Submission No 65

INQUIRY INTO PFAS CONTAMINATION IN WATERWAYS AND DRINKING WATER SUPPLIES THROUGHOUT NEW SOUTH WALES

Organisation: Friends of Callan Park

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FRIENDS OF CALLAN PARK
WANGAL | GADIGAL LANDS
PO BOX 238
ROZELLE NSW 2039

www.callanpark.com

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SUBMISSION TO:

SELECT COMMITTEE ON PFAS CONTAMINATION IN WATERWAYS AND DRINKING WATER SUPPLIES THROUGHOUT NEW SOUTH WALES

Dear Committee Members,

Friends of Callan Park appreciate the opportunity to deliver this submission to the Senate Select Committee's inquiry on the regulation and management of PFAS contamination in New South Wales, and indeed Australia.

The executive of Friends of Callan Park note the Terms of Reference and in making this submission believe four of those relate specifically to our concerns: b, c, j and k.

Whilst our concerns are centred particularly upon the State Heritage item, Callan Park, in Rozelle in Sydney, the issues are universal.

1 (b) sources of exposure to PFAS, including through environmental contamination, food systems and consumer goods

1 (c) the health, environmental, social, cultural and economic impacts of PFAS

1 (j) international best practices for environmental and health risk assessments, reduction and management of PFAS contamination and exposure

1 (k) areas for reform, including legislative, regulatory, public health and other policy measures to prevent, control and manage the risks of PFAS to human health and the environment, including the phasing out of these harmful substances.

WHAT IS CALLAN PARK

Callan Park was formerly a large psychiatric hospital located on 61 ha. Callan Park is a State Significant heritage item on the Harbour foreshore in the suburb of Rozelle in Sydney. Indeed parts of Callan Park are identified in that listing as of Exceptional Significance. Constructed in the 1880s as a state of the art psychiatric hospital, it became one of the largest psychiatric hospitals in the nation. For more than a century Callan Park was owned by NSW Health (or various iterations of that department's name). In 2020, 62% of the site was transferred to the newly formed NSW government agency, Greater Sydney Parklands (GSP), with NSW Health retaining 38%. Three playing fields within Callan Park are leased by the GSP to the Inner West Council.

WHO ARE FRIENDS OF CALLAN PARK

Friends of Callan Park is a not-for-profit community organisation which has advocated to protect Callan Park from sell-offs and development for twenty-six years.

Our advocacy is demonstrated by educating and informing the community about the history and contemporary activities and proposals by the delivery of tours, seminars and publications. Our hope is to ensure the protection and appropriate maintenance of public open green spaces for a variety of uses, with our focus on Callan Park and Broughton Hall (which is part of the whole Callan Park site).

We also advocate for funding for the restoration of heritage buildings at Callan Park. We recognise Callan Park's irreplaceable cultural, environmental and therapeutic values as a place of reflection and respite – and a suitable site for the location of mental heath services.

