therefore unconscionable that the approval process chosen for the synthetic turf was Part 5 of the EP&A Act where there was no requirement to, as such, require a permit/approval.

Process for Environmental Review not followed

Furthermore, under Part 5 of the EP&A Act there is a requirement to undertake a Review of Environmental Factors (REF) to be "completed and determined before the proponent undertakes an activity or a determining authority grants approval for an activity to be undertaken." It was well after the contract had been signed and materials ordered that a REF was completed.

Community Ignored at Public Forum

A public forum was held on 14 March 2023 at Ku-ring-gai Council Chambers preceding an Extraordinary General Meeting called by Councillor Christine Kay and Councillor Alec Taylor to be held on 16 March 2023. The Councillors put forward a motion to 'decide whether to provide a period of public notice on the Review of Environmental Factors for the stormwater and synthetic sports field at Norman Griffiths Oval before proceeding with construction.'

Community members simply wanted a reasonable amount of time to review the REF before Norman Griffiths Oval was ripped up.

13 people including highly qualified experts, environmental leaders and community members spoke out in favour of the motion. They raised the following concerns:

- **Inadequate level of community consultation associated with the project.**
- **Failure of Ku-ring-gai Council in not establishing a community stakeholders' group as had been promised.**
- **Ku-ring-gai Council not providing the community with 4-6 weeks' time to review the Review of Environmental Factors (REF) as had been promised.**
- **Failure to provide the community with the latest developments in natural turf field design and maintenance.**
- **Failure to acknowledge the dangers of synthetic turf to the health of players, including potential cancer risks of PFAS as reported in the US and Europe.**
- **Failure to address the environmental risks associated with the overflow of turf infill and fibres into Quarry Creek and Lane Cove National Park.**
- **Failure to ensure appropriate consultation with the National Parks and Wildlife Service as agreed by Ku-ring-gai Council.**

Community members provided evidence, scientific research and sensible reasons for delaying the REF and taking another look at the legitimate concerns of this project.

Disturbingly, a well-respected member of the community was told by Mayor Pettett to 'sit down'. She simply told the Councillors "We are profoundly disappointed by the process of this project. When Council voted to go ahead, they were completely misled." Mayor Pettett said "I'll ask you to withdraw that because it is a defamatory comment. Withdraw that and apologise." When she refused, he asked her to sit down. It was shocking to witness that level of disrespect to a community member for expressing her views. Further, it was a completely inaccurate interpretation of 'defamation.'

“ WITHDRAW AND
APOLOGISE
SIT DOWN ”

Mayor Jeff Pettett to a
Community Member

Legitimate Concerns from Environmental Groups Ignored

On 16 March 2023, community organisations including STEP Inc, FOKE (Friends of Ku-ring-gai Environment), Friends of Lane Cove National Park, North Turramurra Action Group (NTAG) and Friends of Norman Griffiths Oval in a joint statement registered their concern at the way Ku-ring-gai Council has undertaken the development (see Appendix 1). They requested that Ku-ring-gai Council not proceed with construction without written signoff from National Parks and Wildlife Service and to wait for the NSW Chief Scientist report into Synthetic Turf which, amongst other concerns, examined microplastic and heat island impacts of these fields. They also stated that ‘the REF contains major statements without being backed up by evidence, etc. Disappointingly, their legitimate concerns about the environmental impacts of synthetic turf at Norman Griffith Oval were completely ignored.

EGM to Extend the REF – Motion Defeated

The EGM was held on 16 March 2023 to decide whether to provide a period of public notice on the Review of Environmental Factors for the stormwater and synthetic sports field at Norman Griffiths Oval before proceeding with construction. This motion was defeated 8 to 2.

Mayor Jeff Pettett and Councillor Martin Smith said that because the REF has been available on the public portal for over three weeks and that there were “no glaring holes in the REF” and there is no need to delay construction. Councillor Martin Smith further stated that “If there was something really wrong then something would have come out.” Remarkably he said that from the public forum only “One item [was of] concern with the fencing height that birds may fly in during the evening.” This is blatantly untrue. As has been stated previously 13 people spoke at the public forum and highlighted legitimate issues with the synthetic turf.

When questioned about the process a Council Director stated, “It is not the purpose of the REF to provide comments” and there is “No statutory obligation to distribute the REF for consultation” and “There is no contractual relationship between a REF and community engagement.” When questioned about their lack of consultation with National Parks and Wildlife their response was “The only statutory authority that had to be consulted under the SEPP (State Environmental Planning Policies) is the SES and they have been consulted and responded.”

These responses reveal a Council culture that excludes ratepayers from being consulted and informed. It reveals a lack of concern for the critically endangered ecosystems it is supposedly meant to protect. It reveals contempt for a section of the community that has legitimate concerns about the environment, health and safety of Norman Griffiths Oval development. It reveals contempt for democratic processes and transparency.

Mayor Pettett stated that “Within that REF we have heard nothing from anybody at the forum. There were no speakers highlighting any blaring issues with the REF that has been on the website for three weeks. 72 pages does not take four to six weeks to read. 10 minutes rereading and you’re done.”

I find it extraordinary that Mayor Pettett thinks that it could take 10 minutes to read and critically review a highly technical document. It’s a senseless statement without any plausibility. A short time before the motion was put to the Councillors and subsequently rejected, Mayor Pettett said “I must commend staff that they have gone through the REF with a fine-tooth comb” to which Director Bounassif responded, “I haven’t come across a REF that is more detailed in my time at Local Government.” Perhaps we need to point out to Director Bounassif that great detail does not equate to great quality. There are legitimate concerns with the REF, and they are technical in nature.

Key Concerns about the REF

Norman Griffiths Oval lies within the Sydney Catchment Area and therefore comes within Regulation 171a of the EPA Act. This regulation came into effect in March 2022 and is not mentioned in the REF. Furthermore, regulation 171a requires a far more in-depth environmental report than is provided within the existing REF. Regulation 6.8(2)(A) of the EPA Act specifically requires consideration not of the 1% AEP flood event by the probably

Other Major Concerns about the REF

The REF only assesses direct effects on the Oval and immediate surrounds:

- The assessment must look at “areas which are likely to be affected by the proposal, either directly or indirectly. The study area should extend as far as is necessary to take all potential impacts into account”.
- Serious environmental harms which are indirect may include damage to STIF, and Infill or microplastics migrating downstream or into surrounding areas. In the REF the ignoring of indirect effects in relation to infill is justified by (unsubstantiated) claims about the effectiveness of mitigation steps they have taken (raising field above flood level, concrete curb, etc)

Omissions of the REF

- Mitigation measures outlined have not worked in other synthetic ovals with cork such as EHLS Hall which was lauded as the gold standard so where is there any assessment of the effectiveness of these measures?
- The REF does not consider or refer to any evidence which allows the Council to assess the effectiveness of proposed mitigation measures of the infill and plastics.
- The design does not even meet European Union standards regarding mitigation measures.
- Where is an assessment of consequences if mitigation does not work or is limited?
- How does the “heat “effect alter usage hours for children’s sports during daylight or school hours? We assume this will reduce playing hours.
- There is a complete lack of recycling capacity. ‘Theorised ‘recycling is not actually evidenced.
- The expense and environmental consequences of disposing of plastic in landfill.
- There are no ecological assessments. The removal of tree numbers is not an environmental assessment.
- How does the removal of the biota (insects, fungi, microbiome, foraging birdlife) on the oval surrounded by the critically endangered ecological community of STIF affect fauna such as the powerful owl and microbats whose food source involves these insects and birds? These are endangered fauna. This is a gross omission.
- There is no assessment of how changes to hydrology and increased heat affect the STIF.
- There is no mention or assessment of how the cordoning off of the oval will affect social and recreational usage.
- Where is the business case for this project which will be an ongoing cost for ratepayers when maintained and replaced /disposed of every 8-10 years? How will it be licensed to soccer clubs?

Sydney Turpentine
Ironbark Forest listed as
critically endangered
ecosystems (CEEC)



Qualifications of REF Author

Of great concern is that the REF was prepared by a consultant of Willowtree Planning who is an associate planner and has no ecology qualifications which may account for the glaring omissions. How can someone with no ecological experience or qualifications reach the conclusion that synthetic turf “is not considered to exhibit significant or adverse environmental impacts?” Surely a review of environmental factors of a critically endangered habitat such as the STIF should be undertaken by someone with ecology qualifications?