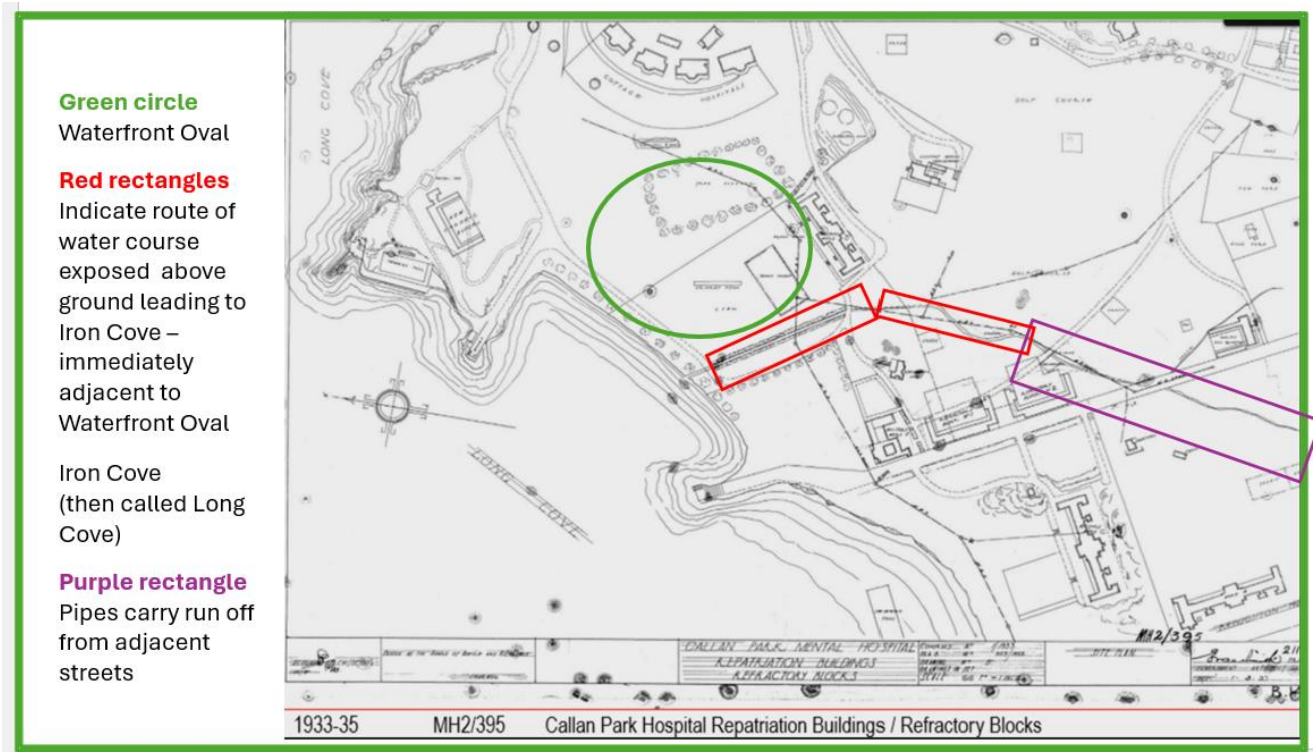
PFAS AND CALLAN PARK

A year ago, our local Council and a number of sporting groups began driving a proposal to replace two natural turf sporting fields within Callan Park with artificial turf/plastic grass. "Sportification" is a term coined in Sweden to describe the role of organised sport in driving the proliferation of plastic turf fields.[1]

The two sporting fields are Balmain Road field and Waterfront Oval. As the name suggests, the Waterfront Oval is located directly adjacent to Iron Cove on Sydney Harbour.

1 Cecilia de Bernardi & Judith H. Waller, 'A quest for greener grass: Value-action gap in the management of artificial turf pitches in Sweden', *Journal of Cleaner Production*, 380, 2022.

Immediately beside the Waterfront Oval is an open culvert which carries suburban water runoff and deposits it into Iron Cove [after travelling from neighbouring residential streets in Lilyfield (Glover, Chapel and Church Streets and Wharf Road) through Broughton Hall and Callan Park].



CARRYING CAPACITY

Callan Park is a state significant heritage item. It is not a site designed for heavy use in all-weather conditions by a range of sporting groups.

Whilst "carrying capacity" is not a by-product of any chemical mix, the carrying capacity of sporting fields which the PFA/chemically produced plastic grass facilitates – by providing an artificial plastic grass field which allows an intensification of games played on such a field – it would be destructive of the cultural and social values of Callan Park. In addition, the impact of plastic blades and runoff on the health and environmental values of Callan Park would be unacceptable.

The semantics surrounding PFAS products, such as “all-weather” field, causes confusion for the general public. Time-poor parents who liked the idea of “all-weather” capacity for their children (without any informed discussion about the definition of an “all-weather” sports field) are often concerned to learn their children will be playing on plastic grass – with a great many unknowns about the composition of this material and its environmental and human health impacts.