Cost of Synthetic Turf

What must be of great concern to ratepayers is the extraordinary cost of the synthetic turf field at Norman Griffiths Oval. If we deduct the grants totalling \$928,765 ratepayers are left with a whopping bill of \$2.5 million. The total cost of the synthetic turf oval was estimated at \$3.5 million. Where is the business case for this project which will be ongoing cost for ratepayers when maintained and replaced/disposed of every 8-10 years? Here is a breakdown of costs:

Grants

West Pymble Football Club	\$100,000
Northern Suburbs Football Association	\$132,425
Office of Liquor and Gaming	\$500,000
NSW Asian Cup Legacy Fund	\$150,000
Local Sport Program	\$26,340
Stronger Communities Programme	\$20,000
Total	\$928,765

Ratepayers Expense

\$2.5 million (estimated)

Expensive Maintenance Schedule

To date, no information has been provided on the maintenance schedule for the synthetic field. The preliminary estimate of annual cost is **\$47,360** (internal KMC budget accessed via GIPA); however, it is noted that this excludes the cost of replacing cork infill that migrates from the field as a result of water movement over the field. Ku-ring-gai Council has stated that no chemicals will be used in the maintenance of the field, however, a nearby field ELS Hall in North Ryde uses herbicides to remove weeds from the field area.

Expensive Replacement Costs

The turf field replacement fee will be a minimum **\$650,000** (or \$65,000 per year over 10 years). The estimate is that a properly designed and maintained natural turf oval would cost around 20-25% of the total cost of the synthetic field over 10 years. Given the extraordinary cost to ratepayers why wasn't natural turf considered?

Commercial Arrangements with Soccer Clubs

The community should be made aware of any commercial arrangements with the soccer clubs. Will Norman Griffiths Oval be licenced to the local soccer clubs? Canada Bay Council is considering entering a licensing lease agreement for the synthetic pitch and amenities of Majors Bay Reserve, at Concord, for at least five years with Canada Bay Football Institute who would collect profit from the field. Given this land is zoned as recreational land, the community should be aware of whether commercial arrangements have been or will be entered into for between the NSFA and Council.

Main Issues with Synthetic Turf

The recent Synthetic Turf Study in Public Open Spaces commissioned by the NSW Government identified several environmental and health concerns associated with synthetic turf, including:

- **Human Health:** Heat stress and the impact on player and user comfort associated with playing on synthetic fields in hot weather.
- Abrasiveness on the skin and higher injury rates.
- Research has suggested that biological pathogens, toxic chemicals, and micro-plastic ingestion are all risks to human health that are associated with synthetic materials.
- **Loss of public space:** Community land zone RE1 was previously enjoyed by walkers, picnickers, dog walkers, and nature lovers appropriated by the Football Club. It effectively becomes a resource only they have access to.
- **Pollution:** Air and water pollution caused by synthetic turf materials (i.e., rubber crumbs) is well documented in academic research. Pollution, particularly of waterways and bushland, was a key concern raised by community representatives.
- **Chemical use:** Pesticides and fertilisers are typically used for natural turf fields, while pesticides and fungicides are typically required for synthetic fields.
- **Waste:** There is currently no way of recycling synthetic turf at the end of its 8–10-year life cycle.
- **Heat:** Heat impacts to the surrounding environment caused by synthetic turf absorbing heat rather than reflection.
- **Carbon emissions:** Synthetic fields contribute to heightened CO₂ emissions due to the lack of carbon absorption associated with natural turf.
- **Soil sterilisation:** Sterilisation of soil beneath the synthetic turf has an impact on ecosystems. Synthetic surfaces inhibit living systems.
- **Wildlife:** While natural turf sports fields have limited biodiversity value, they do provide some habitat for local flora and fauna that synthetic turf does not.
- **Variability:** Environmental impacts of synthetic fields vary substantially depending on what type they are. Older synthetic fields (generations 2 and 3) are associated with significantly higher radiant heat and environmental pollution.

The study also recognised that:

- Best practice natural turf design and maintenance have the potential to improve the capacity of existing natural turf fields to support increased sporting use.
- Lack of available information on best practice construction and maintenance of natural turf fields influences and constraints Council decision-making.
- Information about recent innovations and best practices for natural turf is not well-known or commonly used.
- Advances in technology are enabling more targeted maintenance and management of natural turf to reduce energy consumption and costs and maintain capacity.

The study resulted in the appointment of the NSW Chief Scientist to conduct a formal review of scientific evidence associated with synthetic fields. The review was completed in February 2023, however, the NSW Government has refused to make the review public to date.

Conclusion

This position paper raises many serious concerns about the health and safety risks and environmental impacts of synthetic turf. The poor governance which includes not investigating the viable alternatives to synthetic turf, is not at the level the community expects from their Local or State Representatives. Finally, the disrespectful disregard for community consultation and feedback has frustrated many in this community. The Councillors and General Manager could use this position paper to take a serious look at their culture and decide whether it is in the communities i.e. the ratepayer's best interests to continue to behave in such a contemptuous way.

Recommendations

- 1** Immediately release the independent review into the use of synthetic turf in public open spaces in NSW by the NSW Chief Scientist & Engineer.
- 2** The process for approving synthetic fields should be incorporated within a Development Application process, with the production of an Environmental Impact Assessment that considers all environmental issues associated with these developments.
- 3** Construction should cease at Norman Griffiths Oval until concerns about the REF have been legitimately addressed and further consultation with National Parks and Wildlife has taken place.
- 4** Ku-ring-gai Council and Councils in general review their community consultation process associated with these projects, and others like it, to ensure openness and transparency, and the the final decisions are reflective of community feedback.
- 5** There should be a moratorium on the construction and awarding of contracts of all synthetic fields until actions 1 and 2 above have been implemented.
- 6** Ku-ring-gai Council should take accountability for their mishandling of this project and publicly admit to misleading the community, the lack of transparency, disregard for proper process, lack of genuine consultation, and the unacceptable disrespect shown to the community volunteers who have been advocating for their community and against this project for years.
- 7** Council public forums should be live-streamed with recordings available to inform the public of community concerns and ideas.

Further Reading

Reports/Fact Sheets:

Environmental Impacts of synthetic turf and safer alternatives by The Collaborative for Health and Environment (CHE)

Independent review into the design, use and impacts of synthetic turf in public open spaces

Artificial Turf Fact Sheet by Toxics Use Reduction Institute

[Artificial Turf: A Health-Based Consumer Guide](#)

News Stories:

<https://www.smh.com.au/national/nsw/fake-grass-furore-council-pushes-ahead-with-controversial-sports-ground-revamp-20230316-p5csuv.html>

<https://www.theguardian.com/lifeandstyle/2023/mar/29/it-would-survive-nuclear-armageddon-the-rise-and-fall-of-plastic-lawns>

<https://www.theguardian.com/artanddesign/2022/sep/14/turf-wars-the-artists-who-want-to-mow-down-the-menace-of-lawns>

<https://www.theguardian.com/lifeandstyle/2023/mar/29/it-would-survive-nuclear-armageddon-the-rise-and-fall-of-plastic-lawns>

Fake grass furor: Council pushes ahead with controversial sports ground revamp

<https://www.theguardian.com/artanddesign/2022/sep/14/turf-wars-the-artists-who-want-to-mow-down-the-menace-of-lawns>

<https://naturalturfalliance.org/2023/04/24/how-the-syn-turf-industry-pulled-the-wool-over-the-publics-eyes/>

With Thanks

This position paper was compiled with the help of The Natural Turf Alliance which is dedicated to a sustainable and greener future for our parks and ovals. This community organisation is run by a group of dedicated volunteers who provide support to communities advocating for natural turf open spaces and sporting fields using best practice design and maintenance.

Visit their website <https://naturalturfalliance.org/> to learn more about how Natural Turf is the only choice for our communities.

I also received help from many concerned community members and I thank them for thier contribution. A special thanks to Janine Kitson, Independent Candidate for Davidson in the NSW 2023 State Election who continues to positively represent her community.

Annexure 1

Critically Endangered Ecological Communities in Ku-ring-gai Sydney Turpentine-Ironbark Forest



Description

Sydney Turpentine-Ironbark Forest (STIF) is a medium to tall open forest, dominated by tree species including Turpentine (*Syncarpia glomulifera*), Blackbutt (*Eucalyptus pilularis*) and Smooth-barked Apple (*Angophora costata*).