On 31 August 2024 the ABC RN Health Report carried a program about PFAS in childcare centres. During this discussion, Dr Rachael Wakefield-Rann said it should not “be the responsibility of parents or childcare centres to become experts” in the content of plastic grass/synthetic turf.[2] (See Attachment A)

The carrying capacity of plastic turfed sporting fields is addressed by the Chief Scientist’s Report – but there is too little discussion of the impact of plastic turfed fields or synthetic surfaced play spaces on the amenity of place and surrounding areas.

FOCP would like to bring to the Committee’s notice the circumstances of Gardiners Park in the Sydney suburb of Banksia (https://savegardinerpark.wordpress.com/ - and https://naturalturfalliance.org/gardiner-park-banksia/).

Residential amenity for neighbours to this once quiet suburban parkland has been shattered by the number of games played on this park (twenty households have sold up and moved) – and the physical destruction of heritage stonework caused by the impact of the new infrastructure and footings required to support the synthetic turf field.

Sportsfields turfed in plastic / synthetic grass allow for an increase in the number of games played but in addition to the significant documented health and environmental damages, the undisclosed, unanticipated impacts on public amenity of plastic grass and its synthetic 'forever' chemicals' is yet to be fully recognised.

Plastic grass with its synthetic 'forever chemicals' will result in the degradation of amenity of heritage parklands and public spaces which are currently accessible to the whole community for both passive and active recreational uses.

UNKNOWNS ABOUT PLASTIC GRASS

The chemical properties and composition of plastic grass are not known in any detail and it should be incumbent on manufacturers to provide that detail (as in food labelling).

Dr Rachael Wakefield-Rann stated in August 2024:

> a lot of these classes of chemicals are ones that it's really tricky to provide the type of evidence that regulators in places like Australia need. And so if you look at places like Europe. They've taken a much more precautionary approach, and said, *Look the data that is there is sufficient for us to say that there is sufficient risk.* … the key trouble is with chemicals that are considered to be something like an endocrine disrupting chemical, which is a hormone disrupting chemical, you just you can't do things like randomized control trials or do the types of scientific studies which are going to give you a 100% consistent result.[3]

Plastic turf / PFAS confection is unsustainable, with no assured method of disposal, and for its entire life poses risks to marine and terrestrial creatures and their environments.

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2 https://www.abc.net.au/listen/programs/healthreport/toxins-pfas-plastics-childcare/104291074 https://profiles.uts.edu.au/Rachael.Wakefield-Rann/publications

3 https://www.abc.net.au/listen/programs/healthreport/toxins-pfas-plastics-childcare/104291074

Plastic turf is not free of maintenance costs. Not only are there impacts on health and environment, and cultural values – the material is an expensive alternative to properly maintained natural turf. A 2019 study by Turi (The Toxics Use Reduction Institute, University of Massachusetts Lowell) cited a study undertaken at the University of Western Australia which indicates natural turf is far less expensive than synthetic turf.[4]

Table 1: Comparison of life-cycle costs	
Field type	**16-year annualized costs**
Natural soil-based field	$33,522
Sand-cap grass field	$49,318
Basic synthetic field	$65,849
Premium synthetic field	$109,013
Source: Brad Fresenburg, "More Answers to Questions about Synthetic Fields – Safety and Cost Comparison." University of Missouri.	

Last September the *New York Times* published an article titled, "What we know (and don't know) about 'Forever Chemicals' in food".[5]

The NSW Chief Scientist uses the word "unknown" thirty-three times in his Report and it seems apparent that there are more unknowns in the realm of plastic/synthetic grass alone. The Chief Scientist also uses the word "variables" twenty-five times. The report highlights the unknowns, variables and differences of a highly toxic product made from a variety of chemical substances which have been proven to impact marine and terrestrial life. These are universal comments across much of the conversation about and scientific studies relating to plastic turf.

According to a study undertaken over two months (April and May 2021) at two relatively small plastic surfaced play areas in Queensland [Coral Sea Park play area 20 m x 18 m and George Davidson Park (AKA Mullers Lagoon Park) play area 11 m x 8 m] found these two areas shed more than 25,000 pieces of rubber per square metre. Both sites are close to the Great Barrier Reef with the potential to cause unfathomable damage to nearby marine and terrestrial environments.[6]

Even the slightest engagement with the literature about the potential dangers of plastic turf/synthetic grass to environmental and human health reinforces the huge unknowns about the scale and impact of plastic and synthetic turf.