In Ku-ring-gai it is found along Mona Vale Road, St. Ives, the southern end of Fox Valley Road and Bicentennial Park. Found along ridgelines and slopes on shale and shale-enriched sandstone soils. Seeds locked in this soil are the source of future generations of plants.

Protection and Threats

STIF is protected as a Critically Endangered Ecological Community, under both the *NSW Biodiversity Conservation Act 2016* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Threats to this community include: clearing along ridgelines, small-scale residential clearing, nutrient enrichment, weed invasion, garden escapes, recreational damage and rubbish dumping. Fragmentation of the forest also creates challenges for regeneration.

Wildlife

This forest provides layers of habitat for wildlife, with mature trees providing nest hollows for Australia's largest owl - the Powerful Owl and also for the Glossy Black-Cockatoo.

What can you do?

There's lots you can do to help preserve STIF:

- Join a Bushcare group
- Keep your pets under control and report any fox sightings to us
- Never dump rubbish in bushland - penalties apply
- Remove weeds from your garden to stop them spreading
- [Install a rain garden](#) to manage stormwater
- If you live near this forest community you can plant some of the forest's native species in your garden to help attract birds, mammals and butterflies (see list over)

For further information

- Visit the NSW [Office of Environment & Heritage](#) website



Orange Sydney Turpentine-Ironbark Forest
Green Office of Environment & Heritage

Only 0.5% of the original Sydney Turpentine-Ironbark Forest remains in Ku-ring-gai



Annexure 2



Planning,
Industry &
Environment



Our ref: EF16/10788

Guy Thomas,
Ku-ring-gai Council,
Locked Bag 1006
Gordon NSW 2075
Email kmc@kmc.nsw.gov.au

21/09/2020

Dear Guy Thomas

Ku-ring-gai Council – Norman Griffiths Sportsground proposal for Synthetic turf field

I refer to your correspondence dated 24 August 2020 regarding the proposal of a synthetic turf field at Norman Griffiths Sportsground.

The site is in close proximity to Lane Cove National Park. As part of this assessment Council is requested to ensure that the concept development shall adhere to the Guidelines for developments adjoining land managed by the Department of Planning Industry and Environment. A copy of the guidelines is available at the following link: <http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm>. This will ensure the development does not adversely impact Lane Cove National Park.

At a minimum, the following aspects are recommended for inclusion development conditions to ensure the development complies with this guide:

1. The adjoining National Park boundary must be clearly delineated and, if required, accurately surveyed to ensure encroachment onto the Park does not occur. Refer to the Guidelines for developments adjoining OEHLand (Section 2.6).
2. Stormwater drainage must be designed in a way so no surface water / stormwater runoff from the property enters the adjacent National Park from the development site at any time during the construction or upon completion. All stormwater is to be either managed on site or directed away from the National Park. Refer to the OEHLand Guidelines for developments adjoining OEHLand (Section 2.2).
3. No sediment or soil is permitted to enter the adjacent National Park from the site at any time during construction or post-completion. Appropriate sediment controls must be implemented. Refer to OEHLand guidelines for developments adjoining OEHLand (Section 2.1).
4. Adjoining land within the National Park must **not** be used:
 - a. to access development sites;
 - b. to store materials, equipment, vehicles, or machinery; or
 - c. for maintenance access after development.
5. Vegetation, rock, and soil within the adjacent National Park must not be disturbed without prior written permission from the NPWS Area Manager.
6. The proponent must assess and manage impacts to threatened species communities and the environment as per legislative requirements.

Annexure 2



Planning,
Industry &
Environment



Consideration of the overall catchments water quality and the inclusion of measures to improve water quality within the catchment should be included as part of the scope of this project;

Detail regarding the potential increase in water usage and the type of water to be used to for cleaning the synthetic turf, considering future drought conditions and water restrictions.

What will be your primary and back up water source for the surface?

What will be the cost of this source?

Is it sufficient to meet the irrigation requirements to maintain the surface to the minimum standards for use (considering rainfall and irrigation requirements)?

Is the source's availability likely to change within the short-medium term?

Detail regarding the long term impact on the soil and the macro and microorganisms that inhabit the soil beneath the turf, synthetic turf damages soil structure, soil microbes and soil life.. No organic biodiversity due to compacted base and synthetic surface.

Synthetic turf results increased temperatures, the impact of the increased temperature on surrounding fauna and flora needs to be considered as well as consultation with Birdlife Australia regarding the potential impact to the local Powerful Owl population. We request that impacts to powerful owls and other birds within the National Park are considered and managed appropriately as part of this development application.

The synthetic turf does not have the ability to remove carbon dioxide from the atmosphere.

Propose the installation of biofiltration systems at drainage points to ensure any runoff does not result in weed plumes establishing and spreading into the National Park.

Sydney Turpentine Ironbark Forest and rare floral species (ground orchid species) are present on site and should not be impacted upon. The proposal should not result in any further impact on the floral species and ecological communities in the surrounding area, nor result in a larger footprint of impact.

NPWS request to be considered and consulted as a stakeholder throughout the development of the project.

Please contact Robyn San, 8448 0405 or email robyn.san@environment.nsw.gov.au if you would like to discuss anything further.

Yours sincerely

Robyn San

Ranger
North Western Sydney Area
Greater Sydney Branch
National Parks and Wildlife Service

Annexure 3

STEP INC

FOKE (FRIENDS OF KU-RING-GAI ENVIRONMENT)

FRIENDS OF LANE COVE NATIONAL PARK

NORTH TURRAMURRA ACTION GROUP (NTAG)

FRIENDS OF NORMAN GRIFFITHS OVAL

STATEMENT ON NORMAN GRIFFITHS SYNTHETIC FIELD DEVELOPMENT

- We wish to register our concern at the way in which Ku-ring-gai Council has undertaken the development of a synthetic field at Norman Griffiths Oval, West Pymble.
- Council should not proceed with construction without written signoff from National Parks and Wildlife Service, an important stakeholder in the process.
- The government has not released the NSW Chief Scientist report which amongst other concerns examined microplastic and heat island impacts of these fields.
- We point to the following facts:
- The REF contains major statements without being backed up by evidence in the appendices, for example the 6m fences risks to birdlife are not assessed, the heat study is irrelevant to Sydney conditions, concerning information in the bushfire report is not mentioned in the conclusions.
- When Ku-ring-gai Council was initially approached with a tied grant for a synthetic oval council staff stated that a synthetic oval was 'fundamentally incompatible' with the oval.
- A petition with 1.012 signatures asking for a halt to the synthetic option tabled in council is not mentioned in the REF.
- Council voted to go ahead with synthetic field on the basis council had completed 'a preliminary environmental assessment'. Incredibly, this assessment was never shown to councillors, is not on the website and when the community tried to access the documents via freedom of information requests (GIPA) were told it did not exist.
- The oval is now costing ratepayers \$3.6 Million dollars – almost 3 times the cost per hectare of the MCG sporting field construction and 3.5 times per hectare the cost of the new field at Bank West stadium. We have seen no business case for it.
- Cromer Park was converted to synthetic in 2013 and 9 years later it had to be resurfaced at a cost of \$1.25 million dollars. The initial surface is still rolled up and sitting at the field as no recycling facilities are available to take it.

The project has been characterised by lack of transparency, a dismissal of proper process and most concerning a disregard of impact of a synthetic oval on the critically endangered forest that surrounds it, and the creek that runs underneath it. Residents of Ku-ring-gai deserve better.

16 March 2022

President Friends of Lane Cove National Park

A Butteriss.