Any proposal for the installation of plastic turf should be accompanied by environmental impact statements which detail the chemical composition and behaviours of the composite materials and which should be published for public comment prior to any decisions about installation in any site.

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4 https://www.turi.org/publications/artificial-turf/ *Athletic Playing Fields and Artificial Turf: Considerations for Municipalities and Institutions,* 2020, p4. Note: dollars shown are American.

5 New York Times 21 September 2024 *https://www.nytimes.com/2024/09/21/climate/pfas-chemicals-food-health.html*

6 AusMap, ReefClean, *Rubber Crumb Loss Assessment from Play Areas in The Great Barrier Reef Catchment*, November 2021, p 2, fields in Cardwell and Bowen, Queensland (www.tangaroablue.org/reefclean).

SYNTHETIC FIELDS / PLASTIC GRASS CONTAINS PFAS. THE "FOREVER CHEMICALS" CAN BE FOUND IN THE INFILL AND IN THE BLADES.

Friends of Callan Park have read widely on a growing body of literature about plastic / synthetic turf (much of which addresses the many unknowns of PFAS and the manufactured product of synthetic grass), with a pressing endeavour to understand the attitudes to and environmental cost of artificial turf. We have learned that there is no reason to replace natural turf with plastic grass: properly maintained natural turf sportsfields can handle multiple games[7] and a cautionary approach – the scientific "precautionary principle" - should be at the forefront.[8]

A number of articles highlight the dangers of plastic grass for both environmental and human health and a number of cities and countries internationally are prohibiting its use now that the dangers of PFAS chemicals (as well as other factors) are better recognised.

Scientific analysis published in August 2024 by the University of Massachusetts Lowell found in a number of locations, evidence of PFAS present where the plastic turf was described as PFAS-free.[9]

CONCLUSION

In New York, the Natural Resources Defense Council's Senior Attorney, Eric Goldstein, argues that the *"scientific "precautionary principle" … When even there's any doubt about whether something is hazardous to our health and an environmental threat, we ought to err on the side of caution."*[10]

We also provide a list of further references (Attachment B) which is only a sample of recent references and scientific papers in the growing global discussion of the topic of PFAS and plastic grass for the Committee's consideration.

In light of the evidence and experience of foreign countries, we would ask the Committee to recommend a ban on the use of artificial turf/plastic grass throughout New South Wales.

Yours sincerely

Hall Greenland
President … on behalf of the Executive

CC: Ms Kobi Shetty, Member for Balmain

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7 'Vegas stadium will be pitch perfect for four games: NRL', *Sun Herald*, 2 March 2025, p38 The pitch has "been perfectly prepared, it's in great condition … We're starting with a pristine surface and four games on it during the course of one day won't cause a problem at all", according to NRL head of football.

8 ' "Turf Has Got to Go," Says Marte, and Other Supporters of "Touch Grass Bill" ', *The Spirit,* 28 February 2025, www.westsidespirit.com/news/turf-has-got-to-go-says-marte-and-other-supporters-of-touch-grass-bill-KY4274639

9 'PFAS in Artificial Turf: Results from academic, municipal, and other testing efforts', Lowell Center for Sustainable Production, University of Massachusetts Lowell, p7 https://www.uml.edu/docs/PFAS%20in%20Artificial%20Turf%20-%20Academic%20Municipal%20%26%20Other%20Tests%20Aug%202024_tcm18-386957.pdf

10 ' "Turf Has Got to Go," Says Marte, and Other Supporters of "Touch Grass Bill" ', *The Spirit,* 28 February 2025. (link as Footnote 8) NRDC membership was more than 3 million (2019) - online activities nationwide across the US with a staff of about 700 lawyers, scientists and other policy experts and international offices.