Annexure 4

Timeline Synthetic Turf In Ku-ring-gai

December, 2017	Mosman Council Voted Against Plastic Grass on Middle Head Oval
2019	Two grants totalling \$520,000 were awarded by NSW Sports Minister Stuart Ayres to Ku-ring-gai Council specifically for a synthetic turf playing field.
9 April, 2019	Ku-ring-gai Council ruled out synthetic turf for Norman Griffiths Oval but voted to proceed with synthetic turf at Mimosa Oval in South Turramurra.
21 September, 2020	National Parks and Wildlife Service letter received by Ku-ring-gai Council expressing concerns with synthetic turf at Norman Griffith Oval, West Pymble.
October, 2020	Community consultation conducted question: 'Do you want synthetic turf because it will increase playing hours?' Chief Executive Officer of Northern Suburbs Football Association (NSFA), Kevin Johnson, assured the community that 95% of the 706 respondents despite flawed survey methodology. A subsequent independent petition attracted 2,217 supporting a natural turf field at Norman Griffiths Oval.
October, 2020	Ku-ring-gai Council votes to proceed with synthetic turf at Norman Griffith Oval, West Pymble.
<u>November, 2021</u>	NSW Minister for Planning and Public Spaces the Hon. Rob Stokes MP requests the NSW Chief Scientist & Engineer conduct an independent expert review into the use of synthetic turf in public open spaces in NSW.
4 December, 2021	Local Government Election for Commenara Ward. Independent Greg Taylor is elected as Councillor. Campaigned against synthetic turf oval at Norman Griffith Oval, West Pymble.
16 March, 2023	Extraordinary General Meeting with motion by Councillor Christine Kay and Councillor Alec Taylor to ' <i>decide whether to provide a period of public notice on the Review of Environmental Factors for the stormwater and synthetic sports field at Normal Griffiths Oval before proceeding with construction.</i> ' The motion was defeated 8 to 2.
16 March, 2023	Ku-ring-gai community groups, STEP Inc, FOKE (Friends of Ku-ring-gai Environment), Friends of Lane Cove National Park, North Turramurra Action Group (NTAG) and Friends of Norman Griffiths Oval present joint statement registered their concern at the way Ku-ring-gai Council has undertaken the development of the proposal for a synthetic turf at Norman Griffith Oval, West Pymble.
25 March, 2023	NSW Election for Wahroonga. Independent Kristyn Haywood Campaigns against synthetic turf at Norman Griffith Oval, West Pymble.
April, 2023	Construction is underway for a \$ 3.5-million synthetic turf replacement at Norman Griffith Oval, West Pymble.

A NON-PLASTIC FUTURE FOR COMMUNITY OVALS

SYNTHETIC -V-NATURAL TURF, GET THE FACTS FROM THE EXPERTS

23 June 2023

7.00pm to 8.45pm

Ku-ring-gai Town Hall

118 Pacific Hwy Pymble

Zoom Link:

<https://us02web.zoom.us/j/83441149383>

To Book



MC/Forum Curator



Kristyn Haywood

DIRECTOR, PEOPLE FOR SUCCESS
INDEPENDENT CANDIDATE FOR
WAHROONGA
25 MARCH 2023 STATE ELECTION

Purpose of the Forum

- To provide evidence-based information that upgrading sports fields with natural turf is the best choice for players, the environment, and the community.
- To provide evidence of the environmental, health and safety dangers of plastic turf.
- Present the community with the process Ku-ring-gai Council used to proceed with the implementation of synthetic turf at Norman Griffiths without proper environmental assessments or community consultation.
- Provide an opportunity to ask the scientists and community members questions.
- Outline recommendations and suggest actions to ensure proper Governance.

Guest Speakers The Health, Safety & Environmental Risks of Synthetic Turf



Dr Elizabeth Farrelly

COLUMNIST, AUTHOR,
URBAN COMMENTATOR
SENATE CANDIDATE NSW
STATE ELECTION 2023



Dr Scott Wilson

CHIEF SCIENTIST
EARTHWATCH INSTITUTE



Rob Hanna

FINANCE EXPERT
ECONOMICS OF
SYNTHETIC



Garnet Brownbill

RESIDENT GARDINER PARK/
NATURAL TURF ALLIANCE

Guest Speakers Natural Turf - the Viable Alternative



Dr Mick Battam

SOIL SCIENTIST AND
SPORTS TURF SPECIALIST
AG ENVIRO SOLUTIONS



Dr Paul Lamble

PRINCIPAL, PEAK
WATER CONSULTING
DRAINAGE SPECIALIST



Richard Pike

PRESIDENT
MOSMAN
FOOTBALL CLUB



Jill Green

PRESIDENT OF STEP
ENVIRONMENTAL
GROUP

Booking Link: <https://events.humanitix.com/a-non-plastic-future-for-community-ovals>

For inquiries, contact me.



www.kristynhaywood4wahroonga.com

enquiry@kristynhaywood4wahroonga.com

Ph: 0419421332

For more information about Natural Turf for your community visit <https://naturalturfalliance.org/>

